

stamp.peripheral.onewire

Class DS2480B

[java.lang.Object](#)|--stamp.peripheral.onewire.DS2480B

public class **DS2480B**extends [Object](#)

Overview

The DS2480B chip is a transceiver that the Javelin Stamp can use to communicate with devices on a 1-Wire bus. Each instance of the DS2480B library supports communication between the Javelin Stamp and a DS2480B chip.

See Also:

Getting Started with 1-Wire for circuit diagrams, examples, and instructions on how to use this class with the DS2480B and devices on a 1-Wire bus. This application note is available from www.javelinstamp.com.

Field Summary

static int	BIT_WRITE_0 To send a binary-0 to the 1-Wire bus, place the DS2480B in command mode, then use the <code>message</code> method to send this value.
static int	BIT_WRITE_1 To send a binary-1 to the 1-Wire bus, place the DS2480B in command mode, then use the <code>message</code> method to send this value.
static int	COMMAND To place the DS2480B into command mode, use the <code>message</code> method to send it this value.
static int	DATA To place the DS2480B into data mode, use the <code>message</code> method to send it this value.
static int	INFINITE_DURATION To enable the DS2480B's strong pullup resistor, pass this value to the <code>strongPullup</code> method.

static int	<u>READ_0_WROTE_0</u> The DS2480B replies to the Javelin Stamp with this value if it relayed a binary-0 from the Javelin Stamp (BIT_WRITE_0) to the 1-Wire bus and received a binary-0 reply.
static int	<u>READ_0_WROTE_1</u> The DS2480B replies to the Javelin Stamp with this value if it relayed a binary-1 from the Javelin Stamp (BIT_WRITE_1) to the 1-Wire bus and received a binary-0 reply.
static int	<u>READ_1_WROTE_0</u> The DS2480B replies to the Javelin Stamp with this value if it relayed a binary-0 from the Javelin Stamp (BIT_WRITE_0) to the 1-Wire bus and received a binary-1 reply.
static int	<u>READ_1_WROTE_1</u> The DS2480B replies to the Javelin Stamp with this value if it relayed a binary-1 from the Javelin Stamp (BIT_WRITE_1) to the 1-Wire bus and received a binary-1 reply.
static int	<u>SEARCH_ACCELERATOR_OFF</u> To disable the DS2480B's search accelerator mode, place it into command mode, then use the message method to send it this value.
static int	<u>SEARCH_ACCELERATOR_ON</u> To enable the DS2480B's search accelerator mode, place it into command mode, then use the message method to send it this value.
static int	<u>TERMINATE_DURATION</u> To disable the DS2480B's strong pullup resistor, pass this value to the strongPullup method.

Constructor Summary

[DS2480B](#)(int txPin, int rxPin)

Constructs a Uart to 1-Wire serial interface using the specified I/O pins for Uart communication between the DS2480B and the Javelin Stamp.

Method Summary

boolean	<u>getBit</u> () Reads a bit value from the 1-Wire bus.
void	<u>getData</u> (int bytecount, int[] array, int command) Retrieves data bytes from the 1-Wire bus and stores them in an array.
void	<u>message</u> (int b) Sends a byte to the DS2480B.
void	<u>message</u> (int b, int c) Sends a two message bytes to the DS2480B.
void	<u>message</u> (int number, int[] values) Sends a specified number of message bytes from an array of int values.
void	<u>message</u> (int b, int c, int d) Sends a three message bytes to the DS2480B.

boolean	<code>reset()</code> Sends a reset pulse to the DS2480B's 1-Wire bus.
void	<code>strongPullup(int parameter)</code> Enables or disables the DS2480B's 4.7 k "strong pullup resistor".

Methods inherited from class java.lang.Object
equals

Field Detail

COMMAND

```
public static final int COMMAND
```

To place the DS2480B into command mode, use the `message` method to send it this value.

See Also:

[Constant Field Values](#)

DATA

```
public static final int DATA
```

To place the DS2480B into data mode, use the `message` method to send it this value.

See Also:

[Constant Field Values](#)

INFINITE_DURATION

```
public static final int INFINITE_DURATION
```

To enable the DS2480B's strong pullup resistor, pass this value to the `strongPullup` method.

See Also:

[Constant Field Values](#)

TERMINATE_DURATION

```
public static final int TERMINATE_DURATION
```

To disable the DS2480B's strong pullup resistor, pass this value to the `strongPullup` method.

See Also:

[Constant Field Values](#)

BIT_WRITE_1

```
public static final int BIT_WRITE_1
```

To send a binary-1 to the 1-Wire bus, place the DS2480B in command mode, then use the `message` method to send this value.

See Also:

[Constant Field Values](#)

BIT_WRITE_0

```
public static final int BIT_WRITE_0
```

To send a binary-0 to the 1-Wire bus, place the DS2480B in command mode, then use the `message` method to send this value.

See Also:

[Constant Field Values](#)

READ_1_WROTE_1

```
public static final int READ_1_WROTE_1
```

The DS2480B replies to the Javelin Stamp with this value if it relayed a binary-1 from the Javelin Stamp (`BIT_WRITE_1`) to the 1-Wire bus and received a binary-1 reply.

See Also:

[Constant Field Values](#)

READ_0_WROTE_1

```
public static final int READ_0_WROTE_1
```

The DS2480B replies to the Javelin Stamp with this value if it relayed a binary-1 from the Javelin Stamp (`BIT_WRITE_1`) to the 1-Wire bus and received a binary-0 reply.

See Also:

[Constant Field Values](#)

READ_1_WROTE_0

```
public static final int READ_1_WROTE_0
```

The DS2480B replies to the Javelin Stamp with this value if it relayed a binary-0 from the Javelin Stamp (BIT_WRITE_0) to the 1-Wire bus and received a binary-1 reply.

See Also:

[Constant Field Values](#)

READ_0_WROTE_0

```
public static final int READ_0_WROTE_0
```

The DS2480B replies to the Javelin Stamp with this value if it relayed a binary-0 from the Javelin Stamp (BIT_WRITE_0) to the 1-Wire bus and received a binary-0 reply.

See Also:

[Constant Field Values](#)

SEARCH_ACCELERATOR_ON

```
public static final int SEARCH_ACCELERATOR_ON
```

To enable the DS2480B's search accelerator mode, place it into command mode, then use the message method to send it this value.

See Also:

[Constant Field Values](#)

SEARCH_ACCELERATOR_OFF

```
public static final int SEARCH_ACCELERATOR_OFF
```

To disable the DS2480B's search accelerator mode, place it into command mode, then use the message method to send it this value.

See Also:

[Constant Field Values](#)

<h2>Constructor Detail</h2>

Sends a three message bytes to the DS2480B.

Parameters:

- b - the `int` value containing the byte sent to the DS2480B in its lower eight bits (least significant byte).
 - c - the `int` value containing the byte sent to the DS2480B in its lower eight bits (least significant byte).
 - d - the `int` value containing the byte sent to the DS2480B in its lower eight bits (least significant byte).
-

message

```
public void message(int number,  
                    int[] values)
```

Sends a specified number of message bytes from an array of `int` values.

Parameters:

- number - of bytes from the array to be sent to the DS2480B.
 - values - [] the `int` array containing the byte values to be sent to the DS2480B.
-

reset

```
public boolean reset()
```

Sends a reset pulse to the DS2480B's 1-Wire bus.

Returns:

- `true` if a presence pulse was returned from the 1-Wire bus, `false` if a return pulse was not received from the 1-Wire bus.
-

getData

```
public void getData(int bytecount,  
                    int[] array,  
                    int command)
```

Retrieves data bytes from the 1-Wire bus and stores them in an array.

Parameters:

- bytecount - the number of bytes to read from the 1-Wire bus.
 - array - [] the array of `int` values the bytes are to be stored in.
 - command - the message byte that causes the device on the 1-Wire bus to send the requested data.
-

getBit

```
public boolean getBit()
```

Reads a bit value from the 1-Wire bus.

Returns:

true if the bit value is 1, false if the bit value is 0.

strongPullup

```
public void strongPullup(int parameter)
```

Enables or disables the DS2480B's 4.7 k "strong pullup resistor".

Parameters:

parameter - byte value that enables or disables the pullup resistor. Use INFINITE_DURATION to enable and TERMINATE_DURATION to disable the pullup resistor.

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Javelin Stamp

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