190405505 EFM32LG Datasheet update 2.2

Bulletin Issue Date: 4/5/2019 **Effective Date:** 4/5/2019

Description of Change

Silicon Labs is pleased to announce the release of datasheet version 2.2 for the EFM32LG product family.
The changes to the datasheet are as follows:

-Added TJ parameter to Table 4.1 Absolute Maximum Ratings on page 63.
-Key Features stop mode current changed to match value specified in 4.5 Current Consumption.
-Ordering Information corrected to show that the package for the EFM32LG942 is the TQFP64 and not the BGA120.
-Spelling and punctuation errors fixed in 3.1.12 Universal Serial Bus Controller (USB).
-Corrected available ACMP0 and ACMP1 channels in the following Configuration Summary sections:

•3.2.6 EFM32LG330
•3.2.7 EFM32LG332
•3.2.9 EFM32LG380
•3.2.10 EFM32LG390
•3.2.12 EFM32LG840
•3.2.13 EFM32LG842
•3.2.18 EFM32LG940
•3.2.19 EFM32LG942
•3.2.20 EFM32LG980
•3.2.21 EFM32LG990

-GPIO count in Table 3.6 EFM32LG330 Configuration Summary on page 27 increased from 52 to 53.
-GPIO count in Table 3.18 EFM32LG940 Configuration Summary on page 51 increased from 52 to 53.
-Added 4.4 Backup Supply Domain specifications to 4. Electrical Characteristics.
-Capitalization of figure titles made consistent in 4.5.1 EM1 Current Consumption.
-Restored figure title for Figure 4.7 EM1 Current Consumption with all Peripheral Clocks Disabled and HFRCO Running at 1.2 MHz on page 70.
-Restored note to 4.5.2 EM2 Current Consumption indicating use of Backup RTC (BURTC).
-Updated page erase time (tPERASE) and device erase time (tDERASE)in section 4.8 Flash specifications and added relevant notes
-Added load current (ILOAD_DC) maximum to 4.12 Digital Analog Converter (DAC) specifications.
-Updated the load resistance (RLOAD) in 4.13 Operational Amplifier (OPAMP) specifications.
-Corrected the following 4.16 EBI parameters:
• Minimum tOH_ALEn equation to use ADDRHOLD instead of WRHOLD.
• Minimum tH_ARDY equation to include addition of (3 * tHFCORECLK) term.
-Title of Figure 4.44 SPI Slave Timing on page 128 corrected to specify slave (not master) timing.
-Restored the analog description of USB_VREGI and USB_VREGO as follows:
• Pins A11 and A12 in the Table 5.13 Device Pinout on page 178 for EFM32LG295.
• Pin s 45 and 46 in the Table 5.13 Device Pinout on page 178 for EFM32LG330.
• Pin s 45 and 46 in the Table 5.19 Device Pinout on page 202 for EFM32LG332.
• Pins A11 and A12 in the Table 5.64 Device Pinout on page 405 for EFM32LG995.
• Pins B1 and C1 in the Table 5.22 Device Pinout on page 212 for EFM32LG360.
• Pins 72 and 73 in the Table 5.25 Device Pinout on page 224 for EFM32LG380.
• Pins B10 and B11 in the Table 5.28 Device Pinout on page 236 for EFM32LG390.
• Pins A11 and A12 in the Table 5.31 Device Pinout on page 250 for EFM32LG395.
• Pins A11 and A12 in the Table 5.46 Device Pinout on page 319 for EFM32LG895.
• Pins 45 and 46 in the Table 5.52 Device Pinout on page 352 for EFM32LG940.
• Pins 45 and 46 in the Table 5.55 Device Pinout on page 362 for EFM32LG942.
• Pins 72 and 73 in the Table 5.58 Device Pinout on page 374 for EFM32LG980.
• Pins B10 and B11 in the Table 5.61 Device Pinout on page 389 for EFM32LG990.
• Pins A11 and A12 in the Table 5.64 Device Pinout on page 405 for EFM32LG995.
-Changed pin #8 in Table 5.1 Device Pinout on page 131 from VSS to IOVDD_0 to match Figure 5.1 EFM32LG232 on page 130.
-Restored PC1 and PC0 as 4th alternate locations of I2C0_SCL and I2C0_SDA, respectively in 5.2.2 Alternate Functionality Pinout for the EFM32LG232.
-Removed USB_DMPU #0 from the Communication column of pin 48 in Table 5.7 Device Pinout on page 151 for the

-Corrected 5.5.3 GPIO Pinout Overview text to reflect that the information shown is for the EFM32LG295 and not the EFM32LG395.
-Restored the signal descriptions of DAC0_OUT1 /OPAMP_OUT1 in 5.6.2 Alternate Functionality Pinout for the EFM32LG330.
-Restored the following signals in 5.12.2 Alternate Functionality Pinout for the EFM32LG840:
• GPIO_EM4WU1
• PA6 as 4th location of ETM_CLK
• PC13 as the 4th location of TIM1_CC2
-Restored PC13 as the 4th location of TIM1_CC2 in 5.13.2 Alternate Functionality Pinout for the EFM32LG842.
-Removed USB_DMPU #0 from the Communication column of pin 48 in Table 5.40 Device Pinout on page 287 for the EFM32LG880.
-Restored PF3 as the 0th (primary) location of EBI_ALE in 5.14.2 Alternate Functionality Pinout for the EFM32LG880.
-Restored PC15 as the 1st location of DBG_SWO in 5.15.2 Alternate Functionality Pinout for the EFM32LG890.
-Restored U1_RX #1 to the Communication column of pin A13 in Table 5.46 Device Pinout on page 319 for the EFM32LG895.
-Pad 117 changed from PD15 to PB15 in Table 5.49 Device Padout on page 334 for the EFM32LG900.
-Added TIM3_CC2 to 5.19.2 Alternate Functionality Pinout for the EFM32LG940.
-Restored moisture sensitivity information to 13.2 Soldering Information.
-Corrected symbol b in 10.1 QFN64 Package Dimensions.
-Corrected the pin number for symbol P9 in 10.2 QFN64 PCB Layout.

Reason for Change

Adding junction temperature specifications to maximum ratings, GPIO clarifications, format improvements, and general description improvements.

Product Identification

```
EFM32LG230F64G-E-QFN64
EFM32LG230F64G-E-QFN64R
EFM32LG230F128G-E-QFN64
EFM32LG230F128G-E-QFN64R
EFM32LG230F256G-E-QFN64
EFM32LG230F256G-E-QFN64R
EFM32LG232F64G-E-QFP64
EFM32LG232F64G-E-QFP64R
EFM32LG232F128G-E-QFP64
EFM32LG232F128G-E-QFP64R
EFM32LG232F256G-E-QFP64
EFM32LG232F256G-E-QFP64R
EFM32LG280F64G-E-QFP100
EFM32LG280F64G-E-QFP100R
EFM32LG280F128G-E-QFP100
EFM32LG280F128G-E-QFP100R
EFM32LG280F256G-E-QFP100
EFM32LG280F256G-E-QFP100R
EFM32LG290F64G-E-BGA112
EFM32LG290F64G-E-BGA112R
EFM32LG290F128G-E-BGA112
EFM32LG290F128G-E-BGA112R
EFM32LG290F256G-E-BGA112
EFM32LG290F256G-E-BGA112R
EFM32LG295F64G-E-BGA120
EFM32LG295F64G-E-BGA120R
EFM32LG295F128G-E-BGA120
EFM32LG295F128G-E-BGA120R
EFM32LG295F256G-E-BGA120
EFM32LG295F256G-E-BGA120R
EFM32LG330F64G-E-QFN64
EFM32LG330F64G-E-QFN64R
EFM32LG330F128G-E-QFN64
EFM32LG330F128G-E-QFN64R
EFM32LG330F256G-E-QFN64
EFM32LG330F256G-E-QFN64R
EFM32LG332F64G-E-QFP64
EFM32LG332F64G-E-QFP64R
EFM32LG332F128G-E-QFP64
EFM32LG332F128G-E-QFP64R
EFM32LG332F256G-E-QFP64
EFM32LG332F256G-E-QFP64R
```

EFM32LG360F64G-E-CSP81
EFM32LG360F64G-E-CSP81R
EFM32LG360F128G-E-CSP81
EFM32LG360F128G-E-CSP81R
EFM32LG360F256G-E-CSP81
EFM32LG360F256G-E-CSP81R
EFM32LG380F64G-E-QFP100
EFM32LG380F64G-E-QFP100R
EFM32LG380F128G-E-QFP100
EFM32LG380F128G-E-QFP100R
EFM32LG380F256G-E-QFP100
EFM32LG380F256G-E-QFP100R
EFM32LG390F64G-E-BGA112
EFM32LG390F64G-E-BGA112R
EFM32LG390F128G-E-BGA112
EFM32LG390F128G-E-BGA112R
EFM32LG390F256G-E-BGA112
EFM32LG390F256G-E-BGA112R
EFM32LG395F64G-E-BGA120
EFM32LG395F64G-E-BGA120R
EFM32LG395F128G-E-BGA120
EFM32LG395F128G-E-BGA120R
EFM32LG395F256G-E-BGA120
EFM32LG395F256G-E-BGA120R
EFM32LG840F64G-E-QFN64
EFM32LG840F64G-E-QFN64R
EFM32LG840F128G-E-QFN64
EFM32LG840F128G-E-QFN64R
EFM32LG840F256G-E-QFN64
EFM32LG840F256G-E-QFN64R
EFM32LG842F64G-E-QFP64
EFM32LG842F64G-E-QFP64R
EFM32LG842F128G-E-QFP64
EFM32LG842F128G-E-QFP64R
EFM32LG842F256G-E-QFP64
EFM32LG842F256G-E-QFP64R
EFM32LG880F64G-E-QFP100
EFM32LG880F64G-E-QFP100R
EFM32LG880F128G-E-QFP100
EFM32LG880F128G-E-QFP100R
EFM32LG880F256G-E-QFP100
EFM32LG880F256G-E-QFP100R
EFM32LG890F64G-E-BGA112
EFM32LG890F64G-E-BGA112R
EFM32LG890F128G-E-BGA112
EFM32LG890F128G-E-BGA112R
EFM32LG890F256G-E-BGA112
EFM32LG890F256G-E-BGA112R
EFM32LG895F64G-E-BGA120
EFM32LG895F64G-E-BGA120R
EFM32LG895F128G-E-BGA120
EFM32LG895F128G-E-BGA120R
EFM32LG895F256G-E-BGA120
EFM32LG895F256G-E-BGA120R
EFM32LG900F256G-E-D1I
EFM32LG940F64G-E-QFN64
EFM32LG940F64G-E-QFN64R
EFM32LG940F128G-E-QFN64
EFM32LG940F128G-E-QFN64R
EFM32LG940F256G-E-QFN64
EFM32LG940F256G-E-QFN64R
EFM32LG942F64G-E-QFP64
EFM32LG942F64G-E-QFP64R
EFM32LG942F128G-E-QFP64
EFM32LG942F128G-E-QFP64R
EFM32LG942F256G-E-QFP64
EFM32LG942F256G-E-QFP64R

```
EFM32LG980F64G-E-QFP100
EFM32LG980F64G-E-QFP100R
EFM32LG980F128G-E-QFP100
EFM32LG980F128G-E-QFP100R
EFM32LG980F256G-E-QFP100
EFM32LG980F256G-E-QFP100R
EFM32LG990F64G-E-BGA112
EFM32LG990F64G-E-BGA112R
EFM32LG990F128G-E-BGA112
EFM32LG990F128G-E-BGA112R
EFM32LG990F256G-E-BGA112
EFM32LG990F256G-E-BGA112R
EFM32LG995F64G-E-BGA120
EFM32LG995F64G-E-BGA120R
EFM32LG995F128G-E-BGA120
EFM32LG995F128G-E-BGA120R
EFM32LG995F256G-E-BGA120
EFM32LG995F256G-E-BGA120R
```

This change is considered a minor change which does not affect form, fit, function, quality, or reliability. The information is being provided as a customer courtesy.

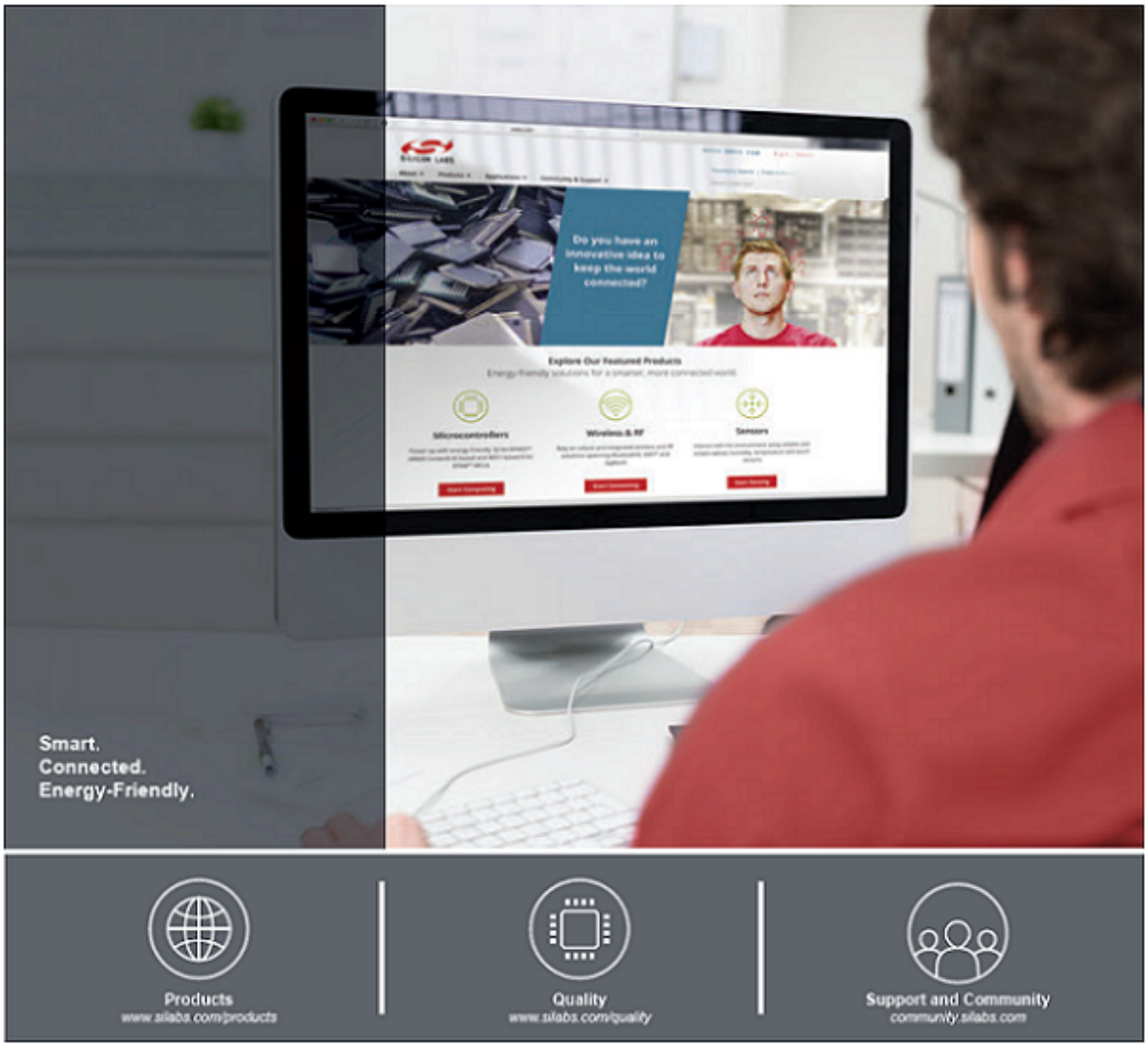
Please contact your local Silicon Labs sales representative with any questions about this notification. A list of Silicon Labs sales representatives may be found at **http://www.silabs.com**.

Customer Actions Needed:

None required.

User Registration

Register today to create your account on Silabs.com. Your personalized profile allows you to receive technical document updates, new product announcements, “how-to” and design documents, product change notices (PCN) and other valuable content available only to registered users. **http://www.silabs.com/profile**



Silicon Laboratories Inc.
400 West Cesar Chavez
Austin, TX 78701

http://www.silabs.com