



Release Notes

V3.09.02

Revision History

Version	Date	Description
V3.09.02	2012 May	Bug fixes & improvements.
V3.09.01	2011 Aug	New features, bug fixes & improvements.
V3.09	2010 Nov	New features, bug fixes & improvements
V3.08	2010 Apr	New features, bug fixes & improvements
V3.07	2009 Aug	Bug fixes
V3.06	2009 Jun	Improvements First version with release history

Required Modules

Version 3.09.02

µC/CPU	version 1.25
µC/LIB	version 1.29

Version 3.09.01

µC/CPU	version 1.25
µC/LIB	version 1.29

Version 3.09

µC/CPU	version 1.25
µC/LIB	version 1.29

Version 3.08

µC/CPU	version 1.21
µC/LIB	version 1.28

Version 3.07

µC/CPU	version 1.21
µC/LIB	version 1.28

Version 3.06

µC/CPU	version 1.21
µC/LIB	version 1.28

New Features

Version 3.09.02

N/A

Version 3.09.01

V3.09.01-001

Added Clk_CacheYr & Clk_CacheYrDays into clk.c to cache the last number of days calculated by Clk_GetDayOfWkHandler() & Clk_GetDayOfYrHandler().

V3.09.01-002

Added Clk_CacheMonth & Clk_CacheMonthDays into clk.c to cache the last number of days calculated by Clk_GetDayOfYrHandler().

Version 3.09

V3.09-001a

Added CLK_CFG_EXT_EN into clk_cfg.h to configure Clock to be maintained via an external timestamp/clock.

V3.09-001b

Added new External timestamp application/BSP functions:

Clk_ExtTS_Init()	Called by Clk_Init() to initialize the External timestamp clock
Clk_ExtTS_Get()	Called by Clk_GetTS() to get Clock module timestamp from the External timestamp
Clk_ExtTS_Set()	Called by Clk_SetTS() to set the External timestamp

V3.09-002

Added configuration into clk_cfg.h to include NTP and Unix conversion functions:

CLK_CFG_NTP_EN	Include NTP timestamp conversion utilities
CLK_CFG_UNIX_EN	Include Unix timestamp conversion utilities

V3.09-003

Added CLK_CFG_TZ_DFLT_SEC into clk_cfg.h to configure default time zone used by Clock.

V3.09-004

Added new API functions:

Clk_IsDateTimeValid()	Determine if a date/time structure is valid in Clock epoch
Clk_TS_NTP_ToDateTime()	Convert a NTP timestamp to a date/time structure
Clk_DateTimeToTS_NTP()	Convert a date/time structure to a NTP timestamp
Clk_NTP_DateTimeMake()	Build a date/time structure valid in NTP epoch

<code>Clk_IsNTP_DateTimeValid()</code>	Determine if a date/time structure is valid in NTP epoch
<code>Clk_TS_UnixToDateTime()</code>	Convert a Unix timestamp to a date/time structure
<code>Clk_DateTimeToTS_Unix()</code>	Convert a date/time structure to a Unix timestamp
<code>Clk_UnixDateTimeMake()</code>	Build a date/time structure valid in Unix epoch
<code>Clk_IsUnixDateTimeValid()</code>	Determine if a date/time structure is valid in Unix epoch
<code>Clk_GetDayOfWk()</code>	Determine the day of week of a date

Version 3.08

V3.08-001

Added `clk_os.c` (µC/OS-III port) to support µC/OS-III V3.01.0 (& later versions). See also 'Improvements V3.08-001'.

Version 3.07

N/A

Version 3.06

N/A

Improvements

Version 3.09.02

V3.09.02-001

Added MICRIUM_SOURCE definition to all .c files. This was a requested from some customers to detect the presence of our source code at compile time.

Version 3.09.01

V3.09.01-001

Create new clock constant values:

```
CLK_MONTH_JAN
CLK_MONTH_FEB
CLK_MONTH_MAR
CLK_MONTH_APR
CLK_MONTH_MAY
CLK_MONTH_JUN
CLK_MONTH_FEB
CLK_MONTH_MAR
CLK_MONTH_APR
CLK_MONTH_MAY
CLK_MONTH_JUN
CLK_MONTH_JUL
CLK_MONTH_AUG
CLK_MONTH_SEP
CLK_MONTH_OCT
CLK_MONTH_NOV
CLK_MONTH_DEC
```

```
CLK_DAY_OF_WK_SUN
CLK_DAY_OF_WK_MON
CLK_DAY_OF_WK_TUE
CLK_DAY_OF_WK_WED
CLK_DAY_OF_WK_THU
CLK_DAY_OF_WK_FRI
CLK_DAY_OF_WK_SAT
```

Version 3.09

V3.09-001

Added return errors for Clk_Init() & Clk_SignalClk() [see also 'Changes V3.09-002b'].

V3.09-002

Created new Clock data types:

CLK_ERR	Clock error data type (see 'Improvements V3.09-001')
CLK_TICK_CTR	Tick data type for tick counter
CLK_YR	Year data type
CLK_MONTH	Month data type
CLK_DAY	Day data type
CLK_HR	Hour data type
CLK_MIN	Minute data type
CLK_SEC	Second data type
CLK_STR_FMT	String format [for Clk_DateTimeToStr()]
CLK_TS_SEC	Timestamp data type (for Clock, NTP, or Unix)
CLK_TZ_SEC	Time zone data type

See also 'Changes V3.09-005'.

V3.09-003

Added Clock string format constants for Clk_DateTimeToStr():

CLK_FMT_YYYY_MM_DD_HH_MM_SS_UTC	"YYYY-MM-DD HH:MM:SS UTC+TZ" format	
CLK_FMT_YYYY_MM_DD_HH_MM_SS	"YYYY-MM-DD HH:MM:SS"	format
CLK_FMT_MM_DD_YY_HH_MM_SS	"MM-DD-YY HH:MM:SS"	format
CLK_FMT_YYYY_MM_DD	"YYYY-MM-DD"	format
CLK_FMT_MM_DD_YY	"MM-DD-YY"	format
CLK_FMT_DAY_MONTH_DD_YYYY	"Day Month DD, YYYY"	format
CLK_FMT_DAY_MONTH_DD_HH_MM_SS_YYYY	"Day Mon DD HH:MM:SS YYYY"	format
CLK_FMT_HH_MM_SS	"HH:MM:SS"	format
CLK_FMT_HH_MM_SS_AM_PM	"HH:MM:SS AM PM"	format
CLK_STR_YYYY_MM_DD_HH_MM_SS_UTC_LEN	CLK_FMT_YYYY_MM_DD_HH_MM_SS_UTC	string length
CLK_STR_YYYY_MM_DD_HH_MM_SS_LEN	CLK_FMT_YYYY_MM_DD_HH_MM_SS	string length
CLK_STR_MM_DD_YY_HH_MM_SS_LEN	CLK_FMT_MM_DD_YY_HH_MM_SS	string length
CLK_STR_YYYY_MM_DD_LEN	CLK_FMT_YYYY_MM_DD	string length
CLK_STR_MM_DD_YY_LEN	CLK_FMT_MM_DD_YY	string length
CLK_STR_DAY_MONTH_DD_YYYY_MAX_LEN	CLK_FMT_DAY_MONTH_DD_YYYY	string length
CLK_STR_DAY_MONTH_DD_HH_MM_SS_YYYY_LEN	CLK_FMT_DAY_MONTH_DD_HH_MM_SS_YYYY	string length
CLK_STR_HH_MM_SS_LEN	CLK_FMT_HH_MM_SS	string length
CLK_STR_HH_MM_SS_AM_PM_LEN	CLK_FMT_HH_MM_SS_AM_PM	string length
CLK_STR_FMT_MAX_LEN	Maximum string length for all Clock string formats	

V3.09-004

Added 'DayOfYr' field into CLK_DATE_TIME structure (see also 'Changes V3.09-004a').

V3.09-005

Refactored OS port layer to be clean, clear, & easy to port.

Version 3.08

V3.08-001

Added `clk_os.c` (μ C/OS-III port) to support μ C/OS-III V3.01.0 (& later versions). See also 'New Features V3.08-001'.

Version 3.07

N/A

Version 3.06

V3.06-001

Added appropriate type casting, where necessary.

V3.06-002

Replaced all 'cpu_sr' local variable declarations with μ C/CPU's new `CPU_SR_ALLOC()` macro.

Changes

Version 3.09.02

N/A

Version 3.09.01

V3.09.01-001

Modified how trace macros are defined to remove possible warning.

Version 3.09

V3.09-001a

Modified configuration file `clk_cfg.h` to require configuration for Clock module only.

V3.09-001b

Configuration for OS port layer must be copied into application configuration file, `app_cfg.h`.

V3.09-002a

Renamed the following Clock module functions:

<code>Clk_Task()</code>	renamed to <code>Clk_TaskHandler()</code>
<code>Clk_TS_Unix_ToTS()</code>	renamed to <code>Clk_TS_UnixToTS()</code>
<code>Clk_DateTime_ToTS()</code>	renamed to <code>Clk_DateTimeToTS()</code>
<code>Clk_DateTime_Make()</code>	renamed to <code>Clk_DateTimeMake()</code>
<code>Clk_DateTime_ToStr()</code>	renamed to <code>Clk_DateTimeToStr()</code>
<code>Clk_GetTZ_Offset()</code>	renamed to <code>Clk_GetTZ()</code>
<code>Clk_SetTZ_Offset()</code>	renamed to <code>Clk_SetTZ()</code>

V3.09-002b

Modified the argument &/or return API of the following Clock module functions:

<code>Clk_Init()</code>	Added 'p_err' argument
<code>Clk_SignalClk()</code>	Added 'p_err' argument
<code>Clk_GetTS()</code>	Replaced return pointer 'ts' & return Boolean with returned timestamp
<code>Clk_SetTS()</code>	Replaced 'ts' pointer with 'ts_sec' argument
<code>Clk_GetTZ()</code>	Replaced return pointer 'tz_offset' & return Boolean with returned time zone
<code>Clk_SetTZ()</code>	Replaced 'tz_offset' pointer with 'tz_sec' argument
<code>Clk_TS_ToDateTime()</code>	Replaced 'ts' pointer with 'ts_sec' argument & added with 'tz_sec' argument
<code>Clk_DateTimeToStr()</code>	Added 'str_len' argument

<code>Clk_SetTS_NTP()</code>	Replaced 'ts_ntp' pointer with 'ts_ntp_sec' argument
<code>Clk_TS_ToTS_NTP()</code>	Replaced 'ts_ntp' pointer with 'ts_sec' argument
<code>Clk_TS_NTP_ToTS()</code>	Replaced 'ts_ntp' pointer with 'ts_ntp_sec' argument
<code>Clk_SetTS_Unix()</code>	Replaced 'ts_unix' pointer with 'ts_unix_sec' argument
<code>Clk_TS_ToTS_Unix()</code>	Replaced 'ts_unix' pointer with 'ts_sec' argument
<code>Clk_TS_UnixToTS()</code>	Replaced 'ts_unix' pointer with 'ts_unix_sec' argument

V3.09-002c

Moved `Clk_SignalClk()` into `clk.c` from OS port layer `clk_os.c`.

V3.09-003

Renamed the following Clock module global variables:

<code>Clk_TimeStamp</code>	renamed to <code>Clk_TS_UTC_sec</code>
<code>Clk_TimeZoneOffset</code>	renamed to <code>Clk_TZ_sec</code>

V3.09-004a

Renamed `CLK_DATE_TIME` structure data type fields:

<code>Year</code>	replaced by <code>Yr</code>
<code>DayOfWeek</code>	replaced by <code>DayOfWk</code>
<code>Hour</code>	replaced by <code>Hr</code>
<code>Minute</code>	replaced by <code>Min</code>
<code>Second</code>	replaced by <code>Sec</code>
<code>TZ_Offset</code>	replaced by <code>TZ_sec</code>

V3.09-004b

Modified `CLK_DATE_TIME` structure's `Month`, `Day`, and `DayOfWk` fields' reference base to start at 1 instead of 0:

<code>Month</code>	values range from 1 to 12
<code>day</code>	values range from 1 to 31
<code>DayOfWk</code>	values range from 1 to 7

See also 'Corrections V3.09-003'.

V3.09-005a

Renamed the following Clock module data types:

<code>CLK_TS</code>	renamed to <code>CLK_TS_SEC</code>
<code>CLK_TZ_OFFSET</code>	renamed to <code>CLK_TZ_SEC</code>

V3.09-005b

Removed the following Clock module data types:

`CLK_TS_NTP`
`CLK_TS_UNIX`

Version 3.08

V3.08-001

Renamed configuration define from `CLK_CFG_SIGNAL_RATE` to `CLK_CFG_SIGNAL_FREQ_HZ`.

Version 3.07

V3.07-001

Renamed operating system layer function `ClkSignalClk()` to `Clk_SignalClk()`.

Version 3.06

V3.06-001

Deprecated & removed unnecessary `clk_fmt.*` files.

Corrections

Version 3.09.02

V3.09.02-001

Fixed Clk_DateTimeMakeHandler() to validate correctly DayOfYr.

Version 3.09.01

V3.09.01-001

Fixed Clk_DateTimeToStr() to initialize half_day_hr in all case before using it.

Version 3.09

V3.09-001

Clock global variables Clk_TS.UTC_sec, Clk_TZ_sec and Clk_TickCtr always accessed exclusively in critical sections.

V3.09-002

Clock global variable timestamp (Clk_TS.UTC_sec) is maintained at UTC+0 and time zone is never applied to the timestamp.

V3.09-003

Modified Clock date calculations to start Month, Day, DayOfWk and DayOfYr fields at 1 instead of 0 to be more consistent with real date format (see also 'Changes V3.09-004b').

Version 3.08

N/A

Version 3.07

N/A

Version 3.06

N/A

Known Problems

Version 3.09.02

N/A

Version 3.09.01

N/A

Version 3.09

N/A

Version 3.08

N/A

Version 3.07

N/A

Version 3.06

N/A

Limitations

001

Does not support Daylight Time; if desired, set Time Zone offset accordingly.

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