IO.Bindings.libsimpleio Namespace

Wrapper Classes for the Linux Simple I/O Library (http://git.munts.com/libsimpleio)

Classes

	Class	Description
	libADC	Wrapper for libsimpleio A/D converter services.
	libDAC	Wrapper for libsimpleio D/A converter services.
	libEvent	Wrapper for libsimpleio epoll services.
	libGPIO	Wrapper for libsimpleio GPIO services.
	libHIDRaw	Wrapper for libsimpleio raw HID services.
	libI2C	Wrapper for libsimpleio I^2C bus controller services.
	libIPV4	Wrapper for libsimpleio IPv4 network services.

	libLinux	Wrapper for libsimpleio Linux system call services.
	libPWM	Wrapper for libsimpleio PWM output services.
	libSerial	Wrapper for libsimpleio serial port services.
	libSPI	Wrapper for libsimpleio SPI device services.
	libStream	Wrapper for libsimpleio Stream Framing Protocol services.
	libWatchdog	Wrapper for libsimpleio watchdog timer services.

libADC Class

Wrapper for libsimpleio A/D converter services.

Inheritance Hierarchy

SystemObject IO.Bindings.libsimpleiolibADC

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class libADC
```

The libADC type exposes the following members.

Constructors

	Name	Description
	libADC	Initializes a new instance of the libADC class

Top

Methods

	Name	Description
S	ADC_close	Close a Linux IIO A/D converter

		input device.
	ADC_get_name	Get the subsystem name for the specified Linux IIO A/D converter device.
	ADC_open	Open a Linux IIO A/D converter input device.
	ADC_read	Read a Linux IIO A/D converter input device.

Top

See Also

Reference

IO.Bindings.libsimpleio Namespace

libADC Constructor

Initializes a new instance of the libADC class

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public libADC()
```

See Also

Reference

libADC Class
IO.Bindings.libsimpleio Namespace

libADC Methods

The libADC type exposes the following members.

Methods

	Name	Description
	ADC_close	Close a Linux IIO A/D converter input device.
	ADC_get_name	Get the subsystem name for the specified Linux IIO A/D converter device.
	ADC_open	Open a Linux IIO A/D converter input device.
	ADC_read	Read a Linux IIO A/D converter input device.

Top

See Also

Reference

libADC Class

IO.Bindings.libsimpleio Namespace

libADCADC_close Method

Close a Linux IIO A/D converter input device.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static void ADC_close(
        int fd,
        out int error
)
```

Parameters

fd
Type: SystemInt32
File descriptor.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libADC Class
IO.Bindings.libsimpleio Namespace

libADCADC_get_name Method

Get the subsystem name for the specified Linux IIO A/D converter device.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void ADC_get_name(
        int chip,
        StringBuilder name,
        int size,
        out int error
)
```

Parameters

chip
Type: SystemInt32
Linux IIO device number.

name
Type: System.TextStringBuilder
Destination buffer.

size
Type: SystemInt32
Size of destination buffer.

error

Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libADC Class
IO.Bindings.libsimpleio Namespace

libADCADC_open Method

Open a Linux IIO A/D converter input device.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void ADC_open(
        int chip,
        int channel,
        out int fd,
        out int error
)
```

Parameters

chip
Type: SystemInt32
Linux IIO device number.

channel
Type: SystemInt32
Input channel number.

fd
Type: SystemInt32
File descriptor.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libADC Class

IO.Bindings.libsimpleio Namespace

libADCADC_read Method

Read a Linux IIO A/D converter input device.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void ADC_read(
        int fd,
        out int sample,
        out int error
)
```

Parameters

fd
Type: SystemInt32
File descriptor.

sample
Type: SystemInt32
Analog sample data.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libADC Class

IO.Bindings.libsimpleio Namespace

libDAC Class

Wrapper for libsimpleio D/A converter services.

Inheritance Hierarchy

SystemObject IO.Bindings.libsimpleiolibDAC

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class libDAC
```

The libDAC type exposes the following members.

Constructors

	Name	Description
	libDAC	Initializes a new instance of the libDAC class

Top

Methods

	Name	Description
S	DAC_close	Close a Linux IIO D/A converter

		output device.
	DAC_get_name	Get the subsystem name for the specified Linux IIO D/A converter device.
	DAC_open	Open a Linux IIO D/A converter output device.
	DAC_write	Write to a Linux IIO D/A converter output device.

Top

See Also

Reference

IO.Bindings.libsimpleio Namespace

libDAC Constructor

Initializes a new instance of the libDAC class

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public libDAC()
```

See Also

Reference

libDAC Class
IO.Bindings.libsimpleio Namespace

libDAC Methods

The libDAC type exposes the following members.

Methods

	Name	Description
	DAC_close	Close a Linux IIO D/A converter output device.
	DAC_get_name	Get the subsystem name for the specified Linux IIO D/A converter device.
	DAC_open	Open a Linux IIO D/A converter output device.
	DAC_write	Write to a Linux IIO D/A converter output device.

Top

See Also

Reference

libDAC Class

IO.Bindings.libsimpleio Namespace

libDACDAC_close Method

Close a Linux IIO D/A converter output device.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void DAC_close(
        int fd,
        out int error
)
```

Parameters

fd
Type: SystemInt32
File descriptor.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libDAC Class
IO.Bindings.libsimpleio Namespace

libDACDAC_get_name Method

Get the subsystem name for the specified Linux IIO D/A converter device.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void DAC_get_name(
        int chip,
        StringBuilder name,
        int size,
        out int error
)
```

Parameters

chip
Type: SystemInt32
Linux IIO device number.

name
Type: System.TextStringBuilder
Destination buffer.

size
Type: SystemInt32
Size of destination buffer.

error

Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libDAC Class
IO.Bindings.libsimpleio Namespace

libDACDAC_open Method

Open a Linux IIO D/A converter output device.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void DAC_open(
        int chip,
        int channel,
        out int fd,
        out int error
)
```

Parameters

chip
Type: SystemInt32
Linux IIO device number.

channel
Type: SystemInt32
Output channel number.

fd
Type: SystemInt32
File descriptor.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libDAC Class

IO.Bindings.libsimpleio Namespace

libDACDAC_write Method

Write to a Linux IIO D/A converter output device.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void DAC_write(
        int fd,
        int sample,
        out int error
)
```

Parameters

fd
Type: SystemInt32
File descriptor.

sample
Type: SystemInt32
Analog sample data.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libDAC Class

IO.Bindings.libsimpleio Namespace

libEvent Class

Wrapper for libsimpleio epoll services.

Inheritance Hierarchy

SystemObject IO.Bindings.libsimpleiolibEvent

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class libEvent
```

The libEvent type exposes the following members.

Constructors

	Name	Description
	libEvent	Initializes a new instance of the libEvent class

Top

Methods

	Name	Description
S	EVENT_close	Close an `epoll` event

		dispatcher.
	EVENT_modify_fd	Modify a file registration.
	EVENT_open	Open an `epoll` event dispatcher.
	EVENT_register_fd	Register a file descriptor with an `epoll` event dispatcher.
	EVENT_unregister_fd	Unregister a file from an `epoll` dispatcher.
	EVENT_wait	Wait for events from an `epoll` dispatcher.

Top

See Also

Reference

IO.Bindings.libsimpleio Namespace

libEvent Constructor

Initializes a new instance of the libEvent class

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public libEvent()
```

See Also

Reference

libEvent Class
IO.Bindings.libsimpleio Namespace

libEvent Methods

The libEvent type exposes the following members.

Methods

	Name	Description
	EVENT_close	Close an `epoll` event dispatcher.
	EVENT_modify_fd	Modify a file registration.
	EVENT_open	Open an `epoll` event dispatcher.
	EVENT_register_fd	Register a file descriptor with an `epoll` event dispatcher.
	EVENT_unregister_fd	Unregister a file from an `epoll` dispatcher.
	EVENT_wait	Wait for events from an `epoll` dispatcher.

Top

See Also

Reference

libEvent Class

IO.Bindings.libsimpleio Namespace

libEventEVENT_close Method

Close an `epoll` event dispatcher.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public static void EVENT_close(
        int epfd,
        out int error
)
```

Parameters

epfd
Type: SystemInt32
File descriptor.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libEvent Class
IO.Bindings.libsimpleio Namespace

libEventEVENT_modify_fd Method

Modify a file registration.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void EVENT_modify_fd(
        int epfd,
        int fd,
        int events,
        int handle,
        out int error
)
```

Parameters

epfd
Type: SystemInt32
File descriptor for the dispatcher.

fd
Type: SystemInt32
File descriptor to register for events.

events
Type: SystemInt32
Events to register for. May be a sum of the individual event flags.

handle

Type: SystemInt32
Event handle.

error

Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libEvent Class
IO.Bindings.libsimpleio Namespace

libEventEVENT_open Method

Open an `epoll` event dispatcher.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void EVENT_open(
        out int epfd,
        out int error
)
```

Parameters

epfd
Type: SystemInt32
File descriptor.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libEvent Class
IO.Bindings.libsimpleio Namespace

libEventEVENT_register_fd Method

Register a file descriptor with an `epoll` event dispatcher.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void EVENT_register_fd(
        int epfd,
        int fd,
        int events,
        int handle,
        out int error
)
```

Parameters

epfd
Type: SystemInt32
File descriptor for the dispatcher.

fd
Type: SystemInt32
File descriptor to register for events.

events
Type: SystemInt32
Events to register for. May be a sum of the individual event flags.

handle

Type: SystemInt32
Event handle.

error

Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libEvent Class
IO.Bindings.libsimpleio Namespace

libEventEVENT_unregister_fd Method

Unregister a file from an `epoll` dispatcher.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void EVENT_unregister_fd(
        int epfd,
        int fd,
        out int error
)
```

Parameters

epfd
Type: SystemInt32
File descriptor for the dispatcher.>

fd
Type: SystemInt32
File descriptor.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libEvent Class

IO.Bindings.libsimpleio Namespace

libEventEVENT_wait Method

Wait for events from an `epoll` dispatcher.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void EVENT_wait(
        int epfd,
        out int fd,
        out int events,
        out int handle,
        int timeoutms,
        out int error
)
```

Parameters

epfd
Type: SystemInt32
File descriptor for the displatcher.

fd
Type: SystemInt32
File descriptor the event is applicable to.

events
Type: SystemInt32
Events that occurred. May be a sum of the individual event flags.

handle

Type: SystemInt32
Event handle provided whent the file descriptor was registered.

timeoutms
Type: SystemInt32
Time in milliseconds to wait for an event.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libEvent Class
IO.Bindings.libsimpleio Namespace

libGPIO Class

Wrapper for libsimpleio GPIO services.

Inheritance Hierarchy

SystemObject IO.Bindings.libsimpleiolibGPIO

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class libGPIO
```

The libGPIO type exposes the following members.

Constructors

	Name	Description
	libGPIO	Initializes a new instance of the libGPIO class

Top

Methods

	Name	Description
S	GPIO_chip_info	Get GPIO chip information.

S	GPIO_close	Close a Linux GPIO pin device.
S	GPIO_configure	Configure a Linux GPIO pin.
S	GPIO_line_close	Close a single GPIO line.
S	GPIO_line_event	Read an edge trigger event from single GPIO line.
S	GPIO_line_info	Get GPIO line information.
S	GPIO_line_open	Open a single GPIO line.
S	GPIO_line_read	Read the state of a single GPIO line.
S	GPIO_line_write	Write the state of a single GPIO line.
S	GPIO_open	Open a Linux GPIO pin device.
S	GPIO_read	Read a Linux GPIO pin.
S	GPIO_write	Write a Linux GPIO pin.

Top

Fields

	Name	Description
S	DIRECTION_INPUT	Input data direction.
S	DIRECTION_OUTPUT	Out data direction.
S		

	DRIVER_OPENDRAIN	Open drain (sink only) output driver.
S	DRIVER_OPENSOURCE	Open source (source only) output driver
S	DRIVER_PUSHPULL	Push-pull (source and sink) output driver.
S	EDGE_BOTH	Interrupt on both edges.
S	EDGE_FALLING	Interrupt on falling edge.
S	EDGE_NONE	Interrupts are disabled.
S	EDGE_RISING	Interrupt on rising edge.
S	EVENT_REQUEST_BOTH	Enable GPIO input interrupt on both edges.
S	EVENT_REQUEST_FALLING	Enable GPIO input interrupt on falling edge.
S	EVENT_REQUEST_NONE	Disable GPIO input interrupt.
S		

	EVENT_REQUEST_RISING	Enable GPIO input interrupt on rising edge.
S	LINE_INFO_ACTIVE_LOW	GPIO line is configured as active low (inverted).
S	LINE_INFO_KERNEL	GPIO line is being used by the kernel.
S	LINE_INFO_OPEN_DRAIN	GPIO line is configured as open drain (current sink only).
S	LINE_INFO_OPEN_SOURCE	GPIO line is configured as open source (current source only).
S	LINE_INFO_OUTPUT	GPIO line is configured as an output.
S	LINE_REQUEST_ACTIVE_HIGH	Select GPIO line polarity active high (normal).
S	LINE_REQUEST_ACTIVE_LOW	Select GPIO line polarity active low (inverted).

S	LINE_REQUEST_INPUT	Select GPIO line direction input.
S	LINE_REQUEST_OPEN_DRAIN	Select GPIO line driver open drain (current sink only).
S	LINE_REQUEST_OPEN_SOURCE	Select GPIO line driver open source (current source only).
S	LINE_REQUEST_OUTPUT	Select GPIO line direction output.
S	LINE_REQUEST_PUSH_PULL	Select GPIO line driver push-pull (current source and sink).
S	POLARITY_ACTIVEHIGH	Active high (normal) polarity.
S	POLARITY_ACTIVELOW	Active low (inverted) polarity.

Top

See Also

Reference

IO.Bindings.libsimpleio Namespace

libGPIO Constructor

Initializes a new instance of the libGPIO class

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public libGPIO()
```

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libGPIO Methods

The libGPIO type exposes the following members.

Methods

	Name	Description
	GPIO_chip_info	Get GPIO chip information.
	GPIO_close	Close a Linux GPIO pin device.
	GPIO_configure	Configure a Linux GPIO pin.
	GPIO_line_close	Close a single GPIO line.
	GPIO_line_event	Read an edge trigger event from single GPIO line.
	GPIO_line_info	Get GPIO line information.
	GPIO_line_open	Open a single GPIO line.
	GPIO_line_read	Read the state of a single GPIO line.
	GPIO_line_write	Write the state of a single GPIO line.
	GPIO_open	Open a Linux GPIO pin device.
	GPIO_read	Read a Linux GPIO pin.

	GPIO_write	Write a Linux GPIO pin.

Top

See Also

Reference

libGPIO Class

IO.Bindings.libsimpleio Namespace

libGPIOGPIO_chip_info Method

Get GPIO chip information.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void GPIO_chip_info(
        int chip,
        StringBuilder name,
        int namesize,
        StringBuilder label,
        int labelsize,
        out int lines,
        out int error
)
```

Parameters

chip
Type: SystemInt32
GPIO chip number.

name
Type: System.TextStringBuilder
GPIO chip name.

namesize
Type: SystemInt32
Maximum size of name.

label

Type: System.TextStringBuilder
GPIO chip label.

labelsize

Type: SystemInt32
Maximum size of label.

lines

Type: SystemInt32
Number of GPIO lines.

error

Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libGPIOGPIO_close Method

Close a Linux GPIO pin device.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void GPIO_close(
        int fd,
        out int error
)
```

Parameters

fd
Type: SystemInt32
File descriptor.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libGPIOGPIO_configure Method

Configure a Linux GPIO pin.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void GPIO_configure(
        int pin,
        int direction,
        int state,
        int edge,
        int polarity,
        out int error
)
```

Parameters

pin
Type: SystemInt32
Pin number.

direction
Type: SystemInt32
Data direction.

state
Type: SystemInt32
Initial GPIO output state.

edge

Type: SystemInt32
Interrupt edge for input pin.

polarity

Type: SystemInt32
Polarity

error

Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libGPIOGPIO_line_close Method

Close a single GPIO line.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void GPIO_line_close(
        int fd,
        out int error
)
```

Parameters

fd
Type: SystemInt32
Linux file descriptor.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libGPIOGPIO_line_event Method

Read an edge trigger event from single GPIO line.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void GPIO_line_event(
        int fd,
        out int state,
        out int error
)
```

Parameters

fd
Type: SystemInt32
Linux file descriptor.

state
Type: SystemInt32
State of the GPIO line after the edge trigger event.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libGPIO Class

IO.Bindings.libsimpleio Namespace

libGPIOGPIO_line_info Method

Get GPIO line information.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void GPIO_line_info(
        int chip,
        int line,
        StringBuilder name,
        int namesize,
        StringBuilder label,
        int labelsize,
        out int error
)
```

Parameters

chip
Type: SystemInt32
GPIO chip number.

line
Type: SystemInt32
GPIO line number.

name
Type: System.TextStringBuilder
GPIO line name.

namesize

Type: SystemInt32
Maximum size of name.

label

Type: System.TextStringBuilder
GPIO line label.

labelsize

Type: SystemInt32
Maximum size of label.

error

Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libGPIOGPIO_line_open Method

Open a single GPIO line.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void GPIO_line_open(
        int chip,
        int line,
        int flags,
        int events,
        int state,
        out int fd,
        out int error
)
```

Parameters

chip
Type: SystemInt32
GPIO chip number.

line
Type: SystemInt32
GPIO line number.

flags
Type: SystemInt32
GPIO line configuration flags.

events

Type: SystemInt32
GPIO line event flags.

state

Type: SystemInt32
Initial GPIO output state.

fd

Type: SystemInt32
Linux file descriptor.

error

Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libGPIOGPIO_line_read Method

Read the state of a single GPIO line.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void GPIO_line_read(
        int fd,
        out int state,
        out int error
)
```

Parameters

fd
Type: SystemInt32
Linux file descriptor.

state
Type: SystemInt32
State of the GPIO line.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libGPIO Class

IO.Bindings.libsimpleio Namespace

libGPIOGPIO_line_write Method

Write the state of a single GPIO line.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void GPIO_line_write(
        int fd,
        int state,
        out int error
)
```

Parameters

fd
Type: SystemInt32
Linux file descriptor.

state
Type: SystemInt32
State of the GPIO line.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libGPIO Class

IO.Bindings.libsimpleio Namespace

libGPIOGPIO_open Method

Open a Linux GPIO pin device.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void GPIO_open(
        int pin,
        out int fd,
        out int error
)
```

Parameters

pin
Type: SystemInt32
Pin number.

fd
Type: SystemInt32
File descriptor.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libGPIO Class

IO.Bindings.libsimpleio Namespace

libGPIOGPIO_read Method

Read a Linux GPIO pin.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void GPIO_read(
        int fd,
        out int state,
        out int error
)
```

Parameters

fd
Type: SystemInt32
File descriptor.

state
Type: SystemInt32
Pin state.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libGPIO Class

IO.Bindings.libsimpleio Namespace

libGPIOGPIO_write Method

Write a Linux GPIO pin.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void GPIO_write(
        int fd,
        int state,
        out int error
)
```

Parameters

fd
Type: SystemInt32
File descriptor.

state
Type: SystemInt32
Pin state.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libGPIO Class

IO.Bindings.libsimpleio Namespace

libGPIO Fields

The libGPIO type exposes the following members.

Fields

	Name	Description
s	DIRECTION_INPUT	Input data direction.
s	DIRECTION_OUTPUT	Out data direction.
s	DRIVER_OPENDRAIN	Open drain (sink only) output driver.
s	DRIVER_OPENSOURCE	Open source (source only) output driver
s	DRIVER_PUSHPULL	Push-pull (source and sink) output driver.
s	EDGE_BOTH	Interrupt on both edges.
s	EDGE_FALLING	Interrupt on falling edge.
s	EDGE_NONE	Interrupts are

		disabled.
S	EDGE_RISING	Interrupt on rising edge.
S	EVENT_REQUEST_BOTH	Enable GPIO input interrupt on both edges.
S	EVENT_REQUEST_FALLING	Enable GPIO input interrupt on falling edge.
S	EVENT_REQUEST_NONE	Disable GPIO input interrupt.
S	EVENT_REQUEST_RISING	Enable GPIO input interrupt on rising edge.
S	LINE_INFO_ACTIVE_LOW	GPIO line is configured as active low (inverted).
S	LINE_INFO_KERNEL	GPIO line is being used by the kernel.
S	LINE_INFO_OPEN_DRAIN	GPIO line is configured as open drain (current sink only).
S	LINE_INFO_OPEN_SOURCE	GPIO line is

		configured as open source (current source only).
S	LINE_INFO_OUTPUT	GPIO line is configured as an output.
S	LINE_REQUEST_ACTIVE_HIGH	Select GPIO line polarity active high (normal).
S	LINE_REQUEST_ACTIVE_LOW	Select GPIO line polarity active low (inverted).
S	LINE_REQUEST_INPUT	Select GPIO line direction input.
S	LINE_REQUEST_OPEN_DRAIN	Select GPIO line driver open drain (current sink only).
S	LINE_REQUEST_OPEN_SOURCE	Select GPIO line driver open source (current source only).
S	LINE_REQUEST_OUTPUT	Select GPIO line direction output.
S	LINE_REQUEST_PUSH_PULL	Select GPIO line driver push-pull

		(current source and sink).
	POLARITY_ACTIVEHIGH	Active high (normal) polarity.
	POLARITY_ACTIVELOW	Active low (inverted) polarity.

Top

See Also

Reference

libGPIO Class

IO.Bindings.libsimpleio Namespace

libGPIODIRECTION_INPUT Field

Input data direction.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int DIRECTION_INPUT = 0
```

Field Value

Type: Int32

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libGPIODIRECTION_OUTPUT Field

Out data direction.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int DIRECTION_OUTPUT = 1
```

Field Value

Type: Int32

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libGPIODRIVER_OPENDRAIN Field

Open drain (sink only) output driver.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int DRIVER_OPENDRAIN = 1
```

Field Value

Type: Int32

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libGPIODRIVER_OPENSOURCE Field

Open source (source only) output driver

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public const int DRIVER_OPENSOURCE = 2
```

Field Value

Type: Int32

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libGPIODRIVER_PUSHPULL Field

Push-pull (source and sink) output driver.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int DRIVER_PUSHPULL = 0
```

Field Value

Type: Int32

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libGPIOEDGE_BOTH Field

Interrupt on both edges.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int EDGE_BOTH = 3
```

Field Value

Type: Int32

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libGPIOEDGE_FALLING Field

Interrupt on falling edge.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int EDGE_FALLING = 2
```

Field Value

Type: Int32

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libGPIOEDGE_NONE Field

Interrupts are disabled.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int EDGE_NONE = 0
```

Field Value

Type: Int32

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libGPIOEDGE_RISING Field

Interrupt on rising edge.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int EDGE_RISING = 1
```

Field Value

Type: Int32

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libGPIOEVENT_REQUEST_BOTH Field

Enable GPIO input interrupt on both edges.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public const int EVENT_REQUEST_BOTH = 3
```

Field Value

Type: Int32

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libGPIOEVENT_REQUEST_FALLING Field

Enable GPIO input interrupt on falling edge.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public const int EVENT_REQUEST_FALLING = 2
```

Field Value

Type: Int32

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libGPIOEVENT_REQUEST_NONE Field

Disable GPIO input interrupt.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public const int EVENT_REQUEST_NONE = 0
```

Field Value

Type: Int32

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libGPIOEVENT_REQUEST_RISING Field

Enable GPIO input interrupt on rising edge.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int EVENT_REQUEST_RISING = 1
```

Field Value

Type: Int32

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libGPIOLINE_INFO_ACTIVE_LOW Field

GPIO line is configured as active low (inverted).

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int LINE_INFO_ACTIVE_LOW = 4
```

Field Value

Type: Int32

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libGPIOLINE_INFO_KERNEL Field

GPIO line is being used by the kernel.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int LINE_INFO_KERNEL = 1
```

Field Value

Type: Int32

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libGPIOLINE_INFO_OPEN_DRAIN Field

GPIO line is configured as open drain (current sink only).

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public const int LINE_INFO_OPEN_DRAIN = 8
```

Field Value

Type: Int32

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libGPIOLINE_INFO_OPEN_SOURCE Field

GPIO line is configured as open source (current source only).

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public const int LINE_INFO_OPEN_SOURCE = 16
```

Field Value

Type: Int32

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libGPIOLINE_INFO_OUTPUT Field

GPIO line is configured as an output.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int LINE_INFO_OUTPUT = 2
```

Field Value

Type: Int32

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libGPIOLINE_REQUEST_ACTIVE_HIGH Field

Select GPIO line polarity active high (normal).

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public const int LINE_REQUEST_ACTIVE_HIGH = 0
```

Field Value

Type: Int32

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libGPIOLINE_REQUEST_ACTIVE_LOW Field

Select GPIO line polarity active low (inverted).

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int LINE_REQUEST_ACTIVE_LOW = 4
```

Field Value

Type: Int32

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libGPIOLINE_REQUEST_INPUT Field

Select GPIO line direction input.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public const int LINE_REQUEST_INPUT = 1
```

Field Value

Type: Int32

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libGPIOLINE_REQUEST_OPEN_DRAIN Field

Select GPIO line driver open drain (current sink only).

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public const int LINE_REQUEST_OPEN_DRAIN = 8
```

Field Value

Type: Int32

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libGPIOLINE_REQUEST_OPEN_SOURCE Field

Select GPIO line driver open source (current source only).

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public const int LINE_REQUEST_OPEN_SOURCE = 16
```

Field Value

Type: Int32

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libGPIOLINE_REQUEST_OUTPUT Field

Select GPIO line direction output.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public const int LINE_REQUEST_OUTPUT = 2
```

Field Value

Type: Int32

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libGPIOLINE_REQUEST_PUSH_PULL Field

Select GPIO line driver push-pull (current source and sink).

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public const int LINE_REQUEST_PUSH_PULL = 0
```

Field Value

Type: Int32

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libGPIOPOLARITY_ACTIVEHIGH Field

Active high (normal) polarity.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public const int POLARITY_ACTIVEHIGH = 1
```

Field Value

Type: Int32

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libGPIOPOLARITY_ACTIVELOW Field

Active low (inverted) polarity.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int POLARITY_ACTIVELOW = 0
```

Field Value

Type: Int32

See Also

Reference

libGPIO Class
IO.Bindings.libsimpleio Namespace

libHIDRaw Class

Wrapper for libsimpleio raw HID services.

Inheritance Hierarchy

SystemObject IO.Bindings.libsimpleiolibHIDRaw

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class libHIDRaw
```

The libHIDRaw type exposes the following members.

Constructors

	Name	Description
	libHIDRaw	Initializes a new instance of the libHIDRaw class

Top

Methods

	Name	Description
S	HIDRAW_close	Close a Linux raw HID.

	HIDRAW_get_info	Get Linux raw HID bus type, vendor ID, and product ID.
	HIDRAW_get_name	Get Linux raw HID name string.
	HIDRAW_open	Open a Linux raw HID device by device node name.
	HIDRAW_open_id	Open a Linux raw HID device by vendor ID and product ID.
	HIDRAW_receive	Get a 64-byte report from a Linux HID.
	HIDRAW_send	Send a 64-byte report to a Linux HID.

Top

See Also

Reference

IO.Bindings.libsimpleio Namespace

libHIDRaw Constructor

Initializes a new instance of the libHIDRaw class

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public libHIDRaw()
```

See Also

Reference

libHIDRaw Class
IO.Bindings.libsimpleio Namespace

libHIDRaw Methods

The libHIDRaw type exposes the following members.

Methods

	Name	Description
	HIDRAW_close	Close a Linux raw HID.
	HIDRAW_get_info	Get Linux raw HID bus type, vendor ID, and product ID.
	HIDRAW_get_name	Get Linux raw HID name string.
	HIDRAW_open	Open a Linux raw HID device by device node name.
	HIDRAW_open_id	Open a Linux raw HID device by vendor ID and product ID.
	HIDRAW_receive	Get a 64-byte report from a Linux HID.
	HIDRAW_send	Send a 64-byte report to a Linux HID.

Top

See Also

Reference

libHIDRaw Class

IO.Bindings.libsimpleio Namespace

libHIDRawHIDRAW_close Method

Close a Linux raw HID.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void HIDRAW_close(
        int fd,
        out int error
)
```

Parameters

fd
Type: SystemInt32
File descriptor.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libHIDRaw Class
IO.Bindings.libsimpleio Namespace

libHIDRawHIDRAW_get_info Method

Get Linux raw HID bus type, vendor ID, and product ID.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void HIDRAW_get_info(
        int fd,
        out int bustype,
        out int vendor,
        out int product,
        out int error
)
```

Parameters

fd
Type: SystemInt32
File descriptor.

bustype
Type: SystemInt32
Bus type.

vendor
Type: SystemInt32
Vendor ID.

product

Type: SystemInt32
Product ID.

error

Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libHIDRaw Class
IO.Bindings.libsimpleio Namespace

libHIDRawHIDRAW_get_name Method

Get Linux raw HID name string.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void HIDRAW_get_name(
        int fd,
        StringBuilder name,
        int size,
        out int error
)
```

Parameters

fd
Type: SystemInt32
File descriptor.

name
Type: System.TextStringBuilder
Destination buffer.

size
Type: SystemInt32
Size of destination buffer.

error

Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libHIDRaw Class
IO.Bindings.libsimpleio Namespace

libHIDRawHIDRAW_open Method

Open a Linux raw HID device by device node name.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void HIDRAW_open(
        string devname,
        out int fd,
        out int error
)
```

Parameters

devname
Type: SystemString
Device node name.

fd
Type: SystemInt32
Device node name.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libHIDRaw Class

IO.Bindings.libsimpleio Namespace

libHIDRawHIDRAW_open_id Method

Open a Linux raw HID device by vendor ID and product ID.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void HIDRAW_open_id(
        int VID,
        int PID,
        out int fd,
        out int error
)
```

Parameters

VID
Type: SystemInt32
Vendor ID.

PID
Type: SystemInt32
Product ID.

fd
Type: SystemInt32
File descriptor.

error

Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libHIDRaw Class
IO.Bindings.libsimpleio Namespace

libHIDRawHIDRAW_receive Method

Get a 64-byte report from a Linux HID.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void HIDRAW_receive(
        int fd,
        byte[] buf,
        int bufsize,
        out int count,
        out int error
)
```

Parameters

fd
Type: SystemInt32
File descriptor.

buf
Type: SystemByte
Destination buffer.

bufsize
Type: SystemInt32
Destination buffer size.

count

Type: SystemInt32
Number of bytes actually received.

error

Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libHIDRaw Class
IO.Bindings.libsimpleio Namespace

libHIDRawHIDRAW_send Method

Send a 64-byte report to a Linux HID.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void HIDRAW_send(
        int fd,
        byte[] buf,
        int bufsize,
        out int count,
        out int error
)
```

Parameters

fd
Type: SystemInt32
File descriptor.

buf
Type: SystemByte
Source buffer.

bufsize
Type: SystemInt32
Source buffer size.

count
Type: SystemInt32
Number of bytes actually sent.

error

Type: SystemInt32

Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libHIDRaw Class

IO.Bindings.libsimpleio Namespace

libI2C Class

Wrapper for libsimpleio I^{2}C bus controller services.

Inheritance Hierarchy

SystemObject IO.Bindings.libsimpleiolibI2C

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class libI2C
```

The libI2C type exposes the following members.

Constructors

	Name	Description
	libI2C	Initializes a new instance of the libI2C class

Top

Methods

	Name	Description
S	I2C_close	Close a Linux I^{2}C bus controller

		device.
	I2C_open	Open a Linux I^2C bus controller device.
	I2C_transaction	Send bytes to and/or receive bytes from an I^2C slave device.

Top

See Also

Reference

IO.Bindings.libsimpleio Namespace

libI2C Constructor

Initializes a new instance of the libI2C class

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public libI2C()
```

See Also

Reference

libI2C Class
IO.Bindings.libsimpleio Namespace

libI2C Methods

The libI2C type exposes the following members.

Methods

	Name	Description
	I2C_close	Close a Linux I^{2}C bus controller device.
	I2C_open	Open a Linux I^{2}C bus controller device.
	I2C_transaction	Send bytes to and/or receive bytes from an I^{2}C slave device.

Top

See Also

Reference

libI2C Class

IO.Bindings.libsimpleio Namespace

libI2CI2C_close Method

Close a Linux I²C bus controller device.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void I2C_close(
        int fd,
        out int error
)
```

Parameters

fd
Type: SystemInt32
File descriptor.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libI2C Class
IO.Bindings.libsimpleio Namespace

libI2CI2C_open Method

Open a Linux I²C bus controller device.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void I2C_open(
        string devname,
        out int fd,
        out int error
)
```

Parameters

devname
Type: SystemString
Device node name.

fd
Type: SystemInt32
File descriptor.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libI2C Class

IO.Bindings.libsimpleio Namespace

libI2CI2C_transaction Method

Send bytes to and/or receive bytes from an I²C slave device.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void I2C_transaction(
        int fd,
        int slaveaddr,
        byte[] cmd,
        int cmdlen,
        byte[] resp,
        int resplen,
        out int error
)
```

Parameters

fd
Type: SystemInt32
File descriptor.

slaveaddr
Type: SystemInt32
Slave address.

cmd
Type: SystemByte
Source buffer.

cmdlen

Type: SystemInt32
Source buffer size.

resp

Type: SystemByte
Response buffer.

resplen

Type: SystemInt32
Response buffer size.

error

Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libI2C Class
IO.Bindings.libsimpleio Namespace

libIPV4 Class

Wrapper for libsimpleio IPv4 network services.

Inheritance Hierarchy

SystemObject IO.Bindings.libsimpleiolibIPV4

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class libIPV4
```

The libIPV4 type exposes the following members.

Constructors

	Name	Description
	libIPV4	Initializes a new instance of the libIPV4 class

Top

Methods

	Name	Description
S	IPV4_ntoa	Convert an IPv4 address to a

		dotted notation string (*e.g.* 1.2.3.4).
S	IPV4_resolve	Resolve a domain name to an IPv4 host address.
S	TCP4_accept	Start TCP server and wait for a single connection.
S	TCP4_close	Close a TCP connection.
S	TCP4_connect	Connect to a TCP server.
S	TCP4_receive	Receive bytes from TCP peer.
S	TCP4_send	Send bytes to TCP peer.
S	TCP4_server	Start a TCP server and fork for each connection.
S	UDP4_close	Close a UDP socket.
S	UDP4_open	Open a UDP socket.
S	UDP4_receive	Receive a UDP datagram.
S	UDP4_send	Send a UDP datagram.

Top

Fields

	Name	Description
S	INADDR_ANY	IPv4 address for binding to all network interfaces.
S	INADDR_BROADCAST	IPv4 broadcast address.

	INADDR_LOOPBACK	IPv4 address for binding to the loopback interface (aka `localhost`).
	MSG_DONTROUTE	Don't use a gateway to send out the packet, send to hosts only on directly connected networks.
	MSG_DONTWAIT	Enables nonblocking operation; if the operation would block, `EAGAIN` or `EWOULDBLOCK` is returned.
	MSG_MORE	The caller has more data to send. This flag informs the kernel to package all of the data sent in calls with this flag set into a single datagram which is transmitted only when a call is performed that does not specify this flag.

Top

See Also

Reference

IO.Bindings.libsimpleio Namespace

libIPV4 Constructor

Initializes a new instance of the libIPV4 class

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public libIPV4()
```

See Also

Reference

libIPV4 Class
IO.Bindings.libsimpleio Namespace

libIPV4 Methods

The libIPV4 type exposes the following members.

Methods

	Name	Description
	IPV4_ntoa	Convert an IPv4 address to a dotted notation string (*e.g.* 1.2.3.4).
	IPV4_resolve	Resolve a domain name to an IPv4 host address.
	TCP4_accept	Start TCP server and wait for a single connection.
	TCP4_close	Close a TCP connection.
	TCP4_connect	Connect to a TCP server.
	TCP4_receive	Receive bytes from TCP peer.
	TCP4_send	Send bytes to TCP peer.
	TCP4_server	Start a TCP server and fork for each connection.
	UDP4_close	Close a UDP socket.
	UDP4_open	Open a UDP socket.
	UDP4_receive	Receive a UDP datagram.

	UDP4_send	Send a UDP datagram.

Top

See Also

Reference

libIPV4 Class

IO.Bindings.libsimpleio Namespace

libIPV4IPV4_ntoa Method

Convert an IPv4 address to a dotted notation string (*e.g.* 1.2.3.4).

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void IPV4_ntoa(
        int host,
        StringBuilder buf,
        int bufsize,
        out int error
)
```

Parameters

host
Type: SystemInt32
IPv4 host address

buf
Type: System.TextStringBuilder
Destination buffer.

bufsize
Type: SystemInt32
Destination buffer size.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libIPV4 Class

IO.Bindings.libsimpleio Namespace

libIPV4IPV4_resolve Method

Resolve a domain name to an IPv4 host address.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void IPV4_resolve(
        string hostname,
        out int host,
        out int error
)
```

Parameters

hostname
Type: SystemString
Host name to resolve.

host
Type: SystemInt32
IPv4 host address.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libIPV4 Class

IO.Bindings.libsimpleio Namespace

libIPV4TCP4_accept Method

Start TCP server and wait for a single connection.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void TCP4_accept(
        int host,
        int port,
        out int fd,
        out int error
)
```

Parameters

host
Type: SystemInt32
IPv4 address, of the interface to listen on. Use 0.0.0.0 to listen on all interfaces.

port
Type: SystemInt32
TCP port number.

fd
Type: SystemInt32
File descriptor.

error

Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libIPV4 Class
IO.Bindings.libsimpleio Namespace

libIPV4TCP4_close Method

Close a TCP connection.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void TCP4_close(
        int fd,
        out int error
)
```

Parameters

fd
Type: SystemInt32
File descriptor.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libIPV4 Class
IO.Bindings.libsimpleio Namespace

libIPV4TCP4_connect Method

Connect to a TCP server.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void TCP4_connect(
        int host,
        int port,
        out int fd,
        out int error
)
```

Parameters

host
Type: SystemInt32
IPv4 host address.

port
Type: SystemInt32
TCP port number.

fd
Type: SystemInt32
File descriptor.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libIPV4 Class

IO.Bindings.libsimpleio Namespace

libIPV4TCP4_receive Method

Receive bytes from TCP peer.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void TCP4_receive(
        int fd,
        byte[] buf,
        int bufsize,
        out int count,
        out int error
)
```

Parameters

fd
Type: SystemInt32
File descriptor.

buf
Type: SystemByte
Destination buffer.

bufsize
Type: SystemInt32
Destination buffer size.

count
Type: SystemInt32
Number of bytes actually received.

error

Type: SystemInt32

Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libIPV4 Class

IO.Bindings.libsimpleio Namespace

libIPV4TCP4_send Method

Send bytes to TCP peer.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void TCP4_send(
        int fd,
        byte[] buf,
        int bufsize,
        out int count,
        out int error
)
```

Parameters

fd
Type: SystemInt32
File descriptor.

buf
Type: SystemByte
Source buffer.

bufsize
Type: SystemInt32
Source buffer size.

count
Type: SystemInt32
Number of bytes actually sent.

error

Type: SystemInt32

Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libIPV4 Class

IO.Bindings.libsimpleio Namespace

libIPV4TCP4_server Method

Start a TCP server and fork for each connection.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void TCP4_server(
        int host,
        int port,
        out int fd,
        out int error
)
```

Parameters

host
Type: SystemInt32
IPv4 address, of the interface to listen on. Use 0.0.0.0 to listen on all interfaces.

port
Type: SystemInt32
TCP port number.

fd
Type: SystemInt32
File descriptor.

error

Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libIPV4 Class
IO.Bindings.libsimpleio Namespace

libIPV4UDP4_close Method

Close a UDP socket.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void UDP4_close(
        int fd,
        out int error
)
```

Parameters

fd
Type: SystemInt32
File descriptor.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libIPV4 Class
IO.Bindings.libsimpleio Namespace

libIPV4UDP4_open Method

Open a UDP socket.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void UDP4_open(
        int host,
        int port,
        out int fd,
        out int error
)
```

Parameters

host
Type: SystemInt32
IPv4 host address.

port
Type: SystemInt32
UDP port number.

fd
Type: SystemInt32
File descriptor.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libIPV4 Class

IO.Bindings.libsimpleio Namespace

libIPV4UDP4_receive Method

Receive a UDP datagram.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void UDP4_receive(
        int fd,
        out int host,
        out int port,
        byte[] buf,
        int bufsize,
        int flags,
        out int count,
        out int error
)
```

Parameters

fd
Type: SystemInt32
File descriptor.

host
Type: SystemInt32
Source IPv4 host address.

port
Type: SystemInt32
Source UDP port number.

buf

Type: SystemByte

Destination buffer.

bufsize

Type: SystemInt32

Destination buffer size.

flags

Type: SystemInt32

Flags for the Linux `recvfrom()` system call.

count

Type: SystemInt32

Number of bytes actually received.

error

Type: SystemInt32

Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libIPV4 Class

IO.Bindings.libsimpleio Namespace

libIPV4UDP4_send Method

Send a UDP datagram.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void UDP4_send(
        int fd,
        int host,
        int port,
        byte[] buf,
        int bufsize,
        int flags,
        out int count,
        out int error
)
```

Parameters

fd
Type: SystemInt32
File descriptor.

host
Type: SystemInt32
Destination IPv4 host address.

port
Type: SystemInt32
Destination UDP port number.

buf

Type: SystemByte

Source buffer.

bufsize

Type: SystemInt32

Source buffer size.

flags

Type: SystemInt32

Flags for the Linux `sendto()` system call.

count

Type: SystemInt32

Number of bytes actually sent.

error

Type: SystemInt32

Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libIPV4 Class

IO.Bindings.libsimpleio Namespace

libIPV4 Fields

The libIPV4 type exposes the following members.

Fields

	Name	Description
S	INADDR_ANY	IPv4 address for binding to all network interfaces.
S	INADDR_BROADCAST	IPv4 broadcast address.
S	INADDR_LOOPBACK	IPv4 address for binding to the loopback interface (aka `localhost`).
S	MSG_DONTROUTE	Don't use a gateway to send out the packet, send to hosts only on directly connected networks.
S	MSG_DONTWAIT	Enables nonblocking operation; if the operation would block, `EAGAIN` or `EWOULDBLOCK` is returned.
S	MSG_MORE	The caller has more data to send. This flag informs the kernel to package all of the data sent in calls with this

	flag set into a single datagram which is transmitted only when a call is performed that does not specify this flag.

Top

See Also

Reference

libIPV4 Class

IO.Bindings.libsimpleio Namespace

libIPV4INADDR_ANY Field

IPv4 address for binding to all network interfaces.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int INADDR_ANY = 0
```

Field Value

Type: Int32

See Also

Reference

libIPV4 Class
IO.Bindings.libsimpleio Namespace

libIPV4INADDR_BROADCAST Field

IPv4 broadcast address.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public const int INADDR_BROADCAST = -1
```

Field Value

Type: Int32

See Also

Reference

libIPV4 Class
IO.Bindings.libsimpleio Namespace

libIPV4INADDR_LOOPBACK Field

IPv4 address for binding to the loopback interface (aka `localhost`).

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int INADDR_LOOPBACK = 2130706433
```

Field Value

Type: Int32

See Also

Reference

libIPV4 Class
IO.Bindings.libsimpleio Namespace

libIPV4MSG_DONTROUTE Field

Don't use a gateway to send out the packet, send to hosts only on directly connected networks.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public const int MSG_DONTROUTE = 4
```

Field Value

Type: Int32

See Also

Reference

libIPV4 Class
IO.Bindings.libsimpleio Namespace

libIPV4MSG_DONTWAIT Field

Enables nonblocking operation; if the operation would block, `EAGAIN` or `EWOULDBLOCK` is returned.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int MSG_DONTWAIT = 64
```

Field Value

Type: Int32

See Also

Reference

libIPV4 Class
IO.Bindings.libsimpleio Namespace

libIPV4MSG_MORE Field

The caller has more data to send. This flag informs the kernel to package all of the data sent in calls with this flag set into a single datagram which is transmitted only when a call is performed that does not specify this flag.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public const int MSG_MORE = 32768
```

Field Value

Type: Int32

See Also

Reference

libIPV4 Class
IO.Bindings.libsimpleio Namespace

libLinux Class

Wrapper for libsimpleio Linux system call services.

Inheritance Hierarchy

SystemObject IO.Bindings.libsimpleiolibLinux

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class libLinux
```

The libLinux type exposes the following members.

Constructors

	Name	Description
	libLinux	Initializes a new instance of the libLinux class

Top

Methods

	Name	Description
S	LINUX_command	Execute a shell command

		string.
	LINUX_detach	Detach the process and run it in the background.
	LINUX_drop_privileges	Drop process privileges to those of the specified user. **Remarks** Only a process running at superuser privilege is allowed to drop privileges.
	LINUX_errno	Fetch the value of `errno`.
	LINUX_openlog	Open a connection to the `syslog` service.
	LINUX_poll	Wait for an event on one or more files.
	LINUX_strerror	Retrieve the error message for a particular `errno` error code.
	LINUX_syslog	Send a message to the `syslog` service.
	LINUX_usleep	Sleep for the specified number of microseconds.

Top

Fields

	Name	Description
s	LOG_ALERT	Action must be taken immediately.
s	LOG_AUTH	Security/authorization messages.
s	LOG_AUTHPRIV	Securit/authorization messages.
s	LOG_CRIT	Critical condition.
s	LOG_CRON	`cron` daemon messages.
s	LOG_DAEMON	System daemons.
s	LOG_DEBUG	Debug message.
s	LOG_EMERG	System is unusable.
s	LOG_ERR	Error condition.
s	LOG_FTP	`FTP` daemon messages.
s	LOG_INFO	Informational message.
s	LOG_KERN	Kernel messages.
s	LOG_LOCAL0	Reserved for local use.
s	LOG_LOCAL1	Reserved for local use.
s	LOG_LOCAL2	Reserved for local use.
s	LOG_LOCAL3	Reserved for local use.
s	LOG_LOCAL4	Reserved for local use.

s	LOG_LOCAL5	Reserved for local use.
s	LOG_LOCAL6	Reserved for local use.
s	LOG_LOCAL7	Reserved for local use.
s	LOG_LPR	Line printer subsystem
s	LOG_MAIL	Mail system.
s	LOG_NEWS	Network news subsystem
s	LOG_NOTICE	Normal but significant condition.
s	LOG_PROGNAME	Use the program name for the identity string.
s	LOG_SYSLOG	Messages generated internally by syslogd
s	LOG_USER	Random user-level messages.
s	LOG_UUCP	UUCP subsystem
s	LOG_WARNING	Warning condition.
s	POLLERR	An error occurred.
s	POLLHUP	Peer closed connection.
s	POLLIN	There is data to read.
s	POLLNVAL	File descriptor is invalid.
s	POLLOUT	Writing is now possible.

	POLLPRI	There is urgent data to read.

Top

See Also

Reference

IO.Bindings.libsimpleio Namespace

libLinux Constructor

Initializes a new instance of the libLinux class

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public libLinux()
```

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinux Methods

The libLinux type exposes the following members.

Methods

	Name	Description
	LINUX_command	Execute a shell command string.
	LINUX_detach	Detach the process and run it in the background.
	LINUX_drop_privileges	Drop process privileges to those of the specified user. **Remarks** Only a process running at superuser privilege is allowed to drop privileges.
	LINUX_errno	Fetch the value of `errno`.
	LINUX_openlog	Open a connection to the `syslog` service.
	LINUX_poll	Wait for an event on one or more files.

	LINUX_strerror	Retrieve the error message for a particular `errno` error code.
	LINUX_syslog	Send a message to the `syslog` service.
	LINUX_usleep	Sleep for the specified number of microseconds.

Top

See Also

Reference

libLinux Class

IO.Bindings.libsimpleio Namespace

libLinuxLINUX_command Method

Execute a shell command string.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static void LINUX_command(
        string cmd,
        out int error
)
```

Parameters

cmd
Type: SystemString
Command string.

error
Type: SystemInt32
Error code.

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxLINUX_detach Method

Detach the process and run it in the background.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void LINUX_detach(
        out int error
)
```

Parameters

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxLINUX_drop_privileges Method

Drop process privileges to those of the specified user.

Remarks

Only a process running at superuser privilege is allowed to drop privileges.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void LINUX_drop_privileges(
        string username,
        out int error
)
```

Parameters

username
Type: SystemString
User privileges to assume.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libLinux Class

IO.Bindings.libsimpleio Namespace

libLinuxLINUX_errno Method

Fetch the value of `errno`.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static int LINUX_errno()
```

Return Value

Type: Int32
Current value of `errno`.

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxLINUX_openlog Method

Open a connection to the `syslog` service.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void LINUX_openlog(
        string id,
        int options,
        int facility,
        out int error
)
```

Parameters

id
Type: SystemString
Program identifier.

options
Type: SystemInt32
Logging options.

facility
Type: SystemInt32
Logging facility identifier.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libLinux Class

IO.Bindings.libsimpleio Namespace

libLinuxLINUX_poll Method

Wait for an event on one or more files.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void LINUX_poll(
        int numfiles,
        int[] files,
        int[] events,
        int[] results,
        int timeoutms,
        out int error
)
```

Parameters

numfiles
Type: SystemInt32
Number elements in each of the following arrays.

files
Type: SystemInt32
File descriptors.

events
Type: SystemInt32
Events to wait for on each file descriptor.

results

Type: SystemInt32
Events that occurred on each file descriptor.

timeoutms

Type: SystemInt32
Milliseconds to wait for an event to occur. A value of -1 means wait forever and a value of 0 means do not wait at all.

error

Type: SystemInt32
Error code.

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxLINUX_strerror Method

Retrieve the error message for a particular `errno` error code.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void LINUX_strerror(
        int error,
        StringBuilder buf,
        int bufsize
)
```

Parameters

error
Type: SystemInt32
Error code.

buf
Type: System.TextStringBuilder
Destination buffer.

bufsize
Type: SystemInt32
Destination buffer size.

See Also

Reference

libLinux Class

IO.Bindings.libsimpleio Namespace

libLinuxLINUX_syslog Method

Send a message to the `syslog` service.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void LINUX_syslog(
        int priority,
        string msg,
        out int error
)
```

Parameters

priority
Type: SystemInt32
Message priority

msg
Type: SystemString
Message to send.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libLinux Class

IO.Bindings.libsimpleio Namespace

libLinuxLINUX_usleep Method

Sleep for the specified number of microseconds.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public static void LINUX_usleep(
        int microsecs,
        out int error
)
```

Parameters

microsecs
Type: SystemInt32
Number of microseconds to sleep.

error
Type: SystemInt32
Error code.

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinux Fields

The libLinux type exposes the following members.

Fields

	Name	Description
s	LOG_ALERT	Action must be taken immediately.
s	LOG_AUTH	Security/authorization messages.
s	LOG_AUTHPRIV	Securit/authorization messages.
s	LOG_CRIT	Critical condition.
s	LOG_CRON	`cron` daemon messages.
s	LOG_DAEMON	System daemons.
s	LOG_DEBUG	Debug message.
s	LOG_EMERG	System is unusable.
s	LOG_ERR	Error condition.
s	LOG_FTP	`FTP` daemon messages.
s	LOG_INFO	Informational message.
s	LOG_KERN	Kernel messages.

s	LOG_LOCAL0	Reserved for local use.
s	LOG_LOCAL1	Reserved for local use.
s	LOG_LOCAL2	Reserved for local use.
s	LOG_LOCAL3	Reserved for local use.
s	LOG_LOCAL4	Reserved for local use.
s	LOG_LOCAL5	Reserved for local use.
s	LOG_LOCAL6	Reserved for local use.
s	LOG_LOCAL7	Reserved for local use.
s	LOG_LPR	Line printer subsystem
s	LOG_MAIL	Mail system.
s	LOG_NEWS	Network news subsystem
s	LOG_NOTICE	Normal but significant condition.
s	LOG_PROGNAME	Use the program name for the identity string.
s	LOG_SYSLOG	Messages generated internally by syslogd
s	LOG_USER	Random user-level messages.
s	LOG_UUCP	UUCP subsystem
s	LOG_WARNING	Warning condition.

S	POLLERR	An error occurred.
S	POLLHUP	Peer closed connection.
S	POLLIN	There is data to read.
S	POLLNVAL	File descriptor is invalid.
S	POLLOUT	Writing is now possible.
S	POLLPRI	There is urgent data to read.

Top

See Also

Reference

libLinux Class

IO.Bindings.libsimpleio Namespace

libLinuxLOG_ALERT Field

Action must be taken immediately.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int LOG_ALERT = 1
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxLOG_AUTH Field

Security/authorization messages.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int LOG_AUTH = 32
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxLOG_AUTHPRIV Field

Securit/authorization messages.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int LOG_AUTHPRIV = 80
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxLOG_CRIT Field

Critical condition.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int LOG_CRIT = 2
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxLOG_CRON Field

`cron` daemon messages.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int LOG_CRON = 72
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxLOG_DAEMON Field

System daemons.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int LOG_DAEMON = 24
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxLOG_DEBUG Field

Debug message.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int LOG_DEBUG = 7
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxLOG_EMERG Field

System is unusable.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int LOG_EMERG = 0
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxLOG_ERR Field

Error condition.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int LOG_ERR = 3
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxLOG_FTP Field

`FTP` daemon messages.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int LOG_FTP = 88
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxLOG_INFO Field

Informational message.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int LOG_INFO = 6
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxLOG_KERN Field

Kernel messages.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int LOG_KERN = 0
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxLOG_LOCAL0 Field

Reserved for local use.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int LOG_LOCAL0 = 128
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxLOG_LOCAL1 Field

Reserved for local use.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int LOG_LOCAL1 = 136
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxLOG_LOCAL2 Field

Reserved for local use.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int LOG_LOCAL2 = 144
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxLOG_LOCAL3 Field

Reserved for local use.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int LOG_LOCAL3 = 152
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxLOG_LOCAL4 Field

Reserved for local use.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int LOG_LOCAL4 = 160
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxLOG_LOCAL5 Field

Reserved for local use.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int LOG_LOCAL5 = 168
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxLOG_LOCAL6 Field

Reserved for local use.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int LOG_LOCAL6 = 176
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxLOG_LOCAL7 Field

Reserved for local use.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int LOG_LOCAL7 = 184
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxLOG_LPR Field

Line printer subsystem

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int LOG_LPR = 48
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxLOG_MAIL Field

Mail system.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int LOG_MAIL = 16
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxLOG_NEWS Field

Network news subsystem

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int LOG_NEWS = 56
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxLOG_NOTICE Field

Normal but significant condition.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int LOG_NOTICE = 5
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxLOG_PROGNAME Field

Use the program name for the identity string.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const string LOG_PROGNAME = ""
```

Field Value

Type: String

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxLOG_SYSLOG Field

Messages generated internally by syslogd

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public const int LOG_SYSLOG = 40
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxLOG_USER Field

Random user-level messages.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int LOG_USER = 8
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxLOG_UUCP Field

UUCP subsystem

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int LOG_UUCP = 64
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxLOG_WARNING Field

Warning condition.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int LOG_WARNING = 4
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxPOLLERR Field

An error occurred.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int POLLERR = 8
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxPOLLHUP Field

Peer closed connection.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int POLLHUP = 16
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxPOLLIN Field

There is data to read.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int POLLIN = 1
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxPOLLNVAL Field

File descriptor is invalid.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int POLLNVAL = 32
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxPOLLOUT Field

Writing is now possible.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int POLLOUT = 4
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libLinuxPOLLPRI Field

There is urgent data to read.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int POLLPRI = 2
```

Field Value

Type: Int32

See Also

Reference

libLinux Class
IO.Bindings.libsimpleio Namespace

libPWM Class

Wrapper for libsimpleio PWM output services.

Inheritance Hierarchy

SystemObject IO.Bindings.libsimpleiolibPWM

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class libPWM
```

The libPWM type exposes the following members.

Constructors

	Name	Description
	libPWM	Initializes a new instance of the libPWM class

Top

Methods

	Name	Description
S	PWM_close	Close a Linux PWM output

		device.
	PWM_configure	Configure a Linux PWM output device.
	PWM_open	Open a Linux PWM output device.
	PWM_write	Set a Linux PWM output device duty cycle.

Top

Fields

	Name	Description
	ActiveHigh	Configure the PWM output as active high (normal).
	ActiveLow	Configure the PWM output as active low (inverted).

Top

See Also

Reference

IO.Bindings.libsimpleio Namespace

libPWM Constructor

Initializes a new instance of the libPWM class

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public libPWM()
```

See Also

Reference

libPWM Class
IO.Bindings.libsimpleio Namespace

libPWM Methods

The libPWM type exposes the following members.

Methods

	Name	Description
	PWM_close	Close a Linux PWM output device.
	PWM_configure	Configure a Linux PWM output device.
	PWM_open	Open a Linux PWM output device.
	PWM_write	Set a Linux PWM output device duty cycle.

Top

See Also

Reference

libPWM Class

IO.Bindings.libsimpleio Namespace

libPWMPWM_close Method

Close a Linux PWM output device.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void PWM_close(
        int fd,
        out int error
)
```

Parameters

fd
Type: SystemInt32
File descriptor.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libPWM Class
IO.Bindings.libsimpleio Namespace

libPWMPWM_configure Method

Configure a Linux PWM output device.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void PWM_configure(
        int chip,
        int channel,
        int period,
        int ontime,
        int polarity,
        out int error
)
```

Parameters

chip
Type: SystemInt32
Chip number.

channel
Type: SystemInt32
Channel number.

period
Type: SystemInt32
Pulse period in microseconds.

ontime

Type: SystemInt32
Initial on time in microseconds.

polarity

Type: SystemInt32
PWM output polarity (0 for active low/inverted or 1 for active high/normal).

error

Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

Remarks

On many platforms two more more PWM outputs may share the same clock generator, so configuring different PWM pulse periods may not be possible.

Remarks

Not all platforms support active low (inverted) PWM outputs.

See Also

Reference

libPWM Class
IO.Bindings.libsimpleio Namespace

libPWMPWM_open Method

Open a Linux PWM output device.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void PWM_open(
        int chip,
        int channel,
        out int fd,
        out int error
)
```

Parameters

chip
Type: SystemInt32
Chip number.

channel
Type: SystemInt32
Channel number.

fd
Type: SystemInt32
File descriptor.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libPWM Class

IO.Bindings.libsimpleio Namespace

libPWMPWM_write Method

Set a Linux PWM output device duty cycle.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void PWM_write(
        int fd,
        int ontime,
        out int error
)
```

Parameters

fd
Type: SystemInt32
File descriptor.

ontime
Type: SystemInt32
On time in microseconds.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libPWM Class

IO.Bindings.libsimpleio Namespace

libPWM Fields

The libPWM type exposes the following members.

Fields

	Name	Description
	ActiveHigh	Configure the PWM output as active high (normal).
	ActiveLow	Configure the PWM output as active low (inverted).

Top

See Also

Reference

libPWM Class

IO.Bindings.libsimpleio Namespace

libPWMActiveHigh Field

Configure the PWM output as active high (normal).

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int ActiveHigh = 1
```

Field Value

Type: Int32

See Also

Reference

libPWM Class
IO.Bindings.libsimpleio Namespace

libPWMActiveLow Field

Configure the PWM output as active low (inverted).

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int ActiveLow = 0
```

Field Value

Type: Int32

Remarks

Not all platforms support active low (inverted) PWM outputs.

See Also

Reference

libPWM Class
IO.Bindings.libsimpleio Namespace

libSerial Class

Wrapper for libsimpleio serial port services.

Inheritance Hierarchy

SystemObject IO.Bindings.libsimpleiolibSerial

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class libSerial
```

The libSerial type exposes the following members.

Constructors

	Name	Description
	libSerial	Initializes a new instance of the libSerial class

Top

Methods

	Name	Description
S	SERIAL_close	Close a Linux serial port device.

	SERIAL_open	Open a Linux serial port device.
	SERIAL_receive	Receive data from a Linux serial port device.
	SERIAL_send	Send data to a Linux serial port device.

Top

Fields

	Name	Description
	PARITY_EVEN	Request even parity checking.
	PARITY_NONE	Disable parity checking.
	PARITY_ODD	Request odd parity checking.

Top

See Also

Reference

IO.Bindings.libsimpleio Namespace

libSerial Constructor

Initializes a new instance of the libSerial class

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public libSerial()
```

See Also

Reference

libSerial Class
IO.Bindings.libsimpleio Namespace

libSerial Methods

The libSerial type exposes the following members.

Methods

	Name	Description
	SERIAL_close	Close a Linux serial port device.
	SERIAL_open	Open a Linux serial port device.
	SERIAL_receive	Receive data from a Linux serial port device.
	SERIAL_send	Send data to a Linux serial port device.

Top

See Also

Reference

libSerial Class

IO.Bindings.libsimpleio Namespace

libSerialSERIAL_close Method

Close a Linux serial port device.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void SERIAL_close(
        int fd,
        out int error
)
```

Parameters

fd
Type: SystemInt32
File descriptor.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libSerial Class
IO.Bindings.libsimpleio Namespace

libSerialSERIAL_open Method

Open a Linux serial port device.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void SERIAL_open(
        string devname,
        int baudrate,
        int parity,
        int databits,
        int stopbits,
        out int fd,
        out int error
)
```

Parameters

devname
Type: SystemString
Device node name.

baudrate
Type: SystemInt32
Baud rate.

parity
Type: SystemInt32
Parity setting (0 to 2).

databits

Type: SystemInt32
Word size setting (5 to 8).

stopbits

Type: SystemInt32
Number of stop bits (1 or 2).

fd

Type: SystemInt32
File descriptor.

error

Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libSerial Class
IO.Bindings.libsimpleio Namespace

libSerialSERIAL_receive Method

Receive data from a Linux serial port device.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void SERIAL_receive(
        int fd,
        byte[] buf,
        int bufsize,
        out int count,
        out int error
)
```

Parameters

fd
Type: SystemInt32
File descriptor.

buf
Type: SystemByte
Destination buffer.

bufsize
Type: SystemInt32
Destination buffer size.

count
Type: SystemInt32
Number of bytes actually received.

error

Type: SystemInt32

Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libSerial Class

IO.Bindings.libsimpleio Namespace

libSerialSERIAL_send Method

Send data to a Linux serial port device.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void SERIAL_send(
        int fd,
        byte[] buf,
        int bufsize,
        out int count,
        out int error
)
```

Parameters

fd
Type: SystemInt32
File descriptor.

buf
Type: SystemByte
Source buffer.

bufsize
Type: SystemInt32
Source buffer size.

count
Type: SystemInt32
Number of bytes actually sent.

error

Type: SystemInt32

Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libSerial Class

IO.Bindings.libsimpleio Namespace

libSerial Fields

The libSerial type exposes the following members.

Fields

	Name	Description
S	PARITY_EVEN	Request even parity checking.
S	PARITY_NONE	Disable parity checking.
S	PARITY_ODD	Request odd parity checking.

Top

See Also

Reference

libSerial Class

IO.Bindings.libsimpleio Namespace

libSerialPARITY_EVEN Field

Request even parity checking.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int PARITY_EVEN = 1
```

Field Value

Type: Int32

See Also

Reference

libSerial Class
IO.Bindings.libsimpleio Namespace

libSerialPARITY_NONE Field

Disable parity checking.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int PARITY_NONE = 0
```

Field Value

Type: Int32

See Also

Reference

libSerial Class
IO.Bindings.libsimpleio Namespace

libSerialPARITY_ODD Field

Request odd parity checking.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int PARITY_ODD = 2
```

Field Value

Type: Int32

See Also

Reference

libSerial Class
IO.Bindings.libsimpleio Namespace

libSPI Class

Wrapper for libsimpleio SPI device services.

Inheritance Hierarchy

SystemObject IO.Bindings.libsimpleiolibSPI

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class libSPI
```

The libSPI type exposes the following members.

Constructors

	Name	Description
	libSPI	Initializes a new instance of the libSPI class

Top

Methods

	Name	Description
S	SPI_close	Close a Linux SPI device.

	SPI_open	Open a Linux SPI device.
	SPI_transaction	Send bytes to and/or receive bytes from a Linux SPI device.

Top

Fields

	Name	Description
	SPI_AUTO_CS	Use hardware slave select.

Top

See Also

Reference

IO.Bindings.libsimpleio Namespace

libSPI Constructor

Initializes a new instance of the libSPI class

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public libSPI()
```

See Also

Reference

libSPI Class
IO.Bindings.libsimpleio Namespace

libSPI Methods

The libSPI type exposes the following members.

Methods

	Name	Description
	SPI_close	Close a Linux SPI device.
	SPI_open	Open a Linux SPI device.
	SPI_transaction	Send bytes to and/or receive bytes from a Linux SPI device.

Top

See Also

Reference

libSPI Class

IO.Bindings.libsimpleio Namespace

libSPISPI_close Method

Close a Linux SPI device.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void SPI_close(
        int fd,
        out int error
)
```

Parameters

fd
Type: SystemInt32
File descriptor.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libSPI Class
IO.Bindings.libsimpleio Namespace

libSPISPI_open Method

Open a Linux SPI device.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void SPI_open(
        string devname,
        int mode,
        int wordsize,
        int speed,
        out int fd,
        out int error
)
```

Parameters

devname
Type: SystemString
Device node name.

mode
Type: SystemInt32
SPI transfer mode (0 .. 3)

wordsize
Type: SystemInt32
SPI transfer word size (8, 16, or 32).

speed

Type: SystemInt32
SPI transfer speed in Hz.

fd

Type: SystemInt32
File descriptor.

error

Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

Remarks

The Linux kernel create a device nodes for each SPI slave device, of the form `/dev/spidevX.Y` where `X` is the SPI bus controller number and `Y` is the SPI slave select number.

See Also

Reference

libSPI Class
IO.Bindings.libsimpleio Namespace

libSPISPI_transaction Method

Send bytes to and/or receive bytes from a Linux SPI device.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void SPI_transaction(
        int fd,
        int csfd,
        byte[] cmd,
        int cmdlen,
        int delayus,
        byte[] resp,
        int resplen,
        out int error
)
```

Parameters

fd
Type: SystemInt32
File descriptor.

csfd
Type: SystemInt32
Chip select file descriptor.

cmd
Type: SystemByte
Source buffer.

cmdlen

Type: SystemInt32

Source buffer size.

delayus

Type: SystemInt32

Delay in microseconds between the write and read operations.

resp

Type: SystemByte

Destination buffer.

resplen

Type: SystemInt32

Destination buffer size.

error

Type: SystemInt32

Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libSPI Class

IO.Bindings.libsimpleio Namespace

libSPI Fields

The libSPI type exposes the following members.

Fields

	Name	Description
	SPI_AUTO_CS	Use hardware slave select.

Top

See Also

Reference

libSPI Class

IO.Bindings.libsimpleio Namespace

libSPISPI_AUTO_CS Field

Use hardware slave select.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int SPI_AUTO_CS = -1
```

Field Value

Type: Int32

See Also

Reference

libSPI Class
IO.Bindings.libsimpleio Namespace

libStream Class

Wrapper for libsimpleio Stream Framing Protocol services.

Inheritance Hierarchy

SystemObject IO.Bindings.libsimpleiolibStream

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class libStream
```

The libStream type exposes the following members.

Constructors

	Name	Description
	libStream	Initializes a new instance of the libStream class

Top

Methods

	Name	Description
S	STREAM_decode_frame	Decode a frame.

	STREAM_encode_frame	Encode a frame.
	STREAM_receive_frame	Receive an encoded frame.
	STREAM_send_frame	Send an encoded frame.

Top

See Also

Reference

IO.Bindings.libsimpleio Namespace

libStream Constructor

Initializes a new instance of the libStream class

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public libStream()
```

See Also

Reference

libStream Class
IO.Bindings.libsimpleio Namespace

libStream Methods

The libStream type exposes the following members.

Methods

	Name	Description
	STREAM_decode_frame	Decode a frame.
	STREAM_encode_frame	Encode a frame.
	STREAM_receive_frame	Receive an encoded frame.
	STREAM_send_frame	Send an encoded frame.

Top

See Also

Reference

libStream Class

IO.Bindings.libsimpleio Namespace

libStreamSTREAM_decode_frame Method

Decode a frame.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void STREAM_decode_frame(
        byte[] src,
        int srclen,
        byte[] dst,
        int dstsize,
        out int dstlen,
        out int error
)
```

Parameters

src
Type: SystemByte
Source buffer.

srclen
Type: SystemInt32
Source buffer size.

dst
Type: SystemByte
Destination buffer.

dstsize

Type: SystemInt32

Destination buffer size.

dstlen

Type: SystemInt32

Size of decoded frame.

error

Type: SystemInt32

Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libStream Class

IO.Bindings.libsimpleio Namespace

libStreamSTREAM_encode_frame Method

Encode a frame.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void STREAM_encode_frame(
        byte[] src,
        int srclen,
        byte[] dst,
        int dstsize,
        out int dstlen,
        out int error
)
```

Parameters

src
Type: SystemByte
Source buffer.

srclen
Type: SystemInt32
Source buffer size.

dst
Type: SystemByte
Destination buffer.

dstsize

Type: SystemInt32

Destination buffer size.

dstlen

Type: SystemInt32

Size of encoded frame.

error

Type: SystemInt32

Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libStream Class

IO.Bindings.libsimpleio Namespace

libStreamSTREAM_receive_frame Method

Receive an encoded frame.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void STREAM_receive_frame(
        int fd,
        byte[] buf,
        int bufsize,
        out int count,
        out int error
)
```

Parameters

fd
Type: SystemInt32
File descriptior.

buf
Type: SystemByte
Destination buffer.

bufsize
Type: SystemInt32
Destination buffer size.

count

Type: SystemInt32
Number of bytes actually received.

error

Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libStream Class
IO.Bindings.libsimpleio Namespace

libStreamSTREAM_send_frame Method

Send an encoded frame.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void STREAM_send_frame(
        int fd,
        byte[] buf,
        int bufsize,
        out int count,
        out int error
)
```

Parameters

fd
Type: SystemInt32
File descriptor.

buf
Type: SystemByte
Source buffer.

bufsize
Type: SystemInt32
Source buffer size.

count

Type: SystemInt32
Number of bytes actually sent.

error

Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libStream Class
IO.Bindings.libsimpleio Namespace

libWatchdog Class

Wrapper for libsimpleio watchdog timer services.

Inheritance Hierarchy

SystemObject IO.Bindings.libsimpleiolibWatchdog

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class libWatchdog
```

The libWatchdog type exposes the following members.

Constructors

	Name	Description
	libWatchdog	Initializes a new instance of the libWatchdog class

Top

Methods

	Name	Description
S	WATCHDOG_close	Close a Linux watchdog

		timer device.
	WATCHDOG_get_timeout	Query a Linux watchdog timer device.
	WATCHDOG_kick	Reset the watchdog timer.
	WATCHDOG_open	Open a Linux watchdog timer device.
	WATCHDOG_set_timeout	Change the watchdog timer period.

Top

See Also

Reference

IO.Bindings.libsimpleio Namespace

libWatchdog Constructor

Initializes a new instance of the libWatchdog class

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public libWatchdog()
```

See Also

Reference

libWatchdog Class
IO.Bindings.libsimpleio Namespace

libWatchdog Methods

The libWatchdog type exposes the following members.

Methods

	Name	Description
	WATCHDOG_close	Close a Linux watchdog timer device.
	WATCHDOG_get_timeout	Query a Linux watchdog timer device.
	WATCHDOG_kick	Reset the watchdog timer.
	WATCHDOG_open	Open a Linux watchdog timer device.
	WATCHDOG_set_timeout	Change the watchdog timer period.

Top

See Also

Reference

libWatchdog Class
IO.Bindings.libsimpleio Namespace

libWatchdogWATCHDOG_close Method

Close a Linux watchdog timer device.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void WATCHDOG_close(
        int fd,
        out int error
)
```

Parameters

fd
Type: SystemInt32
File descriptor.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libWatchdog Class
IO.Bindings.libsimpleio Namespace

libWatchdogWATCHDOG_get_timeout Method

Query a Linux watchdog timer device.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void WATCHDOG_get_timeout(
        int fd,
        out int timeout,
        out int error
)
```

Parameters

fd
Type: SystemInt32
File descriptor.

timeout
Type: SystemInt32
Timeout period in seconds.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libWatchdog Class
IO.Bindings.libsimpleio Namespace

libWatchdogWATCHDOG_kick Method

Reset the watchdog timer.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void WATCHDOG_kick(
        int fd,
        out int error
)
```

Parameters

fd
Type: SystemInt32
File descriptor.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libWatchdog Class
IO.Bindings.libsimpleio Namespace

libWatchdogWATCHDOG_open Method

Open a Linux watchdog timer device.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void WATCHDOG_open(
        string devname,
        out int fd,
        out int error
)
```

Parameters

devname
Type: SystemString
Device node name.

fd
Type: SystemInt32
File descriptor.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

See Also

Reference

libWatchdog Class

IO.Bindings.libsimpleio Namespace

libWatchdogWATCHDOG_set_timeout Method

Change the watchdog timer period.

Namespace: IO.Bindings.libsimpleio
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static void WATCHDOG_set_timeout(
        int fd,
        int newtimeout,
        out int timeout,
        out int error
)
```

Parameters

fd
Type: SystemInt32
File descriptor.

newtimeout
Type: SystemInt32
Requested timeout period in seconds.

timeout
Type: SystemInt32
Actual timeout period in seconds.

error
Type: SystemInt32
Error code. Zero upon success or an `errno` value upon failure.

Remarks

Not all platforms allow changing the timeout period. Some platforms may not allow *increasing* the period.

See Also

Reference

libWatchdog Class

IO.Bindings.libsimpleio Namespace

IO.Devices.AD5593R Namespace

AD5593 Analog/Digital I/O Device Services.

Classes

	Class	Description
	Device	Enscapsulates the AD5593R I^2C Analog/Digital I/O device.

Enumerations

	Enumeration	Description
	PinMode	AD5593R I/O Pin Modes.
	ReferenceMode	ADC5593R ADC and DAC reference settings.

Device Class

Enscapsulates the AD5593R I^{2}C Analog/Digital I/O device.

Inheritance Hierarchy

SystemObject IO.Devices.AD5593RDevice

Namespace: IO.Devices.AD5593R
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Device
```

The Device type exposes the following members.

Constructors

	Name	Description
	Device	Constructor for a single AD5593R device.

Top

Properties

	Name	Description
	ADC_Reference	Write-only property for setting the AD5593R ADC reference

		mode.
	DAC_Reference	Write-only property for setting the AD5593R DAC reference mode.
	GPIO_Inputs	GPIO input register state. Any I/O pin that is not configured as a GPIO input will read as zero.
	GPIO_Outputs	GPIO output register state. Any I/O pin that is not configured as a GPIO output will be written as zero.

Top

Methods

	Name	Description
	ADC_Create	Create an AD5593R ADC input object.
	ConfigureChannel	Configure a single ADC5593R I/O pin.
	DAC_Create	Create an AD5593R DAC output object.
	GPIO_Create	Create an AD5593R GPIO pin object.
	Read_ADC	Read from an ADC channel.
	Write_DAC	Write to a DAC channel.

Top

Fields

	Name	Description
S	ADC_Resolution	ADC resolution in bits.
S	DAC_Resolution	DAC resolution in bits.
S	MaxChannel	Maximum I/O channel number.
S	MinChannel	Minimum I/O channel number.

Top

See Also

Reference

IO.Devices.AD5593R Namespace

Device Constructor

Constructor for a single AD5593R device.

Namespace: IO.Devices.AD5593R
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public Device(
        Bus bus,
        int addr
)
```

Parameters

bus
Type: IO.Interfaces.I2CBus
I^2C bus controller object.

addr
Type: SystemInt32
I^2C slave address.

See Also

Reference

Device Class
IO.Devices.AD5593R Namespace

Device Properties

The Device type exposes the following members.

Properties

	Name	Description
	ADC_Reference	Write-only property for setting the AD5593R ADC reference mode.
	DAC_Reference	Write-only property for setting the AD5593R DAC reference mode.
	GPIO_Inputs	GPIO input register state. Any I/O pin that is not configured as a GPIO input will read as zero.
	GPIO_Outputs	GPIO output register state. Any I/O pin that is not configured as a GPIO output will be written as zero.

Top

See Also

Reference

Device Class

IO.Devices.AD5593R Namespace

DeviceADC_Reference Property

Write-only property for setting the AD5593R ADC reference mode.

Namespace: IO.Devices.AD5593R
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public ReferenceMode ADC_Reference { set; }
```

Property Value

Type: ReferenceMode

See Also

Reference

Device Class
IO.Devices.AD5593R Namespace

DeviceDAC_Reference Property

Write-only property for setting the AD5593R DAC reference mode.

Namespace: IO.Devices.AD5593R
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public ReferenceMode DAC_Reference { set; }
```

Property Value

Type: ReferenceMode

See Also

Reference

Device Class
IO.Devices.AD5593R Namespace

DeviceGPIO_Inputs Property

GPIO input register state. Any I/O pin that is not configured as a GPIO input will read as zero.

Namespace: IO.Devices.AD5593R
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public byte GPIO_Inputs { get; }
```

Property Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.AD5593R Namespace

DeviceGPIO_Outputs Property

GPIO output register state. Any I/O pin that is not configured as a GPIO output will be written as zero.

Namespace: IO.Devices.AD5593R
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public byte GPIO_Outputs { get; set; }
```

Property Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.AD5593R Namespace

Device Methods

The Device type exposes the following members.

Methods

	Name	Description
	ADC_Create	Create an AD5593R ADC input object.
	ConfigureChannel	Configure a single ADC5593R I/O pin.
	DAC_Create	Create an AD5593R DAC output object.
	GPIO_Create	Create an AD5593R GPIO pin object.
	Read_ADC	Read from an ADC channel.
	Write_DAC	Write to a DAC channel.

Top

See Also

Reference

Device Class

IO.Devices.AD5593R Namespace

DeviceADC_Create Method

Create an AD5593R ADC input object.

Namespace: IO.Devices.AD5593R
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Sample ADC_Create(
        int channel
)
```

Parameters

channel
Type: SystemInt32
AD5593R ADC channel number (0 to 7).

Return Value

Type: Sample
ADC input object.

See Also

Reference

Device Class
IO.Devices.AD5593R Namespace

DeviceConfigureChannel Method

Configure a single ADC5593R I/O pin.

Namespace: IO.Devices.AD5593R
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public void ConfigureChannel(
        int channel,
        PinMode mode
)
```

Parameters

channel
Type: SystemInt32
ADC5593R I/O channel number (0 to 7).

mode
Type: IO.Devices.AD5593RPinMode
ADC5593R I/O pin mode.

See Also

Reference

Device Class
IO.Devices.AD5593R Namespace

DeviceDAC_Create Method

Create an AD5593R DAC output object.

Namespace: IO.Devices.AD5593R
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public Sample DAC_Create(
        int channel,
        int sample = 0
)
```

Parameters

channel
Type: SystemInt32
AD5593R DAC channel number (0 to 7).

sample **(Optional)**
Type: SystemInt32
Initial DAC output sample.

Return Value

Type: Sample
DAC output object.

See Also

Reference

Device Class

IO.Devices.AD5593R Namespace

DeviceGPIO_Create Method

Create an AD5593R GPIO pin object.

Namespace: IO.Devices.AD5593R
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Pin GPIO_Create(
        int channel,
        Direction dir,
        bool state = false
)
```

Parameters

channel
Type: SystemInt32
AD5593R GPIO channel number (0 to 7).

dir
Type: IO.Interfaces.GPIODirection
GPIO pin data direction.

state **(Optional)**
Type: SystemBoolean
Initial GPIO output state.

Return Value

Type: Pin
GPIO pin object.

See Also

Reference

Device Class

IO.Devices.AD5593R Namespace

DeviceRead_ADC Method

Read from an ADC channel.

Namespace: IO.Devices.AD5593R
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public int Read_ADC(
        int channel
)
```

Parameters

channel
Type: SystemInt32
ADC channel number (0 to 7).

Return Value

Type: Int32
ADC input sample data (0 to 4095).

See Also

Reference

Device Class
IO.Devices.AD5593R Namespace

DeviceWrite_DAC Method

Write to a DAC channel.

Namespace: IO.Devices.AD5593R
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public void Write_DAC(
        int channel,
        int data
)
```

Parameters

channel
Type: SystemInt32
DAC channel number (0 to 7).

data
Type: SystemInt32
DAC output sample data (0 to 4095).

See Also

Reference

Device Class
IO.Devices.AD5593R Namespace

Device Fields

The Device type exposes the following members.

Fields

	Name	Description
S	ADC_Resolution	ADC resolution in bits.
S	DAC_Resolution	DAC resolution in bits.
S	MaxChannel	Maximum I/O channel number.
S	MinChannel	Minimum I/O channel number.

Top

See Also

Reference

Device Class

IO.Devices.AD5593R Namespace

DeviceADC_Resolution Field

ADC resolution in bits.

Namespace: IO.Devices.AD5593R
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int ADC_Resolution = 12
```

Field Value

Type: Int32

See Also

Reference

Device Class
IO.Devices.AD5593R Namespace

DeviceDAC_Resolution Field

DAC resolution in bits.

Namespace: IO.Devices.AD5593R
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int DAC_Resolution = 12
```

Field Value

Type: Int32

See Also

Reference

Device Class
IO.Devices.AD5593R Namespace

DeviceMaxChannel Field

Maximum I/O channel number.

Namespace: IO.Devices.AD5593R
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int MaxChannel = 7
```

Field Value

Type: Int32

See Also

Reference

Device Class
IO.Devices.AD5593R Namespace

DeviceMinChannel Field

Minimum I/O channel number.

Namespace: IO.Devices.AD5593R
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int MinChannel = 0
```

Field Value

Type: Int32

See Also

Reference

Device Class
IO.Devices.AD5593R Namespace

PinMode Enumeration

AD5593R I/O Pin Modes.

Namespace: IO.Devices.AD5593R
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public enum PinMode
```

Members

Member name	Value	Description
ADC_Input	0	Analog input.
DAC_Output	1	Analog output.
GPIO_Input	2	GPIO input.
GPIO_Output	3	GPIO output.
GPIO_Output_OpenDrain	4	GPIO open drain output.

See Also

Reference

IO.Devices.AD5593R Namespace

ReferenceMode Enumeration

ADC5593R ADC and DAC reference settings.

Namespace: IO.Devices.AD5593R
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public enum ReferenceMode
```

Members

	Member name	Value	Description
	Internalx1	0	The reference voltage is 2.5V using the internal reference.
	Internalx2	1	The reference voltage is 5.0V using the internal reference.
	Externalx1	2	The reference voltage is 1.0*Vref, using an external reference.
	Externalx2	3	The reference voltage is 2.0*Vref, using an external reference.

See Also

Reference

IO.Devices.AD5593R Namespace

IO.Devices.AD5593R.ADC Namespace

AD5593 Analog/Digital I/O Device ADC Input Services.

Classes

	Class	Description
	Sample	Encapsulates AD5593R ADC inputs.

Sample Class

Encapsulates AD5593R ADC inputs.

Inheritance Hierarchy

SystemObject IO.Devices.AD5593R.ADCSample

Namespace: IO.Devices.AD5593R.ADC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Sample : Sample
```

The Sample type exposes the following members.

Constructors

	Name	Description
	Sample	Create an AD5593R ADC input.

Top

Properties

	Name	Description
	resolution	Read-only property returning the number of bits of resolution.

	sample	Read-only property returning an integer analog sample value.

Top

See Also

Reference

IO.Devices.AD5593R.ADC Namespace

Sample Constructor

Create an AD5593R ADC input.

Namespace: IO.Devices.AD5593R.ADC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public Sample(
        Device dev,
        int channel
)
```

Parameters

dev
Type: IO.Devices.AD5593RDevice
AD5593R device object.

channel
Type: SystemInt32
AD5593R I/O channel number (0 to 7).

See Also

Reference

Sample Class
IO.Devices.AD5593R.ADC Namespace

Sample Properties

The Sample type exposes the following members.

Properties

	Name	Description
	resolution	Read-only property returning the number of bits of resolution.
	sample	Read-only property returning an integer analog sample value.

Top

See Also

Reference

Sample Class

IO.Devices.AD5593R.ADC Namespace

Sampleresolution Property

Read-only property returning the number of bits of resolution.

Namespace: IO.Devices.AD5593R.ADC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public int resolution { get; }
```

Property Value

Type: Int32

Implements

Sampleresolution

See Also

Reference

Sample Class
IO.Devices.AD5593R.ADC Namespace

Samplesample Property

Read-only property returning an integer analog sample value.

Namespace: IO.Devices.AD5593R.ADC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public int sample { get; }
```

Property Value

Type: Int32

Implements

Samplesample

See Also

Reference

Sample Class
IO.Devices.AD5593R.ADC Namespace

IO.Devices.AD5593R.DAC Namespace

AD5593 Analog/Digital I/O Device DAC Output Services.

Classes

	Class	Description
	Sample	Encapsulates AD5593R DAC outputs.

Sample Class

Encapsulates AD5593R DAC outputs.

Inheritance Hierarchy

SystemObject IO.Devices.AD5593R.DACSample

Namespace: IO.Devices.AD5593R.DAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Sample : Sample
```

The Sample type exposes the following members.

Constructors

	Name	Description
	Sample	Create an AD5593R DAC output.

Top

Properties

	Name	Description
	resolution	Read-only property returning the number of bits of resolution.

	sample	Write-only property for writing an integer analog sample to a DAC output.

Top

See Also

Reference

IO.Devices.AD5593R.DAC Namespace

Sample Constructor

Create an AD5593R DAC output.

Namespace: IO.Devices.AD5593R.DAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public Sample(
        Device dev,
        int channel,
        int sample = 0
)
```

Parameters

dev
Type: IO.Devices.AD5593RDevice
AD5593R device object.

channel
Type: SystemInt32
AD5593R I/O channel number (0 to 7).

sample **(Optional)**
Type: SystemInt32
Initial DAC output sample.

See Also

Reference

Sample Class

IO.Devices.AD5593R.DAC Namespace

Sample Properties

The Sample type exposes the following members.

Properties

	Name	Description
	resolution	Read-only property returning the number of bits of resolution.
	sample	Write-only property for writing an integer analog sample to a DAC output.

Top

See Also

Reference

Sample Class

IO.Devices.AD5593R.DAC Namespace

Sampleresolution Property

Read-only property returning the number of bits of resolution.

Namespace: IO.Devices.AD5593R.DAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public int resolution { get; }
```

Property Value

Type: Int32

Implements

Sampleresolution

See Also

Reference

Sample Class
IO.Devices.AD5593R.DAC Namespace

Samplesample Property

Write-only property for writing an integer analog sample to a DAC output.

Namespace: IO.Devices.AD5593R.DAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public int sample { set; }
```

Property Value

Type: Int32

Implements

Samplesample

See Also

Reference

Sample Class
IO.Devices.AD5593R.DAC Namespace

IO.Devices.AD5593R.GPIO Namespace

AD5593 Analog/Digital I/O Device GPIO Pin Services.

Classes

	Class	Description
	Pin	Encapsulates AD5593R GPIO pins.

Pin Class

Encapsulates AD5593R GPIO pins.

Inheritance Hierarchy

SystemObject IO.Devices.AD5593R.GPIOPin

Namespace: IO.Devices.AD5593R.GPIO
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Pin : Pin
```

The Pin type exposes the following members.

Constructors

	Name	Description
	Pin	Create an AD5593R GPIO pin.

Top

Properties

	Name	Description
	state	Read/Write GPIO state property.

Top

See Also

Reference

IO.Devices.AD5593R.GPIO Namespace

Pin Constructor

Create an AD5593R GPIO pin.

Namespace: IO.Devices.AD5593R.GPIO
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Pin(
        Device dev,
        int channel,
        Direction dir,
        bool state = false
)
```

Parameters

dev
Type: IO.Devices.AD5593RDevice
AD5593R device object.

channel
Type: SystemInt32
AD5593R I/O channel number (0 to 7).

dir
Type: IO.Interfaces.GPIODirection
GPIO pin data direction.

state **(Optional)**
Type: SystemBoolean
Initial GPIO output state.

See Also

Reference

Pin Class

IO.Devices.AD5593R.GPIO Namespace

Pin Properties

The Pin type exposes the following members.

Properties

	Name	Description
	state	Read/Write GPIO state property.

Top

See Also

Reference

Pin Class

IO.Devices.AD5593R.GPIO Namespace

Pinstate Property

Read/Write GPIO state property.

Namespace: IO.Devices.AD5593R.GPIO
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public bool state { get; set; }
```

Property Value

Type: Boolean

Implements

Pinstate

See Also

Reference

Pin Class
IO.Devices.AD5593R.GPIO Namespace

IO.Devices.ADC121C021 Namespace

ADC121C021 I^2C A/D Converter Services

Classes

	Class	Description
	Sample	Encapsulates the ADC121C021 I^2C A/D converter.

Sample Class

Encapsulates the ADC121C021 I^{2}C A/D converter.

Inheritance Hierarchy

SystemObject IO.Devices.ADC121C021Sample

Namespace: IO.Devices.ADC121C021
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Sample : Sample
```

The Sample type exposes the following members.

Constructors

	Name	Description
	Sample	Constructor for an ADC121C021 analog input.

Top

Properties

	Name	Description
	resolution	Return the number of bits of A/D

		resolution.
	sample	Returns a single 12-bit analog sample.

Top

See Also

Reference

IO.Devices.ADC121C021 Namespace

Sample Constructor

Constructor for an ADC121C021 analog input.

Namespace: IO.Devices.ADC121C021
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public Sample(
        Bus bus,
        byte addr
)
```

Parameters

bus
Type: IO.Interfaces.I2CBus
I^2C bus controller.

addr
Type: SystemByte
I^2C slave address.

See Also

Reference

Sample Class
IO.Devices.ADC121C021 Namespace

Sample Properties

The Sample type exposes the following members.

Properties

	Name	Description
	resolution	Return the number of bits of A/D resolution.
	sample	Returns a single 12-bit analog sample.

Top

See Also

Reference

Sample Class

IO.Devices.ADC121C021 Namespace

Sampleresolution Property

Return the number of bits of A/D resolution.

Namespace: IO.Devices.ADC121C021
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public int resolution { get; }
```

Property Value

Type: Int32

Implements

Sampleresolution

See Also

Reference

Sample Class
IO.Devices.ADC121C021 Namespace

Samplesample Property

Returns a single 12-bit analog sample.

Namespace: IO.Devices.ADC121C021
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public int sample { get; }
```

Property Value

Type: Int32

Implements

Samplesample

See Also

Reference

Sample Class
IO.Devices.ADC121C021 Namespace

IO.Devices.ClickBoards.RemoteIO.ADAC Namespace

Mikroelektronika ADAC Click MIKROE-2690 Services

Classes

	Class	Description
	Board	Encapsulates the Mikroelektronika ADAC Click Board. MIKROE-2690.

Board Class

Encapsulates the Mikroelektronika ADAC Click Board. MIKROE-2690.

Inheritance Hierarchy

SystemObject IO.Devices.ClickBoards.RemoteIO.ADACBoard

Namespace: IO.Devices.ClickBoards.RemoteIO.ADAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Board
```

The Board type exposes the following members.

Constructors

	Name	Description
	Board	Constructor for a single ADAC click.

Top

Properties

	Name	Description
	device	Returns the underlying AD5593R device object.

Top

Methods

	Name	Description
	ADC	Factory function for creating ADC inputs.
	DAC	Factory function for creating DAC outputs.
	GPIO	Factory function for creating GPIO pins.
	Reset	Issue hardware reset to the AD5593R.

Top

Fields

	Name	Description
S	DefaultAddress	Default I^2C slave address.

Top

See Also

Reference

IO.Devices.ClickBoards.RemoteIO.ADAC Namespace

Board Constructor

Constructor for a single ADAC click.

Namespace: IO.Devices.ClickBoards.RemoteIO.ADAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Board(
        int socknum,
        int addr = 16,
        Device remdev = null
)
```

Parameters

socknum
Type: SystemInt32
mikroBUS socket number.

addr **(Optional)**
Type: SystemInt32
I^2C slave address.

remdev **(Optional)**
Type: IO.RemoteDevice
Remote I/O server device object.

See Also

Reference

Board Class

IO.Devices.ClickBoards.RemoteIO.ADAC Namespace

Board Properties

The Board type exposes the following members.

Properties

	Name	Description
	device	Returns the underlying AD5593R device object.

Top

See Also

Reference

Board Class

IO.Devices.ClickBoards.RemoteIO.ADAC Namespace

Boarddevice Property

Returns the underlying AD5593R device object.

Namespace: IO.Devices.ClickBoards.RemoteIO.ADAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public Device device { get; }
```

Property Value

Type: Device

See Also

Reference

Board Class
IO.Devices.ClickBoards.RemoteIO.ADAC Namespace

Board Methods

The Board type exposes the following members.

Methods

	Name	Description
	ADC	Factory function for creating ADC inputs.
	DAC	Factory function for creating DAC outputs.
	GPIO	Factory function for creating GPIO pins.
	Reset	Issue hardware reset to the AD5593R.

Top

See Also

Reference

Board Class

IO.Devices.ClickBoards.RemoteIO.ADAC Namespace

BoardADC Method

Factory function for creating ADC inputs.

Namespace: IO.Devices.ClickBoards.RemoteIO.ADAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public Sample ADC(
        int channel
)
```

Parameters

channel
Type: SystemInt32
AD5593R I/O channel number (0 to 7).

Return Value

Type: Sample
ADC input object.

See Also

Reference

Board Class
IO.Devices.ClickBoards.RemoteIO.ADAC Namespace

BoardDAC Method

Factory function for creating DAC outputs.

Namespace: IO.Devices.ClickBoards.RemoteIO.ADAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public Sample DAC(
        int channel,
        int sample = 0
)
```

Parameters

channel
Type: SystemInt32
AD5593R I/O channel number (0 to 7).

sample **(Optional)**
Type: SystemInt32
Initial DAC output sample.

Return Value

Type: Sample
DAC output object.

See Also

Reference

Board Class

IO.Devices.ClickBoards.RemoteIO.ADAC Namespace

BoardGPIO Method

Factory function for creating GPIO pins.

Namespace: IO.Devices.ClickBoards.RemoteIO.ADAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public Pin GPIO(
        int channel,
        Direction dir,
        bool state = false
)
```

Parameters

channel
Type: SystemInt32
AD5593R I/O channel number (0 to 7).

dir
Type: IO.Interfaces.GPIODirection
GPIO pin direction.

state **(Optional)**
Type: SystemBoolean
Initial GPIO output state.

Return Value

Type: Pin
GPIO pin object.

See Also

Reference

Board Class

IO.Devices.ClickBoards.RemoteIO.ADAC Namespace

BoardReset Method

Issue hardware reset to the AD5593R.

Namespace: IO.Devices.ClickBoards.RemoteIO.ADAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public void Reset()
```

See Also

Reference

Board Class
IO.Devices.ClickBoards.RemoteIO.ADAC Namespace

Board Fields

The Board type exposes the following members.

Fields

	Name	Description
	DefaultAddress	Default I^2C slave address.

Top

See Also

Reference

Board Class

IO.Devices.ClickBoards.RemoteIO.ADAC Namespace

BoardDefaultAddress Field

Default I^{2}C slave address.

Namespace: IO.Devices.ClickBoards.RemoteIO.ADAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const byte DefaultAddress = 16
```

Field Value

Type: Byte

See Also

Reference

Board Class
IO.Devices.ClickBoards.RemoteIO.ADAC Namespace

IO.Devices.ClickBoards.RemoteIO.Expand Namespace

Mikroelektronika Expand Click MIKROE-951 Services

Classes

	Class	Description
	Board	Encapsulates the Mikroelektronika Expand Click Board.

Board Class

Encapsulates the Mikroelektronika Expand Click Board.

Inheritance Hierarchy

SystemObject IO.Devices.ClickBoards.RemoteIO.ExpandBoard

Namespace: IO.Devices.ClickBoards.RemoteIO.Expand
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Board
```

The Board type exposes the following members.

Constructors

	Name	Description
	Board	Constructor for a single Expand click.

Top

Properties

	Name	Description
	device	Returns the underlying MCP23S17 device object.

Top

Methods

	Name	Description
	GPIO	Factory function for creating GPIO pins.
	Reset	Issue hardware reset to the MCP23S17.

Top

See Also

Reference

IO.Devices.ClickBoards.RemoteIO.Expand Namespace

Board Constructor

Constructor for a single Expand click.

Namespace: IO.Devices.ClickBoards.RemoteIO.Expand
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public Board(
        int socknum,
        Device remdev = null
)
```

Parameters

socknum
Type: SystemInt32
mikroBUS socket number.

remdev **(Optional)**
Type: IO.RemoteDevice
Remote I/O server device object.

See Also

Reference

Board Class
IO.Devices.ClickBoards.RemoteIO.Expand Namespace

Board Properties

The Board type exposes the following members.

Properties

	Name	Description
	device	Returns the underlying MCP23S17 device object.

Top

See Also

Reference

Board Class

IO.Devices.ClickBoards.RemoteIO.Expand Namespace

Boarddevice Property

Returns the underlying MCP23S17 device object.

Namespace: IO.Devices.ClickBoards.RemoteIO.Expand
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public Device device { get; }
```

Property Value

Type: Device

See Also

Reference

Board Class
IO.Devices.ClickBoards.RemoteIO.Expand Namespace

Board Methods

The Board type exposes the following members.

Methods

	Name	Description
	GPIO	Factory function for creating GPIO pins.
	Reset	Issue hardware reset to the MCP23S17.

Top

See Also

Reference

Board Class

IO.Devices.ClickBoards.RemoteIO.Expand Namespace

BoardGPIO Method

Factory function for creating GPIO pins.

Namespace: IO.Devices.ClickBoards.RemoteIO.Expand
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Pin GPIO(
        int channel,
        Direction dir,
        bool state = false
)
```

Parameters

channel
Type: SystemInt32
MCP23S17 channel number (0 to 15).

dir
Type: IO.Interfaces.GPIODirection
GPIO pin direction.

state **(Optional)**
Type: SystemBoolean
Initial GPIO output state.

Return Value

Type: Pin
GPIO pin object.

See Also

Reference

Board Class

IO.Devices.ClickBoards.RemoteIO.Expand Namespace

BoardReset Method

Issue hardware reset to the MCP23S17.

Namespace: IO.Devices.ClickBoards.RemoteIO.Expand
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public void Reset()
```

See Also

Reference

Board Class
IO.Devices.ClickBoards.RemoteIO.Expand Namespace

IO.Devices.ClickBoards.RemoteIO.Expand2 Namespace

Mikroelektronika Expand 2 Click MIKROE-1838 Services

Classes

	Class	Description
	Board	Encapsulates the Mikroelektronika Expand 2 Click Board.

Board Class

Encapsulates the Mikroelektronika Expand 2 Click Board.

Inheritance Hierarchy

SystemObject IO.Devices.ClickBoards.RemoteIO.Expand2Board

Namespace: IO.Devices.ClickBoards.RemoteIO.Expand2
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Board
```

The Board type exposes the following members.

Constructors

	Name	Description
	Board	Constructor for a single Expand 2 click.

Top

Properties

	Name	Description
	device	Returns the underlying MCP23017 device object.

Top

Methods

	Name	Description
	GPIO	Factory function for creating GPIO pins.
	Reset	Issue hardware reset to the MCP23017.

Top

Fields

	Name	Description
S	DefaultAddress	Default I^2C slave address.

Top

See Also

Reference

IO.Devices.ClickBoards.RemoteIO.Expand2 Namespace

Board Constructor

Constructor for a single Expand 2 click.

Namespace: IO.Devices.ClickBoards.RemoteIO.Expand2
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Board(
        int socknum,
        int addr = 32,
        Device remdev = null
)
```

Parameters

socknum
Type: SystemInt32
mikroBUS socket number.

addr **(Optional)**
Type: SystemInt32
I^2C slave address.

remdev **(Optional)**
Type: IO.RemoteDevice
Remote I/O server device object.

See Also

Reference

Board Class

IO.Devices.ClickBoards.RemoteIO.Expand2 Namespace

Board Properties

The Board type exposes the following members.

Properties

	Name	Description
	device	Returns the underlying MCP23017 device object.

Top

See Also

Reference

Board Class

IO.Devices.ClickBoards.RemoteIO.Expand2 Namespace

Boarddevice Property

Returns the underlying MCP23017 device object.

Namespace: IO.Devices.ClickBoards.RemoteIO.Expand2
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public Device device { get; }
```

Property Value

Type: Device

See Also

Reference

Board Class
IO.Devices.ClickBoards.RemoteIO.Expand2 Namespace

Board Methods

The Board type exposes the following members.

Methods

	Name	Description
	GPIO	Factory function for creating GPIO pins.
	Reset	Issue hardware reset to the MCP23017.

Top

See Also

Reference

Board Class

IO.Devices.ClickBoards.RemoteIO.Expand2 Namespace

BoardGPIO Method

Factory function for creating GPIO pins.

Namespace: IO.Devices.ClickBoards.RemoteIO.Expand2
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Pin GPIO(
        int channel,
        Direction dir,
        bool state = false
)
```

Parameters

channel
Type: SystemInt32
MCP23017 channel number (0 to 15).

dir
Type: IO.Interfaces.GPIODirection
GPIO pin direction.

state **(Optional)**
Type: SystemBoolean
Initial GPIO output state.

Return Value

Type: Pin
GPIO pin object.

See Also

Reference

Board Class

IO.Devices.ClickBoards.RemoteIO.Expand2 Namespace

BoardReset Method

Issue hardware reset to the MCP23017.

Namespace: IO.Devices.ClickBoards.RemoteIO.Expand2
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public void Reset()
```

See Also

Reference

Board Class
IO.Devices.ClickBoards.RemoteIO.Expand2 Namespace

Board Fields

The Board type exposes the following members.

Fields

	Name	Description
	DefaultAddress	Default I^2C slave address.

Top

See Also

Reference

Board Class

IO.Devices.ClickBoards.RemoteIO.Expand2 Namespace

BoardDefaultAddress Field

Default I^{2}C slave address.

Namespace: IO.Devices.ClickBoards.RemoteIO.Expand2
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int DefaultAddress = 32
```

Field Value

Type: Int32

See Also

Reference

Board Class
IO.Devices.ClickBoards.RemoteIO.Expand2 Namespace

IO.Devices.ClickBoards.RemoteIO.PWM Namespace

Mikroelektronika PWM Click MIKROE-1898 Services

Classes

	Class	Description
	Board	Encapsulates the Mikroelektronika PWM Click Board. MIKROE-1898.

Board Class

Encapsulates the Mikroelektronika PWM Click Board. MIKROE-1898.

Inheritance Hierarchy

SystemObject IO.Devices.ClickBoards.RemoteIO.PWMBoard

Namespace: IO.Devices.ClickBoards.RemoteIO.PWM
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Board
```

The Board type exposes the following members.

Constructors

	Name	Description
	Board	Constructor for a single PWM click.

Top

Properties

	Name	Description
	dev	Returns the underlying PCA9685 device object.

Top

Methods

	Name	Description
	GPIO	Factory function for creating GPIO output pins.
	PWM	Factory function for creating PWM outputs.
	Servo	Factory function for creating servo outputs.

Top

Fields

	Name	Description
S	DefaultAddress	Default I^2C slave address.

Top

See Also

Reference

IO.Devices.ClickBoards.RemoteIO.PWM Namespace

Board Constructor

Constructor for a single PWM click.

Namespace: IO.Devices.ClickBoards.RemoteIO.PWM
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Board(
        int socknum,
        int freq,
        int addr = 64,
        Device remdev = null
)
```

Parameters

socknum
Type: SystemInt32
mikroBUS socket number.

freq
Type: SystemInt32
PWM pulse frequency in Hz.

addr **(Optional)**
Type: SystemInt32
I^2C slave address.

remdev **(Optional)**
Type: IO.RemoteDevice
Remote I/O device object.

See Also

Reference

Board Class

IO.Devices.ClickBoards.RemoteIO.PWM Namespace

Board Properties

The Board type exposes the following members.

Properties

	Name	Description
	dev	Returns the underlying PCA9685 device object.

Top

See Also

Reference

Board Class

IO.Devices.ClickBoards.RemoteIO.PWM Namespace

Boarddev Property

Returns the underlying PCA9685 device object.

Namespace: IO.Devices.ClickBoards.RemoteIO.PWM
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public Device dev { get; }
```

Property Value

Type: Device

See Also

Reference

Board Class
IO.Devices.ClickBoards.RemoteIO.PWM Namespace

Board Methods

The Board type exposes the following members.

Methods

	Name	Description
	GPIO	Factory function for creating GPIO output pins.
	PWM	Factory function for creating PWM outputs.
	Servo	Factory function for creating servo outputs.

Top

See Also

Reference

Board Class

IO.Devices.ClickBoards.RemoteIO.PWM Namespace

BoardGPIO Method

Factory function for creating GPIO output pins.

Namespace: IO.Devices.ClickBoards.RemoteIO.PWM
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Pin GPIO(
        int channel,
        bool state = false
)
```

Parameters

channel
Type: SystemInt32
PCA9685 output channel number.

state **(Optional)**
Type: SystemBoolean
Initial GPIO output state.

Return Value

Type: Pin
GPIO output pin object.

See Also

Reference

Board Class

IO.Devices.ClickBoards.RemoteIO.PWM Namespace

BoardPWM Method

Factory function for creating PWM outputs.

Namespace: IO.Devices.ClickBoards.RemoteIO.PWM
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Output PWM(
        int channel,
        double dutycycle = 0
)
```

Parameters

channel
Type: SystemInt32
PCA9685 output channel number.

dutycycle **(Optional)**
Type: SystemDouble
Initial PWM output duty cycle.

Return Value

Type: Output
PWM output object.

See Also

Reference

Board Class

IO.Devices.ClickBoards.RemoteIO.PWM Namespace

BoardServo Method

Factory function for creating servo outputs.

Namespace: IO.Devices.ClickBoards.RemoteIO.PWM
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Output Servo(
        int channel,
        double position = 0
)
```

Parameters

channel
Type: SystemInt32
PCA9685 output channel number.

position **(Optional)**
Type: SystemDouble
Initial servo position.>

Return Value

Type: Output
Servo output object.

See Also

Reference

Board Class

IO.Devices.ClickBoards.RemoteIO.PWM Namespace

Board Fields

The Board type exposes the following members.

Fields

	Name	Description
	DefaultAddress	Default I^2C slave address.

Top

See Also

Reference

Board Class

IO.Devices.ClickBoards.RemoteIO.PWM Namespace

BoardDefaultAddress Field

Default I^{2}C slave address.

Namespace: IO.Devices.ClickBoards.RemoteIO.PWM
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public const byte DefaultAddress = 64
```

Field Value

Type: Byte

See Also

Reference

Board Class
IO.Devices.ClickBoards.RemoteIO.PWM Namespace

IO.Devices.ClickBoards.RemoteIO.SevenSegment Namespace

Mikroelektronika 7Seg Click MIKROE-1201 Services

Classes

	Class	Description
	Board	Encapsulates the Mikroelektronika 7Seg Click Board. MIKROE-1201.

Enumerations

	Enumeration	Description
	BoardBase	Numeral systems.
	BoardZeroBlanking	Zero blanking modes.

Board Class

Encapsulates the Mikroelektronika 7Seg Click Board. MIKROE-1201.

Inheritance Hierarchy

SystemObject IO.Devices.ClickBoards.RemoteIO.SevenSegmentBoard

Namespace: IO.Devices.ClickBoards.RemoteIO.SevenSegment
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public class Board
```

The Board type exposes the following members.

Constructors

	Name	Description
	Board	Constructor for a single 7seg click.

Top

Properties

	Name	Description
	blanking	Zero blanking mode. Allowed values are `None`, `Leading`, and `Full`.

	brightness	Write-only property for setting the brightness of the display. Allowed values are 0.0 to 100.0 percent.
	leftdp	Write-only property for setting the left digit decimal point.
	radix	Numerical base or radix. Allowed values are `Decimal` and `Hexadecimal`.
	rightdp	Write-only property for setting the right digit decimal point.
	state	Write-only property for setting the state of the display. Allowed values are 0 to 99 for decimal mode and 0 to 255 for hexadecimal mode.

Top

Methods

	Name	Description
	Clear	Clear the display.
	Reset	Issue hardware reset to the 74HC595 shift register chain.

Top

Remarks

The `MISO`*aka*`SDI` pin should be removed from the 7seg click, because it is not tri-state and will interfere with other devices on the same SPI

bus.

See Also

Reference

IO.Devices.ClickBoards.RemoteIO.SevenSegment Namespace

Board Constructor

Constructor for a single 7seg click.

Namespace: IO.Devices.ClickBoards.RemoteIO.SevenSegment
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Board(
        int socket,
        BoardBase radix = BoardBase.Decimal,
        BoardZeroBlanking blanking = BoardZeroBlanking
        int pwmfreq = 100,
        Device remdev = null
)
```

Parameters

socket
Type: SystemInt32
mikroBUS socket number.

radix **(Optional)**
Type: IO.Devices.ClickBoards.RemoteIO.SevenSegmentBoardBase
Numerical base or radix. Allowed values are `Decimal` and `Hexadecimal`.

blanking **(Optional)**
Type: IO.Devices.ClickBoards.RemoteIO.SevenSegmentBoardZeroBlanking
Zero blanking. Allowed values are `None`, `Leading`, and `Full`.

pwmfreq **(Optional)**

Type: SystemInt32

PWM frequency. Set to zero to use GPIO instead of PWM.

remdev **(Optional)**

Type: IO.RemoteDevice

Remote I/O server device object.

See Also

Reference

Board Class

IO.Devices.ClickBoards.RemoteIO.SevenSegment Namespace

Board Properties

The Board type exposes the following members.

Properties

	Name	Description
	blanking	Zero blanking mode. Allowed values are `None`, `Leading`, and `Full`.
	brightness	Write-only property for setting the brightness of the display. Allowed values are 0.0 to 100.0 percent.
	leftdp	Write-only property for setting the left digit decimal point.
	radix	Numerical base or radix. Allowed values are `Decimal` and `Hexadecimal`.
	rightdp	Write-only property for setting the right digit decimal point.
	state	Write-only property for setting the state of the display. Allowed values are 0 to 99 for decimal mode and 0 to 255 for hexadecimal mode.

Top

See Also

Reference

Board Class

IO.Devices.ClickBoards.RemoteIO.SevenSegment Namespace

Boardblanking Property

Zero blanking mode. Allowed values are `None`, `Leading`, and `Full`.

Namespace: IO.Devices.ClickBoards.RemoteIO.SevenSegment
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public BoardZeroBlanking blanking { get; set; }
```

Property Value

Type: BoardZeroBlanking

See Also

Reference

Board Class
IO.Devices.ClickBoards.RemoteIO.SevenSegment Namespace

Boardbrightness Property

Write-only property for setting the brightness of the display. Allowed values are 0.0 to 100.0 percent.

Namespace: IO.Devices.ClickBoards.RemoteIO.SevenSegment
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public double brightness { set; }
```

Property Value

Type: Double

See Also

Reference

Board Class
IO.Devices.ClickBoards.RemoteIO.SevenSegment Namespace

Boardleftdp Property

Write-only property for setting the left digit decimal point.

Namespace: IO.Devices.ClickBoards.RemoteIO.SevenSegment
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public bool leftdp { set; }
```

Property Value

Type: Boolean

See Also

Reference

Board Class
IO.Devices.ClickBoards.RemoteIO.SevenSegment Namespace

Boardradix Property

Numerical base or radix. Allowed values are `Decimal` and `Hexadecimal`.

Namespace: IO.Devices.ClickBoards.RemoteIO.SevenSegment
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public BoardBase radix { get; set; }
```

Property Value

Type: BoardBase

See Also

Reference

Board Class
IO.Devices.ClickBoards.RemoteIO.SevenSegment Namespace

Boardrightdp Property

Write-only property for setting the right digit decimal point.

Namespace: IO.Devices.ClickBoards.RemoteIO.SevenSegment
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public bool rightdp { set; }
```

Property Value

Type: Boolean

See Also

Reference

Board Class
IO.Devices.ClickBoards.RemoteIO.SevenSegment Namespace

Boardstate Property

Write-only property for setting the state of the display. Allowed values are 0 to 99 for decimal mode and 0 to 255 for hexadecimal mode.

Namespace: IO.Devices.ClickBoards.RemoteIO.SevenSegment
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public int state { set; }
```

Property Value

Type: Int32

See Also

Reference

Board Class
IO.Devices.ClickBoards.RemoteIO.SevenSegment Namespace

Board Methods

The Board type exposes the following members.

Methods

	Name	Description
	Clear	Clear the display.
	Reset	Issue hardware reset to the 74HC595 shift register chain.

Top

See Also

Reference

Board Class

IO.Devices.ClickBoards.RemoteIO.SevenSegment Namespace

BoardClear Method

Clear the display.

Namespace: IO.Devices.ClickBoards.RemoteIO.SevenSegment
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public void Clear()
```

See Also

Reference

Board Class
IO.Devices.ClickBoards.RemoteIO.SevenSegment Namespace

BoardReset Method

Issue hardware reset to the 74HC595 shift register chain.

Namespace: IO.Devices.ClickBoards.RemoteIO.SevenSegment
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public void Reset()
```

See Also

Reference

Board Class
IO.Devices.ClickBoards.RemoteIO.SevenSegment Namespace

BoardBase Enumeration

Numeral systems.

Namespace: IO.Devices.ClickBoards.RemoteIO.SevenSegment
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public enum Base
```

Members

Member name	Value	Description
Decimal	0	Base 10.
Hexadecimal	1	Base 16.

See Also

Reference

IO.Devices.ClickBoards.RemoteIO.SevenSegment Namespace

BoardZeroBlanking Enumeration

Zero blanking modes.

Namespace: IO.Devices.ClickBoards.RemoteIO.SevenSegment
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public enum ZeroBlanking
```

Members

Member name	Value	Description
None	0	No zero blanking.
Leading	1	Leading zero blanking.
Full	2	Full zero blanking.

See Also

Reference

IO.Devices.ClickBoards.RemoteIO.SevenSegment Namespace

IO.Devices.ClickBoards.SimpleIO.ADAC Namespace

Mikroelektronika ADAC Click MIKROE-2690 Services

Classes

	Class	Description
	Board	Encapsulates the Mikroelektronika ADAC Click Board. MIKROE-2690.

Board Class

Encapsulates the Mikroelektronika ADAC Click Board. MIKROE-2690.

Inheritance Hierarchy

SystemObject IO.Devices.ClickBoards.SimpleIO.ADACBoard

Namespace: IO.Devices.ClickBoards.SimpleIO.ADAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Board
```

The Board type exposes the following members.

Constructors

	Name	Description
	Board	Constructor for a single ADAC click.

Top

Properties

	Name	Description
	device	Returns the underlying AD5593R device object.

Top

Methods

	Name	Description
	ADC	Factory function for creating ADC inputs.
	DAC	Factory function for creating DAC outputs.
	GPIO	Factory function for creating GPIO pins.
	Reset	Issue hardware reset to the AD5593R.

Top

Fields

	Name	Description
S	DefaultAddress	Default I^2C slave address.

Top

See Also

Reference

IO.Devices.ClickBoards.SimpleIO.ADAC Namespace

Board Constructor

Constructor for a single ADAC click.

Namespace: IO.Devices.ClickBoards.SimpleIO.ADAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public Board(
        int socknum,
        int addr = 16
)
```

Parameters

socknum
Type: SystemInt32
mikroBUS socket number.

addr **(Optional)**
Type: SystemInt32
I^2C slave address.

See Also

Reference

Board Class
IO.Devices.ClickBoards.SimpleIO.ADAC Namespace

Board Properties

The Board type exposes the following members.

Properties

	Name	Description
	device	Returns the underlying AD5593R device object.

Top

See Also

Reference

Board Class

IO.Devices.ClickBoards.SimpleIO.ADAC Namespace

Boarddevice Property

Returns the underlying AD5593R device object.

Namespace: IO.Devices.ClickBoards.SimpleIO.ADAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public Device device { get; }
```

Property Value

Type: Device

See Also

Reference

Board Class
IO.Devices.ClickBoards.SimpleIO.ADAC Namespace

Board Methods

The Board type exposes the following members.

Methods

	Name	Description
	ADC	Factory function for creating ADC inputs.
	DAC	Factory function for creating DAC outputs.
	GPIO	Factory function for creating GPIO pins.
	Reset	Issue hardware reset to the AD5593R.

Top

See Also

Reference

Board Class

IO.Devices.ClickBoards.SimpleIO.ADAC Namespace

BoardADC Method

Factory function for creating ADC inputs.

Namespace: IO.Devices.ClickBoards.SimpleIO.ADAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public Sample ADC(
        int channel
)
```

Parameters

channel
Type: SystemInt32
AD5593R I/O channel number (0 to 7).

Return Value

Type: Sample
ADC input object.

See Also

Reference

Board Class
IO.Devices.ClickBoards.SimpleIO.ADAC Namespace

BoardDAC Method

Factory function for creating DAC outputs.

Namespace: IO.Devices.ClickBoards.SimpleIO.ADAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Sample DAC(
        int channel,
        int sample = 0
)
```

Parameters

channel
Type: SystemInt32
AD5593R I/O channel number (0 to 7).

sample **(Optional)**
Type: SystemInt32
Initial DAC output sample.

Return Value

Type: Sample
DAC output object.

See Also

Reference

Board Class

IO.Devices.ClickBoards.SimpleIO.ADAC Namespace

BoardGPIO Method

Factory function for creating GPIO pins.

Namespace: IO.Devices.ClickBoards.SimpleIO.ADAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public Pin GPIO(
        int channel,
        Direction dir,
        bool state = false
)
```

Parameters

channel
Type: SystemInt32
AD5593R I/O channel number (0 to 7).

dir
Type: IO.Interfaces.GPIODirection
GPIO pin direction.

state **(Optional)**
Type: SystemBoolean
Initial GPIO output state.

Return Value

Type: Pin
GPIO pin object.

See Also

Reference

Board Class

IO.Devices.ClickBoards.SimpleIO.ADAC Namespace

BoardReset Method

Issue hardware reset to the AD5593R.

Namespace: IO.Devices.ClickBoards.SimpleIO.ADAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public void Reset()
```

See Also

Reference

Board Class
IO.Devices.ClickBoards.SimpleIO.ADAC Namespace

Board Fields

The Board type exposes the following members.

Fields

	Name	Description
	DefaultAddress	Default I^2C slave address.

Top

See Also

Reference

Board Class

IO.Devices.ClickBoards.SimpleIO.ADAC Namespace

BoardDefaultAddress Field

Default I^{2}C slave address.

Namespace: IO.Devices.ClickBoards.SimpleIO.ADAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const byte DefaultAddress = 16
```

Field Value

Type: Byte

See Also

Reference

Board Class
IO.Devices.ClickBoards.SimpleIO.ADAC Namespace

IO.Devices.ClickBoards.SimpleIO.Expand Namespace

Mikroelektronika Expand Click MIKROE-951 Services

Classes

	Class	Description
	Board	Encapsulates the Mikroelektronika Expand Click Board.

Board Class

Encapsulates the Mikroelektronika Expand Click Board.

Inheritance Hierarchy

SystemObject IO.Devices.ClickBoards.SimpleIO.ExpandBoard

Namespace: IO.Devices.ClickBoards.SimpleIO.Expand
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Board
```

The Board type exposes the following members.

Constructors

	Name	Description
	Board	Constructor for a single Expand 2 click.

Top

Properties

	Name	Description
	device	Returns the underlying MCP23S17 device object.

Top

Methods

	Name	Description
	GPIO	Factory function for creating GPIO pins.
	Reset	Issue hardware reset to the MCP23S17.

Top

See Also

Reference

IO.Devices.ClickBoards.SimpleIO.Expand Namespace

Board Constructor

Constructor for a single Expand 2 click.

Namespace: IO.Devices.ClickBoards.SimpleIO.Expand
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Board(
        int socknum
)
```

Parameters

socknum
Type: SystemInt32
mikroBUS socket number.

See Also

Reference

Board Class
IO.Devices.ClickBoards.SimpleIO.Expand Namespace

Board Properties

The Board type exposes the following members.

Properties

	Name	Description
	device	Returns the underlying MCP23S17 device object.

Top

See Also

Reference

Board Class

IO.Devices.ClickBoards.SimpleIO.Expand Namespace

Boarddevice Property

Returns the underlying MCP23S17 device object.

Namespace: IO.Devices.ClickBoards.SimpleIO.Expand
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public Device device { get; }
```

Property Value

Type: Device

See Also

Reference

Board Class
IO.Devices.ClickBoards.SimpleIO.Expand Namespace

Board Methods

The Board type exposes the following members.

Methods

	Name	Description
	GPIO	Factory function for creating GPIO pins.
	Reset	Issue hardware reset to the MCP23S17.

Top

See Also

Reference

Board Class

IO.Devices.ClickBoards.SimpleIO.Expand Namespace

BoardGPIO Method

Factory function for creating GPIO pins.

Namespace: IO.Devices.ClickBoards.SimpleIO.Expand
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Pin GPIO(
        int channel,
        Direction dir,
        bool state = false
)
```

Parameters

channel
Type: SystemInt32
MCP23S17 channel number (0 to 15).

dir
Type: IO.Interfaces.GPIODirection
GPIO pin direction.

state **(Optional)**
Type: SystemBoolean
Initial GPIO output state.

Return Value

Type: Pin
GPIO pin object.

See Also

Reference

Board Class

IO.Devices.ClickBoards.SimpleIO.Expand Namespace

BoardReset Method

Issue hardware reset to the MCP23S17.

Namespace: IO.Devices.ClickBoards.SimpleIO.Expand
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public void Reset()
```

See Also

Reference

Board Class
IO.Devices.ClickBoards.SimpleIO.Expand Namespace

IO.Devices.ClickBoards.SimpleIO.Expand2 Namespace

Mikroelektronika Expand 2 Click MIKROE-1838 Services

Classes

	Class	Description
	Board	Encapsulates the Mikroelektronika Expand 2 Click Board.

Board Class

Encapsulates the Mikroelektronika Expand 2 Click Board.

Inheritance Hierarchy

SystemObject IO.Devices.ClickBoards.SimpleIO.Expand2Board

Namespace: IO.Devices.ClickBoards.SimpleIO.Expand2
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public class Board
```

The Board type exposes the following members.

Constructors

	Name	Description
	Board	Constructor for a single Expand 2 click.

Top

Properties

	Name	Description
	device	Returns the underlying MCP23017 device object.

Top

Methods

	Name	Description
	GPIO	Factory function for creating GPIO pins.
	Reset	Issue hardware reset to the MCP23017.

Top

Fields

	Name	Description
S	DefaultAddress	Default I^2C slave address.

Top

See Also

Reference

IO.Devices.ClickBoards.SimpleIO.Expand2 Namespace

Board Constructor

Constructor for a single Expand 2 click.

Namespace: IO.Devices.ClickBoards.SimpleIO.Expand2
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Board(
        int socknum,
        int addr = 32
)
```

Parameters

socknum
Type: SystemInt32
mikroBUS socket number.

addr **(Optional)**
Type: SystemInt32
I^2C slave address.

See Also

Reference

Board Class
IO.Devices.ClickBoards.SimpleIO.Expand2 Namespace

Board Properties

The Board type exposes the following members.

Properties

	Name	Description
	device	Returns the underlying MCP23017 device object.

Top

See Also

Reference

Board Class

IO.Devices.ClickBoards.SimpleIO.Expand2 Namespace

Boarddevice Property

Returns the underlying MCP23017 device object.

Namespace: IO.Devices.ClickBoards.SimpleIO.Expand2
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public Device device { get; }
```

Property Value

Type: Device

See Also

Reference

Board Class
IO.Devices.ClickBoards.SimpleIO.Expand2 Namespace

Board Methods

The Board type exposes the following members.

Methods

	Name	Description
	GPIO	Factory function for creating GPIO pins.
	Reset	Issue hardware reset to the MCP23017.

Top

See Also

Reference

Board Class

IO.Devices.ClickBoards.SimpleIO.Expand2 Namespace

BoardGPIO Method

Factory function for creating GPIO pins.

Namespace: IO.Devices.ClickBoards.SimpleIO.Expand2
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public Pin GPIO(
        int channel,
        Direction dir,
        bool state = false
)
```

Parameters

channel
Type: SystemInt32
MCP23017 channel number (0 to 15).

dir
Type: IO.Interfaces.GPIODirection
GPIO pin direction.

state **(Optional)**
Type: SystemBoolean
Initial GPIO output state.

Return Value

Type: Pin
GPIO pin object.

See Also

Reference

Board Class

IO.Devices.ClickBoards.SimpleIO.Expand2 Namespace

BoardReset Method

Issue hardware reset to the MCP23017.

Namespace: IO.Devices.ClickBoards.SimpleIO.Expand2
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public void Reset()
```

See Also

Reference

Board Class
IO.Devices.ClickBoards.SimpleIO.Expand2 Namespace

Board Fields

The Board type exposes the following members.

Fields

	Name	Description
	DefaultAddress	Default I^2C slave address.

Top

See Also

Reference

Board Class

IO.Devices.ClickBoards.SimpleIO.Expand2 Namespace

BoardDefaultAddress Field

Default I^{2}C slave address.

Namespace: IO.Devices.ClickBoards.SimpleIO.Expand2
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int DefaultAddress = 32
```

Field Value

Type: Int32

See Also

Reference

Board Class
IO.Devices.ClickBoards.SimpleIO.Expand2 Namespace

IO.Devices.ClickBoards.SimpleIO.PWM Namespace

Mikroelektronika PWM Click MIKROE-1898 Services

Classes

	Class	Description
	Board	Encapsulates the Mikroelektronika PWM Click Board. MIKROE-1898.

Board Class

Encapsulates the Mikroelektronika PWM Click Board. MIKROE-1898.

Inheritance Hierarchy

SystemObject IO.Devices.ClickBoards.SimpleIO.PWMBoard

Namespace: IO.Devices.ClickBoards.SimpleIO.PWM
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Board
```

The Board type exposes the following members.

Constructors

	Name	Description
	Board	Constructor for a single PWM click.

Top

Properties

	Name	Description
	dev	Returns the underlying PCA9685 device object.

Top

Methods

	Name	Description
	GPIO	Factory function for creating GPIO output pins.
	PWM	Factory function for creating PWM outputs.
	Servo	Factory function for creating servo outputs.

Top

Fields

	Name	Description
S	DefaultAddress	Default I^2C slave address.

Top

See Also

Reference

IO.Devices.ClickBoards.SimpleIO.PWM Namespace

Board Constructor

Constructor for a single PWM click.

Namespace: IO.Devices.ClickBoards.SimpleIO.PWM
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Board(
        int socknum,
        int freq,
        int addr = 64
)
```

Parameters

socknum
Type: SystemInt32
mikroBUS socket number.

freq
Type: SystemInt32
PWM pulse frequency in Hz.

addr **(Optional)**
Type: SystemInt32
I^2C slave address.

See Also

Reference

Board Class

IO.Devices.ClickBoards.SimpleIO.PWM Namespace

Board Properties

The Board type exposes the following members.

Properties

	Name	Description
	dev	Returns the underlying PCA9685 device object.

Top

See Also

Reference

Board Class

IO.Devices.ClickBoards.SimpleIO.PWM Namespace

Boarddev Property

Returns the underlying PCA9685 device object.

Namespace: IO.Devices.ClickBoards.SimpleIO.PWM
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Device dev { get; }
```

Property Value

Type: Device

See Also

Reference

Board Class
IO.Devices.ClickBoards.SimpleIO.PWM Namespace

Board Methods

The Board type exposes the following members.

Methods

	Name	Description
	GPIO	Factory function for creating GPIO output pins.
	PWM	Factory function for creating PWM outputs.
	Servo	Factory function for creating servo outputs.

Top

See Also

Reference

Board Class

IO.Devices.ClickBoards.SimpleIO.PWM Namespace

BoardGPIO Method

Factory function for creating GPIO output pins.

Namespace: IO.Devices.ClickBoards.SimpleIO.PWM
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Pin GPIO(
        int channel,
        bool state = false
)
```

Parameters

channel
Type: SystemInt32
PCA9685 output channel number.

state **(Optional)**
Type: SystemBoolean
Initial GPIO output state.

Return Value

Type: Pin
GPIO output pin object.

See Also

Reference

Board Class

IO.Devices.ClickBoards.SimpleIO.PWM Namespace

BoardPWM Method

Factory function for creating PWM outputs.

Namespace: IO.Devices.ClickBoards.SimpleIO.PWM
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Output PWM(
        int channel,
        double dutycycle = 0
)
```

Parameters

channel
Type: SystemInt32
PCA9685 output channel number.

dutycycle **(Optional)**
Type: SystemDouble
Initial PWM output duty cycle.

Return Value

Type: Output
PWM output object.

See Also

Reference

Board Class

IO.Devices.ClickBoards.SimpleIO.PWM Namespace

BoardServo Method

Factory function for creating servo outputs.

Namespace: IO.Devices.ClickBoards.SimpleIO.PWM
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Output Servo(
        int channel,
        double position = 0
)
```

Parameters

channel
Type: SystemInt32
PCA9685 output channel number.

position **(Optional)**
Type: SystemDouble
Initial servo position.>

Return Value

Type: Output
Servo output object.

See Also

Reference

Board Class

IO.Devices.ClickBoards.SimpleIO.PWM Namespace

Board Fields

The Board type exposes the following members.

Fields

	Name	Description
	DefaultAddress	Default I^2C slave address.

Top

See Also

Reference

Board Class

IO.Devices.ClickBoards.SimpleIO.PWM Namespace

BoardDefaultAddress Field

Default I^{2}C slave address.

Namespace: IO.Devices.ClickBoards.SimpleIO.PWM
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public const byte DefaultAddress = 64
```

Field Value

Type: Byte

See Also

Reference

Board Class
IO.Devices.ClickBoards.SimpleIO.PWM Namespace

IO.Devices.ClickBoards.SimpleIO.SevenSegment Namespace

Mikroelektronika 7Seg Click MIKROE-1201 Services

Classes

	Class	Description
	Board	Encapsulates the Mikroelektronika 7Seg Click Board. MIKROE-1201.

Enumerations

	Enumeration	Description
	BoardBase	Numeral systems.
	BoardZeroBlanking	Zero blanking modes.

Board Class

Encapsulates the Mikroelektronika 7Seg Click Board. MIKROE-1201.

Inheritance Hierarchy

SystemObject IO.Devices.ClickBoards.SimpleIO.SevenSegmentBoard

Namespace: IO.Devices.ClickBoards.SimpleIO.SevenSegment
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public class Board
```

The Board type exposes the following members.

Constructors

	Name	Description
	Board	Constructor for a single 7seg click.

Top

Properties

	Name	Description
	blanking	Zero blanking mode. Allowed values are `None`, `Leading`, and `Full`.

	brightness	Write-only property for setting the brightness of the display. Allowed values are 0.0 to 100.0 percent.
	leftdp	Write-only property for setting the left digit decimal point.
	radix	Numerical base or radix. Allowed values are `Decimal` and `Hexadecimal`.
	rightdp	Write-only property for setting the right digit decimal point.
	state	Write-only property for setting the state of the display. Allowed values are 0 to 99 for decimal mode and 0 to 255 for hexadecimal mode.

Top

Methods

	Name	Description
	Clear	Clear the display.

Top

Remarks

The `MISO`*aka*`SDI` pin should be removed from the 7seg click, because it is not tri-state and will interfere with other devices on the same SPI bus.

See Also

Reference

IO.Devices.ClickBoards.SimpleIO.SevenSegment Namespace

Board Constructor

Constructor for a single 7seg click.

Namespace: IO.Devices.ClickBoards.SimpleIO.SevenSegment
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Board(
        int socket,
        BoardBase radix = BoardBase.Decimal,
        BoardZeroBlanking blanking = BoardZeroBlanking
        int pwmfreq = 100
)
```

Parameters

socket
Type: SystemInt32
mikroBUS socket number.

radix **(Optional)**
Type: IO.Devices.ClickBoards.SimpleIO.SevenSegmentBoardBase
Numerical base or radix. Allowed values are `Decimal` and `Hexadecimal`.

blanking **(Optional)**
Type: IO.Devices.ClickBoards.SimpleIO.SevenSegmentBoardZeroBlanking
Zero blanking. Allowed values are `None`, `Leading`, and `Full`.

pwmfreq **(Optional)**

Type: SystemInt32
PWM frequency. Set to zero to use GPIO instead of PWM.

See Also

Reference

Board Class
IO.Devices.ClickBoards.SimpleIO.SevenSegment Namespace

Board Properties

The Board type exposes the following members.

Properties

	Name	Description
	blanking	Zero blanking mode. Allowed values are `None`, `Leading`, and `Full`.
	brightness	Write-only property for setting the brightness of the display. Allowed values are 0.0 to 100.0 percent.
	leftdp	Write-only property for setting the left digit decimal point.
	radix	Numerical base or radix. Allowed values are `Decimal` and `Hexadecimal`.
	rightdp	Write-only property for setting the right digit decimal point.
	state	Write-only property for setting the state of the display. Allowed values are 0 to 99 for decimal mode and 0 to 255 for hexadecimal mode.

Top

See Also

Reference

Board Class

IO.Devices.ClickBoards.SimpleIO.SevenSegment Namespace

Boardblanking Property

Zero blanking mode. Allowed values are `None`, `Leading`, and `Full`.

Namespace: IO.Devices.ClickBoards.SimpleIO.SevenSegment
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public BoardZeroBlanking blanking { get; set; }
```

Property Value

Type: BoardZeroBlanking

See Also

Reference

Board Class
IO.Devices.ClickBoards.SimpleIO.SevenSegment Namespace

Boardbrightness Property

Write-only property for setting the brightness of the display. Allowed values are 0.0 to 100.0 percent.

Namespace: IO.Devices.ClickBoards.SimpleIO.SevenSegment
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public double brightness { set; }
```

Property Value

Type: Double

See Also

Reference

Board Class
IO.Devices.ClickBoards.SimpleIO.SevenSegment Namespace

Boardleftdp Property

Write-only property for setting the left digit decimal point.

Namespace: IO.Devices.ClickBoards.SimpleIO.SevenSegment
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public bool leftdp { set; }
```

Property Value

Type: Boolean

See Also

Reference

Board Class
IO.Devices.ClickBoards.SimpleIO.SevenSegment Namespace

Boardradix Property

Numerical base or radix. Allowed values are `Decimal` and `Hexadecimal`.

Namespace: IO.Devices.ClickBoards.SimpleIO.SevenSegment
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public BoardBase radix { get; set; }
```

Property Value

Type: BoardBase

See Also

Reference

Board Class
IO.Devices.ClickBoards.SimpleIO.SevenSegment Namespace

Boardrightdp Property

Write-only property for setting the right digit decimal point.

Namespace: IO.Devices.ClickBoards.SimpleIO.SevenSegment
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public bool rightdp { set; }
```

Property Value

Type: Boolean

See Also

Reference

Board Class
IO.Devices.ClickBoards.SimpleIO.SevenSegment Namespace

Boardstate Property

Write-only property for setting the state of the display. Allowed values are 0 to 99 for decimal mode and 0 to 255 for hexadecimal mode.

Namespace: IO.Devices.ClickBoards.SimpleIO.SevenSegment
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public int state { set; }
```

Property Value

Type: Int32

See Also

Reference

Board Class
IO.Devices.ClickBoards.SimpleIO.SevenSegment Namespace

Board Methods

The Board type exposes the following members.

Methods

	Name	Description
	Clear	Clear the display.

Top

See Also

Reference

Board Class

IO.Devices.ClickBoards.SimpleIO.SevenSegment Namespace

BoardClear Method

Clear the display.

Namespace: IO.Devices.ClickBoards.SimpleIO.SevenSegment
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public void Clear()
```

See Also

Reference

Board Class
IO.Devices.ClickBoards.SimpleIO.SevenSegment Namespace

BoardBase Enumeration

Numeral systems.

Namespace: IO.Devices.ClickBoards.SimpleIO.SevenSegment
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public enum Base
```

Members

Member name	Value	Description
Decimal	0	Base 10.
Hexadecimal	1	Base 16.

See Also

Reference

IO.Devices.ClickBoards.SimpleIO.SevenSegment Namespace

BoardZeroBlanking Enumeration

Zero blanking modes.

Namespace: IO.Devices.ClickBoards.SimpleIO.SevenSegment
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public enum ZeroBlanking
```

Members

Member name	Value	Description
None	0	No zero blanking.
Leading	1	Leading zero blanking.
Full	2	Full zero blanking.

See Also

Reference

IO.Devices.ClickBoards.SimpleIO.SevenSegment Namespace

IO.Devices.Grove.ADC Namespace

Seeed Studio Grove I^{2}C ADC (ADC121C021) Services

Classes

	Class	Description
	Device	Encapsulates the Seeed Studio Grove I^{2}C ADC (ADC121C021).

Device Class

Encapsulates the Seeed Studio Grove I^{2}C ADC (ADC121C021).

Inheritance Hierarchy

SystemObject IO.Devices.Grove.ADCDevice

Namespace: IO.Devices.Grove.ADC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Device
```

The Device type exposes the following members.

Constructors

	Name	Description
	Device	Constructor for a Seeed Studio Grove I^{2}C ADC (ADC121C021).

Top

Properties

	Name	Description
	voltage	Read-only property returning an analog

input voltage measurement.

Top

See Also

Reference

IO.Devices.Grove.ADC Namespace

Device Constructor

Constructor for a Seeed Studio Grove I^{2}C ADC (ADC121C021).

Namespace: IO.Devices.Grove.ADC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public Device(
        Bus bus,
        byte addr = 80
)
```

Parameters

bus
Type: IO.Interfaces.I2CBus
I^{2}C bus object.

addr **(Optional)**
Type: SystemByte
I^{2}C device address.

See Also

Reference

Device Class
IO.Devices.Grove.ADC Namespace

Device Properties

The Device type exposes the following members.

Properties

	Name	Description
	voltage	Read-only property returning an analog input voltage measurement.

Top

See Also

Reference

Device Class

IO.Devices.Grove.ADC Namespace

Devicevoltage Property

Read-only property returning an analog input voltage measurement.

Namespace: IO.Devices.Grove.ADC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public double voltage { get; }
```

Property Value

Type: Double

See Also

Reference

Device Class
IO.Devices.Grove.ADC Namespace

IO.Devices.Grove.Temperature Namespace

Seeed Studio Grove Temperature Sensor (thermistor) Services

Classes

	Class	Description
	Device	Encapsulates the Seeed Studio Grove Temperature Sensor (thermistor).

Device Class

Encapsulates the Seeed Studio Grove Temperature Sensor (thermistor).

Inheritance Hierarchy

SystemObject IO.Devices.Grove.TemperatureDevice

Namespace: IO.Devices.Grove.Temperature
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Device : Sensor
```

The Device type exposes the following members.

Constructors

	Name	Description
	Device	Constructor for a Seeed Studio Grove Temperature Sensor (thermistor).

Top

Properties

	Name	Description
	Celsius	Read-only property returning the

		temperature in degrees Celsius.
	Fahrenheit	Read-only property returning the temperature in degrees Fahrenheit.
	Kelvins	Read-only property returning the temperature in Kelvins.

Top

See Also

Reference

IO.Devices.Grove.Temperature Namespace

Device Constructor

Constructor for a Seeed Studio Grove Temperature Sensor (thermistor).

Namespace: IO.Devices.Grove.Temperature
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public Device(
        Voltage Vin,
        double Vcc = 3.3
)
```

Parameters

Vin
Type: IO.Interfaces.ADCVoltage
Voltage input object.

Vcc **(Optional)**
Type: SystemDouble
Reference voltage.

See Also

Reference

Device Class
IO.Devices.Grove.Temperature Namespace

Device Properties

The Device type exposes the following members.

Properties

	Name	Description
	Celsius	Read-only property returning the temperature in degrees Celsius.
	Fahrenheit	Read-only property returning the temperature in degrees Fahrenheit.
	Kelvins	Read-only property returning the temperature in Kelvins.

Top

See Also

Reference

Device Class

IO.Devices.Grove.Temperature Namespace

DeviceCelsius Property

Read-only property returning the temperature in degrees Celsius.

Namespace: IO.Devices.Grove.Temperature
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public double Celsius { get; }
```

Property Value

Type: Double

Implements

SensorCelsius

See Also

Reference

Device Class
IO.Devices.Grove.Temperature Namespace

DeviceFahrenheit Property

Read-only property returning the temperature in degrees Fahrenheit.

Namespace: IO.Devices.Grove.Temperature
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public double Fahrenheit { get; }
```

Property Value

Type: Double

Implements

SensorFahrenheit

See Also

Reference

Device Class
IO.Devices.Grove.Temperature Namespace

DeviceKelvins Property

Read-only property returning the temperature in Kelvins.

Namespace: IO.Devices.Grove.Temperature
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public double Kelvins { get; }
```

Property Value

Type: Double

Implements

SensorKelvins

See Also

Reference

Device Class
IO.Devices.Grove.Temperature Namespace

IO.Devices.Grove.Temperature_Humidity Namespace

Seeed Studio Grove Temperature and Humdity Sensor (TH02) Services.

Classes

	Class	Description
	Device	Encapsulate the Seeed Studio Grove Temperature and Humidity Sensor (TH02).

Device Class

Encapsulate the Seeed Studio Grove Temperature and Humidity Sensor (TH02).

Inheritance Hierarchy

SystemObject IO.Devices.TH02Device
IO.Devices.Grove.Temperature_HumidityDevice

Namespace: IO.Devices.Grove.Temperature_Humidity
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public class Device : Device
```

The Device type exposes the following members.

Constructors

	Name	Description
	Device	Constructor for a Seeed Studio Grove Temperature and Humidity Sensor (TH02).

Top

Properties

	Name	Description
	Celsius	Read-only property returning the temperature in degrees Celsius. (Inherited from Device.)
	DeviceID	Read-only property returning the device ID. (Inherited from Device.)
	Fahrenheit	Read-only property returning the temperature in degrees Fahrenheit. (Inherited from Device.)
	Humidity	Read-only property returning the percentage relative humidity. (Inherited from Device.)
	Kelvins	Read-only property returning the temperature in Kelvins. (Inherited from Device.)

Top

See Also

Reference

IO.Devices.Grove.Temperature_Humidity Namespace

Device Constructor

Constructor for a Seeed Studio Grove Temperature and Humidity Sensor (TH02).

Namespace: IO.Devices.Grove.Temperature_Humidity
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public Device(
        Bus bus
)
```

Parameters

bus
Type: IO.Interfaces.I2CBus
I^2 bus object.

See Also

Reference

Device Class
IO.Devices.Grove.Temperature_Humidity Namespace

Device Properties

The Device type exposes the following members.

Properties

	Name	Description
	Celsius	Read-only property returning the temperature in degrees Celsius. (Inherited from Device.)
	DeviceID	Read-only property returning the device ID. (Inherited from Device.)
	Fahrenheit	Read-only property returning the temperature in degrees Fahrenheit. (Inherited from Device.)
	Humidity	Read-only property returning the percentage relative humidity. (Inherited from Device.)
	Kelvins	Read-only property returning the temperature in Kelvins. (Inherited from Device.)

Top

See Also

Reference

Device Class

IO.Devices.Grove.Temperature_Humidity Namespace

IO.Devices.HDC1080 Namespace

HDC1080 I^{2}C Temperature/Humidity Sensor Services

Classes

	Class	Description
	Device	Encapsulates the HDC1080 temperature and humidity sensor.

Device Class

Encapsulates the HDC1080 temperature and humidity sensor.

Inheritance Hierarchy

SystemObject IO.Devices.HDC1080Device
IO.Devices.Pmod.HYGRODevice

Namespace: IO.Devices.HDC1080
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Device : Sensor, Sensor
```

The Device type exposes the following members.

Constructors

	Name	Description
	Device	Constructor for an HDC1080 temperature and humidity sensor object.

Top

Properties

Name	Description

	Celsius	Read-only property returning the temperature in degrees Celsius.
	DeviceID	Read-only property returning the device ID.
	Fahrenheit	Read-only property returning the temperature in degrees Fahrenheit.
	Humidity	Read-only property returning the percentage relative humidity.
	Kelvins	Read-only property returning the temperature in Kelvins.
	ManufacturerID	Read-only property returning the manufacturer ID.

Top

Methods

	Name	Description
	Read	Read from an HDC1080 device register.
	Write	Write to an HDC1080 device register.

Top

Fields

	Name	Description
S	RegConfiguration	Configuration Register

		address.
S	RegDeviceID	Device ID Register address.
S	RegHumidity	Humidity Register address.
S	RegManufacturerID	Manufacturer ID Register address.
S	RegSerialNumberFirst	Serial Number First Bits Register address.
S	RegSerialNumberLast	Serial Number Last Bits Register address.
S	RegSerialNumberMid	Serial Number Middle Bits Register address.
S	RegTemperature	Temperature Register address.

Top

See Also

Reference

IO.Devices.HDC1080 Namespace

Device Constructor

Constructor for an HDC1080 temperature and humidity sensor object.

Namespace: IO.Devices.HDC1080
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public Device(
        Bus bus
)
```

Parameters

bus
Type: IO.Interfaces.I2CBus
I^2C bus controller.

See Also

Reference

Device Class
IO.Devices.HDC1080 Namespace

Device Properties

The Device type exposes the following members.

Properties

	Name	Description
	Celsius	Read-only property returning the temperature in degrees Celsius.
	DeviceID	Read-only property returning the device ID.
	Fahrenheit	Read-only property returning the temperature in degrees Fahrenheit.
	Humidity	Read-only property returning the percentage relative humidity.
	Kelvins	Read-only property returning the temperature in Kelvins.
	ManufacturerID	Read-only property returning the manufacturer ID.

Top

See Also

Reference

Device Class
IO.Devices.HDC1080 Namespace

DeviceCelsius Property

Read-only property returning the temperature in degrees Celsius.

Namespace: IO.Devices.HDC1080
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public double Celsius { get; }
```

Property Value

Type: Double

Implements

SensorCelsius

See Also

Reference

Device Class
IO.Devices.HDC1080 Namespace

DeviceDeviceID Property

Read-only property returning the device ID.

Namespace: IO.Devices.HDC1080
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public ushort DeviceID { get; }
```

Property Value

Type: UInt16

See Also

Reference

Device Class
IO.Devices.HDC1080 Namespace

DeviceFahrenheit Property

Read-only property returning the temperature in degrees Fahrenheit.

Namespace: IO.Devices.HDC1080
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public double Fahrenheit { get; }
```

Property Value

Type: Double

Implements

SensorFahrenheit

See Also

Reference

Device Class
IO.Devices.HDC1080 Namespace

DeviceHumidity Property

Read-only property returning the percentage relative humidity.

Namespace: IO.Devices.HDC1080
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public double Humidity { get; }
```

Property Value

Type: Double

Implements

SensorHumidity

See Also

Reference

Device Class
IO.Devices.HDC1080 Namespace

DeviceKelvins Property

Read-only property returning the temperature in Kelvins.

Namespace: IO.Devices.HDC1080
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public double Kelvins { get; }
```

Property Value

Type: Double

Implements

SensorKelvins

See Also

Reference

Device Class
IO.Devices.HDC1080 Namespace

DeviceManufacturerID Property

Read-only property returning the manufacturer ID.

Namespace: IO.Devices.HDC1080
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public ushort ManufacturerID { get; }
```

Property Value

Type: UInt16

See Also

Reference

Device Class
IO.Devices.HDC1080 Namespace

Device Methods

The Device type exposes the following members.

Methods

	Name	Description
	Read	Read from an HDC1080 device register.
	Write	Write to an HDC1080 device register.

Top

See Also

Reference

Device Class

IO.Devices.HDC1080 Namespace

DeviceRead Method

Read from an HDC1080 device register.

Namespace: IO.Devices.HDC1080
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public ushort Read(
        byte reg
)
```

Parameters

reg
Type: SystemByte
8-bit register address.

Return Value

Type: UInt16
16-bit register data

See Also

Reference

Device Class
IO.Devices.HDC1080 Namespace

DeviceWrite Method

Write to an HDC1080 device register.

Namespace: IO.Devices.HDC1080
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public void Write(
        byte reg,
        ushort data
)
```

Parameters

reg
Type: SystemByte
8-bit register address.

data
Type: SystemUInt16
16-bit register data.

See Also

Reference

Device Class
IO.Devices.HDC1080 Namespace

Device Fields

The Device type exposes the following members.

Fields

	Name	Description
	RegConfiguration	Configuration Register address.
	RegDeviceID	Device ID Register address.
	RegHumidity	Humidity Register address.
	RegManufacturerID	Manufacturer ID Register address.
	RegSerialNumberFirst	Serial Number First Bits Register address.
	RegSerialNumberLast	Serial Number Last Bits Register address.
	RegSerialNumberMid	Serial Number Middle Bits Register address.
	RegTemperature	Temperature Register address.

Top

See Also

Reference

Device Class

IO.Devices.HDC1080 Namespace

DeviceRegConfiguration Field

Configuration Register address.

Namespace: IO.Devices.HDC1080
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const byte RegConfiguration = 2
```

Field Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.HDC1080 Namespace

DeviceRegDeviceID Field

Device ID Register address.

Namespace: IO.Devices.HDC1080
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const byte RegDeviceID = 255
```

Field Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.HDC1080 Namespace

DeviceRegHumidity Field

Humidity Register address.

Namespace: IO.Devices.HDC1080
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const byte RegHumidity = 1
```

Field Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.HDC1080 Namespace

DeviceRegManufacturerID Field

Manufacturer ID Register address.

Namespace: IO.Devices.HDC1080
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const byte RegManufacturerID = 254
```

Field Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.HDC1080 Namespace

DeviceRegSerialNumberFirst Field

Serial Number First Bits Register address.

Namespace: IO.Devices.HDC1080
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const byte RegSerialNumberFirst = 251
```

Field Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.HDC1080 Namespace

DeviceRegSerialNumberLast Field

Serial Number Last Bits Register address.

Namespace: IO.Devices.HDC1080
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const byte RegSerialNumberLast = 253
```

Field Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.HDC1080 Namespace

DeviceRegSerialNumberMid Field

Serial Number Middle Bits Register address.

Namespace: IO.Devices.HDC1080
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const byte RegSerialNumberMid = 252
```

Field Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.HDC1080 Namespace

DeviceRegTemperature Field

Temperature Register address.

Namespace: IO.Devices.HDC1080
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const byte RegTemperature = 0
```

Field Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.HDC1080 Namespace

IO.Devices.MCP23017 Namespace

MCP23017 I^{2}C GPIO Expander Device Services.

Classes

	Class	Description
	Device	Encapsulates the MCP23017 I^{2}C I/O GPIO Expander.

Device Class

Encapsulates the MCP23017 I^{2}C I/O GPIO Expander.

Inheritance Hierarchy

SystemObject IO.Devices.MCP23017Device

Namespace: IO.Devices.MCP23017
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Device
```

The Device type exposes the following members.

Constructors

	Name	Description
	Device	Constructor for a single MCP23017 device.

Top

Properties

	Name	Description
	Direction	Data Direction Property (16 bits). Bits 0

		to 7 correspond to PORT A and bits 8 to 15 correspond to PORT B. For each bit, 0=input and 1=output.
	DirectionA	Port A Data Direction Property (8 bits). For each bit, 0=input and 1=output.
	DirectionB	Port B Data Direction Property (8 bits). For each bit, 0=input and 1=output.
	Polarity	Data Polarity Property (16 bits). Bits 0 to 7 correspond to PORT A and bits 8 to 15 correspond to PORT B. For each bit, 0=input and 1=output.
	PolarityA	Port A Data Polarity Property (8 bits). For each bit, 0=input and 1=output.
	PolarityB	Port B Data Polarity Property (8 bits). For each bit, 0=input and 1=output.
	Port	Port Data Property (16 bites). Bits 0 to 7 correspond to PORT A and bits 8 to 15 correspond to PORT B.
	PortA	Port A Data Property (8 bits).
	PortB	Port B Data Property (8 bits).
	Pullups	Input Pullup Property (16 bits). Bits 0 to 7 correspond to PORT A and bits 8 to 15 correspond to PORT B. For each bit, 0=high impedance and 1=100k pullup.

	PullupsA	Port A Input Pullup Property (16 bits). For each bit, 0=high impedance and 1=100k pullup.
	PullupsB	Port B Input Pullup Property (16 bits). For each bit, 0=high impedance and 1=100k pullup.

Top

Methods

	Name	Description
	GPIO_Create	Create an MCP23017 GPIO pin object.

Top

Fields

	Name	Description
S	MaxChannel	Maximum I/O channel number.
S	MinChannel	Minimum I/O channel number.

Top

See Also

Reference

IO.Devices.MCP23017 Namespace

Device Constructor

Constructor for a single MCP23017 device.

Namespace: IO.Devices.MCP23017
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public Device(
        Bus bus,
        int addr
)
```

Parameters

bus
Type: IO.Interfaces.I2CBus
I^2C bus controller object.

addr
Type: SystemInt32
I^2C slave address.

See Also

Reference

Device Class
IO.Devices.MCP23017 Namespace

Device Properties

The Device type exposes the following members.

Properties

	Name	Description
	Direction	Data Direction Property (16 bits). Bits 0 to 7 correspond to PORT A and bits 8 to 15 correspond to PORT B. For each bit, 0=input and 1=output.
	DirectionA	Port A Data Direction Property (8 bits). For each bit, 0=input and 1=output.
	DirectionB	Port B Data Direction Property (8 bits). For each bit, 0=input and 1=output.
	Polarity	Data Polarity Property (16 bits). Bits 0 to 7 correspond to PORT A and bits 8 to 15 correspond to PORT B. For each bit, 0=input and 1=output.
	PolarityA	Port A Data Polarity Property (8 bits). For each bit, 0=input and 1=output.
	PolarityB	Port B Data Polarity Property (8 bits). For each bit, 0=input and 1=output.
	Port	Port Data Property (16 bites). Bits 0 to 7 correspond to PORT A and bits 8 to

		15 correspond to PORT B.
	PortA	Port A Data Property (8 bits).
	PortB	Port B Data Property (8 bits).
	Pullups	Input Pullup Property (16 bits). Bits 0 to 7 correspond to PORT A and bits 8 to 15 correspond to PORT B. For each bit, 0=high impedance and 1=100k pullup.
	PullupsA	Port A Input Pullup Property (16 bits). For each bit, 0=high impedance and 1=100k pullup.
	PullupsB	Port B Input Pullup Property (16 bits). For each bit, 0=high impedance and 1=100k pullup.

Top

See Also

Reference

Device Class

IO.Devices.MCP23017 Namespace

DeviceDirection Property

Data Direction Property (16 bits). Bits 0 to 7 correspond to PORT A and bits 8 to 15 correspond to PORT B. For each bit, 0=input and 1=output.

Namespace: IO.Devices.MCP23017
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public uint Direction { get; set; }
```

Property Value

Type: UInt32

Remarks

This property follows the industry standard convention for data direction bit polarity (1=output) rather than the MCP23017 `IODIR` register polarity (0=output).

See Also

Reference

Device Class
IO.Devices.MCP23017 Namespace

DeviceDirectionA Property

Port A Data Direction Property (8 bits). For each bit, 0=input and 1=output.

Namespace: IO.Devices.MCP23017
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public byte DirectionA { get; set; }
```

Property Value

Type: Byte

Remarks

This property follows the industry standard convention for data direction bit polarity (1=output) rather than the MCP23017 `IODIRA` register polarity (0=output).

See Also

Reference

Device Class
IO.Devices.MCP23017 Namespace

DeviceDirectionB Property

Port B Data Direction Property (8 bits). For each bit, 0=input and 1=output.

Namespace: IO.Devices.MCP23017
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public byte DirectionB { get; set; }
```

Property Value

Type: Byte

Remarks

This property follows the industry standard convention for data direction bit polarity (1=output) rather than the MCP23017 `IODIRA` register polarity (0=output).

See Also

Reference

Device Class
IO.Devices.MCP23017 Namespace

DevicePolarity Property

Data Polarity Property (16 bits). Bits 0 to 7 correspond to PORT A and bits 8 to 15 correspond to PORT B. For each bit, 0=input and 1=output.

Namespace: IO.Devices.MCP23017
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public uint Polarity { get; set; }
```

Property Value

Type: UInt32

See Also

Reference

Device Class
IO.Devices.MCP23017 Namespace

DevicePolarityA Property

Port A Data Polarity Property (8 bits). For each bit, 0=input and 1=output.

Namespace: IO.Devices.MCP23017
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public byte PolarityA { get; set; }
```

Property Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.MCP23017 Namespace

DevicePolarityB Property

Port B Data Polarity Property (8 bits). For each bit, 0=input and 1=output.

Namespace: IO.Devices.MCP23017
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public byte PolarityB { get; set; }
```

Property Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.MCP23017 Namespace

DevicePort Property

Port Data Property (16 bites). Bits 0 to 7 correspond to PORT A and bits 8 to 15 correspond to PORT B.

Namespace: IO.Devices.MCP23017
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public uint Port { get; set; }
```

Property Value

Type: UInt32

See Also

Reference

Device Class
IO.Devices.MCP23017 Namespace

DevicePortA Property

Port A Data Property (8 bits).

Namespace: IO.Devices.MCP23017
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public byte PortA { get; set; }
```

Property Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.MCP23017 Namespace

DevicePortB Property

Port B Data Property (8 bits).

Namespace: IO.Devices.MCP23017
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public byte PortB { get; set; }
```

Property Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.MCP23017 Namespace

DevicePullups Property

Input Pullup Property (16 bits). Bits 0 to 7 correspond to PORT A and bits 8 to 15 correspond to PORT B. For each bit, 0=high impedance and 1=100k pullup.

Namespace: IO.Devices.MCP23017
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public uint Pullups { get; set; }
```

Property Value

Type: UInt32

See Also

Reference

Device Class
IO.Devices.MCP23017 Namespace

DevicePullupsA Property

Port A Input Pullup Property (16 bits). For each bit, 0=high impedance and 1=100k pullup.

Namespace: IO.Devices.MCP23017
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public byte PullupsA { get; set; }
```

Property Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.MCP23017 Namespace

DevicePullupsB Property

Port B Input Pullup Property (16 bits). For each bit, 0=high impedance and 1=100k pullup.

Namespace: IO.Devices.MCP23017
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public byte PullupsB { get; set; }
```

Property Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.MCP23017 Namespace

Device Methods

The Device type exposes the following members.

Methods

	Name	Description
	GPIO_Create	Create an MCP23017 GPIO pin object.

Top

See Also

Reference

Device Class

IO.Devices.MCP23017 Namespace

DeviceGPIO_Create Method

Create an MCP23017 GPIO pin object.

Namespace: IO.Devices.MCP23017
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Pin GPIO_Create(
        int channel,
        Direction dir,
        bool state = false
)
```

Parameters

channel
Type: SystemInt32
MCP23017 channel number (0 to 15).

dir
Type: IO.Interfaces.GPIODirection
GPIO pin data direction.

state **(Optional)**
Type: SystemBoolean
Initial GPIO output state.

Return Value

Type: Pin
GPIO pin object.

See Also

Reference

Device Class

IO.Devices.MCP23017 Namespace

Device Fields

The Device type exposes the following members.

Fields

	Name	Description
	MaxChannel	Maximum I/O channel number.
	MinChannel	Minimum I/O channel number.

Top

See Also

Reference

Device Class
IO.Devices.MCP23017 Namespace

DeviceMaxChannel Field

Maximum I/O channel number.

Namespace: IO.Devices.MCP23017
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int MaxChannel = 15
```

Field Value

Type: Int32

See Also

Reference

Device Class
IO.Devices.MCP23017 Namespace

DeviceMinChannel Field

Minimum I/O channel number.

Namespace: IO.Devices.MCP23017
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int MinChannel = 0
```

Field Value

Type: Int32

See Also

Reference

Device Class
IO.Devices.MCP23017 Namespace

IO.Devices.MCP23017.GPIO Namespace

MCP23017 I^{2}C GPIO Expander GPIO Pin Services.

Classes

	Class	Description
	Pin	Encapsulates MCP23017 GPIO pins.

Pin Class

Encapsulates MCP23017 GPIO pins.

Inheritance Hierarchy

SystemObject IO.Devices.MCP23017.GPIOPin

Namespace: IO.Devices.MCP23017.GPIO
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Pin : Pin
```

The Pin type exposes the following members.

Constructors

	Name	Description
	Pin	Create a single MCP23017 GPIO pin.

Top

Properties

	Name	Description
	state	Read/Write GPIO state property.

Top

See Also

Reference

IO.Devices.MCP23017.GPIO Namespace

Pin Constructor

Create a single MCP23017 GPIO pin.

Namespace: IO.Devices.MCP23017.GPIO
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Pin(
        Device dev,
        int channel,
        Direction dir,
        bool state = false
)
```

Parameters

dev
Type: IO.Devices.MCP23017Device
MCP23017 device object.

channel
Type: SystemInt32
MCP23017 I/O channel number.

dir
Type: IO.Interfaces.GPIODirection
GPIO pin data direction.

state **(Optional)**
Type: SystemBoolean
Initial GPIO output state.

See Also

Reference

Pin Class

IO.Devices.MCP23017.GPIO Namespace

Pin Properties

The Pin type exposes the following members.

Properties

	Name	Description
	state	Read/Write GPIO state property.

Top

See Also

Reference

Pin Class

IO.Devices.MCP23017.GPIO Namespace

Pinstate Property

Read/Write GPIO state property.

Namespace: IO.Devices.MCP23017.GPIO
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public bool state { get; set; }
```

Property Value

Type: Boolean

Implements

Pinstate

See Also

Reference

Pin Class
IO.Devices.MCP23017.GPIO Namespace

IO.Devices.MCP23S17 Namespace

MCP23S17 SPI GPIO Expander Device Services.

Classes

	Class	Description
	Device	Encapsulates the MCP23S17 SPI I/O GPIO Expander.

Device Class

Encapsulates the MCP23S17 SPI I/O GPIO Expander.

Inheritance Hierarchy

SystemObject IO.Devices.MCP23S17Device

Namespace: IO.Devices.MCP23S17
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Device
```

The Device type exposes the following members.

Constructors

	Name	Description
	Device	Constructor for a single MCP23S17 device.

Top

Properties

	Name	Description
	Direction	Data Direction Property (16 bits). Bits 0

		to 7 correspond to PORT A and bits 8 to 15 correspond to PORT B. For each bit, 0=input and 1=output.
	DirectionA	Port A Data Direction Property (8 bits). For each bit, 0=input and 1=output.
	DirectionB	Port B Data Direction Property (8 bits). For each bit, 0=input and 1=output.
	Polarity	Data Polarity Property (16 bits). Bits 0 to 7 correspond to PORT A and bits 8 to 15 correspond to PORT B. For each bit, 0=input and 1=output.
	PolarityA	Port A Data Polarity Property (8 bits). For each bit, 0=input and 1=output.
	PolarityB	Port B Data Polarity Property (8 bits). For each bit, 0=input and 1=output.
	Port	Port Data Property (16 bites). Bits 0 to 7 correspond to PORT A and bits 8 to 15 correspond to PORT B.
	PortA	Port A Data Property (8 bits).
	PortB	Port B Data Property (8 bits).
	Pullups	Input Pullup Property (16 bits). Bits 0 to 7 correspond to PORT A and bits 8 to 15 correspond to PORT B. For each bit, 0=high impedance and 1=100k pullup.

	PullupsA	Port A Input Pullup Property (16 bits). For each bit, 0=high impedance and 1=100k pullup.
	PullupsB	Port B Input Pullup Property (16 bits). For each bit, 0=high impedance and 1=100k pullup.

Top

Methods

	Name	Description
	GPIO_Create	Create an MCP23S17 GPIO pin object.

Top

Fields

	Name	Description
S	MaxChannel	Maximum I/O channel number.
S	MinChannel	Minimum I/O channel number.
S	SPI_Frequency	SPI maximum clock frequency in Hz.
S	SPI_Mode	SPI transfer mode.
S	SPI_WordSize	SPI transaction word size.

Top

See Also

Reference

IO.Devices.MCP23S17 Namespace

Device Constructor

Constructor for a single MCP23S17 device.

Namespace: IO.Devices.MCP23S17
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public Device(
        Device dev
)
```

Parameters

dev
Type: IO.Interfaces.SPIDevice
SPI slave device object.

See Also

Reference

Device Class
IO.Devices.MCP23S17 Namespace

Device Properties

The Device type exposes the following members.

Properties

	Name	Description
	Direction	Data Direction Property (16 bits). Bits 0 to 7 correspond to PORT A and bits 8 to 15 correspond to PORT B. For each bit, 0=input and 1=output.
	DirectionA	Port A Data Direction Property (8 bits). For each bit, 0=input and 1=output.
	DirectionB	Port B Data Direction Property (8 bits). For each bit, 0=input and 1=output.
	Polarity	Data Polarity Property (16 bits). Bits 0 to 7 correspond to PORT A and bits 8 to 15 correspond to PORT B. For each bit, 0=input and 1=output.
	PolarityA	Port A Data Polarity Property (8 bits). For each bit, 0=input and 1=output.
	PolarityB	Port B Data Polarity Property (8 bits). For each bit, 0=input and 1=output.
	Port	Port Data Property (16 bites). Bits 0 to 7 correspond to PORT A and bits 8 to

		15 correspond to PORT B.
	PortA	Port A Data Property (8 bits).
	PortB	Port B Data Property (8 bits).
	Pullups	Input Pullup Property (16 bits). Bits 0 to 7 correspond to PORT A and bits 8 to 15 correspond to PORT B. For each bit, 0=high impedance and 1=100k pullup.
	PullupsA	Port A Input Pullup Property (16 bits). For each bit, 0=high impedance and 1=100k pullup.
	PullupsB	Port B Input Pullup Property (16 bits). For each bit, 0=high impedance and 1=100k pullup.

Top

See Also

Reference

Device Class

IO.Devices.MCP23S17 Namespace

DeviceDirection Property

Data Direction Property (16 bits). Bits 0 to 7 correspond to PORT A and bits 8 to 15 correspond to PORT B. For each bit, 0=input and 1=output.

Namespace: IO.Devices.MCP23S17
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public uint Direction { get; set; }
```

Property Value

Type: UInt32

Remarks

This property follows the industry standard convention for data direction bit polarity (1=output) rather than the MCP23S17 `IODIR` register polarity (0=output).

See Also

Reference

Device Class
IO.Devices.MCP23S17 Namespace

DeviceDirectionA Property

Port A Data Direction Property (8 bits). For each bit, 0=input and 1=output.

Namespace: IO.Devices.MCP23S17
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public byte DirectionA { get; set; }
```

Property Value

Type: Byte

Remarks

This property follows the industry standard convention for data direction bit polarity (1=output) rather than the MCP23S17 `IODIRA` register polarity (0=output).

See Also

Reference

Device Class
IO.Devices.MCP23S17 Namespace

DeviceDirectionB Property

Port B Data Direction Property (8 bits). For each bit, 0=input and 1=output.

Namespace: IO.Devices.MCP23S17
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public byte DirectionB { get; set; }
```

Property Value

Type: Byte

Remarks

This property follows the industry standard convention for data direction bit polarity (1=output) rather than the MCP23S17 `IODIRA` register polarity (0=output).

See Also

Reference

Device Class
IO.Devices.MCP23S17 Namespace

DevicePolarity Property

Data Polarity Property (16 bits). Bits 0 to 7 correspond to PORT A and bits 8 to 15 correspond to PORT B. For each bit, 0=input and 1=output.

Namespace: IO.Devices.MCP23S17
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public uint Polarity { get; set; }
```

Property Value

Type: UInt32

See Also

Reference

Device Class
IO.Devices.MCP23S17 Namespace

DevicePolarityA Property

Port A Data Polarity Property (8 bits). For each bit, 0=input and 1=output.

Namespace: IO.Devices.MCP23S17
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public byte PolarityA { get; set; }
```

Property Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.MCP23S17 Namespace

DevicePolarityB Property

Port B Data Polarity Property (8 bits). For each bit, 0=input and 1=output.

Namespace: IO.Devices.MCP23S17
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public byte PolarityB { get; set; }
```

Property Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.MCP23S17 Namespace

DevicePort Property

Port Data Property (16 bites). Bits 0 to 7 correspond to PORT A and bits 8 to 15 correspond to PORT B.

Namespace: IO.Devices.MCP23S17
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public uint Port { get; set; }
```

Property Value

Type: UInt32

See Also

Reference

Device Class
IO.Devices.MCP23S17 Namespace

DevicePortA Property

Port A Data Property (8 bits).

Namespace: IO.Devices.MCP23S17
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public byte PortA { get; set; }
```

Property Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.MCP23S17 Namespace

DevicePortB Property

Port B Data Property (8 bits).

Namespace: IO.Devices.MCP23S17
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public byte PortB { get; set; }
```

Property Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.MCP23S17 Namespace

DevicePullups Property

Input Pullup Property (16 bits). Bits 0 to 7 correspond to PORT A and bits 8 to 15 correspond to PORT B. For each bit, 0=high impedance and 1=100k pullup.

Namespace: IO.Devices.MCP23S17
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public uint Pullups { get; set; }
```

Property Value

Type: UInt32

See Also

Reference

Device Class
IO.Devices.MCP23S17 Namespace

DevicePullupsA Property

Port A Input Pullup Property (16 bits). For each bit, 0=high impedance and 1=100k pullup.

Namespace: IO.Devices.MCP23S17
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public byte PullupsA { get; set; }
```

Property Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.MCP23S17 Namespace

DevicePullupsB Property

Port B Input Pullup Property (16 bits). For each bit, 0=high impedance and 1=100k pullup.

Namespace: IO.Devices.MCP23S17
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public byte PullupsB { get; set; }
```

Property Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.MCP23S17 Namespace

Device Methods

The Device type exposes the following members.

Methods

	Name	Description
	GPIO_Create	Create an MCP23S17 GPIO pin object.

Top

See Also

Reference

Device Class

IO.Devices.MCP23S17 Namespace

DeviceGPIO_Create Method

Create an MCP23S17 GPIO pin object.

Namespace: IO.Devices.MCP23S17
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Pin GPIO_Create(
        int channel,
        Direction dir,
        bool state = false
)
```

Parameters

channel
Type: SystemInt32
MCP23S17 channel number (0 to 15).

dir
Type: IO.Interfaces.GPIODirection
GPIO pin data direction.

state **(Optional)**
Type: SystemBoolean
Initial GPIO output state.

Return Value

Type: Pin
GPIO pin object.

See Also

Reference

Device Class

IO.Devices.MCP23S17 Namespace

Device Fields

The Device type exposes the following members.

Fields

	Name	Description
	MaxChannel	Maximum I/O channel number.
	MinChannel	Minimum I/O channel number.
	SPI_Frequency	SPI maximum clock frequency in Hz.
	SPI_Mode	SPI transfer mode.
	SPI_WordSize	SPI transaction word size.

Top

See Also

Reference

Device Class

IO.Devices.MCP23S17 Namespace

DeviceMaxChannel Field

Maximum I/O channel number.

Namespace: IO.Devices.MCP23S17
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int MaxChannel = 15
```

Field Value

Type: Int32

See Also

Reference

Device Class
IO.Devices.MCP23S17 Namespace

DeviceMinChannel Field

Minimum I/O channel number.

Namespace: IO.Devices.MCP23S17
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int MinChannel = 0
```

Field Value

Type: Int32

See Also

Reference

Device Class
IO.Devices.MCP23S17 Namespace

DeviceSPI_Frequency Field

SPI maximum clock frequency in Hz.

Namespace: IO.Devices.MCP23S17
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int SPI_Frequency = 10000000
```

Field Value

Type: Int32

Remarks

Guaranteed only for 2.7V to 5.5V and -40°C to +85°C.

See Also

Reference

Device Class
IO.Devices.MCP23S17 Namespace

DeviceSPI_Mode Field

SPI transfer mode.

Namespace: IO.Devices.MCP23S17
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int SPI_Mode = 0
```

Field Value

Type: Int32

See Also

Reference

Device Class
IO.Devices.MCP23S17 Namespace

DeviceSPI_WordSize Field

SPI transaction word size.

Namespace: IO.Devices.MCP23S17
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int SPI_WordSize = 8
```

Field Value

Type: Int32

See Also

Reference

Device Class
IO.Devices.MCP23S17 Namespace

IO.Devices.MCP23S17.GPIO Namespace

MCP23S17 SPI GPIO Expander GPIO Pin Services.

Classes

	Class	Description
	Pin	Encapsulates MCP23S17 GPIO pins.

Pin Class

Encapsulates MCP23S17 GPIO pins.

Inheritance Hierarchy

SystemObject IO.Devices.MCP23S17.GPIOPin

Namespace: IO.Devices.MCP23S17.GPIO
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Pin : Pin
```

The Pin type exposes the following members.

Constructors

	Name	Description
	Pin	Create a single MCP23S17 GPIO pin.

Top

Properties

	Name	Description
	state	Read/Write GPIO state property.

Top

See Also

Reference

IO.Devices.MCP23S17.GPIO Namespace

Pin Constructor

Create a single MCP23S17 GPIO pin.

Namespace: IO.Devices.MCP23S17.GPIO
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Pin(
        Device dev,
        int channel,
        Direction dir,
        bool state = false
)
```

Parameters

dev
Type: IO.Devices.MCP23S17Device
MCP23S17 device object.

channel
Type: SystemInt32
MCP23S17 I/O channel number.

dir
Type: IO.Interfaces.GPIODirection
GPIO pin data direction.

state **(Optional)**
Type: SystemBoolean
Initial GPIO output state.

See Also

Reference

Pin Class

IO.Devices.MCP23S17.GPIO Namespace

Pin Properties

The Pin type exposes the following members.

Properties

	Name	Description
	state	Read/Write GPIO state property.

Top

See Also

Reference

Pin Class

IO.Devices.MCP23S17.GPIO Namespace

Pinstate Property

Read/Write GPIO state property.

Namespace: IO.Devices.MCP23S17.GPIO
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public bool state { get; set; }
```

Property Value

Type: Boolean

Implements

Pinstate

See Also

Reference

Pin Class
IO.Devices.MCP23S17.GPIO Namespace

IO.Devices.PCA8574 Namespace

PCA8574 (and similar) I^2C GPIO Expander Device Services

Classes

	Class	Description
	Device	Encapsulates PCA8574 (and similar) I^2C GPIO Expanders.

Device Class

Encapsulates PCA8574 (and similar) I^2C GPIO Expanders.

Inheritance Hierarchy

SystemObject IO.Devices.PCA8574Device

Namespace: IO.Devices.PCA8574
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Device
```

The Device type exposes the following members.

Constructors

	Name	Description
	Device	Constructor for a PCA8574 (or similar) GPIO Expander.

Top

Properties

	Name	Description
	Latch	This read-only property returns the last

value written to the output latch.

Top

Methods

	Name	Description
	Read	Return actual state of the GPIO pins.
	Write	Write all GPIO pins.

Top

Fields

	Name	Description
S	MAX_PINS	The number of available GPIO pins per chip.

Top

See Also

Reference

IO.Devices.PCA8574 Namespace

Device Constructor

Constructor for a PCA8574 (or similar) GPIO Expander.

Namespace: IO.Devices.PCA8574
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Device(
        Bus bus,
        int addr,
        byte states = 255
)
```

Parameters

bus
Type: IO.Interfaces.I2CBus
I^2C bus controller.

addr
Type: SystemInt32
I^2C slave address.

states **(Optional)**
Type: SystemByte
Initial output states.

See Also

Reference

Device Class
IO.Devices.PCA8574 Namespace

Device Properties

The Device type exposes the following members.

Properties

	Name	Description
	Latch	This read-only property returns the last value written to the output latch.

Top

See Also

Reference

Device Class

IO.Devices.PCA8574 Namespace

DeviceLatch Property

This read-only property returns the last value written to the output latch.

Namespace: IO.Devices.PCA8574
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public byte Latch { get; }
```

Property Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.PCA8574 Namespace

Device Methods

The Device type exposes the following members.

Methods

	Name	Description
	Read	Return actual state of the GPIO pins.
	Write	Write all GPIO pins.

Top

See Also

Reference

Device Class

IO.Devices.PCA8574 Namespace

DeviceRead Method

Return actual state of the GPIO pins.

Namespace: IO.Devices.PCA8574
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public byte Read()
```

Return Value

Type: Byte
Pin states (MSB = GPIO7).

See Also

Reference

Device Class
IO.Devices.PCA8574 Namespace

DeviceWrite Method

Write all GPIO pins.

Namespace: IO.Devices.PCA8574
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public void Write(
        byte data
)
```

Parameters

data
Type: SystemByte
Data to write to pins (MSB = GPIO7).

See Also

Reference

Device Class
IO.Devices.PCA8574 Namespace

Device Fields

The Device type exposes the following members.

Fields

	Name	Description
	MAX_PINS	The number of available GPIO pins per chip.

Top

See Also

Reference

Device Class

IO.Devices.PCA8574 Namespace

DeviceMAX_PINS Field

The number of available GPIO pins per chip.

Namespace: IO.Devices.PCA8574
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int MAX_PINS = 8
```

Field Value

Type: Int32

See Also

Reference

Device Class
IO.Devices.PCA8574 Namespace

IO.Devices.PCA8574.GPIO Namespace

PCA8574 (and similar) I^2C GPIO Expander GPIO Pin Services

Classes

	Class	Description
	Pin	Encapsulates PCA8574 (and similar) I^2C GPIO Expander pins.

Pin Class

Encapsulates PCA8574 (and similar) I^{2}C GPIO Expander pins.

Inheritance Hierarchy

SystemObject IO.Devices.PCA8574.GPIOPin

Namespace: IO.Devices.PCA8574.GPIO
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Pin : Pin
```

The Pin type exposes the following members.

Constructors

	Name	Description
	Pin	Constructor for a single GPIO pin.

Top

Properties

	Name	Description
	state	Read/Write GPIO state property.

Top

See Also

Reference

IO.Devices.PCA8574.GPIO Namespace

Pin Constructor

Constructor for a single GPIO pin.

Namespace: IO.Devices.PCA8574.GPIO
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Pin(
        Device dev,
        int num,
        Direction dir,
        bool state = false
)
```

Parameters

dev
Type: IO.Devices.PCA8574Device
PCA8574 (or similar) device.

num
Type: SystemInt32
GPIO pin number.

dir
Type: IO.Interfaces.GPIODirection
Data direction.

state **(Optional)**
Type: SystemBoolean
Initial GPIO output state.

See Also

Reference

Pin Class

IO.Devices.PCA8574.GPIO Namespace

Pin Properties

The Pin type exposes the following members.

Properties

	Name	Description
	state	Read/Write GPIO state property.

Top

See Also

Reference

Pin Class
IO.Devices.PCA8574.GPIO Namespace

Pinstate Property

Read/Write GPIO state property.

Namespace: IO.Devices.PCA8574.GPIO
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public bool state { get; set; }
```

Property Value

Type: Boolean

Implements

Pinstate

See Also

Reference

Pin Class
IO.Devices.PCA8574.GPIO Namespace

IO.Devices.PCA9534 Namespace

PCA9534 (and similar) I^2C GPIO Expander Device Services

Classes

	Class	Description
	Device	Encapsulates PCA9534 (and similar) I^2C GPIO Expanders.

Device Class

Encapsulates PCA9534 (and similar) I^{2}C GPIO Expanders.

Inheritance Hierarchy

SystemObject IO.Devices.PCA9534Device

Namespace: IO.Devices.PCA9534
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public class Device
```

The Device type exposes the following members.

Constructors

	Name	Description
	Device	Constructor for a PCA9534 (or similar) GPIO Expander.

Top

Properties

	Name	Description
	Config	This read-only property returns the last

		value written to the configuration register.
	Latch	This read-only property returns the last value written to the output port register.

Top

Methods

	Name	Description
	Read	Return actual state of the GPIO pins.
	Read(Byte)	Read from the specified PCA9534 device register.
	Write(Byte)	Write all GPIO pins.
	Write(Byte, Byte)	Write to the specified PCA9534 device register.

Top

Fields

	Name	Description
S	AllInputs	Configure all pins as inputs.
S	AllNormal	Configure all inputs as normal polarity.
S	AllOff	Turn all outputs off.
S	AllOutputs	Configure all pins as outputs.

S	ConfigurationReg	Configuration Register address.
S	InputPolarityReg	Input Port Polarity Register address.
S	InputPortReg	Input Port Register address.
S	MAX_PINS	The number of available GPIO pins per chip.
S	OutputPortReg	Output Port Register address.

Top

See Also

Reference

IO.Devices.PCA9534 Namespace

Device Constructor

Constructor for a PCA9534 (or similar) GPIO Expander.

Namespace: IO.Devices.PCA9534
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Device(
        Bus bus,
        int addr,
        byte config = 255,
        byte states = 0
)
```

Parameters

bus
Type: IO.Interfaces.I2CBus
I^2C bus controller.

addr
Type: SystemInt32
I^2C slave address.

config **(Optional)**
Type: SystemByte
GPIO pin configuration.

states **(Optional)**
Type: SystemByte
Initial output states.

See Also

Reference

Device Class

IO.Devices.PCA9534 Namespace

Device Properties

The Device type exposes the following members.

Properties

	Name	Description
	Config	This read-only property returns the last value written to the configuration register.
	Latch	This read-only property returns the last value written to the output port register.

Top

See Also

Reference

Device Class

IO.Devices.PCA9534 Namespace

DeviceConfig Property

This read-only property returns the last value written to the configuration register.

Namespace: IO.Devices.PCA9534
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public byte Config { get; }
```

Property Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.PCA9534 Namespace

DeviceLatch Property

This read-only property returns the last value written to the output port register.

Namespace: IO.Devices.PCA9534
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public byte Latch { get; }
```

Property Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.PCA9534 Namespace

Device Methods

Methods

	Name	Description
	Read	Return actual state of the GPIO pins.
	Read(Byte)	Read from the specified PCA9534 device register.
	Write(Byte)	Write all GPIO pins.
	Write(Byte, Byte)	Write to the specified PCA9534 device register.

Top

See Also

Reference

Device Class

IO.Devices.PCA9534 Namespace

DeviceRead Method

Overload List

	Name	Description
	Read	Return actual state of the GPIO pins.
	Read(Byte)	Read from the specified PCA9534 device register.

Top

See Also

Reference

Device Class

IO.Devices.PCA9534 Namespace

DeviceRead Method

Return actual state of the GPIO pins.

Namespace: IO.Devices.PCA9534
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public byte Read()
```

Return Value

Type: Byte
Pin states (MSB = GPIO7).

See Also

Reference

Device Class
Read Overload
IO.Devices.PCA9534 Namespace

DeviceRead Method (Byte)

Read from the specified PCA9534 device register.

Namespace: IO.Devices.PCA9534
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public byte Read(
        byte addr
)
```

Parameters

addr
Type: SystemByte
Register address.

Return Value

Type: Byte
Register contents.

See Also

Reference

Device Class
Read Overload
IO.Devices.PCA9534 Namespace

DeviceWrite Method

Overload List

	Name	Description
	Write(Byte)	Write all GPIO pins.
	Write(Byte, Byte)	Write to the specified PCA9534 device register.

Top

See Also

Reference

Device Class

IO.Devices.PCA9534 Namespace

DeviceWrite Method (Byte)

Write all GPIO pins.

Namespace: IO.Devices.PCA9534
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public void Write(
        byte data
)
```

Parameters

data
Type: SystemByte
Data to write to pins (MSB = GPIO7).

See Also

Reference

Device Class
Write Overload
IO.Devices.PCA9534 Namespace

DeviceWrite Method (Byte, Byte)

Write to the specified PCA9534 device register.

Namespace: IO.Devices.PCA9534
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public void Write(
        byte addr,
        byte data
)
```

Parameters

addr
Type: SystemByte
Register address.

data
Type: SystemByte
Data to written.

See Also

Reference

Device Class
Write Overload
IO.Devices.PCA9534 Namespace

Device Fields

The Device type exposes the following members.

Fields

	Name	Description
	AllInputs	Configure all pins as inputs.
	AllNormal	Configure all inputs as normal polarity.
	AllOff	Turn all outputs off.
	AllOutputs	Configure all pins as outputs.
	ConfigurationReg	Configuration Register address.
	InputPolarityReg	Input Port Polarity Register address.
	InputPortReg	Input Port Register address.
	MAX_PINS	The number of available GPIO pins per chip.
	OutputPortReg	Output Port Register address.

Top

See Also

Reference

Device Class

IO.Devices.PCA9534 Namespace

DeviceAllInputs Field

Configure all pins as inputs.

Namespace: IO.Devices.PCA9534
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const byte AllInputs = 255
```

Field Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.PCA9534 Namespace

DeviceAllNormal Field

Configure all inputs as normal polarity.

Namespace: IO.Devices.PCA9534
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const byte AllNormal = 0
```

Field Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.PCA9534 Namespace

DeviceAllOff Field

Turn all outputs off.

Namespace: IO.Devices.PCA9534
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const byte AllOff = 0
```

Field Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.PCA9534 Namespace

DeviceAllOutputs Field

Configure all pins as outputs.

Namespace: IO.Devices.PCA9534
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const byte AllOutputs = 0
```

Field Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.PCA9534 Namespace

DeviceConfigurationReg Field

Configuration Register address.

Namespace: IO.Devices.PCA9534
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const byte ConfigurationReg = 3
```

Field Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.PCA9534 Namespace

DeviceInputPolarityReg Field

Input Port Polarity Register address.

Namespace: IO.Devices.PCA9534
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const byte InputPolarityReg = 2
```

Field Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.PCA9534 Namespace

DeviceInputPortReg Field

Input Port Register address.

Namespace: IO.Devices.PCA9534
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const byte InputPortReg = 0
```

Field Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.PCA9534 Namespace

DeviceMAX_PINS Field

The number of available GPIO pins per chip.

Namespace: IO.Devices.PCA9534
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int MAX_PINS = 8
```

Field Value

Type: Int32

See Also

Reference

Device Class
IO.Devices.PCA9534 Namespace

DeviceOutputPortReg Field

Output Port Register address.

Namespace: IO.Devices.PCA9534
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const byte OutputPortReg = 1
```

Field Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.PCA9534 Namespace

IO.Devices.PCA9534.GPIO Namespace

PCA9534 (and similar) I^2C GPIO Expander GPIO Pin Services

Classes

	Class	Description
	Pin	Encapsulates PCA9534 (and similar) I^2C GPIO Expander pins.

Pin Class

Encapsulates PCA9534 (and similar) I^{2}C GPIO Expander pins.

Inheritance Hierarchy

SystemObject IO.Devices.PCA9534.GPIOPin

Namespace: IO.Devices.PCA9534.GPIO
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Pin : Pin
```

The Pin type exposes the following members.

Constructors

	Name	Description
	Pin	Constructor for a single GPIO pin.

Top

Properties

	Name	Description
	state	Read/Write GPIO state property.

Top

See Also

Reference

IO.Devices.PCA9534.GPIO Namespace

Pin Constructor

Constructor for a single GPIO pin.

Namespace: IO.Devices.PCA9534.GPIO
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Pin(
        Device dev,
        int num,
        Direction dir,
        bool state = false
)
```

Parameters

dev
Type: IO.Devices.PCA9534Device
PCA9534 (or similar) device.

num
Type: SystemInt32
GPIO pin number.

dir
Type: IO.Interfaces.GPIODirection
Data direction.

state **(Optional)**
Type: SystemBoolean
Initial GPIO output state.

See Also

Reference

Pin Class

IO.Devices.PCA9534.GPIO Namespace

Pin Properties

The Pin type exposes the following members.

Properties

	Name	Description
	state	Read/Write GPIO state property.

Top

See Also

Reference

Pin Class

IO.Devices.PCA9534.GPIO Namespace

Pinstate Property

Read/Write GPIO state property.

Namespace: IO.Devices.PCA9534.GPIO
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public bool state { get; set; }
```

Property Value

Type: Boolean

Implements

Pinstate

See Also

Reference

Pin Class
IO.Devices.PCA9534.GPIO Namespace

IO.Devices.PCA9685 Namespace

PCA9685 I^{2}C PWM Controller Device Services

Classes

	Class	Description
	Device	Encapsulates the PCA9685 I^{2}C PWM Controller.

Device Class

Encapsulates the PCA9685 I^{2}C PWM Controller.

Inheritance Hierarchy

SystemObject IO.Devices.PCA9685Device

Namespace: IO.Devices.PCA9685
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Device
```

The Device type exposes the following members.

Constructors

	Name	Description
	Device	Constructor for a single PCA9685 device.

Top

Properties

	Name	Description
	Frequency	Read-only property returning the configured PWM pulse frequency.

Top

Methods

	Name	Description
	ReadChannel	Read PCA9685 output channel data.
	WriteChannel	Write PCA9685 output channel data.

Top

Fields

	Name	Description
S	INTERNAL_CLOCK	Select internal 25 MHz clock oscillator.
S	MAX_CHANNEL	Maximum PCA9685 output channel number.
S	MAX_CLOCK	Maximum clock frequency.
S	MIN_CHANNEL	Minimum PCA9685 output channel number.
S	MIN_CLOCK	Minimum clock frequency.

Top

See Also

Reference

IO.Devices.PCA9685 Namespace

Device Constructor

Constructor for a single PCA9685 device.

Namespace: IO.Devices.PCA9685
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Device(
        Bus bus,
        int addr,
        int freq = 50,
        int clock = 0
)
```

Parameters

bus
Type: IO.Interfaces.I2CBus
I²C bus controller object.

addr
Type: SystemInt32
I²C slave address.

freq **(Optional)**
Type: SystemInt32
PWM pulse frequency. Default is 50 Hz.

clock **(Optional)**
Type: SystemInt32
PCA9685 clock source. Use `INTERNAL_CLOCK`c> to select the

internal 25 MHz clock generator.

See Also

Reference

Device Class

IO.Devices.PCA9685 Namespace

Device Properties

The Device type exposes the following members.

Properties

	Name	Description
	Frequency	Read-only property returning the configured PWM pulse frequency.

Top

See Also

Reference

Device Class

IO.Devices.PCA9685 Namespace

DeviceFrequency Property

Read-only property returning the configured PWM pulse frequency.

Namespace: IO.Devices.PCA9685
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public int Frequency { get; }
```

Property Value

Type: Int32

See Also

Reference

Device Class
IO.Devices.PCA9685 Namespace

Device Methods

The Device type exposes the following members.

Methods

	Name	Description
	ReadChannel	Read PCA9685 output channel data.
	WriteChannel	Write PCA9685 output channel data.

Top

See Also

Reference

Device Class

IO.Devices.PCA9685 Namespace

DeviceReadChannel Method

Read PCA9685 output channel data.

Namespace: IO.Devices.PCA9685
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public void ReadChannel(
        byte channel,
        ref byte[] data
)
```

Parameters

channel
Type: SystemByte
Output channel number.

data
Type: SystemByte
Output channel data (4 bytes).

See Also

Reference

Device Class
IO.Devices.PCA9685 Namespace

DeviceWriteChannel Method

Write PCA9685 output channel data.

Namespace: IO.Devices.PCA9685
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public void WriteChannel(
        byte channel,
        byte[] data
)
```

Parameters

channel
Type: SystemByte
Output channel number.

data
Type: SystemByte
Output channel data.

See Also

Reference

Device Class
IO.Devices.PCA9685 Namespace

Device Fields

The Device type exposes the following members.

Fields

	Name	Description
S	INTERNAL_CLOCK	Select internal 25 MHz clock oscillator.
S	MAX_CHANNEL	Maximum PCA9685 output channel number.
S	MAX_CLOCK	Maximum clock frequency.
S	MIN_CHANNEL	Minimum PCA9685 output channel number.
S	MIN_CLOCK	Minimum clock frequency.

Top

See Also

Reference

Device Class

IO.Devices.PCA9685 Namespace

DeviceINTERNAL_CLOCK Field

Select internal 25 MHz clock oscillator.

Namespace: IO.Devices.PCA9685
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int INTERNAL_CLOCK = 0
```

Field Value

Type: Int32

See Also

Reference

Device Class
IO.Devices.PCA9685 Namespace

DeviceMAX_CHANNEL Field

Maximum PCA9685 output channel number.

Namespace: IO.Devices.PCA9685
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int MAX_CHANNEL = 15
```

Field Value

Type: Int32

See Also

Reference

Device Class
IO.Devices.PCA9685 Namespace

DeviceMAX_CLOCK Field

Maximum clock frequency.

Namespace: IO.Devices.PCA9685
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int MAX_CLOCK = 50000000
```

Field Value

Type: Int32

See Also

Reference

Device Class
IO.Devices.PCA9685 Namespace

DeviceMIN_CHANNEL Field

Minimum PCA9685 output channel number.

Namespace: IO.Devices.PCA9685
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int MIN_CHANNEL = 0
```

Field Value

Type: Int32

See Also

Reference

Device Class
IO.Devices.PCA9685 Namespace

DeviceMIN_CLOCK Field

Minimum clock frequency.

Namespace: IO.Devices.PCA9685
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int MIN_CLOCK = 1
```

Field Value

Type: Int32

See Also

Reference

Device Class
IO.Devices.PCA9685 Namespace

IO.Devices.PCA9685.GPIO Namespace

PCA9685 I^{2}C PWM Controller GPIO Pin Services

Classes

	Class	Description
	Pin	Encapsulates PCA9685 GPIO outputs.

Pin Class

Encapsulates PCA9685 GPIO outputs.

Inheritance Hierarchy

SystemObject IO.Devices.PCA9685.GPIOPin

Namespace: IO.Devices.PCA9685.GPIO
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Pin : Pin
```

The Pin type exposes the following members.

Constructors

	Name	Description
	Pin	Constructor for a single GPIO output pin.

Top

Properties

	Name	Description
	state	Read/Write GPIO output state property.

Top

See Also

Reference

IO.Devices.PCA9685.GPIO Namespace

Pin Constructor

Constructor for a single GPIO output pin.

Namespace: IO.Devices.PCA9685.GPIO
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Pin(
        Device dev,
        int channel,
        bool state = false
)
```

Parameters

dev
Type: IO.Devices.PCA9685Device
PCA9685 device object.

channel
Type: SystemInt32
Output channel number.

state **(Optional)**
Type: SystemBoolean
Initial GPIO output state.

See Also

Reference

Pin Class

IO.Devices.PCA9685.GPIO Namespace

Pin Properties

The Pin type exposes the following members.

Properties

	Name	Description
	state	Read/Write GPIO output state property.

Top

See Also

Reference

Pin Class

IO.Devices.PCA9685.GPIO Namespace

Pinstate Property

Read/Write GPIO output state property.

Namespace: IO.Devices.PCA9685.GPIO
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public bool state { get; set; }
```

Property Value

Type: Boolean

Implements

Pinstate

See Also

Reference

Pin Class
IO.Devices.PCA9685.GPIO Namespace

IO.Devices.PCA9685.PWM Namespace

PCA9685 I^{2}C PWM Controller PWM Output Services

Classes

	Class	Description
	Output	Encapsulates PCA9685 PWM outputs.

Output Class

Encapsulates PCA9685 PWM outputs.

Inheritance Hierarchy

SystemObject IO.Devices.PCA9685.PWMOutput

Namespace: IO.Devices.PCA9685.PWM
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Output : Output
```

The Output type exposes the following members.

Constructors

	Name	Description
	Output	Constructor for a single PWM output.

Top

Properties

	Name	Description
	dutycycle	Write-only property for setting the PWM output duty cycle. Allowed values

are 0.0 to 100.0 percent.

Top

See Also

Reference

IO.Devices.PCA9685.PWM Namespace

Output Constructor

Constructor for a single PWM output.

Namespace: IO.Devices.PCA9685.PWM
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Output(
        Device dev,
        int channel,
        double dutycycle = 0
)
```

Parameters

dev
Type: IO.Devices.PCA9685Device
PCA9685 device object.

channel
Type: SystemInt32
Output channel number.

dutycycle **(Optional)**
Type: SystemDouble
Initial PWM output duty cycle.

See Also

Reference

Output Class

IO.Devices.PCA9685.PWM Namespace

Output Properties

The Output type exposes the following members.

Properties

	Name	Description
	dutycycle	Write-only property for setting the PWM output duty cycle. Allowed values are 0.0 to 100.0 percent.

Top

See Also

Reference

Output Class
IO.Devices.PCA9685.PWM Namespace

Outputdutycycle Property

Write-only property for setting the PWM output duty cycle. Allowed values are 0.0 to 100.0 percent.

Namespace: IO.Devices.PCA9685.PWM
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public double dutycycle { set; }
```

Property Value

Type: Double

Implements

Outputdutycycle

See Also

Reference

Output Class
IO.Devices.PCA9685.PWM Namespace

IO.Devices.PCA9685.Servo Namespace

PCA9685 I^{2}C PWM Controller Servo Output Services

Classes

	Class	Description
	Output	Encapsulates PCA9685 servo outputs.

Output Class

Encapsulates PCA9685 servo outputs.

Inheritance Hierarchy

SystemObject IO.Devices.PCA9685.ServoOutput

Namespace: IO.Devices.PCA9685.Servo
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Output : Output
```

The Output type exposes the following members.

Constructors

	Name	Description
	Output	Constructor for a single servo output.

Top

Properties

	Name	Description
	position	Write-only property for setting the normalized servo position. Allowed

values are -0.0 to+1.0.

Top

See Also

Reference

IO.Devices.PCA9685.Servo Namespace

Output Constructor

Constructor for a single servo output.

Namespace: IO.Devices.PCA9685.Servo
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Output(
        Device dev,
        int channel,
        double position = 0
)
```

Parameters

dev
Type: IO.Devices.PCA9685Device
PCA9685 device object.

channel
Type: SystemInt32
Output channel number.

position **(Optional)**
Type: SystemDouble
Initial servo position.

See Also

Reference

Output Class

IO.Devices.PCA9685.Servo Namespace

Output Properties

The Output type exposes the following members.

Properties

	Name	Description
	position	Write-only property for setting the normalized servo position. Allowed values are -0.0 to+1.0.

Top

See Also

Reference

Output Class
IO.Devices.PCA9685.Servo Namespace

Outputposition Property

Write-only property for setting the normalized servo position. Allowed values are -0.0 to+1.0.

Namespace: IO.Devices.PCA9685.Servo
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public double position { set; }
```

Property Value

Type: Double

Implements

Outputposition

See Also

Reference

Output Class
IO.Devices.PCA9685.Servo Namespace

IO.Devices.Pmod.HYGRO Namespace

Digilent Pmod HYGRO Temperature and Humdity Sensor (HDC1080) Services.

Classes

	Class	Description
	Device	Encapsulate the Digilent Pmod HYGRO Temperature and Humidity Sensor (HDC1080).

Device Class

Encapsulate the Digilent Pmod HYGRO Temperature and Humidity Sensor (HDC1080).

Inheritance Hierarchy

SystemObject IO.Devices.HDC1080Device
IO.Devices.Pmod.HYGRODevice

Namespace: IO.Devices.Pmod.HYGRO
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Device : Device
```

The Device type exposes the following members.

Constructors

	Name	Description
	Device	Constructor for a Digilent Pmod HYGRO Temperature and Humidity Sensor (HDC1080).

Top

Properties

	Name	Description
	Celsius	Read-only property returning the temperature in degrees Celsius. (Inherited from Device.)
	DeviceID	Read-only property returning the device ID. (Inherited from Device.)
	Fahrenheit	Read-only property returning the temperature in degrees Fahrenheit. (Inherited from Device.)
	Humidity	Read-only property returning the percentage relative humidity. (Inherited from Device.)
	Kelvins	Read-only property returning the temperature in Kelvins. (Inherited from Device.)
	ManufacturerID	Read-only property returning the manufacturer ID. (Inherited from Device.)

Top

Methods

	Name	Description
	Read	Read from an HDC1080 device register. (Inherited from Device.)

	Write	Write to an HDC1080 device register. (Inherited from Device.)

Top

See Also

Reference

IO.Devices.Pmod.HYGRO Namespace

Device Constructor

Constructor for a Digilent Pmod HYGRO Temperature and Humidity Sensor (HDC1080).

Namespace: IO.Devices.Pmod.HYGRO
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public Device(
        Bus bus
)
```

Parameters

bus
Type: IO.Interfaces.I2CBus
I^2 bus object.

See Also

Reference

Device Class
IO.Devices.Pmod.HYGRO Namespace

Device Properties

The Device type exposes the following members.

Properties

	Name	Description
	Celsius	Read-only property returning the temperature in degrees Celsius. (Inherited from Device.)
	DeviceID	Read-only property returning the device ID. (Inherited from Device.)
	Fahrenheit	Read-only property returning the temperature in degrees Fahrenheit. (Inherited from Device.)
	Humidity	Read-only property returning the percentage relative humidity. (Inherited from Device.)
	Kelvins	Read-only property returning the temperature in Kelvins. (Inherited from Device.)
	ManufacturerID	Read-only property returning the manufacturer ID.

(Inherited from Device.)

Top

See Also

Reference

Device Class
IO.Devices.Pmod.HYGRO Namespace

Device Methods

The Device type exposes the following members.

Methods

	Name	Description
	Read	Read from an HDC1080 device register. (Inherited from Device.)
	Write	Write to an HDC1080 device register. (Inherited from Device.)

Top

See Also

Reference

Device Class

IO.Devices.Pmod.HYGRO Namespace

IO.Devices.SN74HC595 Namespace

SN74HC595 8-Bit Shift Register Device Services

Classes

	Class	Description
	Device	Encapsulates a chain of one or more SN74HC595 8-bit shift registers.

Device Class

Encapsulates a chain of one or more SN74HC595 8-bit shift registers.

Inheritance Hierarchy

SystemObject IO.Devices.SN74HC595Device

Namespace: IO.Devices.SN74HC595
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Device
```

The Device type exposes the following members.

Constructors

	Name	Description
	Device	Constructor for a chain of one or more SN74HC595 shift registers.

Top

Properties

	Name	Description
	Length	Read-only property returning the

		number of stages in the chain.
	state	Read/Write shift register chain state property.

Top

Methods

	Name	Description
	ClrBit	Clear a single bit in the shift register chain.
	ReadBit	Read a single bit in the shift register chain.
	SetBit	Set a single bit in the shift register chain.

Top

Fields

	Name	Description
S	SPI_MaxFreq	SPI maximum clock frequency for the SNHC74HC595 shift register. (Most pessimistic datasheet limit at 2V.)
S	SPI_Mode	SPI clock mode for the SNHC74HC595 shift register.

Top

See Also

Reference

IO.Devices.SN74HC595 Namespace

Device Constructor

Constructor for a chain of one or more SN74HC595 shift registers.

Namespace: IO.Devices.SN74HC595
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Device(
        Device dev,
        int stages = 1,
        byte[] initialstate = null
)
```

Parameters

dev
Type: IO.Interfaces.SPIDevice
SPI device object.

stages **(Optional)**
Type: SystemInt32
Number of stages in the chain.

initialstate **(Optional)**
Type: SystemByte
Initial shift register chain state.

See Also

Reference

Device Class

IO.Devices.SN74HC595 Namespace

Device Properties

The Device type exposes the following members.

Properties

	Name	Description
	Length	Read-only property returning the number of stages in the chain.
	state	Read/Write shift register chain state property.

Top

See Also

Reference

Device Class

IO.Devices.SN74HC595 Namespace

DeviceLength Property

Read-only property returning the number of stages in the chain.

Namespace: IO.Devices.SN74HC595
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public int Length { get; }
```

Property Value

Type: Int32

See Also

Reference

Device Class
IO.Devices.SN74HC595 Namespace

Devicestate Property

Read/Write shift register chain state property.

Namespace: IO.Devices.SN74HC595
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public byte[] state { get; set; }
```

Property Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.SN74HC595 Namespace

Device Methods

The Device type exposes the following members.

Methods

	Name	Description
	ClrBit	Clear a single bit in the shift register chain.
	ReadBit	Read a single bit in the shift register chain.
	SetBit	Set a single bit in the shift register chain.

Top

See Also

Reference

Device Class

IO.Devices.SN74HC595 Namespace

DeviceClrBit Method

Clear a single bit in the shift register chain.

Namespace: IO.Devices.SN74HC595
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public void ClrBit(
        int index,
        byte mask
)
```

Parameters

index
Type: SystemInt32
Shift register stage number. Zero indicates the first register stage.

mask
Type: SystemByte
Shift register bit mask.

See Also

Reference

Device Class
IO.Devices.SN74HC595 Namespace

DeviceReadBit Method

Read a single bit in the shift register chain.

Namespace: IO.Devices.SN74HC595
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public bool ReadBit(
        int index,
        byte mask
)
```

Parameters

index
Type: SystemInt32
Shift register stage number. Zero indicates the first register stage.

mask
Type: SystemByte
Shift register bit mask.

Return Value

Type: Boolean
Boolean bit value.

See Also

Reference

Device Class

IO.Devices.SN74HC595 Namespace

DeviceSetBit Method

Set a single bit in the shift register chain.

Namespace: IO.Devices.SN74HC595
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public void SetBit(
        int index,
        byte mask
)
```

Parameters

index
Type: SystemInt32
Shift register stage number. Zero indicates the first register stage.

mask
Type: SystemByte
Shift register bit mask.

See Also

Reference

Device Class
IO.Devices.SN74HC595 Namespace

Device Fields

The Device type exposes the following members.

Fields

	Name	Description
	SPI_MaxFreq	SPI maximum clock frequency for the SNHC74HC595 shift register. (Most pessimistic datasheet limit at 2V.)
	SPI_Mode	SPI clock mode for the SNHC74HC595 shift register.

Top

See Also

Reference

Device Class

IO.Devices.SN74HC595 Namespace

DeviceSPI_MaxFreq Field

SPI maximum clock frequency for the SNHC74HC595 shift register. (Most pessimistic datasheet limit at 2V.)

Namespace: IO.Devices.SN74HC595
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int SPI_MaxFreq = 4000000
```

Field Value

Type: Int32

See Also

Reference

Device Class
IO.Devices.SN74HC595 Namespace

DeviceSPI_Mode Field

SPI clock mode for the SNHC74HC595 shift register.

Namespace: IO.Devices.SN74HC595
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int SPI_Mode = 0
```

Field Value

Type: Int32

See Also

Reference

Device Class
IO.Devices.SN74HC595 Namespace

IO.Devices.SN74HC595.GPIO Namespace

SN74HC595 8-Bit Shift Register GPIO Pin Services

Classes

	Class	Description
	Pin	Encapsulates SN74HC595 GPIO outputs.

Pin Class

Encapsulates SN74HC595 GPIO outputs.

Inheritance Hierarchy

SystemObject IO.Devices.SN74HC595.GPIOPin

Namespace: IO.Devices.SN74HC595.GPIO
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Pin : Pin
```

The Pin type exposes the following members.

Constructors

	Name	Description
	Pin	Constructor for a single GPIO output pin.

Top

Properties

	Name	Description
	state	Read/Write GPIO pin state property.

Top

See Also

Reference

IO.Devices.SN74HC595.GPIO Namespace

Pin Constructor

Constructor for a single GPIO output pin.

Namespace: IO.Devices.SN74HC595.GPIO
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Pin(
        Device dev,
        int pos,
        bool state = false
)
```

Parameters

dev
Type: IO.Devices.SN74HC595Device
SN74HC595 device object.

pos
Type: SystemInt32
Bit position, numbered left to right. Zero indicates the most significant bit of the first shift register stage.

state **(Optional)**
Type: SystemBoolean
Initial GPIO output state.

See Also

Reference

Pin Class
IO.Devices.SN74HC595.GPIO Namespace

Pin Properties

The Pin type exposes the following members.

Properties

	Name	Description
	state	Read/Write GPIO pin state property.

Top

See Also

Reference

Pin Class

IO.Devices.SN74HC595.GPIO Namespace

Pinstate Property

Read/Write GPIO pin state property.

Namespace: IO.Devices.SN74HC595.GPIO
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public bool state { get; set; }
```

Property Value

Type: Boolean

Implements

Pinstate

See Also

Reference

Pin Class
IO.Devices.SN74HC595.GPIO Namespace

IO.Devices.TH02 Namespace

TH02 I^{2}C Temperature/Humidity Sensor Services

Classes

	Class	Description
	Device	Encapsulates the TH02 temperature and humidity sensor.

Device Class

Encapsulates the TH02 temperature and humidity sensor.

Inheritance Hierarchy

SystemObject IO.Devices.TH02Device
IO.Devices.Grove.Temperature_HumidityDevice

Namespace: IO.Devices.TH02
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Device : Sensor, Sensor
```

The Device type exposes the following members.

Constructors

	Name	Description
	Device	Constructor for an TH02 temperature and humidity sensor object.

Top

Properties

	Name	Description

	Celsius	Read-only property returning the temperature in degrees Celsius.
	DeviceID	Read-only property returning the device ID.
	Fahrenheit	Read-only property returning the temperature in degrees Fahrenheit.
	Humidity	Read-only property returning the percentage relative humidity.
	Kelvins	Read-only property returning the temperature in Kelvins.

Top

See Also

Reference

IO.Devices.TH02 Namespace

Device Constructor

Constructor for an TH02 temperature and humidity sensor object.

Namespace: IO.Devices.TH02
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public Device(
        Bus bus
)
```

Parameters

bus
Type: IO.Interfaces.I2CBus
I^2C bus controller.

See Also

Reference

Device Class
IO.Devices.TH02 Namespace

Device Properties

The Device type exposes the following members.

Properties

	Name	Description
	Celsius	Read-only property returning the temperature in degrees Celsius.
	DeviceID	Read-only property returning the device ID.
	Fahrenheit	Read-only property returning the temperature in degrees Fahrenheit.
	Humidity	Read-only property returning the percentage relative humidity.
	Kelvins	Read-only property returning the temperature in Kelvins.

Top

See Also

Reference

Device Class
IO.Devices.TH02 Namespace

DeviceCelsius Property

Read-only property returning the temperature in degrees Celsius.

Namespace: IO.Devices.TH02
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public double Celsius { get; }
```

Property Value

Type: Double

Implements

SensorCelsius

See Also

Reference

Device Class
IO.Devices.TH02 Namespace

DeviceDeviceID Property

Read-only property returning the device ID.

Namespace: IO.Devices.TH02
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public byte DeviceID { get; }
```

Property Value

Type: Byte

See Also

Reference

Device Class
IO.Devices.TH02 Namespace

DeviceFahrenheit Property

Read-only property returning the temperature in degrees Fahrenheit.

Namespace: IO.Devices.TH02
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public double Fahrenheit { get; }
```

Property Value

Type: Double

Implements

SensorFahrenheit

See Also

Reference

Device Class
IO.Devices.TH02 Namespace

DeviceHumidity Property

Read-only property returning the percentage relative humidity.

Namespace: IO.Devices.TH02
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public double Humidity { get; }
```

Property Value

Type: Double

Implements

SensorHumidity

See Also

Reference

Device Class
IO.Devices.TH02 Namespace

DeviceKelvins Property

Read-only property returning the temperature in Kelvins.

Namespace: IO.Devices.TH02
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public double Kelvins { get; }
```

Property Value

Type: Double

Implements

SensorKelvins

See Also

Reference

Device Class
IO.Devices.TH02 Namespace

IO.Devices.Thermistor Namespace

Thermistor Modeling Services

Classes

	Class	Description
	NTC_B	Encapsulate an NTC thermistor.

NTC_B Class

Encapsulate an NTC thermistor.

Inheritance Hierarchy

SystemObject IO.Devices.ThermistorNTC_B

Namespace: IO.Devices.Thermistor
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class NTC_B
```

The NTC_B type exposes the following members.

Constructors

	Name	Description
	NTC_B	Constructor for a single NTC thermistor object instance.

Top

Methods

	Name	Description
	Kelvins	Kelvin temperature as a function of the

thermistor resistance.

Top

See Also

Reference

IO.Devices.Thermistor Namespace

NTC_B Constructor

Constructor for a single NTC thermistor object instance.

Namespace: IO.Devices.Thermistor
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public NTC_B(
        double B,
        double R0,
        double T0 = 298.15
)
```

Parameters

B
Type: SystemDouble
Thermistor B parameter.

R0
Type: SystemDouble
Thermistor resistance in ohms at the specified reference temperature.

T0 **(Optional)**
Type: SystemDouble
Thermistor reference temperature in Kelvins.

See Also

Reference

NTC_B Class
IO.Devices.Thermistor Namespace

NTC_B Methods

The NTC_B type exposes the following members.

Methods

	Name	Description
	Kelvins	Kelvin temperature as a function of the thermistor resistance.

Top

See Also

Reference

NTC_B Class

IO.Devices.Thermistor Namespace

NTC_BKelvins Method

Kelvin temperature as a function of the thermistor resistance.

Namespace: IO.Devices.Thermistor
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public double Kelvins(
        double R
)
```

Parameters

R
Type: SystemDouble
Thermistor resistance in ohms.

Return Value

Type: Double
Temperature in Kelvins.

See Also

Reference

NTC_B Class
IO.Devices.Thermistor Namespace

IO.Devices.USB.Munts Namespace

Vendor and Product Identifiers for Munts Technologies (http://tech.munts.com) USB devices

Classes

	Class	Description
	HID	USB device constants for Munts Technologies USB HID devices.
	Serial	USB device constants for Munts Technologies USB serial port devices.

HID Class

USB device constants for Munts Technologies USB HID devices.

Inheritance Hierarchy

SystemObject IO.Devices.USB.MuntsHID

Namespace: IO.Devices.USB.Munts
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static class HID
```

The HID type exposes the following members.

Fields

	Name	Description
s	Product	Product ID for Munts Technologies USB hid devices.
s	Vendor	Vendor ID for Munts Technologies

Top

See Also

Reference

IO.Devices.USB.Munts Namespace

HID Fields

The HID type exposes the following members.

Fields

	Name	Description
	Product	Product ID for Munts Technologies USB hid devices.
	Vendor	Vendor ID for Munts Technologies

Top

See Also

Reference

HID Class

IO.Devices.USB.Munts Namespace

HIDProduct Field

Product ID for Munts Technologies USB hid devices.

Namespace: IO.Devices.USB.Munts
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int Product = 2810
```

Field Value

Type: Int32

See Also

Reference

HID Class
IO.Devices.USB.Munts Namespace

HIDVendor Field

Vendor ID for Munts Technologies

Namespace: IO.Devices.USB.Munts
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int Vendor = 5840
```

Field Value

Type: Int32

See Also

Reference

HID Class
IO.Devices.USB.Munts Namespace

Serial Class

USB device constants for Munts Technologies USB serial port devices.

Inheritance Hierarchy

SystemObject IO.Devices.USB.MuntsSerial

Namespace: IO.Devices.USB.Munts
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static class Serial
```

The Serial type exposes the following members.

Fields

	Name	Description
	Product	Product ID for Munts Technologies USB serial port devices.
	Vendor	Vendor ID for Munts Technologies

Top

See Also

Reference

IO.Devices.USB.Munts Namespace

Serial Fields

The Serial type exposes the following members.

Fields

	Name	Description
	Product	Product ID for Munts Technologies USB serial port devices.
	Vendor	Vendor ID for Munts Technologies

Top

See Also

Reference

Serial Class

IO.Devices.USB.Munts Namespace

SerialProduct Field

Product ID for Munts Technologies USB serial port devices.

Namespace: IO.Devices.USB.Munts
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int Product = 2811
```

Field Value

Type: Int32

See Also

Reference

Serial Class
IO.Devices.USB.Munts Namespace

SerialVendor Field

Vendor ID for Munts Technologies

Namespace: IO.Devices.USB.Munts
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int Vendor = 5840
```

Field Value

Type: Int32

See Also

Reference

Serial Class
IO.Devices.USB.Munts Namespace

IO.Interfaces.ADC Namespace

Abstract Interface for ADC (Analog to Digital Converter) Inputs

Classes

	Class	Description
	Input	Encapsulates ADC voltage inputs.

Interfaces

	Interface	Description
	Sample	Abstract interface for ADC inputs returning an integer sample value.
	Voltage	Abstract interface for ADC inputs returning a floating point voltage value.

Input Class

Encapsulates ADC voltage inputs.

Inheritance Hierarchy

SystemObject IO.Interfaces.ADCInput

Namespace: IO.Interfaces.ADC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Input : Voltage
```

The Input type exposes the following members.

Constructors

	Name	Description
	Input	Create an ADC voltage input.

Top

Properties

	Name	Description
	voltage	Read-only property returning the analog input voltage.

Top

See Also

Reference

IO.Interfaces.ADC Namespace

Input Constructor

Create an ADC voltage input.

Namespace: IO.Interfaces.ADC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Input(
        Sample input,
        double reference,
        double gain = 1
)
```

Parameters

input
Type: IO.Interfaces.ADCSample
ADC sample object.

reference
Type: SystemDouble
ADC reference in volts.

gain **(Optional)**
Type: SystemDouble
ADC input gain in volts per volt.

See Also

Reference

Input Class

IO.Interfaces.ADC Namespace

Input Properties

The Input type exposes the following members.

Properties

	Name	Description
	voltage	Read-only property returning the analog input voltage.

Top

See Also

Reference

Input Class

IO.Interfaces.ADC Namespace

Inputvoltage Property

Read-only property returning the analog input voltage.

Namespace: IO.Interfaces.ADC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public double voltage { get; }
```

Property Value

Type: Double

Implements

Voltagevoltage

See Also

Reference

Input Class
IO.Interfaces.ADC Namespace

Sample Interface

Abstract interface for ADC inputs returning an integer sample value.

Namespace: IO.Interfaces.ADC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public interface Sample
```

The Sample type exposes the following members.

Properties

	Name	Description
	resolution	Read-only property returning the number of bits of resolution.
	sample	Read-only property returning an integer analog sample value.

Top

See Also

Reference

IO.Interfaces.ADC Namespace

Sample Properties

The Sample type exposes the following members.

Properties

	Name	Description
	resolution	Read-only property returning the number of bits of resolution.
	sample	Read-only property returning an integer analog sample value.

Top

See Also

Reference

Sample Interface

IO.Interfaces.ADC Namespace

Sampleresolution Property

Read-only property returning the number of bits of resolution.

Namespace: IO.Interfaces.ADC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
int resolution { get; }
```

Property Value

Type: Int32

See Also

Reference

Sample Interface
IO.Interfaces.ADC Namespace

Samplesample Property

Read-only property returning an integer analog sample value.

Namespace: IO.Interfaces.ADC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
int sample { get; }
```

Property Value

Type: Int32

See Also

Reference

Sample Interface
IO.Interfaces.ADC Namespace

Voltage Interface

Abstract interface for ADC inputs returning a floating point voltage value.

Namespace: IO.Interfaces.ADC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public interface Voltage
```

The Voltage type exposes the following members.

Properties

	Name	Description
	voltage	Read-only property returning a floating point analog voltage value.

Top

See Also

Reference

IO.Interfaces.ADC Namespace

Voltage Properties

The Voltage type exposes the following members.

Properties

	Name	Description
	voltage	Read-only property returning a floating point analog voltage value.

Top

See Also

Reference

Voltage Interface
IO.Interfaces.ADC Namespace

Voltagevoltage Property

Read-only property returning a floating point analog voltage value.

Namespace: IO.Interfaces.ADC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
double voltage { get; }
```

Property Value

Type: Double

See Also

Reference

Voltage Interface
IO.Interfaces.ADC Namespace

IO.Interfaces.DAC Namespace

Abstract Interface for DAC (Digital to Analog Converter) Outputs

Classes

	Class	Description
	Output	Encapsulates DAC voltage outputs.

Interfaces

	Interface	Description
	Sample	Abstract interface for DAC outputs accepting an integer output sample value.
	Voltage	Abstract interface for DAC outputs accepting a floating point output voltage value.

Output Class

Encapsulates DAC voltage outputs.

Inheritance Hierarchy

SystemObject IO.Interfaces.DACOutput

Namespace: IO.Interfaces.DAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Output : Voltage
```

The Output type exposes the following members.

Constructors

	Name	Description
	Output	Create an DAC voltage output.

Top

Properties

	Name	Description
	voltage	Write-only for setting the DAC output voltage.

Top

See Also

Reference

IO.Interfaces.DAC Namespace

Output Constructor

Create an DAC voltage output.

Namespace: IO.Interfaces.DAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Output(
        Sample output,
        double reference,
        double gain = 1
)
```

Parameters

output
Type: IO.Interfaces.DACSample
DAC output object.

reference
Type: SystemDouble
DAC output reference in volts.

gain **(Optional)**
Type: SystemDouble
DAC output gain in volts per volt.

See Also

Reference

Output Class

IO.Interfaces.DAC Namespace

Output Properties

The Output type exposes the following members.

Properties

	Name	Description
	voltage	Write-only for setting the DAC output voltage.

Top

See Also

Reference

Output Class

IO.Interfaces.DAC Namespace

Outputvoltage Property

Write-only for setting the DAC output voltage.

Namespace: IO.Interfaces.DAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public double voltage { set; }
```

Property Value

Type: Double

Implements

Voltagevoltage

See Also

Reference

Output Class
IO.Interfaces.DAC Namespace

Sample Interface

Abstract interface for DAC outputs accepting an integer output sample value.

Namespace: IO.Interfaces.DAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public interface Sample
```

The Sample type exposes the following members.

Properties

	Name	Description
	resolution	Read-only property returning the number of bits of resolution.
	sample	Write-only property for setting the DAC output level.

Top

See Also

Reference

IO.Interfaces.DAC Namespace

Sample Properties

The Sample type exposes the following members.

Properties

	Name	Description
	resolution	Read-only property returning the number of bits of resolution.
	sample	Write-only property for setting the DAC output level.

Top

See Also

Reference

Sample Interface

IO.Interfaces.DAC Namespace

Sampleresolution Property

Read-only property returning the number of bits of resolution.

Namespace: IO.Interfaces.DAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
int resolution { get; }
```

Property Value

Type: Int32

See Also

Reference

Sample Interface
IO.Interfaces.DAC Namespace

Samplesample Property

Write-only property for setting the DAC output level.

Namespace: IO.Interfaces.DAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
int sample { set; }
```

Property Value

Type: Int32

See Also

Reference

Sample Interface
IO.Interfaces.DAC Namespace

Voltage Interface

Abstract interface for DAC outputs accepting a floating point output voltage value.

Namespace: IO.Interfaces.DAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public interface Voltage
```

The Voltage type exposes the following members.

Properties

	Name	Description
	voltage	Write-only property for setting the DAC output voltage.

Top

See Also

Reference

IO.Interfaces.DAC Namespace

Voltage Properties

The Voltage type exposes the following members.

Properties

	Name	Description
	voltage	Write-only property for setting the DAC output voltage.

Top

See Also

Reference

Voltage Interface
IO.Interfaces.DAC Namespace

Voltagevoltage Property

Write-only property for setting the DAC output voltage.

Namespace: IO.Interfaces.DAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
double voltage { set; }
```

Property Value

Type: Double

See Also

Reference

Voltage Interface
IO.Interfaces.DAC Namespace

IO.Interfaces.GPIO Namespace

Abstract Interface for GPIO (General Purpose Input/Output) Pins

Interfaces

	Interface	Description
	Pin	Abstract interface for GPIO pins.

Enumerations

	Enumeration	Description
	Direction	GPIO pin data direction settings.

Direction Enumeration

GPIO pin data direction settings.

Namespace: IO.Interfaces.GPIO
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public enum Direction
```

Members

Member name	Value	Description
Input	0	Input pin (read only)
Output	1	Output pin (read or write)

See Also

Reference

IO.Interfaces.GPIO Namespace

Pin Interface

Abstract interface for GPIO pins.

Namespace: IO.Interfaces.GPIO
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public interface Pin
```

The Pin type exposes the following members.

Properties

	Name	Description
	state	Read/Write GPIO state property.

Top

See Also

Reference

IO.Interfaces.GPIO Namespace

Pin Properties

The Pin type exposes the following members.

Properties

	Name	Description
	state	Read/Write GPIO state property.

Top

See Also

Reference

Pin Interface

IO.Interfaces.GPIO Namespace

Pinstate Property

Read/Write GPIO state property.

Namespace: IO.Interfaces.GPIO
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
bool state { get; set; }
```

Property Value

Type: Boolean

See Also

Reference

Pin Interface
IO.Interfaces.GPIO Namespace

IO.Interfaces.Humidity Namespace

Abstract Interface for Humidity Sensors

Interfaces

	Interface	Description
	Sensor	Abstract interface for humidity sensors.

Sensor Interface

Abstract interface for humidity sensors.

Namespace: IO.Interfaces.Humidity
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public interface Sensor
```

The Sensor type exposes the following members.

Properties

	Name	Description
	Humidity	Read-only property returning the percentage relative humidity.

Top

See Also

Reference

IO.Interfaces.Humidity Namespace

Sensor Properties

The Sensor type exposes the following members.

Properties

	Name	Description
	Humidity	Read-only property returning the percentage relative humidity.

Top

See Also

Reference

Sensor Interface

IO.Interfaces.Humidity Namespace

SensorHumidity Property

Read-only property returning the percentage relative humidity.

Namespace: IO.Interfaces.Humidity
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
double Humidity { get; }
```

Property Value

Type: Double

See Also

Reference

Sensor Interface
IO.Interfaces.Humidity Namespace

IO.Interfaces.I2C Namespace

Abstract Interface for I²C (Inter-Integrated Circuit) Bus Controllers

Classes

	Class	Description
	Device	Encapsulates a single I²C slave device.
	Speeds	I²C bus speed constants.

Interfaces

	Interface	Description
	Bus	Abstract interface for I²C bus controllers.

Bus Interface

Abstract interface for I²C bus controllers.

Namespace: IO.Interfaces.I2C
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public interface Bus
```

The Bus type exposes the following members.

Methods

	Name	Description
	Read	Read bytes from an I²C slave device.
	Transaction	Write and read bytes to and from an I²C slave device.
	Write	Write bytes to an I²C slave device.

Top

See Also

Reference

IO.Interfaces.I2C Namespace

Bus Methods

The Bus type exposes the following members.

Methods

	Name	Description
	Read	Read bytes from an I^{2}C slave device.
	Transaction	Write and read bytes to and from an I^{2}C slave device.
	Write	Write bytes to an I^{2}C slave device.

Top

See Also

Reference

Bus Interface

IO.Interfaces.I2C Namespace

BusRead Method

Read bytes from an I²C slave device.

Namespace: IO.Interfaces.I2C
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
void Read(
        int slaveaddr,
        byte[] resp,
        int resplen
)
```

Parameters

slaveaddr
Type: SystemInt32
I²C slave address.

resp
Type: SystemByte
Response buffer.

resplen
Type: SystemInt32
Number of bytes to read.

See Also

Reference

Bus Interface
IO.Interfaces.I2C Namespace

BusTransaction Method

Write and read bytes to and from an I²C slave device.

Namespace: IO.Interfaces.I2C
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
void Transaction(
        int slaveaddr,
        byte[] cmd,
        int cmdlen,
        byte[] resp,
        int resplen,
        int delayus = 0
)
```

Parameters

slaveaddr
Type: SystemInt32
I²C slave address.

cmd
Type: SystemByte
Command buffer.

cmdlen
Type: SystemInt32
Number of bytes to write.

resp

Type: SystemByte
Response buffer.

resplen

Type: SystemInt32
Number of bytes to read.

delayus **(Optional)**

Type: SystemInt32
Delay in microseconds between the I^2C write and read cycles.
Allowed values are 0 to 65535 microseconds.

See Also

Reference

Bus Interface
IO.Interfaces.I2C Namespace

BusWrite Method

Write bytes to an I²C slave device.

Namespace: IO.Interfaces.I2C
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
void Write(
        int slaveaddr,
        byte[] cmd,
        int cmdlen
)
```

Parameters

slaveaddr
Type: SystemInt32
I²C slave address.

cmd
Type: SystemByte
Command buffer.

cmdlen
Type: SystemInt32
Number of bytes to write.

See Also

Reference

Bus Interface
IO.Interfaces.I2C Namespace

Device Class

Encapsulates a single I²C slave device.

Inheritance Hierarchy

SystemObject IO.Interfaces.I2CDevice

Namespace: IO.Interfaces.I2C
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Device
```

The Device type exposes the following members.

Constructors

	Name	Description
	Device	Create an I²C slave device.

Top

Methods

	Name	Description
	Read	Read bytes from an I²C slave device.

	Transaction	Write and read bytes to and from an I^2C slave device.
	Write	Write bytes to an I^2C slave device.

Top

See Also

Reference

IO.Interfaces.I2C Namespace

Device Constructor

Create an I²C slave device.

Namespace: IO.Interfaces.I2C
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Device(
        Bus bus,
        int slaveaddr
)
```

Parameters

bus
Type: IO.Interfaces.I2CBus
I²C bus controller object.

slaveaddr
Type: SystemInt32
I²C slave address.

See Also

Reference

Device Class
IO.Interfaces.I2C Namespace

Device Methods

The Device type exposes the following members.

Methods

	Name	Description
	Read	Read bytes from an I^2C slave device.
	Transaction	Write and read bytes to and from an I^2C slave device.
	Write	Write bytes to an I^2C slave device.

Top

See Also

Reference

Device Class

IO.Interfaces.I2C Namespace

DeviceRead Method

Read bytes from an I²C slave device.

Namespace: IO.Interfaces.I2C
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public void Read(
        byte[] resp,
        int resplen
)
```

Parameters

resp
Type: SystemByte
Response buffer.

resplen
Type: SystemInt32
Number of bytes to read.

See Also

Reference

Device Class
IO.Interfaces.I2C Namespace

DeviceTransaction Method

Write and read bytes to and from an I²C slave device.

Namespace: IO.Interfaces.I2C
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public void Transaction(
        byte[] cmd,
        int cmdlen,
        byte[] resp,
        int resplen,
        int delayus = 0
)
```

Parameters

cmd
Type: SystemByte
Command buffer.

cmdlen
Type: SystemInt32
Number of bytes to write.

resp
Type: SystemByte
Response buffer.

resplen
Type: SystemInt32
Number of bytes to read.

delayus **(Optional)**

Type: SystemInt32

Delay in microseconds between the I^2C write and read cycles. Allowed values are 0 to 65535 microseconds.

See Also

Reference

Device Class

IO.Interfaces.I2C Namespace

DeviceWrite Method

Write bytes to an I²C slave device.

Namespace: IO.Interfaces.I2C
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public void Write(
        byte[] cmd,
        int cmdlen
)
```

Parameters

cmd
Type: SystemByte
Command buffer.

cmdlen
Type: SystemInt32
Number of bytes to write.

See Also

Reference

Device Class
IO.Interfaces.I2C Namespace

Speeds Class

I^2C bus speed constants.

Inheritance Hierarchy

SystemObject IO.Interfaces.I2CSpeeds

Namespace: IO.Interfaces.I2C
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static class Speeds
```

The Speeds type exposes the following members.

Fields

	Name	Description
S	FastMode	Fast Mode
S	FastModePlus	Fast Mode Plus
S	StandardMode	Standard Mode

Top

See Also

Reference

IO.Interfaces.I2C Namespace

Speeds Fields

The Speeds type exposes the following members.

Fields

	Name	Description
S	FastMode	Fast Mode
S	FastModePlus	Fast Mode Plus
S	StandardMode	Standard Mode

Top

See Also

Reference

Speeds Class

IO.Interfaces.I2C Namespace

SpeedsFastMode Field

Fast Mode

Namespace: IO.Interfaces.I2C
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int FastMode = 400000
```

Field Value

Type: Int32

See Also

Reference

Speeds Class
IO.Interfaces.I2C Namespace

SpeedsFastModePlus Field

Fast Mode Plus

Namespace: IO.Interfaces.I2C
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int FastModePlus = 1000000
```

Field Value

Type: Int32

See Also

Reference

Speeds Class
IO.Interfaces.I2C Namespace

SpeedsStandardMode Field

Standard Mode

Namespace: IO.Interfaces.I2C
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int StandardMode = 100000
```

Field Value

Type: Int32

See Also

Reference

Speeds Class
IO.Interfaces.I2C Namespace

IO.Interfaces.Message64 Namespace

Abstract Interface for 64-Byte Message Services

Classes

	Class	Description
	Message	Encapsulates 64-byte messages.

Interfaces

	Interface	Description
	Messenger	Abstract interface for sending and receiving 64-byte messages.

Message Class

Encapsulates 64-byte messages.

Inheritance Hierarchy

SystemObject IO.Interfaces.Message64Message

Namespace: IO.Interfaces.Message64
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Message
```

The Message type exposes the following members.

Constructors

	Name	Description
	Message	Create a message object without initializing the payload.
	Message(Byte)	Create a message object with an initialized payload.

Top

Fields

	Name	Description
	payload	Message payload.
S	Size	Message payload size.

Top

See Also

Reference

IO.Interfaces.Message64 Namespace

Message Constructor

Overload List

	Name	Description
	Message	Create a message object without initializing the payload.
	Message(Byte)	Create a message object with an initialized payload.

Top

See Also

Reference

Message Class

IO.Interfaces.Message64 Namespace

Message Constructor

Create a message object without initializing the payload.

Namespace: IO.Interfaces.Message64
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public Message()
```

See Also

Reference

Message Class
Message Overload
IO.Interfaces.Message64 Namespace

Message Constructor (Byte)

Create a message object with an initialized payload.

Namespace: IO.Interfaces.Message64
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public Message(
        byte fill
)
```

Parameters

fill
Type: SystemByte
Value to initialize the payload with.

See Also

Reference

Message Class
Message Overload
IO.Interfaces.Message64 Namespace

Message Fields

The Message type exposes the following members.

Fields

	Name	Description
	payload	Message payload.
S	Size	Message payload size.

Top

See Also

Reference

Message Class

IO.Interfaces.Message64 Namespace

Messagepayload Field

Message payload.

Namespace: IO.Interfaces.Message64
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public byte[] payload
```

Field Value

Type: Byte

See Also

Reference

Message Class
IO.Interfaces.Message64 Namespace

MessageSize Field

Message payload size.

Namespace: IO.Interfaces.Message64
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int Size = 64
```

Field Value

Type: Int32

See Also

Reference

Message Class
IO.Interfaces.Message64 Namespace

Messenger Interface

Abstract interface for sending and receiving 64-byte messages.

Namespace: IO.Interfaces.Message64
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public interface Messenger
```

The Messenger type exposes the following members.

Methods

	Name	Description
	Receive	Receive a 64-byte message.
	Send	Send a 64-byte message.
	Transaction	Send a 64-byte command and receive a 64-byte response.

Top

See Also

Reference

IO.Interfaces.Message64 Namespace

Messenger Methods

The Messenger type exposes the following members.

Methods

	Name	Description
	Receive	Receive a 64-byte message.
	Send	Send a 64-byte message.
	Transaction	Send a 64-byte command and receive a 64-byte response.

Top

See Also

Reference

Messenger Interface
IO.Interfaces.Message64 Namespace

MessengerReceive Method

Receive a 64-byte message.

Namespace: IO.Interfaces.Message64
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
void Receive(
        Message resp
)
```

Parameters

resp
Type: IO.Interfaces.Message64Message
Message received.

See Also

Reference

Messenger Interface
IO.Interfaces.Message64 Namespace

MessengerSend Method

Send a 64-byte message.

Namespace: IO.Interfaces.Message64
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
void Send(
        Message cmd
)
```

Parameters

cmd
Type: IO.Interfaces.Message64Message
Message to be sent.

See Also

Reference

Messenger Interface
IO.Interfaces.Message64 Namespace

MessengerTransaction Method

Send a 64-byte command and receive a 64-byte response.

Namespace: IO.Interfaces.Message64
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
void Transaction(
        Message cmd,
        Message resp
)
```

Parameters

cmd
Type: IO.Interfaces.Message64Message
Command to be sent.

resp
Type: IO.Interfaces.Message64Message
Response to be received.

See Also

Reference

Messenger Interface
IO.Interfaces.Message64 Namespace

IO.Interfaces.Motor Namespace

Abstract Interface For Variable Speed Motor Outputs

Classes

	Class	Description
	Velocities	Motor velocity contants.

Interfaces

	Interface	Description
	Output	Abstract interface for variable speed motor outputs.

Output Interface

Abstract interface for variable speed motor outputs.

Namespace: IO.Interfaces.Motor
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public interface Output
```

The Output type exposes the following members.

Properties

	Name	Description
	velocity	Write-only motor velocity property.

Top

See Also

Reference
IO.Interfaces.Motor Namespace

Output Properties

The Output type exposes the following members.

Properties

	Name	Description
	velocity	Write-only motor velocity property.

Top

See Also

Reference

Output Interface
IO.Interfaces.Motor Namespace

Outputvelocity Property

Write-only motor velocity property.

Namespace: IO.Interfaces.Motor
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
double velocity { set; }
```

Property Value

Type: Double

See Also

Reference

Output Interface
IO.Interfaces.Motor Namespace

Velocities Class

Motor velocity contants.

Inheritance Hierarchy

SystemObject IO.Interfaces.MotorVelocities

Namespace: IO.Interfaces.Motor
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static class Velocities
```

The Velocities type exposes the following members.

Fields

	Name	Description
s	Maximum	Maximum velocity (full speed forward).
s	Minimum	Minimum velocity (full speed reverse).
s	Stop	Zero velocity (motor stopped).

Top

See Also

Reference

IO.Interfaces.Motor Namespace

Velocities Fields

The Velocities type exposes the following members.

Fields

	Name	Description
S	Maximum	Maximum velocity (full speed forward).
S	Minimum	Minimum velocity (full speed reverse).
S	Stop	Zero velocity (motor stopped).

Top

See Also

Reference

Velocities Class

IO.Interfaces.Motor Namespace

VelocitiesMaximum Field

Maximum velocity (full speed forward).

Namespace: IO.Interfaces.Motor
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const double Maximum = 1
```

Field Value

Type: Double

See Also

Reference

Velocities Class
IO.Interfaces.Motor Namespace

VelocitiesMinimum Field

Minimum velocity (full speed reverse).

Namespace: IO.Interfaces.Motor
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const double Minimum = -1
```

Field Value

Type: Double

See Also

Reference

Velocities Class
IO.Interfaces.Motor Namespace

VelocitiesStop Field

Zero velocity (motor stopped).

Namespace: IO.Interfaces.Motor
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const double Stop = 0
```

Field Value

Type: Double

See Also

Reference

Velocities Class
IO.Interfaces.Motor Namespace

IO.Interfaces.PWM Namespace

Abstract Interface for PWM (Pulse Width Modulated) Outputs

Classes

	Class	Description
	DutyCycles	PWM dutycycle contants.

Interfaces

	Interface	Description
	Output	Abstract interface for PWM outputs.

DutyCycles Class

PWM dutycycle contants.

Inheritance Hierarchy

SystemObject IO.Interfaces.PWMDutyCycles

Namespace: IO.Interfaces.PWM
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static class DutyCycles
```

The DutyCycles type exposes the following members.

Fields

	Name	Description
	Maximum	Maximum duty cycle (percent).
	Minimum	Minimum duty cycle (percent).

Top

See Also

Reference

IO.Interfaces.PWM Namespace

DutyCycles Fields

The DutyCycles type exposes the following members.

Fields

	Name	Description
	Maximum	Maximum duty cycle (percent).
	Minimum	Minimum duty cycle (percent).

Top

See Also

Reference

DutyCycles Class
IO.Interfaces.PWM Namespace

DutyCyclesMaximum Field

Maximum duty cycle (percent).

Namespace: IO.Interfaces.PWM
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const double Maximum = 100
```

Field Value

Type: Double

See Also

Reference

DutyCycles Class
IO.Interfaces.PWM Namespace

DutyCyclesMinimum Field

Minimum duty cycle (percent).

Namespace: IO.Interfaces.PWM
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public const double Minimum = 0
```

Field Value

Type: Double

See Also

Reference

DutyCycles Class
IO.Interfaces.PWM Namespace

Output Interface

Abstract interface for PWM outputs.

Namespace: IO.Interfaces.PWM
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public interface Output
```

The Output type exposes the following members.

Properties

	Name	Description
	dutycycle	Write-only PWM duty cycle property.

Top

See Also

Reference

IO.Interfaces.PWM Namespace

Output Properties

The Output type exposes the following members.

Properties

	Name	Description
	dutycycle	Write-only PWM duty cycle property.

Top

See Also

Reference

Output Interface
IO.Interfaces.PWM Namespace

Outputdutycycle Property

Write-only PWM duty cycle property.

Namespace: IO.Interfaces.PWM
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
double dutycycle { set; }
```

Property Value

Type: Double

See Also

Reference

Output Interface
IO.Interfaces.PWM Namespace

IO.Interfaces.Servo Namespace

Abstract Interface for Servo Outputs

Classes

	Class	Description
	Positions	Servo position contants.

Interfaces

	Interface	Description
	Output	Abstract interface for servo outputs.

Output Interface

Abstract interface for servo outputs.

Namespace: IO.Interfaces.Servo
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public interface Output
```

The Output type exposes the following members.

Properties

	Name	Description
	position	Write-only servo position property.

Top

See Also

Reference

IO.Interfaces.Servo Namespace

Output Properties

The Output type exposes the following members.

Properties

	Name	Description
	position	Write-only servo position property.

Top

See Also

Reference

Output Interface
IO.Interfaces.Servo Namespace

Outputposition Property

Write-only servo position property.

Namespace: IO.Interfaces.Servo
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
double position { set; }
```

Property Value

Type: Double

See Also

Reference

Output Interface
IO.Interfaces.Servo Namespace

Positions Class

Servo position contants.

Inheritance Hierarchy

SystemObject IO.Interfaces.ServoPositions

Namespace: IO.Interfaces.Servo
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static class Positions
```

The Positions type exposes the following members.

Fields

	Name	Description
s	Maximum	Maximum displacement position.
s	Minimum	Minimum displacement position.
s	Neutral	Zero displacement (neutral) position.

Top

See Also

Reference

IO.Interfaces.Servo Namespace

Positions Fields

The Positions type exposes the following members.

Fields

	Name	Description
	Maximum	Maximum displacement position.
	Minimum	Minimum displacement position.
	Neutral	Zero displacement (neutral) position.

Top

See Also

Reference

Positions Class

IO.Interfaces.Servo Namespace

PositionsMaximum Field

Maximum displacement position.

Namespace: IO.Interfaces.Servo
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const double Maximum = 1
```

Field Value

Type: Double

See Also

Reference

Positions Class
IO.Interfaces.Servo Namespace

PositionsMinimum Field

Minimum displacement position.

Namespace: IO.Interfaces.Servo
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const double Minimum = -1
```

Field Value

Type: Double

See Also

Reference

Positions Class
IO.Interfaces.Servo Namespace

PositionsNeutral Field

Zero displacement (neutral) position.

Namespace: IO.Interfaces.Servo
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const double Neutral = 0
```

Field Value

Type: Double

See Also

Reference

Positions Class
IO.Interfaces.Servo Namespace

IO.Interfaces.SPI Namespace

Abstract Interface for SPI (Serial Peripheral Interconnect) Slave Devices

Interfaces

	Interface	Description
	Device	Abstract interface for SPI slave devices.

Device Interface

Abstract interface for SPI slave devices.

Namespace: IO.Interfaces.SPI
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public interface Device
```

The Device type exposes the following members.

Methods

	Name	Description
	Read	Read bytes from an SPI slave device.
	Transaction	Write bytes to and read bytes from an SPI slave device.
	Write	Write bytes to an SPI slave device.

Top

See Also

Reference

IO.Interfaces.SPI Namespace

Device Methods

The Device type exposes the following members.

Methods

	Name	Description
	Read	Read bytes from an SPI slave device.
	Transaction	Write bytes to and read bytes from an SPI slave device.
	Write	Write bytes to an SPI slave device.

Top

See Also

Reference

Device Interface

IO.Interfaces.SPI Namespace

DeviceRead Method

Read bytes from an SPI slave device.

Namespace: IO.Interfaces.SPI
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
void Read(
        byte[] resp,
        int resplen
)
```

Parameters

resp
Type: SystemByte
Response buffer.

resplen
Type: SystemInt32
Number of bytes to read.

See Also

Reference

Device Interface
IO.Interfaces.SPI Namespace

DeviceTransaction Method

Write bytes to and read bytes from an SPI slave device.

Namespace: IO.Interfaces.SPI
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
void Transaction(
        byte[] cmd,
        int cmdlen,
        byte[] resp,
        int resplen,
        int delayus = 0
)
```

Parameters

cmd
Type: SystemByte
Command buffer.

cmdlen
Type: SystemInt32
Number of bytes to write.

resp
Type: SystemByte
Response buffer.

resplen
Type: SystemInt32
Number of bytes to read.

delayus **(Optional)**

Type: SystemInt32

Delay in microseconds between write and read operations.

See Also

Reference

Device Interface

IO.Interfaces.SPI Namespace

DeviceWrite Method

Write bytes to an SPI slave device.

Namespace: IO.Interfaces.SPI
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
void Write(
        byte[] cmd,
        int cmdLen
)
```

Parameters

cmd
Type: SystemByte
Command buffer.

cmdlen
Type: SystemInt32
Number of bytes to write.

See Also

Reference

Device Interface
IO.Interfaces.SPI Namespace

IO.Interfaces.Temperature Namespace

Abstract Interface for Temperature Sensors

Classes

	Class	Description
	Conversions	Temperature conversion functions.

Interfaces

	Interface	Description
	Sensor	Abstract interface for temperature sensors.

Conversions Class

Temperature conversion functions.

Inheritance Hierarchy

SystemObject IO.Interfaces.TemperatureConversions

Namespace: IO.Interfaces.Temperature
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Conversions
```

The Conversions type exposes the following members.

Constructors

	Name	Description
	Conversions	Initializes a new instance of the Conversions class

Top

Methods

	Name	Description
S	CelsiusToFahrenheit	Convert degrees Celsius to

		degrees Fahrenheit.
	CelsiusToKelvins	Convert degrees Celsius to Kelvins.
	FahrenheitToCelsius	Convert degrees Fahrenheit to degrees Celsius.
	FahrenheitToKelvins	Convert degrees Fahrenheit to Kelvins.
	KelvinsToCelsius	Convert Kelvins to degrees Celsius.
	KelvinsToFahrenheit	Convert Kelvins to degrees Fahrenheit.

Top

See Also

Reference

IO.Interfaces.Temperature Namespace

Conversions Constructor

Initializes a new instance of the Conversions class

Namespace: IO.Interfaces.Temperature
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public Conversions()
```

See Also

Reference

Conversions Class
IO.Interfaces.Temperature Namespace

Conversions Methods

The Conversions type exposes the following members.

Methods

	Name	Description
	CelsiusToFahrenheit	Convert degrees Celsius to degrees Fahrenheit.
	CelsiusToKelvins	Convert degrees Celsius to Kelvins.
	FahrenheitToCelsius	Convert degrees Fahrenheit to degrees Celsius.
	FahrenheitToKelvins	Convert degrees Fahrenheit to Kelvins.
	KelvinsToCelsius	Convert Kelvins to degrees Celsius.
	KelvinsToFahrenheit	Convert Kelvins to degrees Fahrenheit.

Top

See Also

Reference

Conversions Class

IO.Interfaces.Temperature Namespace

ConversionsCelsiusToFahrenheit Method

Convert degrees Celsius to degrees Fahrenheit.

Namespace: IO.Interfaces.Temperature
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static double CelsiusToFahrenheit(
        double celsius
)
```

Parameters

celsius
Type: SystemDouble
Temperature in degrees Celsius.

Return Value

Type: Double
Temperature in degrees Fahrenheit.

See Also

Reference

Conversions Class
IO.Interfaces.Temperature Namespace

ConversionsCelsiusToKelvins Method

Convert degrees Celsius to Kelvins.

Namespace: IO.Interfaces.Temperature
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public static double CelsiusToKelvins(
        double celsius
)
```

Parameters

celsius
Type: SystemDouble
Temperature in degrees Celsius.

Return Value

Type: Double
Temperature in Kelvins.

See Also

Reference

Conversions Class
IO.Interfaces.Temperature Namespace

ConversionsFahrenheitToCelsius Method

Convert degrees Fahrenheit to degrees Celsius.

Namespace: IO.Interfaces.Temperature
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static double FahrenheitToCelsius(
        double fahrenheit
)
```

Parameters

fahrenheit
Type: SystemDouble
Temperature in degrees Fahrenheit.

Return Value

Type: Double
Temperature in degrees Celsius.

See Also

Reference

Conversions Class
IO.Interfaces.Temperature Namespace

ConversionsFahrenheitToKelvins Method

Convert degrees Fahrenheit to Kelvins.

Namespace: IO.Interfaces.Temperature
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static double FahrenheitToKelvins(
        double fahrenheit
)
```

Parameters

fahrenheit
Type: SystemDouble
Temperature in degrees Fahrenheit.

Return Value

Type: Double
Temperature in Kelvins.

See Also

Reference

Conversions Class
IO.Interfaces.Temperature Namespace

ConversionsKelvinsToCelsius Method

Convert Kelvins to degrees Celsius.

Namespace: IO.Interfaces.Temperature
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static double KelvinsToCelsius(
        double kelvins
)
```

Parameters

kelvins
Type: SystemDouble
Temperature in Kelvins.

Return Value

Type: Double
Temperature in degrees Celsius.

See Also

Reference

Conversions Class
IO.Interfaces.Temperature Namespace

ConversionsKelvinsToFahrenheit Method

Convert Kelvins to degrees Fahrenheit.

Namespace: IO.Interfaces.Temperature
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static double KelvinsToFahrenheit(
        double kelvins
)
```

Parameters

kelvins
Type: SystemDouble
Temperature in Kelivns.

Return Value

Type: Double
Temperature in degrees Fahrenheit.

See Also

Reference

Conversions Class
IO.Interfaces.Temperature Namespace

Sensor Interface

Abstract interface for temperature sensors.

Namespace: IO.Interfaces.Temperature
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public interface Sensor
```

The Sensor type exposes the following members.

Properties

	Name	Description
	Celsius	Read-only property returning the temperature in degrees Celsius.
	Fahrenheit	Read-only property returning the temperature in degrees Fahrenheit.
	Kelvins	Read-only property returning the temperature in Kelvins.

Top

See Also

Reference

IO.Interfaces.Temperature Namespace

Sensor Properties

The Sensor type exposes the following members.

Properties

	Name	Description
	Celsius	Read-only property returning the temperature in degrees Celsius.
	Fahrenheit	Read-only property returning the temperature in degrees Fahrenheit.
	Kelvins	Read-only property returning the temperature in Kelvins.

Top

See Also

Reference

Sensor Interface

IO.Interfaces.Temperature Namespace

SensorCelsius Property

Read-only property returning the temperature in degrees Celsius.

Namespace: IO.Interfaces.Temperature
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
double Celsius { get; }
```

Property Value

Type: Double

See Also

Reference

Sensor Interface
IO.Interfaces.Temperature Namespace

SensorFahrenheit Property

Read-only property returning the temperature in degrees Fahrenheit.

Namespace: IO.Interfaces.Temperature
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
double Fahrenheit { get; }
```

Property Value

Type: Double

See Also

Reference

Sensor Interface
IO.Interfaces.Temperature Namespace

SensorKelvins Property

Read-only property returning the temperature in Kelvins.

Namespace: IO.Interfaces.Temperature
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
double Kelvins { get; }
```

Property Value

Type: Double

See Also

Reference

Sensor Interface
IO.Interfaces.Temperature Namespace

IO.Interfaces.Watchdog Namespace

Abstract Interface for Watchdog Timers

Interfaces

	Interface	Description
	Timer	Abstract interface for watchdog timers.

Timer Interface

Abstract interface for watchdog timers.

Namespace: IO.Interfaces.Watchdog
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public interface Timer
```

The Timer type exposes the following members.

Properties

	Name	Description
	timeout	Read/Write watchdog timer period property.

Top

Methods

	Name	Description
	Kick	Reset the watchdog timer.

Top

See Also

Reference

IO.Interfaces.Watchdog Namespace

Timer Properties

The Timer type exposes the following members.

Properties

	Name	Description
	timeout	Read/Write watchdog timer period property.

Top

See Also

Reference

Timer Interface

IO.Interfaces.Watchdog Namespace

Timertimeout Property

Read/Write watchdog timer period property.

Namespace: IO.Interfaces.Watchdog
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
int timeout { get; set; }
```

Property Value

Type: Int32

See Also

Reference

Timer Interface
IO.Interfaces.Watchdog Namespace

Timer Methods

The Timer type exposes the following members.

Methods

	Name	Description
	Kick	Reset the watchdog timer.

Top

See Also

Reference

Timer Interface

IO.Interfaces.Watchdog Namespace

TimerKick Method

Reset the watchdog timer.

Namespace: IO.Interfaces.Watchdog
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
void Kick()
```

See Also

Reference

Timer Interface
IO.Interfaces.Watchdog Namespace

IO.Objects.libsimpleio.ADC Namespace

ADC (Analog to Digital Converter) Input Services

Classes

	Class	Description
	Sample	Encapsulates Linux Industrial I/O Subsystem ADC inputs usingi `libsimpleio`.

Sample Class

Encapsulates Linux Industrial I/O Subsystem ADC inputs usingi `libsimpleio`.

Inheritance Hierarchy

SystemObject IO.Objects.libsimpleio.ADCSample

Namespace: IO.Objects.libsimpleio.ADC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Sample : Sample
```

The Sample type exposes the following members.

Constructors

	Name	Description
	Sample	Constructor for a single ADC input.

Top

Properties

	Name	Description
	fd	Read-only property returning the Linux

		file descriptor for the ADC input.
	resolution	Read-only property returning the number of bits of resolution.
	sample	Read-only property returning an integer analog sample from an ADC input.

Top

Methods

	Name	Description
	name	Retrieve the subsystem name string for a Linux Industrial I/O Subsystem ADC device.

Top

See Also

Reference

IO.Objects.libsimpleio.ADC Namespace

Sample Constructor

Constructor for a single ADC input.

Namespace: IO.Objects.libsimpleio.ADC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Sample(
        Designator desg,
        int resolution
)
```

Parameters

desg
Type: IO.Objects.libsimpleio.DeviceDesignator
ADC input designator.

resolution
Type: SystemInt32
Bits of resolution.

See Also

Reference

Sample Class
IO.Objects.libsimpleio.ADC Namespace

Sample Properties

The Sample type exposes the following members.

Properties

	Name	Description
	fd	Read-only property returning the Linux file descriptor for the ADC input.
	resolution	Read-only property returning the number of bits of resolution.
	sample	Read-only property returning an integer analog sample from an ADC input.

Top

See Also

Reference

Sample Class

IO.Objects.libsimpleio.ADC Namespace

Samplefd Property

Read-only property returning the Linux file descriptor for the ADC input.

Namespace: IO.Objects.libsimpleio.ADC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public int fd { get; }
```

Property Value

Type: Int32

See Also

Reference

Sample Class
IO.Objects.libsimpleio.ADC Namespace

Sampleresolution Property

Read-only property returning the number of bits of resolution.

Namespace: IO.Objects.libsimpleio.ADC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public int resolution { get; }
```

Property Value

Type: Int32

Implements

Sampleresolution

See Also

Reference

Sample Class
IO.Objects.libsimpleio.ADC Namespace

Samplesample Property

Read-only property returning an integer analog sample from an ADC input.

Namespace: IO.Objects.libsimpleio.ADC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public int sample { get; }
```

Property Value

Type: Int32

Implements

Samplesample

See Also

Reference

Sample Class
IO.Objects.libsimpleio.ADC Namespace

Sample Methods

The Sample type exposes the following members.

Methods

	Name	Description
	name	Retrieve the subsystem name string for a Linux Industrial I/O Subsystem ADC device.

Top

See Also

Reference

Sample Class

IO.Objects.libsimpleio.ADC Namespace

Samplename Method

Retrieve the subsystem name string for a Linux Industrial I/O Subsystem ADC device.

Namespace: IO.Objects.libsimpleio.ADC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static string name(
        int chip
)
```

Parameters

chip
Type: SystemInt32
ADC chip number.

Return Value

Type: String
Subsystem name.

See Also

Reference

Sample Class
IO.Objects.libsimpleio.ADC Namespace

IO.Objects.libsimpleio.DAC Namespace

DAC (Digital to Analog Converter) Output Services

Classes

	Class	Description
	Sample	Encapsulates Linux Industrial I/O Subsystem DAC outputs using `libsimpleio`.

Sample Class

Encapsulates Linux Industrial I/O Subsystem DAC outputs using `libsimpleio`.

Inheritance Hierarchy

SystemObject IO.Objects.libsimpleio.DACSample

Namespace: IO.Objects.libsimpleio.DAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Sample : Sample
```

The Sample type exposes the following members.

Constructors

	Name	Description
	Sample	Constructor for a single DAC output.

Top

Properties

	Name	Description
	fd	Read-only property returning the Linux

		file descriptor for the DAC output.
	resolution	Read-only property returning the number of bits of resolution.
	sample	Write-only property for writing an integer analog sample to a DAC output.

Top

Methods

	Name	Description
	name	Retrieve the subsystem name string for a Linux Industrial I/O Subsystem DAC device.

Top

See Also

Reference

IO.Objects.libsimpleio.DAC Namespace

Sample Constructor

Constructor for a single DAC output.

Namespace: IO.Objects.libsimpleio.DAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Sample(
        Designator desg,
        int resolution,
        int sample = 0
)
```

Parameters

desg
Type: IO.Objects.libsimpleio.DeviceDesignator
DAC output designator.

resolution
Type: SystemInt32
Bits of resolution.

sample **(Optional)**
Type: SystemInt32
Initial DAC output sample.

See Also

Reference

Sample Class

IO.Objects.libsimpleio.DAC Namespace

Sample Properties

The Sample type exposes the following members.

Properties

	Name	Description
	fd	Read-only property returning the Linux file descriptor for the DAC output.
	resolution	Read-only property returning the number of bits of resolution.
	sample	Write-only property for writing an integer analog sample to a DAC output.

Top

See Also

Reference

Sample Class

IO.Objects.libsimpleio.DAC Namespace

Samplefd Property

Read-only property returning the Linux file descriptor for the DAC output.

Namespace: IO.Objects.libsimpleio.DAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public int fd { get; }
```

Property Value

Type: Int32

See Also

Reference

Sample Class
IO.Objects.libsimpleio.DAC Namespace

Sampleresolution Property

Read-only property returning the number of bits of resolution.

Namespace: IO.Objects.libsimpleio.DAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public int resolution { get; }
```

Property Value

Type: Int32

Implements

Sampleresolution

See Also

Reference

Sample Class
IO.Objects.libsimpleio.DAC Namespace

Samplesample Property

Write-only property for writing an integer analog sample to a DAC output.

Namespace: IO.Objects.libsimpleio.DAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public int sample { set; }
```

Property Value

Type: Int32

Implements

Samplesample

See Also

Reference

Sample Class
IO.Objects.libsimpleio.DAC Namespace

Sample Methods

The Sample type exposes the following members.

Methods

	Name	Description
	name	Retrieve the subsystem name string for a Linux Industrial I/O Subsystem DAC device.

Top

See Also

Reference

Sample Class

IO.Objects.libsimpleio.DAC Namespace

Samplename Method

Retrieve the subsystem name string for a Linux Industrial I/O Subsystem DAC device.

Namespace: IO.Objects.libsimpleio.DAC
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static string name(
        int chip
)
```

Parameters

chip
Type: SystemInt32
DAC chip number.

Return Value

Type: String
Subsystem name.

See Also

Reference

Sample Class
IO.Objects.libsimpleio.DAC Namespace

IO.Objects.libsimpleio.Device Namespace

Common device declarations

Structures

	Structure	Description
	Designator	Linux kernel I/O device designator..

Designator Structure

Linux kernel I/O device designator..

Namespace: IO.Objects.libsimpleio.Device
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public struct Designator
```

The Designator type exposes the following members.

Constructors

	Name	Description
	Designator	device pin designator constructor.

Top

Properties

	Name	Description
	available	Returns `true` if this device designator is not equal to `Unavailable`.

Top

Fields

	Name	Description
	chan	Linux kernel I/O device channel number.
	chip	Linux kernel I/O device chip number.
S	Unavailable	Linux kernel I/O device designator for an unavailable device.

Top

Remarks

Many Linux kernel I/O devices, including ADC inputs, DAC outputs, GPIO pins, I2C buses, PWM outputs, and SPI devices, are selected by a tuple of integers: chip and channel.

See Also

Reference

IO.Objects.libsimpleio.Device Namespace

Designator Constructor

device pin designator constructor.

Namespace: IO.Objects.libsimpleio.Device
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Designator(
        uint chip,
        uint chan
)
```

Parameters

chip
Type: SystemUInt32
Linux kernel I/O device chip number.

chan
Type: SystemUInt32
Linux kernel I/O device channel number.

See Also

Reference

Designator Structure
IO.Objects.libsimpleio.Device Namespace

Designator Properties

The Designator type exposes the following members.

Properties

	Name	Description
	available	Returns `true` if this device designator is not equal to `Unavailable`.

Top

See Also

Reference

Designator Structure
IO.Objects.libsimpleio.Device Namespace

Designatoravailable Property

Returns `true` if this device designator is not equal to `Unavailable`.

Namespace: IO.Objects.libsimpleio.Device
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public bool available { get; }
```

Property Value

Type: Boolean

See Also

Reference

Designator Structure
IO.Objects.libsimpleio.Device Namespace

Designator Fields

The Designator type exposes the following members.

Fields

	Name	Description
	chan	Linux kernel I/O device channel number.
	chip	Linux kernel I/O device chip number.
S	Unavailable	Linux kernel I/O device designator for an unavailable device.

Top

See Also

Reference

Designator Structure

IO.Objects.libsimpleio.Device Namespace

Designatorchan Field

Linux kernel I/O device channel number.

Namespace: IO.Objects.libsimpleio.Device
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public uint chan
```

Field Value

Type: UInt32

See Also

Reference

Designator Structure
IO.Objects.libsimpleio.Device Namespace

Designatorchip Field

Linux kernel I/O device chip number.

Namespace: IO.Objects.libsimpleio.Device
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public uint chip
```

Field Value

Type: UInt32

See Also

Reference

Designator Structure
IO.Objects.libsimpleio.Device Namespace

DesignatorUnavailable Field

Linux kernel I/O device designator for an unavailable device.

Namespace: IO.Objects.libsimpleio.Device
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator Unavailable
```

Field Value

Type: Designator

See Also

Reference

Designator Structure
IO.Objects.libsimpleio.Device Namespace

IO.Objects.libsimpleio.Exceptions Namespace

Exception Services

Classes

	Class	Description
	Exception	Encapsulates exceptions that may include an optional `errno` value.

Exception Class

Encapsulates exceptions that may include an optional `errno` value.

Inheritance Hierarchy

SystemObject SystemException
IO.Objects.libsimpleio.ExceptionsException

Namespace: IO.Objects.libsimpleio.Exceptions
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public class Exception : Exception
```

Constructors

	Name	Description
	Exception(String)	Constructor for an exception that writes an error message to standard output.
	Exception(String, Int32)	Constructor for an exception that writes an error message including an `errno` value.

Top

See Also

Reference

IO.Objects.libsimpleio.Exceptions Namespace

Exception Constructor

Overload List

	Name	Description
	Exception(String)	Constructor for an exception that writes an error message to standard output.
	Exception(String, Int32)	Constructor for an exception that writes an error message including an `errno` value.

Top

See Also

Reference

Exception Class

IO.Objects.libsimpleio.Exceptions Namespace

Exception Constructor (String)

Constructor for an exception that writes an error message to standard output.

Namespace: IO.Objects.libsimpleio.Exceptions
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public Exception(
        string message
)
```

Parameters

message
Type: SystemString
Error message.

See Also

Reference

Exception Class
Exception Overload
IO.Objects.libsimpleio.Exceptions Namespace

Exception Constructor (String, Int32)

Constructor for an exception that writes an error message including an `errno` value.

Namespace: IO.Objects.libsimpleio.Exceptions
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Exception(
        string message,
        int error
)
```

Parameters

message
Type: SystemString
Error message.

error
Type: SystemInt32
Error code.

See Also

Reference

Exception Class
Exception Overload

IO.Objects.libsimpleio.Exceptions Namespace

IO.Objects.libsimpleio.GPIO Namespace

GPIO (General Purpose Input/Output) Pin Services

Classes

	Class	Description
	Pin	Encapsulates Linux GPIO pins using `libsimpleio`.

Enumerations

	Enumeration	Description
	PinDriver	GPIO output driver settings.
	PinEdge	GPIO input interrupt edge settings.
	PinPolarity	GPIO polarity settings

Pin Class

Encapsulates Linux GPIO pins using `libsimpleio`.

Inheritance Hierarchy

SystemObject IO.Objects.libsimpleio.GPIOPin

Namespace: IO.Objects.libsimpleio.GPIO
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Pin : Pin
```

The Pin type exposes the following members.

Constructors

	Name	Description
	Pin	Constructor for a single GPIO pin.

Top

Properties

	Name	Description
	fd	Read-only property returning the Linux file descriptor for the GPIO pin.

	state	Read/Write GPIO state property.

Top

See Also

Reference

IO.Objects.libsimpleio.GPIO Namespace

Pin Constructor

Constructor for a single GPIO pin.

Namespace: IO.Objects.libsimpleio.GPIO
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Pin(
        Designator desg,
        Direction dir,
        bool state = false,
        PinDriver driver = PinDriver.PushPull,
        PinEdge edge = PinEdge.None,
        PinPolarity polarity = PinPolarity.ActiveHigh
)
```

Parameters

desg
Type: IO.Objects.libsimpleio.DeviceDesignator
GPIO pin designator.

dir
Type: IO.Interfaces.GPIODirection
Data direction.

state **(Optional)**
Type: SystemBoolean
Initial GPIO output state.

driver **(Optional)**

Type: IO.Objects.libsimpleio.GPIOPinDriver
Output driver setting

edge **(Optional)**
Type: IO.Objects.libsimpleio.GPIOPinEdge
Interrupt edge setting.

polarity **(Optional)**
Type: IO.Objects.libsimpleio.GPIOPinPolarity
Polarity setting.

See Also

Reference

Pin Class
IO.Objects.libsimpleio.GPIO Namespace

Pin Properties

The Pin type exposes the following members.

Properties

	Name	Description
	fd	Read-only property returning the Linux file descriptor for the GPIO pin.
	state	Read/Write GPIO state property.

Top

See Also

Reference

Pin Class

IO.Objects.libsimpleio.GPIO Namespace

Pinfd Property

Read-only property returning the Linux file descriptor for the GPIO pin.

Namespace: IO.Objects.libsimpleio.GPIO
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public int fd { get; }
```

Property Value

Type: Int32

See Also

Reference

Pin Class
IO.Objects.libsimpleio.GPIO Namespace

Pinstate Property

Read/Write GPIO state property.

Namespace: IO.Objects.libsimpleio.GPIO
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public bool state { get; set; }
```

Property Value

Type: Boolean

Implements

Pinstate

See Also

Reference

Pin Class
IO.Objects.libsimpleio.GPIO Namespace

PinDriver Enumeration

GPIO output driver settings.

Namespace: IO.Objects.libsimpleio.GPIO
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public enum Driver
```

Members

	Member name	Value	Description
	PushPull	0	Push Pull (current source/sink) output driver.
	OpenDrain	1	Open Drain (current sink) output driver.
	OpenSource	2	Open Source (current source) output driver.

See Also

Reference
IO.Objects.libsimpleio.GPIO Namespace

PinEdge Enumeration

GPIO input interrupt edge settings.

Namespace: IO.Objects.libsimpleio.GPIO
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public enum Edge
```

Members

	Member name	Value	Description
	None	0	Configure GPIO input pin with interrupt disabled.
	Rising	1	Configure GPIO input pin to interrupt on rising edge.
	Falling	2	Configure GPIO pin to interrupt on falling edge.
	Both	3	Configure GPIO pin to interrupt on both edges.

See Also

Reference

IO.Objects.libsimpleio.GPIO Namespace

PinPolarity Enumeration

GPIO polarity settings

Namespace: IO.Objects.libsimpleio.GPIO
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public enum Polarity
```

Members

	Member name	Value	Description
	ActiveLow	0	Configure GPIO pin as active low (inverted logic).
	ActiveHigh	1	Configure GPIO pin as active high (normal logic).

See Also

Reference

IO.Objects.libsimpleio.GPIO Namespace

IO.Objects.libsimpleio.HID Namespace

Raw HID (Human Interface Device) Services

Classes

	Class	Description
	Messenger	Encapsulates Linux raw HID devices using `libsimpleio`.

Messenger Class

Encapsulates Linux raw HID devices using `libsimpleio`.

Inheritance Hierarchy

SystemObject IO.Objects.libsimpleio.HIDMessenger

Namespace: IO.Objects.libsimpleio.HID
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Messenger : Messenger
```

The Messenger type exposes the following members.

Constructors

	Name	Description
	Messenger(String, Int32)	Constructor for a single raw HID device.
	Messenger(Int32, Int32, Int32)	Constructor for a single raw HID device.

Top

Properties

	Name	Description
	bustype	Read-only property returning the bus type identifierfor a raw HID device.
	fd	Read-only property returning the Linux file descriptor for a raw HID device.
	name	Read-only property returning the device information string for a raw HID device.
	product	Read-only property returning the vendor identifierfor a raw HID device.
	vendor	Read-only property returning the bus type identifierfor a raw HID device.

Top

Methods

	Name	Description
	Receive	Receive a 64-byte response message from a raw HID device.
	Send	Send a 64-byte command message to a raw HID device.
	Transaction	Send a 64-byte command message and receive a 64-byte response message.

Top

See Also

Reference

IO.Objects.libsimpleio.HID Namespace

Messenger Constructor

Overload List

	Name	Description
	Messenger(String, Int32)	Constructor for a single raw HID device.
	Messenger(Int32, Int32, Int32)	Constructor for a single raw HID device.

Top

See Also

Reference

Messenger Class

IO.Objects.libsimpleio.HID Namespace

Messenger Constructor (String, Int32)

Constructor for a single raw HID device.

Namespace: IO.Objects.libsimpleio.HID
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public Messenger(
        string devname,
        int timeoutms = 1000
)
```

Parameters

devname
Type: SystemString
Device node name.

timeoutms **(Optional)**
Type: SystemInt32
Time in milliseconds to wait for read and write operations to complete. Zero means wait forever.

See Also

Reference

Messenger Class
Messenger Overload

IO.Objects.libsimpleio.HID Namespace

Messenger Constructor (Int32, Int32, Int32)

Constructor for a single raw HID device.

Namespace: IO.Objects.libsimpleio.HID
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Messenger(
        int VID = 5840,
        int PID = 2810,
        int timeoutms = 1000
)
```

Parameters

VID **(Optional)**
Type: SystemInt32
Vendor ID.

PID **(Optional)**
Type: SystemInt32
Product ID.

timeoutms **(Optional)**
Type: SystemInt32
Time in milliseconds to wait for read and write operations to complete. Zero means wait forever.

See Also

Reference

Messenger Class
Messenger Overload
IO.Objects.libsimpleio.HID Namespace

Messenger Properties

The Messenger type exposes the following members.

Properties

	Name	Description
	bustype	Read-only property returning the bus type identifierfor a raw HID device.
	fd	Read-only property returning the Linux file descriptor for a raw HID device.
	name	Read-only property returning the device information string for a raw HID device.
	product	Read-only property returning the vendor identifierfor a raw HID device.
	vendor	Read-only property returning the bus type identifierfor a raw HID device.

Top

See Also

Reference

Messenger Class
IO.Objects.libsimpleio.HID Namespace

Messengerbustype Property

Read-only property returning the bus type identifierfor a raw HID device.

Namespace: IO.Objects.libsimpleio.HID
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public int bustype { get; }
```

Property Value

Type: Int32

See Also

Reference

Messenger Class
IO.Objects.libsimpleio.HID Namespace

Messengerfd Property

Read-only property returning the Linux file descriptor for a raw HID device.

Namespace: IO.Objects.libsimpleio.HID
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public int fd { get; }
```

Property Value

Type: Int32

See Also

Reference

Messenger Class
IO.Objects.libsimpleio.HID Namespace

Messengername Property

Read-only property returning the device information string for a raw HID device.

Namespace: IO.Objects.libsimpleio.HID
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public string name { get; }
```

Property Value

Type: String

See Also

Reference

Messenger Class
IO.Objects.libsimpleio.HID Namespace

Messengerproduct Property

Read-only property returning the vendor identifierfor a raw HID device.

Namespace: IO.Objects.libsimpleio.HID
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public int product { get; }
```

Property Value

Type: Int32

See Also

Reference

Messenger Class
IO.Objects.libsimpleio.HID Namespace

Messengervendor Property

Read-only property returning the bus type identifierfor a raw HID device.

Namespace: IO.Objects.libsimpleio.HID
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public int vendor { get; }
```

Property Value

Type: Int32

See Also

Reference

Messenger Class
IO.Objects.libsimpleio.HID Namespace

Messenger Methods

The Messenger type exposes the following members.

Methods

	Name	Description
	Receive	Receive a 64-byte response message from a raw HID device.
	Send	Send a 64-byte command message to a raw HID device.
	Transaction	Send a 64-byte command message and receive a 64-byte response message.

Top

See Also

Reference

Messenger Class

IO.Objects.libsimpleio.HID Namespace

MessengerReceive Method

Receive a 64-byte response message from a raw HID device.

Namespace: IO.Objects.libsimpleio.HID
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public void Receive(
        Message resp
)
```

Parameters

resp
Type: IO.Interfaces.Message64Message
64-byte response message.

Implements

MessengerReceive(Message)

See Also

Reference

Messenger Class
IO.Objects.libsimpleio.HID Namespace

MessengerSend Method

Send a 64-byte command message to a raw HID device.

Namespace: IO.Objects.libsimpleio.HID
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public void Send(
        Message cmd
)
```

Parameters

cmd
Type: IO.Interfaces.Message64Message
64-byte command message.

Implements

MessengerSend(Message)

See Also

Reference

Messenger Class
IO.Objects.libsimpleio.HID Namespace

MessengerTransaction Method

Send a 64-byte command message and receive a 64-byte response message.

Namespace: IO.Objects.libsimpleio.HID
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public void Transaction(
        Message cmd,
        Message resp
)
```

Parameters

cmd
Type: IO.Interfaces.Message64Message
64-byte command message.

resp
Type: IO.Interfaces.Message64Message
64-byte response message.

Implements

MessengerTransaction(Message, Message)

See Also

Reference

Messenger Class

IO.Objects.libsimpleio.HID Namespace

IO.Objects.libsimpleio.I2C Namespace

I^2C (Inter-Integrated Circuit) Bus Controller Services

Classes

	Class	Description
	Bus	Encapsulates Linux I^2C bus controllers using `libsimpleio`.

Bus Class

Encapsulates Linux I²C bus controllers using `libsimpleio`.

Inheritance Hierarchy

SystemObject IO.Objects.libsimpleio.I2CBus

Namespace: IO.Objects.libsimpleio.I2C
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Bus : Bus
```

The Bus type exposes the following members.

Constructors

	Name	Description
	Bus(String)	Constructor for a single I²C bus controller.
	Bus(Designator)	Constructor for a single I²C bus controller.

Top

Properties

	Name	Description
	fd	Read-only property returning the Linux file descriptor for the I^2C bus controller.

Top

Methods

	Name	Description
	Read	Read bytes from an I^2C device.
	Transaction	Write and receive bytes to/from an I^2C device.
	Write	Write bytes to an I^2C device.

Top

See Also

Reference

IO.Objects.libsimpleio.I2C Namespace

Bus Constructor

Overload List

	Name	Description
	Bus(String)	Constructor for a single I^{2}C bus controller.
	Bus(Designator)	Constructor for a single I^{2}C bus controller.

Top

See Also

Reference

Bus Class

IO.Objects.libsimpleio.I2C Namespace

Bus Constructor (String)

Constructor for a single I²C bus controller.

Namespace: IO.Objects.libsimpleio.I2C
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public Bus(
        string devname
)
```

Parameters

devname
Type: SystemString
Device node name.

See Also

Reference

Bus Class
Bus Overload
IO.Objects.libsimpleio.I2C Namespace

Bus Constructor (Designator)

Constructor for a single I²C bus controller.

Namespace: IO.Objects.libsimpleio.I2C
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Bus(
        Designator desg
)
```

Parameters

desg
Type: IO.Objects.libsimpleio.DeviceDesignator
I² bus designator.

See Also

Reference

Bus Class
Bus Overload
IO.Objects.libsimpleio.I2C Namespace

Bus Properties

The Bus type exposes the following members.

Properties

	Name	Description
	fd	Read-only property returning the Linux file descriptor for the I^2C bus controller.

Top

See Also

Reference

Bus Class

IO.Objects.libsimpleio.I2C Namespace

Busfd Property

Read-only property returning the Linux file descriptor for the I^2C bus controller.

Namespace: IO.Objects.libsimpleio.I2C
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public int fd { get; }
```

Property Value

Type: Int32

See Also

Reference

Bus Class
IO.Objects.libsimpleio.I2C Namespace

Bus Methods

The Bus type exposes the following members.

Methods

	Name	Description
	Read	Read bytes from an I^2C device.
	Transaction	Write and receive bytes to/from an I^2C device.
	Write	Write bytes to an I^2C device.

Top

See Also

Reference

Bus Class

IO.Objects.libsimpleio.I2C Namespace

BusRead Method

Read bytes from an I²C device.

Namespace: IO.Objects.libsimpleio.I2C
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public void Read(
        int slaveaddr,
        byte[] resp,
        int resplen
)
```

Parameters

slaveaddr
Type: SystemInt32
Slave device address.

resp
Type: SystemByte
Response buffer.

resplen
Type: SystemInt32
Number of bytes to read.

Implements

BusRead(Int32, Byte, Int32)

See Also

Reference

Bus Class

IO.Objects.libsimpleio.I2C Namespace

BusTransaction Method

Write and receive bytes to/from an I^2C device.

Namespace: IO.Objects.libsimpleio.I2C
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public void Transaction(
        int slaveaddr,
        byte[] cmd,
        int cmdlen,
        byte[] resp,
        int resplen,
        int delayus = 0
)
```

Parameters

slaveaddr
Type: SystemInt32
Device slave address.

cmd
Type: SystemByte
Command buffer.

cmdlen
Type: SystemInt32
Number of bytes to write.

resp

Type: SystemByte
Response buffer.

resplen

Type: SystemInt32
Number of bytes to read.

delayus **(Optional)**

Type: SystemInt32
Delay in microseconds between the I^2C write and read cycles.
Allowed values are 0 to 65535 microseconds.

Implements

BusTransaction(Int32, Byte, Int32, Byte, Int32, Int32)

See Also

Reference

Bus Class
IO.Objects.libsimpleio.I2C Namespace

BusWrite Method

Write bytes to an I²C device.

Namespace: IO.Objects.libsimpleio.I2C
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public void Write(
        int slaveaddr,
        byte[] cmd,
        int cmdlen
)
```

Parameters

slaveaddr
Type: SystemInt32
Slave device address.

cmd
Type: SystemByte
Command buffer.

cmdlen
Type: SystemInt32
Number of bytes to write.

Implements

BusWrite(Int32, Byte, Int32)

See Also

Reference

Bus Class

IO.Objects.libsimpleio.I2C Namespace

IO.Objects.libsimpleio.mikroBUS Namespace

Mikroelektronika mikroBUS (https://www.mikroe.com/mikrobus) Shield and Socket Services

Classes

	Class	Description
	Shield	Encapsulates mikroBUS shields (add-on boards providing mikroBUS sockets).
	Socket	Encapsulates mikroBUS sockets.

Enumerations

	Enumeration	Description
	ShieldKinds	Supported mikroBUS shields.

Shield Class

Encapsulates mikroBUS shields (add-on boards providing mikroBUS sockets).

Inheritance Hierarchy

SystemObject IO.Objects.libsimpleio.mikroBUSShield

Namespace: IO.Objects.libsimpleio.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static class Shield
```

The Shield type exposes the following members.

Properties

	Name	Description
	kind	Returns the kind of mikroBUS shield that is installed on the target board, as obtained from the `SHIELDNAME` environment variable or guessed from the `BOARDNAME` environment variable. The guessed value for BeagleBone family target boards (`BOARDNAME` == "BeagleBone*") is `BeagleBoneClick4`.

	The guessed value for Raspberry Pi family target boards (`BOARDNAME` == "RaspberryPi*") is `PiClick3`.

Top

Fields

	Name	Description
	I2CBus	Shared I^2C bus that is common to all sockets on this shield.

Top

See Also

Reference

IO.Objects.libsimpleio.mikroBUS Namespace

Shield Properties

The Shield type exposes the following members.

Properties

	Name	Description
	kind	Returns the kind of mikroBUS shield that is installed on the target board, as obtained from the `SHIELDNAME` environment variable or guessed from the `BOARDNAME` environment variable. The guessed value for BeagleBone family target boards (`BOARDNAME` == "BeagleBone*") is `BeagleBoneClick4`. The guessed value for Raspberry Pi family target boards (`BOARDNAME` == "RaspberryPi*") is `PiClick3`.

Top

See Also

Reference

Shield Class

IO.Objects.libsimpleio.mikroBUS Namespace

Shieldkind Property

Returns the kind of mikroBUS shield that is installed on the target board, as obtained from the `SHIELDNAME` environment variable or guessed from the `BOARDNAME` environment variable. The guessed value for BeagleBone family target boards (`BOARDNAME` == "BeagleBone*") is `BeagleBoneClick4`. The guessed value for Raspberry Pi family target boards (`BOARDNAME` == "RaspberryPi*") is `PiClick3`.

Namespace: IO.Objects.libsimpleio.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public static ShieldKinds kind { get; }
```

Property Value

Type: ShieldKinds

See Also

Reference

Shield Class
IO.Objects.libsimpleio.mikroBUS Namespace

Shield Fields

The Shield type exposes the following members.

Fields

	Name	Description
	I2CBus	Shared I^2C bus that is common to all sockets on this shield.

Top

See Also

Reference

Shield Class

IO.Objects.libsimpleio.mikroBUS Namespace

ShieldI2CBus Field

Shared I^2C bus that is common to all sockets on this shield.

Namespace: IO.Objects.libsimpleio.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static Bus I2CBus
```

Field Value

Type: Bus

See Also

Reference

Shield Class
IO.Objects.libsimpleio.mikroBUS Namespace

ShieldKinds Enumeration

Supported mikroBUS shields.

Namespace: IO.Objects.libsimpleio.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public enum Kinds
```

Members

Member name	Value	Description
BeagleBoneClick2	0	Mikroelektronika BeagleBone Click Shield MIKROE-1596, with two mikroBUS sockets. (Obsolete, but still useful.)
BeagleBoneClick4	1	Mikroelektronika mikroBUS Cape MIKROE-1857 with four mikroBUS sockets.

	PiClick1	2	Mikroelektronika Pi Click Shield MIKROE-1512/1513 for 26-pin expansion header, with one mikroBUS socket (Obsolete.)
	PiClick2	3	Mikroelektronika Pi 2 Click Shield MIKROE-1879 for 40-pin expansion header, with two mikroBUS sockets.
	PiClick3	4	Mikroelektronika Pi 3 Click Shield MIKROE-2756 for 40-pin expansion header, with selectable on-board A/D converter and two mikroBUS sockets.
	PocketBeagle	5	PocketBeagle with female headers on top, with two

		mikroBUS sockets.
Unknown	2147483647	No known mikroBUS shield installed.

See Also

Reference

IO.Objects.libsimpleio.mikroBUS Namespace

Socket Class

Encapsulates mikroBUS sockets.

Inheritance Hierarchy

SystemObject IO.Objects.libsimpleio.mikroBUSSocket

Namespace: IO.Objects.libsimpleio.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Socket
```

The Socket type exposes the following members.

Constructors

	Name	Description
	Socket	Constructor for a single mikroBUS socket.

Top

Properties

	Name	Description
	AIN	Returns the ADC input designator for AN.

	AN	Returns the GPIO pin designator for AN.
	CS	Returns the GPIO pin designator for CS.
	I2CBus	Returns the I^2C bus designator for this socket.
	INT	Returns the GPIO pin designator for INT.
	MISO	Returns the GPIO pin designator for MISO.
	MOSI	Returns the GPIO pin designator for MOSI.
	PWM	Returns the GPIO pin designator for PWM.
	PWMOut	Returns the PWM output designator for this socket.
	RST	Returns the GPIO pin designator for RST.
	RX	Returns the GPIO pin designator for RX.
	SCK	Returns the GPIO pin designator for SCK.
	SCL	Returns the GPIO pin designator for SCL.
	SDA	Returns the GPIO pin designator for SDA.
	SPIDev	Returns the SPI device designator for

		this socket.
	TX	Returns the GPIO pin designator for TX.
	UART	Returns the UART device name for this socket.

Top

See Also

Reference

IO.Objects.libsimpleio.mikroBUS Namespace

Socket Constructor

Constructor for a single mikroBUS socket.

Namespace: IO.Objects.libsimpleio.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Socket(
        int num,
        ShieldKinds shield = ShieldKinds.Unknown
)
```

Parameters

num
Type: SystemInt32
Socket number.

shield **(Optional)**
Type: IO.Objects.libsimpleio.mikroBUSShieldKinds
mikroBUS shield kind. `Shield.Kinds.Unknown` indicates automatic detection using using the `Shield.kind` property.

See Also

Reference

Socket Class
IO.Objects.libsimpleio.mikroBUS Namespace

Socket Properties

The Socket type exposes the following members.

Properties

	Name	Description
	AIN	Returns the ADC input designator for AN.
	AN	Returns the GPIO pin designator for AN.
	CS	Returns the GPIO pin designator for CS.
	I2CBus	Returns the I^2C bus designator for this socket.
	INT	Returns the GPIO pin designator for INT.
	MISO	Returns the GPIO pin designator for MISO.
	MOSI	Returns the GPIO pin designator for MOSI.
	PWM	Returns the GPIO pin designator for PWM.
	PWMOut	Returns the PWM output designator for this socket.

	RST	Returns the GPIO pin designator for RST.
	RX	Returns the GPIO pin designator for RX.
	SCK	Returns the GPIO pin designator for SCK.
	SCL	Returns the GPIO pin designator for SCL.
	SDA	Returns the GPIO pin designator for SDA.
	SPIDev	Returns the SPI device designator for this socket.
	TX	Returns the GPIO pin designator for TX.
	UART	Returns the UART device name for this socket.

Top

See Also

Reference

Socket Class

IO.Objects.libsimpleio.mikroBUS Namespace

SocketAIN Property

Returns the ADC input designator for AN.

Namespace: IO.Objects.libsimpleio.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public Designator AIN { get; }
```

Property Value

Type: Designator

See Also

Reference

Socket Class
IO.Objects.libsimpleio.mikroBUS Namespace

SocketAN Property

Returns the GPIO pin designator for AN.

Namespace: IO.Objects.libsimpleio.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public Designator AN { get; }
```

Property Value

Type: Designator

See Also

Reference

Socket Class
IO.Objects.libsimpleio.mikroBUS Namespace

SocketCS Property

Returns the GPIO pin designator for CS.

Namespace: IO.Objects.libsimpleio.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public Designator CS { get; }
```

Property Value

Type: Designator

See Also

Reference

Socket Class
IO.Objects.libsimpleio.mikroBUS Namespace

SocketI2CBus Property

Returns the I^{2}C bus designator for this socket.

Namespace: IO.Objects.libsimpleio.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public Designator I2CBus { get; }
```

Property Value

Type: Designator

See Also

Reference

Socket Class
IO.Objects.libsimpleio.mikroBUS Namespace

SocketINT Property

Returns the GPIO pin designator for INT.

Namespace: IO.Objects.libsimpleio.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public Designator INT { get; }
```

Property Value

Type: Designator

See Also

Reference

Socket Class
IO.Objects.libsimpleio.mikroBUS Namespace

SocketMISO Property

Returns the GPIO pin designator for MISO.

Namespace: IO.Objects.libsimpleio.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public Designator MISO { get; }
```

Property Value

Type: Designator

See Also

Reference

Socket Class
IO.Objects.libsimpleio.mikroBUS Namespace

SocketMOSI Property

Returns the GPIO pin designator for MOSI.

Namespace: IO.Objects.libsimpleio.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#**

Copy

```
public Designator MOSI { get; }
```

Property Value

Type: Designator

See Also

Reference

Socket Class
IO.Objects.libsimpleio.mikroBUS Namespace

SocketPWM Property

Returns the GPIO pin designator for PWM.

Namespace: IO.Objects.libsimpleio.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Designator PWM { get; }
```

Property Value

Type: Designator

See Also

Reference

Socket Class
IO.Objects.libsimpleio.mikroBUS Namespace

SocketPWMOut Property

Returns the PWM output designator for this socket.

Namespace: IO.Objects.libsimpleio.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public Designator PWMOut { get; }
```

Property Value

Type: Designator

See Also

Reference

Socket Class
IO.Objects.libsimpleio.mikroBUS Namespace

SocketRST Property

Returns the GPIO pin designator for RST.

Namespace: IO.Objects.libsimpleio.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public Designator RST { get; }
```

Property Value

Type: Designator

See Also

Reference

Socket Class
IO.Objects.libsimpleio.mikroBUS Namespace

SocketRX Property

Returns the GPIO pin designator for RX.

Namespace: IO.Objects.libsimpleio.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public Designator RX { get; }
```

Property Value

Type: Designator

See Also

Reference

Socket Class
IO.Objects.libsimpleio.mikroBUS Namespace

SocketSCK Property

Returns the GPIO pin designator for SCK.

Namespace: IO.Objects.libsimpleio.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public Designator SCK { get; }
```

Property Value

Type: Designator

See Also

Reference

Socket Class
IO.Objects.libsimpleio.mikroBUS Namespace

SocketSCL Property

Returns the GPIO pin designator for SCL.

Namespace: IO.Objects.libsimpleio.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public Designator SCL { get; }
```

Property Value

Type: Designator

See Also

Reference

Socket Class
IO.Objects.libsimpleio.mikroBUS Namespace

SocketSDA Property

Returns the GPIO pin designator for SDA.

Namespace: IO.Objects.libsimpleio.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public Designator SDA { get; }
```

Property Value

Type: Designator

See Also

Reference

Socket Class
IO.Objects.libsimpleio.mikroBUS Namespace

SocketSPIDev Property

Returns the SPI device designator for this socket.

Namespace: IO.Objects.libsimpleio.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public Designator SPIDev { get; }
```

Property Value

Type: Designator

See Also

Reference

Socket Class
IO.Objects.libsimpleio.mikroBUS Namespace

SocketTX Property

Returns the GPIO pin designator for TX.

Namespace: IO.Objects.libsimpleio.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public Designator TX { get; }
```

Property Value

Type: Designator

See Also

Reference

Socket Class
IO.Objects.libsimpleio.mikroBUS Namespace

SocketUART Property

Returns the UART device name for this socket.

Namespace: IO.Objects.libsimpleio.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public string UART { get; }
```

Property Value

Type: String

See Also

Reference

Socket Class
IO.Objects.libsimpleio.mikroBUS Namespace

IO.Objects.libsimpleio.Platforms Namespace

Platform Definition Classes

Classes

	Class	Description
	BeagleBone	This class defines identifiers for the devices provided by the BeagleBone hardware platform.
	PocketBeagle	This class defines identifiers for the devices provided by the PocketBeagle hardware platform.
	RaspberryPi	This class defines identifiers for the devices provided by the Raspberry Pi hardware platform.

BeagleBone Class

This class defines identifiers for the devices provided by the BeagleBone hardware platform.

Inheritance Hierarchy

SystemObject IO.Objects.libsimpleio.PlatformsBeagleBone

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static class BeagleBone
```

The BeagleBone type exposes the following members.

Fields

	Name	Description
s	AIN0	ADC input designator for P9.39 (1.8V)
s	AIN1	ADC input designator for P9.40 (1.8V)
s	AIN2	ADC input designator for P9.37 (1.8V)
s	AIN3	ADC input designator for P9.38 (1.8V)
s	AIN4	ADC input designator for P9.33 (1.8V)

s	AIN5	ADC input designator for P9.36 (1.8V)
s	AIN6	ADC input designator for P9.35 (1.8V)
s	GPIO10	Legacy GPIO pin designator for P8.31
s	GPIO11	Legacy GPIO pin designator for P8.32
s	GPIO110	Legacy GPIO pin designator for P9.31
s	GPIO111	Legacy GPIO pin designator for P9.29
s	GPIO112	Legacy GPIO pin designator for P9.30
s	GPIO113	Legacy GPIO pin designator for P9.28
s	GPIO115	Legacy GPIO pin designator for P9.27
s	GPIO117	Legacy GPIO pin designator for P9.25
s	GPIO12	Legacy GPIO pin designator for P9.20
s	GPIO13	Legacy GPIO pin designator for P9.19
s	GPIO14	Legacy GPIO pin designator for P9.26
s	GPIO15	Legacy GPIO pin designator for P9.24
s	GPIO2	Legacy GPIO pin designator for P9.22
s	GPIO20	Legacy GPIO pin designator for P9.41
s	GPIO22	Legacy GPIO pin designator for P8.19
s	GPIO23	Legacy GPIO pin designator for P8.13
s	GPIO26	Legacy GPIO pin designator for P8.14

S	GPIO27	Legacy GPIO pin designator for P8.17
S	GPIO3	Legacy GPIO pin designator for P9.21
S	GPIO30	Legacy GPIO pin designator for P9.11
S	GPIO31	Legacy GPIO pin designator for P9.13
S	GPIO32	Legacy GPIO pin designator for P8.25
S	GPIO33	Legacy GPIO pin designator for P8.24
S	GPIO34	Legacy GPIO pin designator for P8.5
S	GPIO35	Legacy GPIO pin designator for P8.6
S	GPIO36	Legacy GPIO pin designator for P8.23
S	GPIO37	Legacy GPIO pin designator for P8.22
S	GPIO38	Legacy GPIO pin designator for P8.3
S	GPIO39	Legacy GPIO pin designator for P8.4
S	GPIO4	Legacy GPIO pin designator for P9.18
S	GPIO44	Legacy GPIO pin designator for P8.12
S	GPIO45	Legacy GPIO pin designator for P8.11
S	GPIO46	Legacy GPIO pin designator for P8.16
S	GPIO47	Legacy GPIO pin designator for P8.15
S	GPIO48	Legacy GPIO pin designator for P9.15
S	GPIO49	Legacy GPIO pin designator for P9.23

S	GPIO5	Legacy GPIO pin designator for P9.17
S	GPIO50	Legacy GPIO pin designator for P9.14
S	GPIO51	Legacy GPIO pin designator for P9.16
S	GPIO60	Legacy GPIO pin designator for P9.12
S	GPIO61	Legacy GPIO pin designator for P8.26
S	GPIO62	Legacy GPIO pin designator for P8.21
S	GPIO63	Legacy GPIO pin designator for P8.20
S	GPIO65	Legacy GPIO pin designator for P8.18
S	GPIO66	Legacy GPIO pin designator for P8.7
S	GPIO67	Legacy GPIO pin designator for P8.8
S	GPIO68	Legacy GPIO pin designator for P8.10
S	GPIO69	Legacy GPIO pin designator for P8.9
S	GPIO7	Legacy GPIO pin designator for P9.42
S	GPIO70	Legacy GPIO pin designator for P8.45
S	GPIO71	Legacy GPIO pin designator for P8.46
S	GPIO72	Legacy GPIO pin designator for P8.43
S	GPIO73	Legacy GPIO pin designator for P8.44
S	GPIO74	Legacy GPIO pin designator for P8.41
S	GPIO75	Legacy GPIO pin designator for P8.42

S	GPIO76	Legacy GPIO pin designator for P8.39
S	GPIO77	Legacy GPIO pin designator for P8.40
S	GPIO78	Legacy GPIO pin designator for P8.37
S	GPIO79	Legacy GPIO pin designator for P8.38
S	GPIO8	Legacy GPIO pin designator for P8.35
S	GPIO80	Legacy GPIO pin designator for P8.36
S	GPIO81	Legacy GPIO pin designator for P8.34
S	GPIO86	Legacy GPIO pin designator for P8.27
S	GPIO87	Legacy GPIO pin designator for P8.29
S	GPIO88	Legacy GPIO pin designator for P8.28
S	GPIO89	Legacy GPIO pin designator for P8.30
S	GPIO9	Legacy GPIO pin designator for P8.33
S	I2C2	I2C bus designator for P9.19 and P9.20
S	SPI2_0	SPI slave select designator for P9.28
S	SPI2_1	SPI slave select designator for P9.42

Top

See Also

Reference

IO.Objects.libsimpleio.Platforms Namespace

BeagleBone Fields

The BeagleBone type exposes the following members.

Fields

	Name	Description
S	AIN0	ADC input designator for P9.39 (1.8V)
S	AIN1	ADC input designator for P9.40 (1.8V)
S	AIN2	ADC input designator for P9.37 (1.8V)
S	AIN3	ADC input designator for P9.38 (1.8V)
S	AIN4	ADC input designator for P9.33 (1.8V)
S	AIN5	ADC input designator for P9.36 (1.8V)
S	AIN6	ADC input designator for P9.35 (1.8V)
S	GPIO10	Legacy GPIO pin designator for P8.31
S	GPIO11	Legacy GPIO pin designator for P8.32
S	GPIO110	Legacy GPIO pin designator for P9.31
S	GPIO111	Legacy GPIO pin designator for P9.29
S	GPIO112	Legacy GPIO pin designator for P9.30
S	GPIO113	Legacy GPIO pin designator for P9.28

s	GPIO115	Legacy GPIO pin designator for P9.27
s	GPIO117	Legacy GPIO pin designator for P9.25
s	GPIO12	Legacy GPIO pin designator for P9.20
s	GPIO13	Legacy GPIO pin designator for P9.19
s	GPIO14	Legacy GPIO pin designator for P9.26
s	GPIO15	Legacy GPIO pin designator for P9.24
s	GPIO2	Legacy GPIO pin designator for P9.22
s	GPIO20	Legacy GPIO pin designator for P9.41
s	GPIO22	Legacy GPIO pin designator for P8.19
s	GPIO23	Legacy GPIO pin designator for P8.13
s	GPIO26	Legacy GPIO pin designator for P8.14
s	GPIO27	Legacy GPIO pin designator for P8.17
s	GPIO3	Legacy GPIO pin designator for P9.21
s	GPIO30	Legacy GPIO pin designator for P9.11
s	GPIO31	Legacy GPIO pin designator for P9.13
s	GPIO32	Legacy GPIO pin designator for P8.25
s	GPIO33	Legacy GPIO pin designator for P8.24
s	GPIO34	Legacy GPIO pin designator for P8.5
s	GPIO35	Legacy GPIO pin designator for P8.6

S	GPIO36	Legacy GPIO pin designator for P8.23
S	GPIO37	Legacy GPIO pin designator for P8.22
S	GPIO38	Legacy GPIO pin designator for P8.3
S	GPIO39	Legacy GPIO pin designator for P8.4
S	GPIO4	Legacy GPIO pin designator for P9.18
S	GPIO44	Legacy GPIO pin designator for P8.12
S	GPIO45	Legacy GPIO pin designator for P8.11
S	GPIO46	Legacy GPIO pin designator for P8.16
S	GPIO47	Legacy GPIO pin designator for P8.15
S	GPIO48	Legacy GPIO pin designator for P9.15
S	GPIO49	Legacy GPIO pin designator for P9.23
S	GPIO5	Legacy GPIO pin designator for P9.17
S	GPIO50	Legacy GPIO pin designator for P9.14
S	GPIO51	Legacy GPIO pin designator for P9.16
S	GPIO60	Legacy GPIO pin designator for P9.12
S	GPIO61	Legacy GPIO pin designator for P8.26
S	GPIO62	Legacy GPIO pin designator for P8.21
S	GPIO63	Legacy GPIO pin designator for P8.20
S	GPIO65	Legacy GPIO pin designator for P8.18

S	GPIO66	Legacy GPIO pin designator for P8.7
S	GPIO67	Legacy GPIO pin designator for P8.8
S	GPIO68	Legacy GPIO pin designator for P8.10
S	GPIO69	Legacy GPIO pin designator for P8.9
S	GPIO7	Legacy GPIO pin designator for P9.42
S	GPIO70	Legacy GPIO pin designator for P8.45
S	GPIO71	Legacy GPIO pin designator for P8.46
S	GPIO72	Legacy GPIO pin designator for P8.43
S	GPIO73	Legacy GPIO pin designator for P8.44
S	GPIO74	Legacy GPIO pin designator for P8.41
S	GPIO75	Legacy GPIO pin designator for P8.42
S	GPIO76	Legacy GPIO pin designator for P8.39
S	GPIO77	Legacy GPIO pin designator for P8.40
S	GPIO78	Legacy GPIO pin designator for P8.37
S	GPIO79	Legacy GPIO pin designator for P8.38
S	GPIO8	Legacy GPIO pin designator for P8.35
S	GPIO80	Legacy GPIO pin designator for P8.36
S	GPIO81	Legacy GPIO pin designator for P8.34
S	GPIO86	Legacy GPIO pin designator for P8.27

S	GPIO87	Legacy GPIO pin designator for P8.29
S	GPIO88	Legacy GPIO pin designator for P8.28
S	GPIO89	Legacy GPIO pin designator for P8.30
S	GPIO9	Legacy GPIO pin designator for P8.33
S	I2C2	I2C bus designator for P9.19 and P9.20
S	SPI2_0	SPI slave select designator for P9.28
S	SPI2_1	SPI slave select designator for P9.42

Top

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneAIN0 Field

ADC input designator for P9.39 (1.8V)

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator AIN0
```

Field Value

Type: Designator

Remarks

Requires the `BB-ADC` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneAIN1 Field

ADC input designator for P9.40 (1.8V)

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator AIN1
```

Field Value

Type: Designator

Remarks

Requires the `BB-ADC` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneAIN2 Field

ADC input designator for P9.37 (1.8V)

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator AIN2
```

Field Value

Type: Designator

Remarks

Requires the `BB-ADC` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneAIN3 Field

ADC input designator for P9.38 (1.8V)

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator AIN3
```

Field Value

Type: Designator

Remarks

Requires the `BB-ADC` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneAIN4 Field

ADC input designator for P9.33 (1.8V)

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator AIN4
```

Field Value

Type: Designator

Remarks

Requires the `BB-ADC` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneAIN5 Field

ADC input designator for P9.36 (1.8V)

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator AIN5
```

Field Value

Type: Designator

Remarks

Requires the `BB-ADC` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneAIN6 Field

ADC input designator for P9.35 (1.8V)

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator AIN6
```

Field Value

Type: Designator

Remarks

Requires the `BB-ADC` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO10 Field

Legacy GPIO pin designator for P8.31

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO10
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO11 Field

Legacy GPIO pin designator for P8.32

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO11
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO110 Field

Legacy GPIO pin designator for P9.31

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO110
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO111 Field

Legacy GPIO pin designator for P9.29

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO111
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO112 Field

Legacy GPIO pin designator for P9.30

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO112
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO113 Field

Legacy GPIO pin designator for P9.28

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO113
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO115 Field

Legacy GPIO pin designator for P9.27

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO115
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO117 Field

Legacy GPIO pin designator for P9.25

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO117
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO12 Field

Legacy GPIO pin designator for P9.20

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static readonly Designator GPIO12
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO13 Field

Legacy GPIO pin designator for P9.19

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO13
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO14 Field

Legacy GPIO pin designator for P9.26

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO14
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO15 Field

Legacy GPIO pin designator for P9.24

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO15
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO2 Field

Legacy GPIO pin designator for P9.22

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO2
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO20 Field

Legacy GPIO pin designator for P9.41

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO20
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO22 Field

Legacy GPIO pin designator for P8.19

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO22
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO23 Field

Legacy GPIO pin designator for P8.13

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO23
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO26 Field

Legacy GPIO pin designator for P8.14

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO26
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO27 Field

Legacy GPIO pin designator for P8.17

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static readonly Designator GPIO27
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO3 Field

Legacy GPIO pin designator for P9.21

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO3
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO30 Field

Legacy GPIO pin designator for P9.11

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO30
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO31 Field

Legacy GPIO pin designator for P9.13

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO31
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO32 Field

Legacy GPIO pin designator for P8.25

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO32
```

Field Value

Type: Designator

Remarks

Requires the BeagleBone White and the `BB-NOEMMC` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO33 Field

Legacy GPIO pin designator for P8.24

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO33
```

Field Value

Type: Designator

Remarks

Requires the BeagleBone White and the `BB-NOEMMC` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO34 Field

Legacy GPIO pin designator for P8.5

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO34
```

Field Value

Type: Designator

Remarks

Requires the BeagleBone White and the `BB-NOEMMC` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO35 Field

Legacy GPIO pin designator for P8.6

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO35
```

Field Value

Type: Designator

Remarks

Requires the BeagleBone White and the `BB-NOEMMC` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO36 Field

Legacy GPIO pin designator for P8.23

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO36
```

Field Value

Type: Designator

Remarks

Requires the BeagleBone White and the `BB-NOEMMC` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO37 Field

Legacy GPIO pin designator for P8.22

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO37
```

Field Value

Type: Designator

Remarks

Requires the BeagleBone White and the `BB-NOEMMC` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO38 Field

Legacy GPIO pin designator for P8.3

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static readonly Designator GPIO38
```

Field Value

Type: Designator

Remarks

Requires the BeagleBone White and the `BB-NOEMMC` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO39 Field

Legacy GPIO pin designator for P8.4

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO39
```

Field Value

Type: Designator

Remarks

Requires the BeagleBone White and the `BB-NOEMMC` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO4 Field

Legacy GPIO pin designator for P9.18

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO4
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO44 Field

Legacy GPIO pin designator for P8.12

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO44
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO45 Field

Legacy GPIO pin designator for P8.11

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO45
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO46 Field

Legacy GPIO pin designator for P8.16

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO46
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO47 Field

Legacy GPIO pin designator for P8.15

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO47
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO48 Field

Legacy GPIO pin designator for P9.15

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static readonly Designator GPIO48
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO49 Field

Legacy GPIO pin designator for P9.23

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO49
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO5 Field

Legacy GPIO pin designator for P9.17

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO5
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO50 Field

Legacy GPIO pin designator for P9.14

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO50
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO51 Field

Legacy GPIO pin designator for P9.16

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO51
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO60 Field

Legacy GPIO pin designator for P9.12

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO60
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO61 Field

Legacy GPIO pin designator for P8.26

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO61
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO62 Field

Legacy GPIO pin designator for P8.21

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO62
```

Field Value

Type: Designator

Remarks

Requires the BeagleBone White and the `BB-NOEMMC` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO63 Field

Legacy GPIO pin designator for P8.20

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO63
```

Field Value

Type: Designator

Remarks

Requires the BeagleBone White and the `BB-NOEMMC` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO65 Field

Legacy GPIO pin designator for P8.18

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO65
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO66 Field

Legacy GPIO pin designator for P8.7

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO66
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO67 Field

Legacy GPIO pin designator for P8.8

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO67
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO68 Field

Legacy GPIO pin designator for P8.10

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO68
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO69 Field

Legacy GPIO pin designator for P8.9

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO69
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO7 Field

Legacy GPIO pin designator for P9.42

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO7
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO70 Field

Legacy GPIO pin designator for P8.45

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO70
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO71 Field

Legacy GPIO pin designator for P8.46

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO71
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO72 Field

Legacy GPIO pin designator for P8.43

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO72
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO73 Field

Legacy GPIO pin designator for P8.44

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO73
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO74 Field

Legacy GPIO pin designator for P8.41

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO74
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO75 Field

Legacy GPIO pin designator for P8.42

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO75
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO76 Field

Legacy GPIO pin designator for P8.39

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO76
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO77 Field

Legacy GPIO pin designator for P8.40

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO77
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO78 Field

Legacy GPIO pin designator for P8.37

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO78
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO79 Field

Legacy GPIO pin designator for P8.38

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO79
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO8 Field

Legacy GPIO pin designator for P8.35

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static readonly Designator GPIO8
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO80 Field

Legacy GPIO pin designator for P8.36

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO80
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO81 Field

Legacy GPIO pin designator for P8.34

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO81
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO86 Field

Legacy GPIO pin designator for P8.27

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO86
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO87 Field

Legacy GPIO pin designator for P8.29

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO87
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO88 Field

Legacy GPIO pin designator for P8.28

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO88
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO89 Field

Legacy GPIO pin designator for P8.30

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO89
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneGPIO9 Field

Legacy GPIO pin designator for P8.33

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO9
```

Field Value

Type: Designator

Remarks

Requires the `BB-GPIO` device tree overlay.

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneI2C2 Field

I2C bus designator for P9.19 and P9.20

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator I2C2
```

Field Value

Type: Designator

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneSPI2_0 Field

SPI slave select designator for P9.28

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static readonly Designator SPI2_0
```

Field Value

Type: Designator

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

BeagleBoneSPI2_1 Field

SPI slave select designator for P9.42

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator SPI2_1
```

Field Value

Type: Designator

See Also

Reference

BeagleBone Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagle Class

This class defines identifiers for the devices provided by the PocketBeagle hardware platform.

Inheritance Hierarchy

SystemObject IO.Objects.libsimpleio.PlatformsPocketBeagle

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static class PocketBeagle
```

The PocketBeagle type exposes the following members.

Fields

	Name	Description
s	AIN0	ADC input designator for P1.19 (1.8V)
s	AIN1	ADC input designator for P1.21 (1.8V)
s	AIN2	ADC input designator for P1.23 (1.8V)
s	AIN3	ADC input designator for P1.25 (1.8V)
s	AIN4	ADC input designator for P1.27 (1.8V)

s	AIN5	ADC input designator for P2.35 (3.6V)
s	AIN6	ADC input designator for P1.2 (3.6V)
s	AIN7	ADC input designator for P2.36 (1.8V)
s	GPIO110	Legacy GPIO pin designator for P1.36
s	GPIO111	Legacy GPIO pin designator for P1.33
s	GPIO112	Legacy GPIO pin designator for P2.32
s	GPIO113	Legacy GPIO pin designator for P2.30
s	GPIO114	Legacy GPIO pin designator for P1.31
s	GPIO115	Legacy GPIO pin designator for P2.34
s	GPIO116	Legacy GPIO pin designator for P2.28
s	GPIO117	Legacy GPIO pin designator for P1.29
s	GPIO12	Legacy GPIO pin designator for P1.26
s	GPIO13	Legacy GPIO pin designator for P1.28
s	GPIO14	Legacy GPIO pin designator for P2.11
s	GPIO15	Legacy GPIO pin designator for P2.9
s	GPIO19	Legacy GPIO pin designator for P2.31
s	GPIO2	Legacy GPIO pin designator for P1.8
s	GPIO20	Legacy GPIO pin designator for P1.20
s	GPIO23	Legacy GPIO pin designator for P2.3

S	GPIO26	Legacy GPIO pin designator for P1.34
S	GPIO27	Legacy GPIO pin designator for P2.19
S	GPIO3	Legacy GPIO pin designator for P1.10
S	GPIO30	Legacy GPIO pin designator for P2.5
S	GPIO31	Legacy GPIO pin designator for P2.7
S	GPIO4	Legacy GPIO pin designator for P1.12
S	GPIO40	Legacy GPIO pin designator for P2.27
S	GPIO41	Legacy GPIO pin designator for P2.25
S	GPIO42	Legacy GPIO pin designator for P1.32
S	GPIO43	Legacy GPIO pin designator for P1.30
S	GPIO44	Legacy GPIO pin designator for P2.24
S	GPIO45	Legacy GPIO pin designator for P2.33
S	GPIO46	Legacy GPIO pin designator for P2.22
S	GPIO47	Legacy GPIO pin designator for P2.18
S	GPIO5	Legacy GPIO pin designator for P1.6
S	GPIO50	Legacy GPIO pin designator for P2.1
S	GPIO52	Legacy GPIO pin designator for P2.10
S	GPIO57	Legacy GPIO pin designator for P2.6
S	GPIO58	Legacy GPIO pin designator for P2.4

S	GPIO59	Legacy GPIO pin designator for P2.2
S	GPIO60	Legacy GPIO pin designator for P2.8
S	GPIO64	Legacy GPIO pin designator for P2.20
S	GPIO65	Legacy GPIO pin designator for P2.17
S	GPIO7	Legacy GPIO pin designator for P2.29
S	GPIO86	Legacy GPIO pin designator for P2.35
S	GPIO87	Legacy GPIO pin designator for P1.2
S	GPIO88	Legacy GPIO pin designator for P1.35
S	GPIO89	Legacy GPIO pin designator for P1.4
S	I2C1	I2C bus designator for P1.26 and P1.28
S	I2C2	I2C bus designator for P2.9 and P2.11
S	PWM0_0	PWM output designator for P1.36
S	PWM2_0	PWM output designator for P2.1
S	SPI0_0	SPI slave select designator for P1.6
S	SPI1_1	SPI slave select designator for P2.31

Top

See Also

Reference

IO.Objects.libsimpleio.Platforms Namespace

PocketBeagle Fields

The PocketBeagle type exposes the following members.

Fields

	Name	Description
s	AIN0	ADC input designator for P1.19 (1.8V)
s	AIN1	ADC input designator for P1.21 (1.8V)
s	AIN2	ADC input designator for P1.23 (1.8V)
s	AIN3	ADC input designator for P1.25 (1.8V)
s	AIN4	ADC input designator for P1.27 (1.8V)
s	AIN5	ADC input designator for P2.35 (3.6V)
s	AIN6	ADC input designator for P1.2 (3.6V)
s	AIN7	ADC input designator for P2.36 (1.8V)
s	GPIO110	Legacy GPIO pin designator for P1.36
s	GPIO111	Legacy GPIO pin designator for P1.33
s	GPIO112	Legacy GPIO pin designator for P2.32
s	GPIO113	Legacy GPIO pin designator for P2.30
s	GPIO114	Legacy GPIO pin designator for P1.31

S	GPIO115	Legacy GPIO pin designator for P2.34
S	GPIO116	Legacy GPIO pin designator for P2.28
S	GPIO117	Legacy GPIO pin designator for P1.29
S	GPIO12	Legacy GPIO pin designator for P1.26
S	GPIO13	Legacy GPIO pin designator for P1.28
S	GPIO14	Legacy GPIO pin designator for P2.11
S	GPIO15	Legacy GPIO pin designator for P2.9
S	GPIO19	Legacy GPIO pin designator for P2.31
S	GPIO2	Legacy GPIO pin designator for P1.8
S	GPIO20	Legacy GPIO pin designator for P1.20
S	GPIO23	Legacy GPIO pin designator for P2.3
S	GPIO26	Legacy GPIO pin designator for P1.34
S	GPIO27	Legacy GPIO pin designator for P2.19
S	GPIO3	Legacy GPIO pin designator for P1.10
S	GPIO30	Legacy GPIO pin designator for P2.5
S	GPIO31	Legacy GPIO pin designator for P2.7
S	GPIO4	Legacy GPIO pin designator for P1.12
S	GPIO40	Legacy GPIO pin designator for P2.27
S	GPIO41	Legacy GPIO pin designator for P2.25

s	GPIO42	Legacy GPIO pin designator for P1.32
s	GPIO43	Legacy GPIO pin designator for P1.30
s	GPIO44	Legacy GPIO pin designator for P2.24
s	GPIO45	Legacy GPIO pin designator for P2.33
s	GPIO46	Legacy GPIO pin designator for P2.22
s	GPIO47	Legacy GPIO pin designator for P2.18
s	GPIO5	Legacy GPIO pin designator for P1.6
s	GPIO50	Legacy GPIO pin designator for P2.1
s	GPIO52	Legacy GPIO pin designator for P2.10
s	GPIO57	Legacy GPIO pin designator for P2.6
s	GPIO58	Legacy GPIO pin designator for P2.4
s	GPIO59	Legacy GPIO pin designator for P2.2
s	GPIO60	Legacy GPIO pin designator for P2.8
s	GPIO64	Legacy GPIO pin designator for P2.20
s	GPIO65	Legacy GPIO pin designator for P2.17
s	GPIO7	Legacy GPIO pin designator for P2.29
s	GPIO86	Legacy GPIO pin designator for P2.35
s	GPIO87	Legacy GPIO pin designator for P1.2
s	GPIO88	Legacy GPIO pin designator for P1.35

S	GPIO89	Legacy GPIO pin designator for P1.4
S	I2C1	I2C bus designator for P1.26 and P1.28
S	I2C2	I2C bus designator for P2.9 and P2.11
S	PWM0_0	PWM output designator for P1.36
S	PWM2_0	PWM output designator for P2.1
S	SPI0_0	SPI slave select designator for P1.6
S	SPI1_1	SPI slave select designator for P2.31

Top

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleAIN0 Field

ADC input designator for P1.19 (1.8V)

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator AIN0
```

Field Value

Type: Designator

Remarks

Requires the `PB-ADC` device tree overlay.

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleAIN1 Field

ADC input designator for P1.21 (1.8V)

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator AIN1
```

Field Value

Type: Designator

Remarks

Requires the `PB-ADC` device tree overlay.

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleAIN2 Field

ADC input designator for P1.23 (1.8V)

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator AIN2
```

Field Value

Type: Designator

Remarks

Requires the `PB-ADC` device tree overlay.

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleAIN3 Field

ADC input designator for P1.25 (1.8V)

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator AIN3
```

Field Value

Type: Designator

Remarks

Requires the `PB-ADC` device tree overlay.

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleAIN4 Field

ADC input designator for P1.27 (1.8V)

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator AIN4
```

Field Value

Type: Designator

Remarks

Requires the `PB-ADC` device tree overlay.

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleAIN5 Field

ADC input designator for P2.35 (3.6V)

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator AIN5
```

Field Value

Type: Designator

Remarks

Requires the `PB-ADC` device tree overlay.

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleAIN6 Field

ADC input designator for P1.2 (3.6V)

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator AIN6
```

Field Value

Type: Designator

Remarks

Requires the `PB-ADC` device tree overlay.

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleAIN7 Field

ADC input designator for P2.36 (1.8V)

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator AIN7
```

Field Value

Type: Designator

Remarks

Requires the `PB-ADC` device tree overlay.

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO110 Field

Legacy GPIO pin designator for P1.36

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO110
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO111 Field

Legacy GPIO pin designator for P1.33

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO111
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO112 Field

Legacy GPIO pin designator for P2.32

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO112
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO113 Field

Legacy GPIO pin designator for P2.30

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO113
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO114 Field

Legacy GPIO pin designator for P1.31

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO114
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO115 Field

Legacy GPIO pin designator for P2.34

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO115
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO116 Field

Legacy GPIO pin designator for P2.28

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO116
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO117 Field

Legacy GPIO pin designator for P1.29

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO117
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO12 Field

Legacy GPIO pin designator for P1.26

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO12
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO13 Field

Legacy GPIO pin designator for P1.28

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO13
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO14 Field

Legacy GPIO pin designator for P2.11

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO14
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO15 Field

Legacy GPIO pin designator for P2.9

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO15
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO19 Field

Legacy GPIO pin designator for P2.31

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO19
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO2 Field

Legacy GPIO pin designator for P1.8

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO2
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO20 Field

Legacy GPIO pin designator for P1.20

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO20
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO23 Field

Legacy GPIO pin designator for P2.3

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO23
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO26 Field

Legacy GPIO pin designator for P1.34

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO26
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO27 Field

Legacy GPIO pin designator for P2.19

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO27
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO3 Field

Legacy GPIO pin designator for P1.10

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO3
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO30 Field

Legacy GPIO pin designator for P2.5

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO30
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO31 Field

Legacy GPIO pin designator for P2.7

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO31
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO4 Field

Legacy GPIO pin designator for P1.12

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO4
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO40 Field

Legacy GPIO pin designator for P2.27

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO40
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO41 Field

Legacy GPIO pin designator for P2.25

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO41
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO42 Field

Legacy GPIO pin designator for P1.32

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO42
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO43 Field

Legacy GPIO pin designator for P1.30

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO43
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO44 Field

Legacy GPIO pin designator for P2.24

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO44
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO45 Field

Legacy GPIO pin designator for P2.33

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO45
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO46 Field

Legacy GPIO pin designator for P2.22

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO46
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO47 Field

Legacy GPIO pin designator for P2.18

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO47
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO5 Field

Legacy GPIO pin designator for P1.6

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO5
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO50 Field

Legacy GPIO pin designator for P2.1

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO50
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO52 Field

Legacy GPIO pin designator for P2.10

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO52
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO57 Field

Legacy GPIO pin designator for P2.6

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO57
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO58 Field

Legacy GPIO pin designator for P2.4

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO58
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO59 Field

Legacy GPIO pin designator for P2.2

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO59
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO60 Field

Legacy GPIO pin designator for P2.8

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO60
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO64 Field

Legacy GPIO pin designator for P2.20

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO64
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO65 Field

Legacy GPIO pin designator for P2.17

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO65
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO7 Field

Legacy GPIO pin designator for P2.29

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO7
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO86 Field

Legacy GPIO pin designator for P2.35

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO86
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO87 Field

Legacy GPIO pin designator for P1.2

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO87
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO88 Field

Legacy GPIO pin designator for P1.35

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO88
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleGPIO89 Field

Legacy GPIO pin designator for P1.4

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO89
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleI2C1 Field

I2C bus designator for P1.26 and P1.28

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator I2C1
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleI2C2 Field

I2C bus designator for P2.9 and P2.11

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator I2C2
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeaglePWM0_0 Field

PWM output designator for P1.36

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator PWM0_0
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeaglePWM2_0 Field

PWM output designator for P2.1

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator PWM2_0
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleSPI0_0 Field

SPI slave select designator for P1.6

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator SPI0_0
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

PocketBeagleSPI1_1 Field

SPI slave select designator for P2.31

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator SPI1_1
```

Field Value

Type: Designator

See Also

Reference

PocketBeagle Class
IO.Objects.libsimpleio.Platforms Namespace

RaspberryPi Class

This class defines identifiers for the devices provided by the Raspberry Pi hardware platform.

Inheritance Hierarchy

SystemObject IO.Objects.libsimpleio.PlatformsRaspberryPi

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static class RaspberryPi
```

The RaspberryPi type exposes the following members.

Fields

	Name	Description
s	AIN0	Analog input designator
s	AIN1	Analog input designator
s	GPIO10	Legacy GPIO pin designator
s	GPIO11	Legacy GPIO pin designator
s	GPIO12	Legacy GPIO pin designator

S	GPIO13	Legacy GPIO pin designator
S	GPIO14	Legacy GPIO pin designator
S	GPIO15	Legacy GPIO pin designator
S	GPIO16	Legacy GPIO pin designator
S	GPIO17	Legacy GPIO pin designator
S	GPIO18	Legacy GPIO pin designator
S	GPIO19	Legacy GPIO pin designator
S	GPIO2	Legacy GPIO pin designator
S	GPIO20	Legacy GPIO pin designator
S	GPIO21	Legacy GPIO pin designator
S	GPIO22	Legacy GPIO pin designator
S	GPIO23	Legacy GPIO pin designator
S	GPIO24	Legacy GPIO pin designator
S	GPIO25	Legacy GPIO pin designator
S	GPIO26	Legacy GPIO pin designator
S	GPIO27	Legacy GPIO pin designator
S	GPIO3	Legacy GPIO pin designator
S	GPIO4	Legacy GPIO pin designator
S	GPIO5	Legacy GPIO pin designator

S	GPIO6	Legacy GPIO pin designator
S	GPIO7	Legacy GPIO pin designator
S	GPIO8	Legacy GPIO pin designator
S	GPIO9	Legacy GPIO pin designator
S	I2C1	I2C bus designator for GPIO2 and GPIO3
S	PWM0_0	PWM output designator for GPIO18
S	PWM0_1	PWM output designator for GPIO19
S	SPI0_0	SPI slave select designator for GPIO8
S	SPI0_1	SPI slave select designator for GPIO7

Top

See Also

Reference

IO.Objects.libsimpleio.Platforms Namespace

RaspberryPi Fields

The RaspberryPi type exposes the following members.

Fields

	Name	Description
S	AIN0	Analog input designator
S	AIN1	Analog input designator
S	GPIO10	Legacy GPIO pin designator
S	GPIO11	Legacy GPIO pin designator
S	GPIO12	Legacy GPIO pin designator
S	GPIO13	Legacy GPIO pin designator
S	GPIO14	Legacy GPIO pin designator
S	GPIO15	Legacy GPIO pin designator
S	GPIO16	Legacy GPIO pin designator
S	GPIO17	Legacy GPIO pin designator
S	GPIO18	Legacy GPIO pin designator
S	GPIO19	Legacy GPIO pin designator
S	GPIO2	Legacy GPIO pin designator

s	GPIO20	Legacy GPIO pin designator
s	GPIO21	Legacy GPIO pin designator
s	GPIO22	Legacy GPIO pin designator
s	GPIO23	Legacy GPIO pin designator
s	GPIO24	Legacy GPIO pin designator
s	GPIO25	Legacy GPIO pin designator
s	GPIO26	Legacy GPIO pin designator
s	GPIO27	Legacy GPIO pin designator
s	GPIO3	Legacy GPIO pin designator
s	GPIO4	Legacy GPIO pin designator
s	GPIO5	Legacy GPIO pin designator
s	GPIO6	Legacy GPIO pin designator
s	GPIO7	Legacy GPIO pin designator
s	GPIO8	Legacy GPIO pin designator
s	GPIO9	Legacy GPIO pin designator
s	I2C1	I2C bus designator for GPIO2 and GPIO3
s	PWM0_0	PWM output designator for GPIO18
s	PWM0_1	PWM output designator for GPIO19
s	SPI0_0	SPI slave select designator for GPIO8

	SPI0_1	SPI slave select designator for GPIO7

Top

See Also

Reference

RaspberryPi Class

IO.Objects.libsimpleio.Platforms Namespace

RaspberryPiAIN0 Field

Analog input designator

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static readonly Designator AIN0
```

Field Value

Type: Designator

Remarks

Requires the Mikroelektronika Pi 3 Click Shield and the `Pi3ClickShield` device tree overlay.

See Also

Reference

RaspberryPi Class
IO.Objects.libsimpleio.Platforms Namespace

RaspberryPiAIN1 Field

Analog input designator

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator AIN1
```

Field Value

Type: Designator

Remarks

Requires the Mikroelektronika Pi 3 Click Shield and the `Pi3ClickShield` device tree overlay.

See Also

Reference

RaspberryPi Class
IO.Objects.libsimpleio.Platforms Namespace

RaspberryPiGPIO10 Field

Legacy GPIO pin designator

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO10
```

Field Value

Type: Designator

See Also

Reference

RaspberryPi Class
IO.Objects.libsimpleio.Platforms Namespace

RaspberryPiGPIO11 Field

Legacy GPIO pin designator

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO11
```

Field Value

Type: Designator

See Also

Reference

RaspberryPi Class
IO.Objects.libsimpleio.Platforms Namespace

RaspberryPiGPIO12 Field

Legacy GPIO pin designator

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static readonly Designator GPIO12
```

Field Value

Type: Designator

See Also

Reference

RaspberryPi Class
IO.Objects.libsimpleio.Platforms Namespace

RaspberryPiGPIO13 Field

Legacy GPIO pin designator

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static readonly Designator GPIO13
```

Field Value

Type: Designator

See Also

Reference

RaspberryPi Class
IO.Objects.libsimpleio.Platforms Namespace

RaspberryPiGPIO14 Field

Legacy GPIO pin designator

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO14
```

Field Value

Type: Designator

See Also

Reference

RaspberryPi Class
IO.Objects.libsimpleio.Platforms Namespace

RaspberryPiGPIO15 Field

Legacy GPIO pin designator

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO15
```

Field Value

Type: Designator

See Also

Reference

RaspberryPi Class
IO.Objects.libsimpleio.Platforms Namespace

RaspberryPiGPIO16 Field

Legacy GPIO pin designator

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO16
```

Field Value

Type: Designator

See Also

Reference

RaspberryPi Class
IO.Objects.libsimpleio.Platforms Namespace

RaspberryPiGPIO17 Field

Legacy GPIO pin designator

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO17
```

Field Value

Type: Designator

See Also

Reference

RaspberryPi Class
IO.Objects.libsimpleio.Platforms Namespace

RaspberryPiGPIO18 Field

Legacy GPIO pin designator

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO18
```

Field Value

Type: Designator

See Also

Reference

RaspberryPi Class
IO.Objects.libsimpleio.Platforms Namespace

RaspberryPiGPIO19 Field

Legacy GPIO pin designator

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO19
```

Field Value

Type: Designator

See Also

Reference

RaspberryPi Class
IO.Objects.libsimpleio.Platforms Namespace

RaspberryPiGPIO2 Field

Legacy GPIO pin designator

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO2
```

Field Value

Type: Designator

See Also

Reference

RaspberryPi Class
IO.Objects.libsimpleio.Platforms Namespace

RaspberryPiGPIO20 Field

Legacy GPIO pin designator

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO20
```

Field Value

Type: Designator

See Also

Reference

RaspberryPi Class
IO.Objects.libsimpleio.Platforms Namespace

RaspberryPiGPIO21 Field

Legacy GPIO pin designator

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO21
```

Field Value

Type: Designator

See Also

Reference

RaspberryPi Class
IO.Objects.libsimpleio.Platforms Namespace

RaspberryPiGPIO22 Field

Legacy GPIO pin designator

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO22
```

Field Value

Type: Designator

See Also

Reference

RaspberryPi Class
IO.Objects.libsimpleio.Platforms Namespace

RaspberryPiGPIO23 Field

Legacy GPIO pin designator

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO23
```

Field Value

Type: Designator

See Also

Reference

RaspberryPi Class
IO.Objects.libsimpleio.Platforms Namespace

RaspberryPiGPIO24 Field

Legacy GPIO pin designator

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO24
```

Field Value

Type: Designator

See Also

Reference

RaspberryPi Class
IO.Objects.libsimpleio.Platforms Namespace

RaspberryPiGPIO25 Field

Legacy GPIO pin designator

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO25
```

Field Value

Type: Designator

See Also

Reference

RaspberryPi Class
IO.Objects.libsimpleio.Platforms Namespace

RaspberryPiGPIO26 Field

Legacy GPIO pin designator

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO26
```

Field Value

Type: Designator

See Also

Reference

RaspberryPi Class
IO.Objects.libsimpleio.Platforms Namespace

RaspberryPiGPIO27 Field

Legacy GPIO pin designator

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO27
```

Field Value

Type: Designator

See Also

Reference

RaspberryPi Class
IO.Objects.libsimpleio.Platforms Namespace

RaspberryPiGPIO3 Field

Legacy GPIO pin designator

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO3
```

Field Value

Type: Designator

See Also

Reference

RaspberryPi Class
IO.Objects.libsimpleio.Platforms Namespace

RaspberryPiGPIO4 Field

Legacy GPIO pin designator

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO4
```

Field Value

Type: Designator

See Also

Reference

RaspberryPi Class
IO.Objects.libsimpleio.Platforms Namespace

RaspberryPiGPIO5 Field

Legacy GPIO pin designator

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO5
```

Field Value

Type: Designator

See Also

Reference

RaspberryPi Class
IO.Objects.libsimpleio.Platforms Namespace

RaspberryPiGPIO6 Field

Legacy GPIO pin designator

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO6
```

Field Value

Type: Designator

See Also

Reference

RaspberryPi Class
IO.Objects.libsimpleio.Platforms Namespace

RaspberryPiGPIO7 Field

Legacy GPIO pin designator

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO7
```

Field Value

Type: Designator

See Also

Reference

RaspberryPi Class
IO.Objects.libsimpleio.Platforms Namespace

RaspberryPiGPIO8 Field

Legacy GPIO pin designator

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO8
```

Field Value

Type: Designator

See Also

Reference

RaspberryPi Class
IO.Objects.libsimpleio.Platforms Namespace

RaspberryPiGPIO9 Field

Legacy GPIO pin designator

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator GPIO9
```

Field Value

Type: Designator

See Also

Reference

RaspberryPi Class
IO.Objects.libsimpleio.Platforms Namespace

RaspberryPiI2C1 Field

I2C bus designator for GPIO2 and GPIO3

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator I2C1
```

Field Value

Type: Designator

See Also

Reference

RaspberryPi Class
IO.Objects.libsimpleio.Platforms Namespace

RaspberryPiPWM0_0 Field

PWM output designator for GPIO18

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator PWM0_0
```

Field Value

Type: Designator

Remarks

Requires the `pwm` device tree overlay.

See Also

Reference

RaspberryPi Class
IO.Objects.libsimpleio.Platforms Namespace

RaspberryPiPWM0_1 Field

PWM output designator for GPIO19

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator PWM0_1
```

Field Value

Type: Designator

Remarks

Requires the `pwm` device tree overlay.

See Also

Reference

RaspberryPi Class
IO.Objects.libsimpleio.Platforms Namespace

RaspberryPiSPI0_0 Field

SPI slave select designator for GPIO8

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator SPI0_0
```

Field Value

Type: Designator

See Also

Reference

RaspberryPi Class
IO.Objects.libsimpleio.Platforms Namespace

RaspberryPiSPI0_1 Field

SPI slave select designator for GPIO7

Namespace: IO.Objects.libsimpleio.Platforms
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static readonly Designator SPI0_1
```

Field Value

Type: Designator

See Also

Reference

RaspberryPi Class
IO.Objects.libsimpleio.Platforms Namespace

IO.Objects.libsimpleio.PWM Namespace

PWM (Pulse Width Modulated) Output Services

Classes

	Class	Description
	Output	Encapsulates Linux PWM outputs using `libsimpleio`.

Output Class

Encapsulates Linux PWM outputs using `libsimpleio`.

Inheritance Hierarchy

SystemObject IO.Objects.libsimpleio.PWMOutput

Namespace: IO.Objects.libsimpleio.PWM
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Output : Output
```

The Output type exposes the following members.

Constructors

	Name	Description
	Output	Constructor for a single PWM output.

Top

Properties

	Name	Description
	dutycycle	Write-only property for setting the PWM output duty cycle. Allowed values

		are 0.0 to 100.0 percent.
	fd	Read-only property returning the Linux file descriptor for the PWM output.

Top

See Also

Reference

IO.Objects.libsimpleio.PWM Namespace

Output Constructor

Constructor for a single PWM output.

Namespace: IO.Objects.libsimpleio.PWM
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Output(
        Designator desg,
        int frequency,
        double dutycycle = 0,
        int polarity = 1
)
```

Parameters

desg
Type: IO.Objects.libsimpleio.DeviceDesignator
PWM output designator.

frequency
Type: SystemInt32
PWM pulse frequency.

dutycycle **(Optional)**
Type: SystemDouble
Initial PWM output duty cycle.

polarity **(Optional)**
Type: SystemInt32
PWM output polarity.

See Also

Reference

Output Class

IO.Objects.libsimpleio.PWM Namespace

Output Properties

The Output type exposes the following members.

Properties

	Name	Description
	dutycycle	Write-only property for setting the PWM output duty cycle. Allowed values are 0.0 to 100.0 percent.
	fd	Read-only property returning the Linux file descriptor for the PWM output.

Top

See Also

Reference

Output Class

IO.Objects.libsimpleio.PWM Namespace

Outputdutycycle Property

Write-only property for setting the PWM output duty cycle. Allowed values are 0.0 to 100.0 percent.

Namespace: IO.Objects.libsimpleio.PWM
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public double dutycycle { set; }
```

Property Value

Type: Double

Implements

Outputdutycycle

See Also

Reference

Output Class
IO.Objects.libsimpleio.PWM Namespace

Outputfd Property

Read-only property returning the Linux file descriptor for the PWM output.

Namespace: IO.Objects.libsimpleio.PWM
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public int fd { get; }
```

Property Value

Type: Int32

See Also

Reference

Output Class
IO.Objects.libsimpleio.PWM Namespace

IO.Objects.libsimpleio.Servo Namespace

Servo Output Services

Classes

	Class	Description
	Output	Encapsulates Linux servo outputs using `libsimpleio`.

Output Class

Encapsulates Linux servo outputs using `libsimpleio`.

Inheritance Hierarchy

SystemObject IO.Objects.libsimpleio.ServoOutput

Namespace: IO.Objects.libsimpleio.Servo
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Output : Output
```

The Output type exposes the following members.

Constructors

	Name	Description
	Output	Constructor for a single servo output.

Top

Properties

	Name	Description
	fd	Read-only property returning the Linux file descriptor for the servo output.

position	Write-only property for setting the servo position. Allowed values are -1.0 to +1.0.

Top

See Also

Reference

IO.Objects.libsimpleio.Servo Namespace

Output Constructor

Constructor for a single servo output.

Namespace: IO.Objects.libsimpleio.Servo
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Output(
        Designator desg,
        int frequency = 50,
        double position = 0
)
```

Parameters

desg
Type: IO.Objects.libsimpleio.DeviceDesignator
PWM output designator.

frequency **(Optional)**
Type: SystemInt32
PWM pulse frequency.

position **(Optional)**
Type: SystemDouble
Initial servo position.

See Also

Reference

Output Class

IO.Objects.libsimpleio.Servo Namespace

Output Properties

The Output type exposes the following members.

Properties

	Name	Description
	fd	Read-only property returning the Linux file descriptor for the servo output.
	position	Write-only property for setting the servo position. Allowed values are -1.0 to +1.0.

Top

See Also

Reference

Output Class

IO.Objects.libsimpleio.Servo Namespace

Outputfd Property

Read-only property returning the Linux file descriptor for the servo output.

Namespace: IO.Objects.libsimpleio.Servo
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public int fd { get; }
```

Property Value

Type: Int32

See Also

Reference

Output Class
IO.Objects.libsimpleio.Servo Namespace

Outputposition Property

Write-only property for setting the servo position. Allowed values are -1.0 to +1.0.

Namespace: IO.Objects.libsimpleio.Servo
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public double position { set; }
```

Property Value

Type: Double

Implements

Outputposition

See Also

Reference

Output Class
IO.Objects.libsimpleio.Servo Namespace

IO.Objects.libsimpleio.SPI Namespace

SPI (Serial Peripheral Interconnect) Device Services

Classes

	Class	Description
	Device	Encapsulates Linux SPI devices using `libsimpleio`.

Device Class

Encapsulates Linux SPI devices using `libsimpleio`.

Inheritance Hierarchy

SystemObject IO.Objects.libsimpleio.SPIDevice

Namespace: IO.Objects.libsimpleio.SPI
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Device : Device
```

The Device type exposes the following members.

Constructors

	Name	Description
	Device(String, Int32, Int32, Int32, Pin)	Constructor for a single SPI device.
	Device(Designator, Int32, Int32, Int32, Pin)	Constructor for a single SPI device.

Top

Properties

	Name	Description
	fd	Read-only property returning the Linux file descriptor for the SPI slave device.

Top

Methods

	Name	Description
	Read	Read bytes from an SPI slave device.
	Transaction	Write and read bytes to and from an SPI slave device.
	Write	Write bytes to an SPI slave device.

Top

Fields

	Name	Description
S	AUTOCHIPSELECT	Use hardware slave select.

Top

See Also

Reference

IO.Objects.libsimpleio.SPI Namespace

Device Constructor

Overload List

	Name	Description
	Device(String, Int32, Int32, Int32, Pin)	Constructor for a single SPI device.
	Device(Designator, Int32, Int32, Int32, Pin)	Constructor for a single SPI device.

Top

See Also

Reference

Device Class

IO.Objects.libsimpleio.SPI Namespace

Device Constructor (String, Int32, Int32, Int32, Pin)

Constructor for a single SPI device.

Namespace: IO.Objects.libsimpleio.SPI
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Device(
        string devname,
        int mode,
        int wordsize,
        int speed,
        Pin cspin = null
)
```

Parameters

devname
Type: SystemString
SPI device node name.

mode
Type: SystemInt32
SPI clock mode.

wordsize
Type: SystemInt32
SPI transfer word size.

speed

Type: SystemInt32
SPI transfer speed.

cspin **(Optional)**

Type: IO.Objects.libsimpleio.GPIOPin
SPI slave select GPIO pin number, or `AUTOCHIPSELECT`.

See Also

Reference

Device Class
Device Overload
IO.Objects.libsimpleio.SPI Namespace

Device Constructor (Designator, Int32, Int32, Int32, Pin)

Constructor for a single SPI device.

Namespace: IO.Objects.libsimpleio.SPI
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Device(
        Designator desg,
        int mode,
        int wordsize,
        int speed,
        Pin cspin = null
)
```

Parameters

desg
Type: IO.Objects.libsimpleio.DeviceDesignator
SPI device designator.

mode
Type: SystemInt32
SPI clock mode.

wordsize
Type: SystemInt32
SPI transfer word size.

speed

Type: SystemInt32
SPI transfer speed.

cspin **(Optional)**

Type: IO.Objects.libsimpleio.GPIOPin
SPI slave select GPIO pin number, or `AUTOCHIPSELECT`.

See Also

Reference

Device Class
Device Overload
IO.Objects.libsimpleio.SPI Namespace

Device Properties

The Device type exposes the following members.

Properties

	Name	Description
	fd	Read-only property returning the Linux file descriptor for the SPI slave device.

Top

See Also

Reference

Device Class

IO.Objects.libsimpleio.SPI Namespace

Devicefd Property

Read-only property returning the Linux file descriptor for the SPI slave device.

Namespace: IO.Objects.libsimpleio.SPI
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public int fd { get; }
```

Property Value

Type: Int32

See Also

Reference

Device Class
IO.Objects.libsimpleio.SPI Namespace

Device Methods

The Device type exposes the following members.

Methods

	Name	Description
	Read	Read bytes from an SPI slave device.
	Transaction	Write and read bytes to and from an SPI slave device.
	Write	Write bytes to an SPI slave device.

Top

See Also

Reference

Device Class

IO.Objects.libsimpleio.SPI Namespace

DeviceRead Method

Read bytes from an SPI slave device.

Namespace: IO.Objects.libsimpleio.SPI
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public void Read(
        byte[] resp,
        int resplen
)
```

Parameters

resp
Type: SystemByte
Response buffer.

resplen
Type: SystemInt32
Number of bytes to read.

Implements

DeviceRead(Byte, Int32)

See Also

Reference

Device Class
IO.Objects.libsimpleio.SPI Namespace

DeviceTransaction Method

Write and read bytes to and from an SPI slave device.

Namespace: IO.Objects.libsimpleio.SPI
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public void Transaction(
        byte[] cmd,
        int cmdlen,
        byte[] resp,
        int resplen,
        int delayus = 0
)
```

Parameters

cmd
Type: SystemByte
Command buffer.

cmdlen
Type: SystemInt32
Number of bytes to write.

resp
Type: SystemByte
Response buffer.

resplen
Type: SystemInt32
Number of bytes to read.

delayus **(Optional)**

Type: SystemInt32

Delay in microseconds between write and read operations.

Implements

DeviceTransaction(Byte, Int32, Byte, Int32, Int32)

See Also

Reference

Device Class

IO.Objects.libsimpleio.SPI Namespace

DeviceWrite Method

Write bytes to an SPI slave device.

Namespace: IO.Objects.libsimpleio.SPI
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public void Write(
        byte[] cmd,
        int cmdLen
)
```

Parameters

cmd
Type: SystemByte
Command buffer.

cmdlen
Type: SystemInt32
Number of bytes to write.

Implements

DeviceWrite(Byte, Int32)

See Also

Reference

Device Class
IO.Objects.libsimpleio.SPI Namespace

Device Fields

The Device type exposes the following members.

Fields

	Name	Description
	AUTOCHIPSELECT	Use hardware slave select.

Top

See Also

Reference

Device Class

IO.Objects.libsimpleio.SPI Namespace

DeviceAUTOCHIPSELECT Field

Use hardware slave select.

Namespace: IO.Objects.libsimpleio.SPI
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const Pin AUTOCHIPSELECT = null
```

Field Value

Type: Pin

See Also

Reference

Device Class
IO.Objects.libsimpleio.SPI Namespace

IO.Objects.libsimpleio.Watchdog Namespace

Watchdog Timer Services

Classes

	Class	Description
	Timer	Encapsulates Linux watchdog timers using `libsimpleio`.

Timer Class

Encapsulates Linux watchdog timers using `libsimpleio`.

Inheritance Hierarchy

SystemObject IO.Objects.libsimpleio.WatchdogTimer

Namespace: IO.Objects.libsimpleio.Watchdog
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Timer : Timer
```

The Timer type exposes the following members.

Constructors

	Name	Description
	Timer	Constructor for a single watchdog timer.

Top

Properties

	Name	Description
	fd	Read-only property returning the Linux file descriptor for the watchdog timer.

	timeout	Get or set the watchdog timeout. Not all platforms may support this. Even if supported, there may be constraints. For example, some platforms allow shortening the timeout but not lengthening it.

Top

Methods

	Name	Description
	Kick	Reset the watchdog timer.

Top

Fields

	Name	Description
S	DefaultDevice	Default watchdog timer device name.
S	DefaultTimeout	Default watchdog timer timeout value (disabled).

Top

See Also

Reference

IO.Objects.libsimpleio.Watchdog Namespace

Timer Constructor

Constructor for a single watchdog timer.

Namespace: IO.Objects.libsimpleio.Watchdog
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Timer(
        string devname = "/dev/watchdog",
        int timeout = 0
)
```

Parameters

devname **(Optional)**
Type: SystemString
Device node name.

timeout **(Optional)**
Type: SystemInt32
Watchdog timeout setting in seconds, or `DefaultTimeout`.

See Also

Reference

Timer Class
IO.Objects.libsimpleio.Watchdog Namespace

Timer Properties

The Timer type exposes the following members.

Properties

	Name	Description
	fd	Read-only property returning the Linux file descriptor for the watchdog timer.
	timeout	Get or set the watchdog timeout. Not all platforms may support this. Even if supported, there may be constraints. For example, some platforms allow shortening the timeout but not lengthening it.

Top

See Also

Reference

Timer Class

IO.Objects.libsimpleio.Watchdog Namespace

Timerfd Property

Read-only property returning the Linux file descriptor for the watchdog timer.

Namespace: IO.Objects.libsimpleio.Watchdog
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public int fd { get; }
```

Property Value

Type: Int32

See Also

Reference

Timer Class
IO.Objects.libsimpleio.Watchdog Namespace

Timertimeout Property

Get or set the watchdog timeout. Not all platforms may support this. Even if supported, there may be constraints. For example, some platforms allow shortening the timeout but not lengthening it.

Namespace: IO.Objects.libsimpleio.Watchdog
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public int timeout { get; set; }
```

Property Value

Type: Int32

Implements

Timertimeout

See Also

Reference

Timer Class
IO.Objects.libsimpleio.Watchdog Namespace

Timer Methods

The Timer type exposes the following members.

Methods

	Name	Description
	Kick	Reset the watchdog timer.

Top

See Also

Reference

Timer Class

IO.Objects.libsimpleio.Watchdog Namespace

TimerKick Method

Reset the watchdog timer.

Namespace: IO.Objects.libsimpleio.Watchdog
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public void Kick()
```

Implements

TimerKick

See Also

Reference

Timer Class
IO.Objects.libsimpleio.Watchdog Namespace

Timer Fields

The Timer type exposes the following members.

Fields

	Name	Description
	DefaultDevice	Default watchdog timer device name.
	DefaultTimeout	Default watchdog timer timeout value (disabled).

Top

See Also

Reference

Timer Class

IO.Objects.libsimpleio.Watchdog Namespace

TimerDefaultDevice Field

Default watchdog timer device name.

Namespace: IO.Objects.libsimpleio.Watchdog
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const string DefaultDevice = "/dev/watchdog"
```

Field Value

Type: String

See Also

Reference

Timer Class
IO.Objects.libsimpleio.Watchdog Namespace

TimerDefaultTimeout Field

Default watchdog timer timeout value (disabled).

Namespace: IO.Objects.libsimpleio.Watchdog
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public const int DefaultTimeout = 0
```

Field Value

Type: Int32

See Also

Reference

Timer Class
IO.Objects.libsimpleio.Watchdog Namespace

IO.Objects.Message64.UDP Namespace

64-Byte Message Services over UDP

Classes

	Class	Description
	Messenger	64-Byte Message Transport Client Services using UDP (User Datagram Protocol).

Messenger Class

64-Byte Message Transport Client Services using UDP (User Datagram Protocol).

Inheritance Hierarchy

SystemObject IO.Objects.Message64.UDPMessenger

Namespace: IO.Objects.Message64.UDP
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public class Messenger : Messenger
```

The Messenger type exposes the following members.

Constructors

	Name	Description
	Messenger	Constructor for a 64-byte Messenger instance using UDP.

Top

Methods

	Name	Description

	Receive	Receive a 64-byte response message from a raw HID device.
	Send	Send a 64-byte command message to a raw HID device.
	Transaction	Send a 64-byte command message and receive a 64-byte response message.

Top

See Also

Reference

IO.Objects.Message64.UDP Namespace

Messenger Constructor

Constructor for a 64-byte Messenger instance using UDP.

Namespace: IO.Objects.Message64.UDP
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Messenger(
        string host,
        int port,
        int timeoutms = 1000
)
```

Parameters

host
Type: SystemString
UDP server domain name or IP address.

port
Type: SystemInt32
UDP server port number.

timeoutms **(Optional)**
Type: SystemInt32
Receive timeout in milliseconds. Zero indicates wait forever.

See Also

Reference

Messenger Class

IO.Objects.Message64.UDP Namespace

Messenger Methods

The Messenger type exposes the following members.

Methods

	Name	Description
	Receive	Receive a 64-byte response message from a raw HID device.
	Send	Send a 64-byte command message to a raw HID device.
	Transaction	Send a 64-byte command message and receive a 64-byte response message.

Top

See Also

Reference

Messenger Class

IO.Objects.Message64.UDP Namespace

MessengerReceive Method

Receive a 64-byte response message from a raw HID device.

Namespace: IO.Objects.Message64.UDP
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public void Receive(
        Message resp
)
```

Parameters

resp
Type: IO.Interfaces.Message64Message
64-byte response message.

Implements

MessengerReceive(Message)

See Also

Reference

Messenger Class
IO.Objects.Message64.UDP Namespace

MessengerSend Method

Send a 64-byte command message to a raw HID device.

Namespace: IO.Objects.Message64.UDP
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public void Send(
        Message cmd
)
```

Parameters

cmd
Type: IO.Interfaces.Message64Message
64-byte command message.

Implements

MessengerSend(Message)

See Also

Reference

Messenger Class
IO.Objects.Message64.UDP Namespace

MessengerTransaction Method

Send a 64-byte command message and receive a 64-byte response message.

Namespace: IO.Objects.Message64.UDP
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public void Transaction(
        Message cmd,
        Message resp
)
```

Parameters

cmd
Type: IO.Interfaces.Message64Message
64-byte command message.

resp
Type: IO.Interfaces.Message64Message
64-byte response message.

Implements

MessengerTransaction(Message, Message)

See Also

Reference

Messenger Class

IO.Objects.Message64.UDP Namespace

IO.Objects.Motor.PWM Namespace

PWM Controlled Motor Services

Classes

	Class	Description
	Output	Encapsulates motors controlled by PWM and GPIO outputs.

Output Class

Encapsulates motors controlled by PWM and GPIO outputs.

Inheritance Hierarchy

SystemObject IO.Objects.Motor.PWMOutput

Namespace: IO.Objects.Motor.PWM
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Output : Output
```

The Output type exposes the following members.

Constructors

	Name	Description
	Output(Output, Output, Double)	Constructor for a single motor, using two PWM outputs for clockwise and counterclockwise rotation control.
	Output(Pin, Output, Double)	Constructor for a single motor, using one GPIO pin for direction control, and one PWM output for speed control.

Top

Properties

	Name	Description
	velocity	Write-only property for setting the normalized motor velocity. Allowed values are -1.0 (full speed reverse) to +1.0 (full speed forward).

Top

See Also

Reference

IO.Objects.Motor.PWM Namespace

Output Constructor

Overload List

	Name	Description
	Output(Output, Output, Double)	Constructor for a single motor, using two PWM outputs for clockwise and counterclockwise rotation control.
	Output(Pin, Output, Double)	Constructor for a single motor, using one GPIO pin for direction control, and one PWM output for speed control.

Top

See Also

Reference

Output Class

IO.Objects.Motor.PWM Namespace

Output Constructor (Output, Output, Double)

Constructor for a single motor, using two PWM outputs for clockwise and counterclockwise rotation control.

Namespace: IO.Objects.Motor.PWM
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Output(
        Output clockwise,
        Output counterclockwise,
        double velocity = 0
)
```

Parameters

clockwise
Type: IO.Interfaces.PWMOutput
PWM output instance (for clockwise rotation control).

counterclockwise
Type: IO.Interfaces.PWMOutput
PWM output instance (for counterclockwise rotation control).

velocity **(Optional)**
Type: SystemDouble
Initial motor velocity.

See Also

Reference

Output Class
Output Overload
IO.Objects.Motor.PWM Namespace

Output Constructor (Pin, Output, Double)

Constructor for a single motor, using one GPIO pin for direction control, and one PWM output for speed control.

Namespace: IO.Objects.Motor.PWM
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Output(
        Pin direction,
        Output speed,
        double velocity = 0
)
```

Parameters

direction
Type: IO.Interfaces.GPIOPin
GPIO pin instance (for direction control).

speed
Type: IO.Interfaces.PWMOutput
PWM output instance (for speed control).

velocity **(Optional)**
Type: SystemDouble
Initial motor velocity.

See Also

Reference

Output Class
Output Overload
IO.Objects.Motor.PWM Namespace

Output Properties

The Output type exposes the following members.

Properties

	Name	Description
	velocity	Write-only property for setting the normalized motor velocity. Allowed values are -1.0 (full speed reverse) to +1.0 (full speed forward).

Top

See Also

Reference

Output Class

IO.Objects.Motor.PWM Namespace

Outputvelocity Property

Write-only property for setting the normalized motor velocity. Allowed values are -1.0 (full speed reverse) to +1.0 (full speed forward).

Namespace: IO.Objects.Motor.PWM
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public double velocity { set; }
```

Property Value

Type: Double

Implements

Outputvelocity

See Also

Reference

Output Class
IO.Objects.Motor.PWM Namespace

IO.Objects.Motor.Servo Namespace

Servo Controlled Motor (e.g. continuous rotation servo) Services

Classes

	Class	Description
	Output	Encapsulates motors controlled by servo outputs (e.g. continuous rotation servos).

Output Class

Encapsulates motors controlled by servo outputs (e.g. continuous rotation servos).

Inheritance Hierarchy

SystemObject IO.Objects.Motor.ServoOutput

Namespace: IO.Objects.Motor.Servo
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Output : Output
```

The Output type exposes the following members.

Constructors

	Name	Description
	Output	Constructor for a single motor output.

Top

Properties

	Name	Description
	velocity	Write-only property for setting the

	normalized motor velocity. Allowed values are -1.0 (full speed reverse) to +1.0 (full speed forward.

Top

See Also

Reference

IO.Objects.Motor.Servo Namespace

Output Constructor

Constructor for a single motor output.

Namespace: IO.Objects.Motor.Servo
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Output(
        Output servo,
        double velocity = 0
)
```

Parameters

servo
Type: IO.Interfaces.ServoOutput
Servo output instance.

velocity **(Optional)**
Type: SystemDouble
Initial motor velocity.

See Also

Reference

Output Class
IO.Objects.Motor.Servo Namespace

Output Properties

The Output type exposes the following members.

Properties

	Name	Description
	velocity	Write-only property for setting the normalized motor velocity. Allowed values are -1.0 (full speed reverse) to +1.0 (full speed forward.

Top

See Also

Reference

Output Class

IO.Objects.Motor.Servo Namespace

Outputvelocity Property

Write-only property for setting the normalized motor velocity. Allowed values are -1.0 (full speed reverse) to +1.0 (full speed forward.

Namespace: IO.Objects.Motor.Servo
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public double velocity { set; }
```

Property Value

Type: Double

Implements

Outputvelocity

See Also

Reference

Output Class
IO.Objects.Motor.Servo Namespace

IO.Objects.Servo.PWM Namespace

PWM Controlled Servo Services

Classes

	Class	Description
	Output	Encapsulates servo outputs using PWM outputs.

Output Class

Encapsulates servo outputs using PWM outputs.

Inheritance Hierarchy

SystemObject IO.Objects.Servo.PWMOutput

Namespace: IO.Objects.Servo.PWM
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Output : Output
```

The Output type exposes the following members.

Constructors

	Name	Description
	Output	Constructor for a single servo output.

Top

Properties

	Name	Description
	position	Write-only property for setting the servo position. Allowed values are -1.0 to +1.0.

Top

See Also

Reference

IO.Objects.Servo.PWM Namespace

Output Constructor

Constructor for a single servo output.

Namespace: IO.Objects.Servo.PWM
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Output(
        Output pwm,
        int freq = 50,
        double position = 0
)
```

Parameters

pwm
Type: IO.Interfaces.PWMOutput
PWM output instance.

freq **(Optional)**
Type: SystemInt32
PWM pulse frequency.

position **(Optional)**
Type: SystemDouble
Initial servo position.

See Also

Reference

Output Class

IO.Objects.Servo.PWM Namespace

Output Properties

The Output type exposes the following members.

Properties

	Name	Description
	position	Write-only property for setting the servo position. Allowed values are -1.0 to +1.0.

Top

See Also

Reference

Output Class

IO.Objects.Servo.PWM Namespace

Outputposition Property

Write-only property for setting the servo position. Allowed values are -1.0 to +1.0.

Namespace: IO.Objects.Servo.PWM
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public double position { set; }
```

Property Value

Type: Double

Implements

Outputposition

See Also

Reference

Output Class
IO.Objects.Servo.PWM Namespace

IO.Remote Namespace

Remote I/O Device Framework, for sending commands and receiving response to/from Remote I/O Protocol devices.

Classes

	Class	Description
	ADC	Encapsulates remote A/D inputs.
	DAC	Encapsulates remote D/A outputs.
	Device	Encasulates a remote I/O device.
	GPIO	Encapsulates remote GPIO pins.
	I2C	Encapsulates remote I^2C buses.
	PWM	Encapsulates remote PWM outputs.
	SPI	Encapsulates remote SPI slave devices.

Enumerations

	Enumeration	Description
	MessageTypes	Remote I/O protocol message types
	PeripheralTypes	Types of remote peripherals

ADC Class

Encapsulates remote A/D inputs.

Inheritance Hierarchy

SystemObject IO.RemoteADC

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class ADC : Sample
```

The ADC type exposes the following members.

Constructors

	Name	Description
	ADC	Create a remote A/D input.

Top

Properties

	Name	Description
	resolution	Read-only property returning the number of bits of resolution.

	sample	Read-only property returning an integer analog input sample.

Top

See Also

Reference

IO.Remote Namespace

ADC Constructor

Create a remote A/D input.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public ADC(
        Device dev,
        int num
)
```

Parameters

dev
Type: IO.RemoteDevice
Remote I/O device object.

num
Type: SystemInt32
A/D input number: 0 to 127.

Remarks

Use `Device.ADC_Create()` instead of this constructor.

See Also

Reference

ADC Class

IO.Remote Namespace

ADC Properties

The ADC type exposes the following members.

Properties

	Name	Description
	resolution	Read-only property returning the number of bits of resolution.
	sample	Read-only property returning an integer analog input sample.

Top

See Also

Reference

ADC Class

IO.Remote Namespace

ADCresolution Property

Read-only property returning the number of bits of resolution.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public int resolution { get; }
```

Property Value

Type: Int32

Implements

Sampleresolution

See Also

Reference

ADC Class
IO.Remote Namespace

ADCsample Property

Read-only property returning an integer analog input sample.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public int sample { get; }
```

Property Value

Type: Int32

Implements

Samplesample

See Also

Reference

ADC Class
IO.Remote Namespace

DAC Class

Encapsulates remote D/A outputs.

Inheritance Hierarchy

SystemObject IO.RemoteDAC

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class DAC : Sample
```

The DAC type exposes the following members.

Constructors

	Name	Description
	DAC	Create a remote D/A output.

Top

Properties

	Name	Description
	resolution	Read-only property returning the number of bits of resolution.

	sample	Write-only property for writing an integer analog sample to a DAC output.

Top

See Also

Reference

IO.Remote Namespace

DAC Constructor

Create a remote D/A output.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public DAC(
        Device dev,
        int num,
        int sample = 0
)
```

Parameters

dev
Type: IO.RemoteDevice
Remote I/O device object.

num
Type: SystemInt32
D/A output number: 0 to 127.

sample **(Optional)**
Type: SystemInt32
Initial DAC output sample.

Remarks

Use `Device.DAC_Create()` instead of this constructor.

See Also

Reference

DAC Class

IO.Remote Namespace

DAC Properties

The DAC type exposes the following members.

Properties

	Name	Description
	resolution	Read-only property returning the number of bits of resolution.
	sample	Write-only property for writing an integer analog sample to a DAC output.

Top

See Also

Reference

DAC Class

IO.Remote Namespace

DACresolution Property

Read-only property returning the number of bits of resolution.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public int resolution { get; }
```

Property Value

Type: Int32

Implements

Sampleresolution

See Also

Reference

DAC Class
IO.Remote Namespace

DACsample Property

Write-only property for writing an integer analog sample to a DAC output.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public int sample { set; }
```

Property Value

Type: Int32

Implements

Samplesample

See Also

Reference

DAC Class
IO.Remote Namespace

Device Class

Encasulates a remote I/O device.
Encasulates a remote I/O device.

Inheritance Hierarchy

SystemObject IO.RemoteDevice

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public class Device
```

The Device type exposes the following members.

Constructors

	Name	Description
	Device	Create a Remote I/O device object for a Munts Technologies USB raw HID (VID=0x16D0, PID=0x0AFA) device Remote I/O Server.
	Device(Messenger)	Create a Remote I/O device object.

Top

Properties

	Name	Description
	Capabilities	Capability string from the Remote I/O device.
	Version	Version string from the Remote I/O device.

Top

Methods

	Name	Description
	ADC_Available	Query available A/D inputs.
	ADC_Create	Create a remote A/D input.
	DAC_Available	Query available D/A outputs.
	DAC_Create	Create a remote D/A output.
	Dispatcher	Command dispatcher.
	GPIO_Available	Query available GPIO pins.
	GPIO_Create	Create a remote GPIO pin object.
	I2C_Available	Query available I^2C buses.
	I2C_Create	Create a remote I^2C bus controller.

	PWM_Available	Query available PWM outputs.
	PWM_Create	Create a remote PWM output.
	SPI_Available	Query available SPI slave devices.
	SPI_Create	Create a remote SPI slave device.

Top

Fields

	Name	Description
S	MAX_CHANNELS	Maximum number of channels each subsystem can support.
S	Unavailable	Designator for an unavailable channel.

Top

See Also

Reference

IO.Remote Namespace

Device Constructor

Overload List

	Name	Description
	Device	Create a Remote I/O device object for a Munts Technologies USB raw HID (VID=0x16D0, PID=0x0AFA) device Remote I/O Server.
	Device(Messenger)	Create a Remote I/O device object.

Top

See Also

Reference

Device Class

IO.Remote Namespace

Device Constructor

Create a Remote I/O device object for a Munts Technologies USB raw HID (VID=0x16D0, PID=0x0AFA) device Remote I/O Server.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Device()
```

See Also

Reference

Device Class
Device Overload
IO.Remote Namespace

Device Constructor (Messenger)

Create a Remote I/O device object.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# **VB** **F#** Copy

```
public Device(
        Messenger m
)
```

Parameters

m

Type: IO.Interfaces.Message64Messenger
Message transport object

See Also

Reference

Device Class
Device Overload
IO.Remote Namespace

Device Properties

The Device type exposes the following members.

Properties

	Name	Description
	Capabilities	Capability string from the Remote I/O device.
	Version	Version string from the Remote I/O device.

Top

See Also

Reference

Device Class

IO.Remote Namespace

DeviceCapabilities Property

Capability string from the Remote I/O device.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public string Capabilities { get; }
```

Property Value

Type: String

See Also

Reference

Device Class
IO.Remote Namespace

DeviceVersion Property

Version string from the Remote I/O device.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public string Version { get; }
```

Property Value

Type: String

See Also

Reference

Device Class
IO.Remote Namespace

Device Methods

The Device type exposes the following members.

Methods

	Name	Description
	ADC_Available	Query available A/D inputs.
	ADC_Create	Create a remote A/D input.
	DAC_Available	Query available D/A outputs.
	DAC_Create	Create a remote D/A output.
	Dispatcher	Command dispatcher.
	GPIO_Available	Query available GPIO pins.
	GPIO_Create	Create a remote GPIO pin object.
	I2C_Available	Query available I^2C buses.
	I2C_Create	Create a remote I^2C bus controller.
	PWM_Available	Query available PWM outputs.
	PWM_Create	Create a remote PWM output.
	SPI_Available	Query available SPI slave devices.

SPI_Create	Create a remote SPI slave device.

Top

See Also

Reference

Device Class
IO.Remote Namespace

DeviceADC_Available Method

Query available A/D inputs.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public List<int> ADC_Available()
```

Return Value

Type: ListInt32
List of available A/D input numbers.

See Also

Reference

Device Class
IO.Remote Namespace

DeviceADC_Create Method

Create a remote A/D input.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Sample ADC_Create(
        int num
)
```

Parameters

num
Type: SystemInt32
A/D input number: 0 to 127.

Return Value

Type: Sample
A/D input object.

See Also

Reference

Device Class
IO.Remote Namespace

DeviceDAC_Available Method

Query available D/A outputs.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public List<int> DAC_Available()
```

Return Value

Type: ListInt32
List of available D/A output numbers.

See Also

Reference

Device Class
IO.Remote Namespace

DeviceDAC_Create Method

Create a remote D/A output.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Sample DAC_Create(
        int num,
        int sample = 0
)
```

Parameters

num
Type: SystemInt32
D/A output number: 0 to 127.

sample **(Optional)**
Type: SystemInt32
Initial DAC output sample.

Return Value

Type: Sample
D/A output object.

See Also

Reference

Device Class

IO.Remote Namespace

DeviceDispatcher Method

Command dispatcher.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public void Dispatcher(
        Message cmd,
        Message resp
)
```

Parameters

cmd
Type: IO.Interfaces.Message64Message
Command to be sent.

resp
Type: IO.Interfaces.Message64Message
Response to be received.

See Also

Reference

Device Class
IO.Remote Namespace

DeviceGPIO_Available Method

Query available GPIO pins.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public List<int> GPIO_Available()
```

Return Value

Type: ListInt32
List of available GPIO pin numbers.

See Also

Reference

Device Class
IO.Remote Namespace

DeviceGPIO_Create Method

Create a remote GPIO pin object.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Pin GPIO_Create(
        int num,
        Direction dir,
        bool state = false
)
```

Parameters

num
Type: SystemInt32
GPIO pin number: 0 to 127.

dir
Type: IO.Interfaces.GPIODirection
GPIO pin data direction: Input or Output.

state **(Optional)**
Type: SystemBoolean
Initial GPIO output state.

Return Value

Type: Pin
GPIO pin object.

See Also

Reference

Device Class

IO.Remote Namespace

DeviceI2C_Available Method

Query available I²C buses.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public List<int> I2C_Available()
```

Return Value

Type: ListInt32
List of available I²C bus numbers.

See Also

Reference

Device Class
IO.Remote Namespace

DeviceI2C_Create Method

Create a remote I²C bus controller.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Bus I2C_Create(
        int num,
        int speed = 100000
)
```

Parameters

num
Type: SystemInt32
I²C bus number: 0 to 127.

speed **(Optional)**
Type: SystemInt32
I²C bus clock frequency in Hz

Return Value

Type: Bus
I²C bus controller object.

See Also

Reference

Device Class

IO.Remote Namespace

DevicePWM_Available Method

Query available PWM outputs.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public List<int> PWM_Available()
```

Return Value

Type: ListInt32
List of available PWM output numbers.

See Also

Reference

Device Class
IO.Remote Namespace

DevicePWM_Create Method

Create a remote PWM output.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Output PWM_Create(
        int num,
        int freq,
        double duty = 0
)
```

Parameters

num
Type: SystemInt32
PWM output number: 0 to 127.

freq
Type: SystemInt32
PWM pulse frequency in Hz.

duty **(Optional)**
Type: SystemDouble
Initial PWM output duty cycle.

Return Value

Type: Output
PWM output object.

See Also

Reference

Device Class

IO.Remote Namespace

DeviceSPI_Available Method

Query available SPI slave devices.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public List<int> SPI_Available()
```

Return Value

Type: ListInt32
List of available SPI slave device numbers.

See Also

Reference

Device Class
IO.Remote Namespace

DeviceSPI_Create Method

Create a remote SPI slave device.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Device SPI_Create(
        int num,
        int mode,
        int wordsize,
        int speed
)
```

Parameters

num
Type: SystemInt32
SPI slave device number: 0 to 127.

mode
Type: SystemInt32
SPI transfer mode: 0 to 3.

wordsize
Type: SystemInt32
SPI transfer word size: 8, 16, or 32.

speed
Type: SystemInt32
SPI transfer speed in bits per second.

Return Value

Type: Device

SPI slave device object.

Remarks

The actual SPI transfer rate will be the highest realizable rate that does not exceed the value specified in `speed`.

See Also

Reference

Device Class

IO.Remote Namespace

Device Fields

The Device type exposes the following members.

Fields

	Name	Description
	MAX_CHANNELS	Maximum number of channels each subsystem can support.
	Unavailable	Designator for an unavailable channel.

Top

See Also

Reference

Device Class

IO.Remote Namespace

DeviceMAX_CHANNELS Field

Maximum number of channels each subsystem can support.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int MAX_CHANNELS = 128
```

Field Value

Type: Int32

See Also

Reference

Device Class
IO.Remote Namespace

DeviceUnavailable Field

Designator for an unavailable channel.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public const int Unavailable = -1
```

Field Value

Type: Int32

See Also

Reference

Device Class
IO.Remote Namespace

GPIO Class

Encapsulates remote GPIO pins.

Inheritance Hierarchy

SystemObject IO.RemoteGPIO

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class GPIO : Pin
```

The GPIO type exposes the following members.

Constructors

	Name	Description
	GPIO	Create a remote GPIO pin.

Top

Properties

	Name	Description
	state	Read/Write GPIO state property.

Top

See Also

Reference

IO.Remote Namespace

GPIO Constructor

Create a remote GPIO pin.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public GPIO(
        Device dev,
        int num,
        Direction dir,
        bool state = false
)
```

Parameters

dev
Type: IO.RemoteDevice
Remote I/O device object.

num
Type: SystemInt32
GPIO pin number: 0 to 127.

dir
Type: IO.Interfaces.GPIODirection
GPIO pin data direction: Input or Output.

state **(Optional)**
Type: SystemBoolean
Initial GPIO output state.

Remarks

Use `Device.GPIO_Create()` instead of this constructor.

See Also

Reference

GPIO Class
IO.Remote Namespace

GPIO Properties

The GPIO type exposes the following members.

Properties

	Name	Description
	state	Read/Write GPIO state property.

Top

See Also

Reference

GPIO Class
IO.Remote Namespace

GPIOstate Property

Read/Write GPIO state property.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public bool state { get; set; }
```

Property Value

Type: Boolean

Implements

Pinstate

See Also

Reference

GPIO Class
IO.Remote Namespace

I2C Class

Encapsulates remote I²C buses.

Inheritance Hierarchy

SystemObject IO.RemoteI2C

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class I2C : Bus
```

The I2C type exposes the following members.

Constructors

	Name	Description
	I2C	Create a remote I²C bus controller.

Top

Methods

	Name	Description
	Read	Read bytes from an I²C slave device.

	Transaction	Write and read bytes to and from an I^2C slave device.
	Write	Write bytes to an I^2C slave device.

Top

See Also

Reference

IO.Remote Namespace

I2C Constructor

Create a remote I²C bus controller.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public I2C(
        Device dev,
        int num,
        int speed = 100000
)
```

Parameters

dev
Type: IO.RemoteDevice
Remote I/O device object.

num
Type: SystemInt32
I²C bus number: 0 to 127.

speed **(Optional)**
Type: SystemInt32
I²C bus clock frequency in Hz

Remarks

Use `Device.I2C_Create()` instead of this constructor.

See Also

Reference

I2C Class

IO.Remote Namespace

I2C Methods

The I2C type exposes the following members.

Methods

	Name	Description
	Read	Read bytes from an I^2C slave device.
	Transaction	Write and read bytes to and from an I^2C slave device.
	Write	Write bytes to an I^2C slave device.

Top

See Also

Reference

I2C Class

IO.Remote Namespace

I2CRead Method

Read bytes from an I²C slave device.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public void Read(
        int slaveaddr,
        byte[] resp,
        int resplen
)
```

Parameters

slaveaddr
Type: SystemInt32
I²C slave address.

resp
Type: SystemByte
Response buffer.

resplen
Type: SystemInt32
Number of bytes to read.

Implements

BusRead(Int32, Byte, Int32)

See Also

Reference

I2C Class

IO.Remote Namespace

I2CTransaction Method

Write and read bytes to and from an I²C slave device.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public void Transaction(
        int slaveaddr,
        byte[] cmd,
        int cmdlen,
        byte[] resp,
        int resplen,
        int delayus
)
```

Parameters

slaveaddr
Type: SystemInt32
I²C slave address.

cmd
Type: SystemByte
Command buffer.

cmdlen
Type: SystemInt32
Number of bytes to write.

resp

Type: SystemByte
Response buffer.

resplen

Type: SystemInt32
Number of bytes to read.

delayus

Type: SystemInt32
Delay in microseconds between the I^2C write and read cycles.
Allowed values are 0 to 65535 microseconds.

Implements

BusTransaction(Int32, Byte, Int32, Byte, Int32, Int32)

See Also

Reference

I2C Class
IO.Remote Namespace

I2CWrite Method

Write bytes to an I²C slave device.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public void Write(
        int slaveaddr,
        byte[] cmd,
        int cmdlen
)
```

Parameters

slaveaddr
Type: SystemInt32
I²C slave address.

cmd
Type: SystemByte
Command buffer.

cmdlen
Type: SystemInt32
Number of bytes to write.

Implements

BusWrite(Int32, Byte, Int32)

See Also

Reference

I2C Class

IO.Remote Namespace

MessageTypes Enumeration

Remote I/O protocol message types

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public enum MessageTypes
```

Members

Member name	Value	Description
LOOPBACK_REQUEST	0	Loopback request
LOOPBACK_RESPONSE	1	Loopback response
VERSION_REQUEST	2	Version string request
VERSION_RESPONSE	3	Version string response
CAPABILITY_REQUEST	4	Capability

			string request
	CAPABILITY_RESPONSE	5	Capability string response
	GPIO_PRESENT_REQUEST	6	GPIO pins available request
	GPIO_PRESENT_RESPONSE	7	GPIO pins available response
	GPIO_CONFIGURE_REQUEST	8	GPIO pins configure request
	GPIO_CONFIGURE_RESPONSE	9	GPIO pins configure response
	GPIO_READ_REQUEST	10	GPIO pins read request
	GPIO_READ_RESPONSE	11	GPIO pins read response
	GPIO_WRITE_REQUEST	12	GPIO pins write request

	GPIO_WRITE_RESPONSE	13	GPIO pins write response
	I2C_PRESENT_REQUEST	14	I^2C buses available request
	I2C_PRESENT_RESPONSE	15	I^2C buses available response
	I2C_CONFIGURE_REQUEST	16	I^2C bus configure request
	I2C_CONFIGURE_RESPONSE	17	I^2C bus configure response
	I2C_TRANSACTION_REQUEST	18	I^2C bus transaction request
	I2C_TRANSACTION_RESPONSE	19	I^2C bus transaction response
	SPI_PRESENT_REQUEST	20	SPI slave devices available request
	SPI_PRESENT_RESPONSE	21	SPI slave devices

			available response
	SPI_CONFIGURE_REQUEST	22	SPI slave device configure request
	SPI_CONFIGURE_RESPONSE	23	SPI slave device configure response
	SPI_TRANSACTION_REQUEST	24	SPI bus transaction request
	SPI_TRANSACTION_RESPONSE	25	SPI bus transaction response
	ADC_PRESENT_REQUEST	26	ADC inputs available request
	ADC_PRESENT_RESPONSE	27	ADC inputs available response
	ADC_CONFIGURE_REQUEST	28	ADC input configure request
	ADC_CONFIGURE_RESPONSE	29	ADC input configure

			response
	ADC_READ_REQUEST	30	ADC input read request
	ADC_READ_RESPONSE	31	ADC input read response
	DAC_PRESENT_REQUEST	32	DAC outputs available request
	DAC_PRESENT_RESPONSE	33	DAC outputs available response
	DAC_CONFIGURE_REQUEST	34	DAC input configure request
	DAC_CONFIGURE_RESPONSE	35	DAC input configure response
	DAC_WRITE_REQUEST	36	DAC output write request
	DAC_WRITE_RESPONSE	37	DAC output write response

	PWM_PRESENT_REQUEST	38	PWM outputs available request
	PWM_PRESENT_RESPONSE	39	PWM outputs available response
	PWM_CONFIGURE_REQUEST	40	PWM input configure request
	PWM_CONFIGURE_RESPONSE	41	PWM input configure response
	PWM_WRITE_REQUEST	42	PWM output write request
	PWM_WRITE_RESPONSE	43	PWM output write response

See Also

Reference

IO.Remote Namespace

PeripheralTypes Enumeration

Types of remote peripherals

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public enum PeripheralTypes
```

Members

Member name	Value	Description
ADC	0	A/D inputs
DAC	1	D/A outputs
GPIO	2	GPIO pins
I2C	3	I^2C bus controllers
PWM	4	SPI slave devices
SPI	5	PWM outputs

See Also

Reference

IO.Remote Namespace

PWM Class

Encapsulates remote PWM outputs.

Inheritance Hierarchy

SystemObject IO.RemotePWM

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class PWM : Output
```

The PWM type exposes the following members.

Constructors

	Name	Description
	PWM	Create a remote PWM output.

Top

Properties

	Name	Description
	dutycycle	Write-only property for setting the PWM output duty cycle.

Top

See Also

Reference

IO.Remote Namespace

PWM Constructor

Create a remote PWM output.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public PWM(
        Device dev,
        int num,
        int freq,
        double duty = 0
)
```

Parameters

dev
Type: IO.RemoteDevice
Remote I/O device object.

num
Type: SystemInt32
PWM output number: 0 to 127.

freq
Type: SystemInt32
PWM pulse frequency in Hz.

duty **(Optional)**
Type: SystemDouble
Initial PWM output duty cycle.

Remarks

Use `Device.PWM_Create()` instead of this constructor.

See Also

Reference

PWM Class

IO.Remote Namespace

PWM Properties

The PWM type exposes the following members.

Properties

	Name	Description
	dutycycle	Write-only property for setting the PWM output duty cycle.

Top

See Also

Reference

PWM Class

IO.Remote Namespace

PWMdutycycle Property

Write-only property for setting the PWM output duty cycle.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public double dutycycle { set; }
```

Property Value

Type: Double

Implements

Outputdutycycle

See Also

Reference

PWM Class
IO.Remote Namespace

SPI Class

Encapsulates remote SPI slave devices.

Inheritance Hierarchy

SystemObject IO.RemoteSPI

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class SPI : Device
```

The SPI type exposes the following members.

Constructors

	Name	Description
	SPI	Create a remote SPI slave device.

Top

Methods

	Name	Description
	Read	Read bytes from an SPI slave device.

	Transaction	Write and read bytes to and from an SPI slave device.
	Write	Write bytes to an SPI slave device.

Top

See Also

Reference

IO.Remote Namespace

SPI Constructor

Create a remote SPI slave device.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public SPI(
        Device dev,
        int num,
        int mode,
        int wordsize,
        int speed
)
```

Parameters

dev
Type: IO.RemoteDevice
Remote I/O device object.

num
Type: SystemInt32
SPI slave device number: 0 to 127.

mode
Type: SystemInt32
SPI transfer mode: 0 to 3.

wordsize
Type: SystemInt32
SPI transfer word size: 8, 16, or 32.

speed

Type: SystemInt32

SPI transfer speed in bits per second.

Remarks

Use `Device.SPI_Create()` instead of this constructor.

The actual SPI transfer rate will be the highest realizable rate that does not exceed the value specified in `speed`.

See Also

Reference

SPI Class

IO.Remote Namespace

SPI Methods

The SPI type exposes the following members.

Methods

	Name	Description
	Read	Read bytes from an SPI slave device.
	Transaction	Write and read bytes to and from an SPI slave device.
	Write	Write bytes to an SPI slave device.

Top

See Also

Reference

SPI Class

IO.Remote Namespace

SPIRead Method

Read bytes from an SPI slave device.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public void Read(
        byte[] resp,
        int resplen
)
```

Parameters

resp
Type: SystemByte
Response buffer.

resplen
Type: SystemInt32
Number of bytes to read: 1 to 60.

Implements

DeviceRead(Byte, Int32)

See Also

Reference

SPI Class
IO.Remote Namespace

SPITransaction Method

Write and read bytes to and from an SPI slave device.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public void Transaction(
        byte[] cmd,
        int cmdlen,
        byte[] resp,
        int resplen,
        int delayus = 0
)
```

Parameters

cmd
Type: SystemByte
Command buffer.

cmdlen
Type: SystemInt32
Number of bytes to write: 0 to 57.

resp
Type: SystemByte
Response buffer.

resplen
Type: SystemInt32
Number of bytes to read: 0 to 60.

delayus **(Optional)**

Type: SystemInt32

Delay in microseconds between write and read operations: 0 to 65535.

Implements

DeviceTransaction(Byte, Int32, Byte, Int32, Int32)

See Also

Reference

SPI Class

IO.Remote Namespace

SPIWrite Method

Write bytes to an SPI slave device.

Namespace: IO.Remote
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public void Write(
        byte[] cmd,
        int cmdlen
)
```

Parameters

cmd
Type: SystemByte
Command buffer.

cmdlen
Type: SystemInt32
Number of bytes to write: 1 to 57.

Implements

DeviceWrite(Byte, Int32)

See Also

Reference

SPI Class
IO.Remote Namespace

IO.Remote.mikroBUS Namespace

Mikroelektronika mikroBUS (https://www.mikroe.com/mikrobus) Remote I/O protocol Server and Socket Services

Classes

	Class	Description
	Shield	Encapsulates mikroBUS shields on Remote I/O Protocol servers providing mikroBUS sockets).
	Socket	Encapsulates mikroBUS sockets.

Enumerations

	Enumeration	Description
	ShieldKinds	Supported mikroBUS shields.

Shield Class

Encapsulates mikroBUS shields on Remote I/O Protocol servers providing mikroBUS sockets).

Inheritance Hierarchy

SystemObject IO.Remote.mikroBUSShield

Namespace: IO.Remote.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public static class Shield
```

The Shield type exposes the following members.

Properties

	Name	Description
	kind	Returns the kind of mikroBUS shield that is installed on the Remote I/O Protocol server, as obtained from the `SHIELDNAME` environment variable.

Top

Fields

	Name	Description
	I2CBus	Shared I^2C bus that is common to all sockets on this shield.

Top

See Also

Reference

IO.Remote.mikroBUS Namespace

Shield Properties

The Shield type exposes the following members.

Properties

	Name	Description
	kind	Returns the kind of mikroBUS shield that is installed on the Remote I/O Protocol server, as obtained from the `SHIELDNAME` environment variable.

Top

See Also

Reference

Shield Class

IO.Remote.mikroBUS Namespace

Shieldkind Property

Returns the kind of mikroBUS shield that is installed on the Remote I/O Protocol server, as obtained from the `SHIELDNAME` environment variable.

Namespace: IO.Remote.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static ShieldKinds kind { get; }
```

Property Value

Type: ShieldKinds

See Also

Reference

Shield Class
IO.Remote.mikroBUS Namespace

Shield Fields

The Shield type exposes the following members.

Fields

	Name	Description
	I2CBus	Shared I^2C bus that is common to all sockets on this shield.

Top

See Also

Reference

Shield Class

IO.Remote.mikroBUS Namespace

ShieldI2CBus Field

Shared I^2C bus that is common to all sockets on this shield.

Namespace: IO.Remote.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public static Bus I2CBus
```

Field Value

Type: Bus

See Also

Reference

Shield Class
IO.Remote.mikroBUS Namespace

ShieldKinds Enumeration

Supported mikroBUS shields.

Namespace: IO.Remote.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public enum Kinds
```

Members

Member name	Value	Description
Clicker	0	Mikroelektronika STM32F4 Clicker with MUNTS-0011 Remote I/O Server firmware, with one mikroBUS socket.
PiClick1	1	Raspberry Pi with Mikroelektronika Pi Click Shield MIKROE-1512/1513 for 26-pin expansion header, with one mikroBUS socket (Obsolete.)

	PiClick2	2	Raspberry Pi with Mikroelektronika Pi 2 Click Shield MIKROE-1879 for 40-pin expansion header, with two mikroBUS sockets.
	PiClick3	3	Mikroelektronika Pi 3 Click Shield MIKROE-2756 for 40-pin expansion header, with selectable on-board A/D converter and two mikroBUS sockets.
	PocketBeagle	4	PocketBeagle with female headers on top, with two mikroBUS sockets.
	Unknown	2147483647	No known mikroBUS shield installed.

See Also

Reference

IO.Remote.mikroBUS Namespace

Socket Class

Encapsulates mikroBUS sockets.

Inheritance Hierarchy

SystemObject IO.Remote.mikroBUSSocket

Namespace: IO.Remote.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public class Socket
```

The Socket type exposes the following members.

Constructors

	Name	Description
	Socket	Constructor for a single mikroBUS socket.

Top

Properties

	Name	Description
	AIN	Returns the ADC input designator for AN.

	AN	Returns the GPIO pin designator for AN.
	CS	Returns the GPIO pin designator for CS.
	I2CBus	Returns the I^2C bus designator for this socket.
	INT	Returns the GPIO pin designator for INT.
	MISO	Returns the GPIO pin designator for MISO.
	MOSI	Returns the GPIO pin designator for MOSI.
	PWM	Returns the GPIO pin designator for PWM.
	PWMOut	Returns the PWM output designator for PWM.
	RST	Returns the GPIO pin designator for RST.
	RX	Returns the GPIO pin designator for RX.
	SCK	Returns the GPIO pin designator for SCK.
	SCL	Returns the GPIO pin designator for SCL.
	SDA	Returns the GPIO pin designator for SDA.
	SPIDev	Returns the SPI device designator for

		this socket.
	TX	Returns the GPIO pin designator for TX.

Top

See Also

Reference

IO.Remote.mikroBUS Namespace

Socket Constructor

Constructor for a single mikroBUS socket.

Namespace: IO.Remote.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F# Copy

```
public Socket(
        int num,
        ShieldKinds shield = ShieldKinds.Unknown
)
```

Parameters

num
Type: SystemInt32
Socket number.

shield **(Optional)**
Type: IO.Remote.mikroBUSShieldKinds
mikroBUS shield kind. Zero indicates automatic detection using the `Shield.kind` property.

See Also

Reference

Socket Class
IO.Remote.mikroBUS Namespace

Socket Properties

The Socket type exposes the following members.

Properties

	Name	Description
	AIN	Returns the ADC input designator for AN.
	AN	Returns the GPIO pin designator for AN.
	CS	Returns the GPIO pin designator for CS.
	I2CBus	Returns the I^2C bus designator for this socket.
	INT	Returns the GPIO pin designator for INT.
	MISO	Returns the GPIO pin designator for MISO.
	MOSI	Returns the GPIO pin designator for MOSI.
	PWM	Returns the GPIO pin designator for PWM.
	PWMOut	Returns the PWM output designator for PWM.

	RST	Returns the GPIO pin designator for RST.
	RX	Returns the GPIO pin designator for RX.
	SCK	Returns the GPIO pin designator for SCK.
	SCL	Returns the GPIO pin designator for SCL.
	SDA	Returns the GPIO pin designator for SDA.
	SPIDev	Returns the SPI device designator for this socket.
	TX	Returns the GPIO pin designator for TX.

Top

See Also

Reference

Socket Class
IO.Remote.mikroBUS Namespace

SocketAIN Property

Returns the ADC input designator for AN.

Namespace: IO.Remote.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public int AIN { get; }
```

Property Value

Type: Int32

See Also

Reference

Socket Class
IO.Remote.mikroBUS Namespace

SocketAN Property

Returns the GPIO pin designator for AN.

Namespace: IO.Remote.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public int AN { get; }
```

Property Value

Type: Int32

See Also

Reference

Socket Class
IO.Remote.mikroBUS Namespace

SocketCS Property

Returns the GPIO pin designator for CS.

Namespace: IO.Remote.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public int CS { get; }
```

Property Value

Type: Int32

See Also

Reference

Socket Class
IO.Remote.mikroBUS Namespace

SocketI2CBus Property

Returns the I^{2}C bus designator for this socket.

Namespace: IO.Remote.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public int I2CBus { get; }
```

Property Value

Type: Int32

See Also

Reference

Socket Class
IO.Remote.mikroBUS Namespace

SocketINT Property

Returns the GPIO pin designator for INT.

Namespace: IO.Remote.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public int INT { get; }
```

Property Value

Type: Int32

See Also

Reference

Socket Class
IO.Remote.mikroBUS Namespace

SocketMISO Property

Returns the GPIO pin designator for MISO.

Namespace: IO.Remote.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public int MISO { get; }
```

Property Value

Type: Int32

See Also

Reference

Socket Class
IO.Remote.mikroBUS Namespace

SocketMOSI Property

Returns the GPIO pin designator for MOSI.

Namespace: IO.Remote.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public int MOSI { get; }
```

Property Value

Type: Int32

See Also

Reference

Socket Class
IO.Remote.mikroBUS Namespace

SocketPWM Property

Returns the GPIO pin designator for PWM.

Namespace: IO.Remote.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public int PWM { get; }
```

Property Value

Type: Int32

See Also

Reference

Socket Class
IO.Remote.mikroBUS Namespace

SocketPWMOut Property

Returns the PWM output designator for PWM.

Namespace: IO.Remote.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public int PWMOut { get; }
```

Property Value

Type: Int32

See Also

Reference

Socket Class
IO.Remote.mikroBUS Namespace

SocketRST Property

Returns the GPIO pin designator for RST.

Namespace: IO.Remote.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public int RST { get; }
```

Property Value

Type: Int32

See Also

Reference

Socket Class
IO.Remote.mikroBUS Namespace

SocketRX Property

Returns the GPIO pin designator for RX.

Namespace: IO.Remote.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public int RX { get; }
```

Property Value

Type: Int32

See Also

Reference

Socket Class
IO.Remote.mikroBUS Namespace

SocketSCK Property

Returns the GPIO pin designator for SCK.

Namespace: IO.Remote.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public int SCK { get; }
```

Property Value

Type: Int32

See Also

Reference

Socket Class
IO.Remote.mikroBUS Namespace

SocketSCL Property

Returns the GPIO pin designator for SCL.

Namespace: IO.Remote.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public int SCL { get; }
```

Property Value

Type: Int32

See Also

Reference

Socket Class
IO.Remote.mikroBUS Namespace

SocketSDA Property

Returns the GPIO pin designator for SDA.

Namespace: IO.Remote.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public int SDA { get; }
```

Property Value

Type: Int32

See Also

Reference

Socket Class
IO.Remote.mikroBUS Namespace

SocketSPIDev Property

Returns the SPI device designator for this socket.

Namespace: IO.Remote.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public int SPIDev { get; }
```

Property Value

Type: Int32

See Also

Reference

Socket Class
IO.Remote.mikroBUS Namespace

SocketTX Property

Returns the GPIO pin designator for TX.

Namespace: IO.Remote.mikroBUS
Assembly: libsimpleio (in libsimpleio.dll) Version: 2.2020.136.1

Syntax

C# VB F#

Copy

```
public int TX { get; }
```

Property Value

Type: Int32

See Also

Reference

Socket Class
IO.Remote.mikroBUS Namespace

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