

Micrium

Empowering Embedded Systems

μ C/CRC
V1.07

Release Notes

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Revision History

Version	Date	Description
V1.07	2010 Oct	Hamming code redesign
V1.06	2010 Jun	CRC calculation bug correction
V1.05	2009 Aug	New features & Changes
V1.04	2009 May	Changes
V1.03	2009 Apr	Improvements.
V1.02	2009 Jan	New features (BCH codes).
V1.01	2008 Aug	New features (Hamming codes).
V1.00	2007 Dec	Initial release.

Required Modules

Version 1.07

μ C/CPU Version 1.27

μ C/LIB Version 1.33

Version 1.06

μ C/CPU Version 1.26

μ C/LIB Version 1.32

Version 1.05

μ C/CPU Version 1.23

μ C/LIB Version 1.30

Version 1.04

μ C/CPU Version 1.23

μ C/LIB Version 1.29

Version 1.03

μ C/CPU Version 1.22

μ C/LIB Version 1.28

Version 1.02

μ C/CPU Version 1.20

μ C/LIB Version 1.26

New Features

Version 1.07

N/A

Version 1.06

N/A

Version 1.05

V1.05-001

Added Hamming code functions for 4-byte buffer.

Version 1.04

N/A

Version 1.03

N/A

Version 1.02

V1.02-001

Added 4-bit and 8-bit BCH code functions:

<code>BCH_4Bit_Calc()</code>	Calculate 4-bit BCH code for 512-byte buffer.
<code>BCH_4Bit_Chk()</code>	Check 4-bit BCH code for 512-byte buffer.
<code>BCH_4Bit_Correct()</code>	Correct error in 512-byte buffer using 4-bit BCH code.
<code>BCH_8Bit_Calc()</code>	Calculate 8-bit BCH code for 512-byte buffer.
<code>BCH_8Bit_Chk()</code>	Check 8-bit BCH code for 512-byte buffer.
<code>BCH_8Bit_Correct()</code>	Correct error in 512-byte buffer using 8-bit BCH code.

Version 1.01

V1.01-001

Added Hamming code functions:

<code>Hamming_Calc_128()</code>	Calculate Hamming code for 128-byte buffer.
<code>Hamming_Calc_256()</code>	Calculate Hamming code for 256-byte buffer.

<code>Hamming_Calc_512()</code>	Calculate Hamming code for 512-byte buffer.
<code>Hamming_Calc()</code>	Calculate Hamming code for n-byte buffer.
<code>Hamming_Chk_128()</code>	Check Hamming code for 128-byte buffer.
<code>Hamming_Chk_256()</code>	Check Hamming code for 256-byte buffer.
<code>Hamming_Chk_512()</code>	Check Hamming code for 512-byte buffer.
<code>Hamming_Chk()</code>	Check Hamming code for n-byte buffer.
<code>Hamming_Correct_128()</code>	Correct error in 128-byte buffer using Hamming code.
<code>Hamming_Correct_256()</code>	Correct error in 256-byte buffer using Hamming code.
<code>Hamming_Correct_512()</code>	Correct error in 512-byte buffer using Hamming code.
<code>Hamming_Correct()</code>	Correct error in n-byte buffer using Hamming code.

Version 1.00

V1.00-001

CRC calculation functions:

<code>CRC_ChkSumCalc_16Bit()</code>	Calculate 16-bit CRC.
<code>CRC_ChkSumCalc_32Bit()</code>	Calculate 32-bit CRC.
<code>CRC_Open_16Bit()</code>	Open 16-bit CRC calculation.
<code>CRC_Close_16Bit()</code>	Close 16-bit CRC calculation.
<code>CRC_WrBlock_16Bit()</code>	Process data block in 16-bit CRC calculation.
<code>CRC_WrOctet_16Bit()</code>	Process data octet in 16-bit CRC calculation.
<code>CRC_Open_32Bit()</code>	Open 32-bit CRC calculation.
<code>CRC_Close_32Bit()</code>	Close 32-bit CRC calculation.
<code>CRC_WrBlock_32Bit()</code>	Process data block in 32-bit CRC calculation.
<code>CRC_WrOctet_32Bit()</code>	Process data octet in 32-bit CRC calculation.

Improvements

Version 1.07

N/A

Version 1.06

N/A

Version 1.05

N/A

Version 1.04

N/A

Version 1.03

V1.03-001

Added length parameter to BCH code functions, which can now process 512- to 528-byte buffers

V1.03-002

Added configuration defines to allow/disallow checking of external arguments:

```
ECC_BCH_4BIT_CFG_ARG_CHK_EXT_EN  
ECC_BCH_8BIT_CFG_ARG_CHK_EXT_EN  
ECC_CRC_CFG_ARG_CHK_EXT_EN  
ECC_HAMMING_CFG_ARG_CHK_EXT_EN
```

Version 1.02

N/A

Version 1.01

N/A

Version 1.00

N/A

Changes

Version 1.07

Hamming codes for 256 bytes buffers are now 22 bits long (instead of 32) to allow storing in 3 bytes when using the NAND Flash driver.

Version 1.06

N/A

Version 1.05

V1.05-001

Removed Hamming code functions for 128-byte and 512-byte buffers.

Version 1.04

V1.04-001

Configuration file *crc_cfg.h* now included (instead of *app_cfg.h*).

Version 1.03

N/A

Version 1.02

V1.02-001

- Renamed *crc_*.c* files to *edc_crc_*.c*
- Change error code type to CPU_ERR
- Prefixed error code defines and configuration defines in *edc_crc.h* with EDC_

Version 1.01

N/A

Version 1.00

N/A

Corrections

Version 1.07

N/A

Version 1.06

Corrected the table calculation for CRC-32.

Version 1.05

N/A

Version 1.04

N/A

Version 1.03

N/A

Version 1.02

N/A

Version 1.01

N/A

Version 1.00

N/A

Known Problems

Version 1.07

N/A

Version 1.06

N/A

Version 1.05

N/A

Version 1.04

N/A

Version 1.03

N/A

Version 1.02

N/A

Version 1.01

N/A

Version 1.00

N/A

Limitations

N/A

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