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EFM32TG210 Errata, Chip rev. C

F32/F16/F8

This document describes errata for the latest revision of EFM32TG210 devices.

ARM ZERO TINY GECKO LEOPARD GIANT WONDER

SILICON LABS

1 Errata

This document contains information on the errata of the latest revision of this device. For errata on older revisions, please refer to the errata history for the device. The device datasheet explains how to identify chip revision, either from package marking or electronically.

In addition to the errata noted below, the errata for the ARM Cortex-M3 r2p1 (www.arm.com) also applies to this device.

1.1 Chip revision C

Table 1.1. Erratas

ID	Title/Problem	Effect	Fix/Workaround
AES_E101	**BYTEORDER does not work in combination with DATASTART/XORSTART** When the BYTEORDER bit in AES_CTRL is set, an encryption or decryption should not be started through DATASTART or XORSTART.	If BYTEORDER is used in combination with DATASTART or XORSTART, the AES data and key are interpreted in the wrong order.	Do not use BYTEORDER in combination with DATASTART or XORSTART.
AES_E102	**AES_STATUS_RUNNING set one cycle late with BYTEORDER set** When the BYTEORDER bit in AES_CTRL is set, AES_STATUS_RUNNING is set one cycle late.	If BYTEORDER is used, it will take one cycle for the AES_STATUS_RUNNING flag to be set. This means that polling this status flag should be postponed at least one cycle after starting encryption/decryption.	If polling the AES_STATUS_RUNNING is preferred, insert a No Operation assembly instruction (NOP()) before starting to poll the status flag.
DMA_E101	**EM2 with WFE and DMA** WFE does not work for the DMA in EM2.	In EM2, when sleeping with WFE (Wait for Event), an interrupt from the DMA will not wake up the system.	Use WFI (Wait for Interrupt) or EM1 instead.
PRS_E101	**Edge detect on GPIO/ACMP** Edge detect on peripherals with asynchronous edges might be missed.	When using edge detect in PRS on signals from ACMP, GPIO, RTC, LETIMER, LESENSE, VCMP and BURTC edges can be missed.	Do not use edge detect on ACMP, GPIO, RTC, LETIMER, LESENSE, VCMP and BURTC.
TIMER_E102	**Timer capture and debugger** Timer capture triggered when timer is halted by debugger.	When DEBUGRUN is disabled, and the capture input is HIGH it is possible to wrongly trigger a capture event by halting the MCU and starting it again (for instance by setting a breakpoint).	Enable DEBUGRUN when using a debugger.

ID	Title/Problem	Effect	Fix/Workaround
USART_E112	**USART AUTOTX continues to transmit even with full RX buffer** USART AUTOTX continues to transmit even with full RX buffer.	When AUTOTX in USARTn_CTRL or AUTOTXEN in USARTn_TRIGCTRL is set, the USART will continue to transmit data even after the RX buffer is full. This may cause the RX buffer to overflow if the data is not read out in time.	No known workaround.
WDOG_E103	**WDOG EM2 detection with LFXO digital/sine input** The WDOG will mistake EM2 for EM3 if using LFXO with digital or sine input.	When the WDOG is using LFXO with digital or sine input as a clock source, it will mistake EM2 for EM3. The EM2RUN and EM3RUN bits of WDOG_CTRL will behave accordingly.	When using LFXO with digital/sine input, EM3RUN must be set to keep the WDOG running in EM2.

1.2 Older Revisions

Erratas for older revisions can be found at the Silicon Laboratories Norway AS homepage:

www.energymicro.com/downloads/errata-archive

2 Revision History

2.1 Revision 1.0

August 21st, 2013

Added AES_E102.

Updated disclaimer, trademark and contact information.

2.2 Revision 0.90

July 30th, 2013

Added DMA_E101.

Updated errata naming convention.

2.3 Revision 0.80

November 26th, 2012

Removed erratas no longer present for chip revision C: CMU1, CMU2, EMU1, GPIO1, LES1, LES2 and LES3.

Added AES1.

Added TIMER1.

2.4 Revision 0.70

April 24th, 2012

Added LES3.

2.5 Revision 0.60

January 20th, 2012

Added GPIO1.

2.6 Revision 0.50

January 13th, 2012

Added USART1.

2.7 Revision 0.40

January 11th, 2011

Added CMU2.

Updated CMU1.

2.8 Revision 0.30

November 11th, 2011

Added CMU1.

Added PRS1.

2.9 Revision 0.10

May 20th, 2011

Initial preliminary release.

A Disclaimer and Trademarks

A.1 Disclaimer

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A.2 Trademark Information

B Contact Information

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