



Release Notes

V3.09.03

Revision History

Version	Date	Description
V3.09.03	2012 May	New features, bug fixes & changes.
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 3.09.03

µC/CPU	version 1.25
µC/LIB	version 1.29

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 3.09.03

V3.09.03-001

Added new API functions:

<code>Clk_GetDayOfYr()</code>	Get the day of the year of a date.
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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:

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

V3.09-002

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

<code>CLK_CFG_NTP_EN</code>	Include NTP timestamp conversion utilities
<code>CLK_CFG_UNIX_EN</code>	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:

<code>Clk_IsDateTimeValid()</code>	Determine if a date/time structure is valid in Clock epoch
<code>Clk_TS_NTP_ToDateTime()</code>	Convert a NTP timestamp to a date/time structure
<code>Clk_DateTimeToTS_NTP()</code>	Convert a date/time structure to a NTP timestamp
<code>Clk_NTP_DateTimeMake()</code>	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` (μ C/OS-III port) to support μ C/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 3.09.03

N/A

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:

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

See also 'Changes V3.09-005'.

V3.09-003

Added Clock string format constants for `Clk_DateTimeToStr()`:

<code>CLK_FMT_YYYY_MM_DD_HH_MM_SS_UTC</code>	"YYYY-MM-DD HH:MM:SS UTC+TZ" format	
<code>CLK_FMT_YYYY_MM_DD_HH_MM_SS</code>	"YYYY-MM-DD HH:MM:SS"	format
<code>CLK_FMT_MM_DD_YY_HH_MM_SS</code>	"MM-DD-YY HH:MM:SS"	format
<code>CLK_FMT_YYYY_MM_DD</code>	"YYYY-MM-DD"	format
<code>CLK_FMT_MM_DD_YY</code>	"MM-DD-YY"	format
<code>CLK_FMT_DAY_MONTH_DD_YYYY</code>	"Day Month DD, YYYY"	format
<code>CLK_FMT_DAY_MONTH_DD_HH_MM_SS_YYYY</code>	"Day Mon DD HH:MM:SS YYYY"	format
<code>CLK_FMT_HH_MM_SS</code>	"HH:MM:SS"	format
<code>CLK_FMT_HH_MM_SS_AM_PM</code>	"HH:MM:SS AM PM"	format
<code>CLK_STR_YYYY_MM_DD_HH_MM_SS_UTC_LEN</code>	<code>CLK_FMT_YYYY_MM_DD_HH_MM_SS_UTC</code>	string length
<code>CLK_STR_YYYY_MM_DD_HH_MM_SS_LEN</code>	<code>CLK_FMT_YYYY_MM_DD_HH_MM_SS</code>	string length
<code>CLK_STR_MM_DD_YY_HH_MM_SS_LEN</code>	<code>CLK_FMT_MM_DD_YY_HH_MM_SS</code>	string length
<code>CLK_STR_YYYY_MM_DD_LEN</code>	<code>CLK_FMT_YYYY_MM_DD</code>	string length
<code>CLK_STR_MM_DD_YY_LEN</code>	<code>CLK_FMT_MM_DD_YY</code>	string length
<code>CLK_STR_DAY_MONTH_DD_YYYY_MAX_LEN</code>	<code>CLK_FMT_DAY_MONTH_DD_YYYY</code>	string length
<code>CLK_STR_DAY_MONTH_DD_HH_MM_SS_YYYY_LEN</code>	<code>CLK_FMT_DAY_MONTH_DD_HH_MM_SS_YYYY</code>	string length
<code>CLK_STR_HH_MM_SS_LEN</code>	<code>CLK_FMT_HH_MM_SS</code>	string length
<code>CLK_STR_HH_MM_SS_AM_PM_LEN</code>	<code>CLK_FMT_HH_MM_SS_AM_PM</code>	string length
<code>CLK_STR_FMT_MAX_LEN</code>	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 3.09.03

V3.09.03-001

Added the possibility to define CLK_TRACE_LEVEL and CLK_TRACE in another file by wrapping these macro within #ifndef/#endif block.

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:

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

V3.09-002b

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

Clk_Init()	Added 'p_err' argument
Clk_SignalClk()	Added 'p_err' argument
Clk_GetTS()	Replaced return pointer 'ts' & return Boolean with returned timestamp
Clk_SetTS()	Replaced 'ts' pointer with 'ts_sec' argument

Clk_GetTZ()	Replaced return pointer 'tz_offset' & return Boolean with returned time zone
Clk_SetTZ()	Replaced 'tz_offset' pointer with 'tz_sec' argument
Clk_TS_ToDateTime()	Replaced 'ts' pointer with 'ts_sec' argument & added with 'tz_sec' argument
Clk_DateTimeToStr()	Added 'str_len' argument
Clk_SetTS_NTP()	Replaced 'ts_ntp' pointer with 'ts_ntp_sec' argument
Clk_TS_ToTS_NTP()	Replaced 'ts_ntp' pointer with 'ts_sec' argument
Clk_TS_NTP_ToTS()	Replaced 'ts_ntp' pointer with 'ts_ntp_sec' argument
Clk_SetTS_Unix()	Replaced 'ts_unix' pointer with 'ts_unix_sec' argument
Clk_TS_ToTS_Unix()	Replaced 'ts_unix' pointer with 'ts_sec' argument
Clk_TS_UnixToTS()	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:

Clk_TimeStamp	renamed to Clk_TS_UTC_sec
Clk_TimeZoneOffset	renamed to Clk_TZ_sec

V3.09-004a

Renamed CLK_DATE_TIME structure data type fields:

Year	replaced by Yr
DayOfWeek	replaced by DayOfWk
Hour	replaced by Hr
Minute	replaced by Min
Second	replaced by Sec
TZ_Offset	replaced by TZ_sec

V3.09-004b

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

Month	values range from 1 to 12
day	values range from 1 to 31
DayOfWk	values range from 1 to 7

See also 'Corrections V3.09-003'.

V3.09-005a

Renamed the following Clock module data types:

CLK_TS	renamed to CLK_TS_SEC
CLK_TZ_OFFSET	renamed to CLK_TZ_SEC

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 3.09.03

V3.09.03-001

Fixed `Clk_IsDateTimeValidHandler()` to validate correctly `DayOfYr`.

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 3.09.03

N/A

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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