



180226244 EFM8 Universal Bee 1 (UB1) Datasheet v1.3

PCN Issue Date: 2/26/2018

Effective Date: 5/30/2018

PCN Type: Datasheet

Description of Change

Silicon Labs is pleased to announce V1.3 of EFM8 UB1 datasheet. This update is focused on the recommended use case for VBUS sensing.

If VIO and VBUS are first applied simultaneously to the device, or if VBUS is applied and VIO is not present, a resistor divider on VBUS is needed to ensure reliability.

A list of changes to the datasheet are as follows:

- Changed the recommended use case of the VBUS pin in Section 5.2 USB to state that it should be used as a GPIO.
- Updated Figure 5.2 to remove the use of the VBUS pin.
- Updated Figure 3.1 to show 1024 bytes of XRAM and not 2048, the USB FIFO and on-chip XRAM both contain 1024 bytes totaling 2048 bytes of usable RAM. The previous image incorrectly labeled on-chip XRAM as 2048 bytes and USB FIFO as 1024 giving the wrong impression that the device had 3K bytes of RAM.
- Updated pin definitions for QFN20 and QSOP24 packages to state that the C2D pins are not available on the crossbar.
- Updated the test condition in Table 4.14 "Port I/O" parameter Weak Pull-Up Current from $V_{dd}=3.6V$ to $V_{io} = 3.6V$.
- Updated the max voltage in Table 4.13 "Comparators" parameter Input Range (CP+ or CP-) test condition Direct comparator input from $V_{io}+0.25V$ to $V_{dd}+0.25V$.
- Updated the max voltage in Table 4.13 "Comparators" parameter Input Range (CP+ or CP-) test condition Reference DAC input from V_{io} to V_{dd} .
- Updated the maximum Voltage Reference Range specification in Table 4.1.8 "ADC" to reference VDD instead of VIO in 4.1.8 ADC.
- Added Z and Y dimensions to Table 7.1 "QFN28 Package Dimensions" to give more information on package size
- Added a note in 3.1 "Introduction" to point the reader to the reference manual where more detailed device information can be found.
- Updated Section 5.1 to remove mention of the VBUS pin.
- Updated the title of Figure 5.3 to include a self powered description

Reason for Change

The reason for this datasheet update was to fix erroneous information within the datasheet, give a more accurate representation of the device and its capabilities, and in certain use cases to recommend a resistor divider on VBUS.

Impact on Form, Fit, Function, Quality, Reliability

There is no change to Form, Fit, Function, Quality, or Reliability

Product Identification

EFM8UB10F16G-C
EFM8UB10F16G-CR
EFM8UB10C1095F16GM-C
EFM8UB10C1095F16GM-CR
EFM8UB10F8G-C-QFN20
EFM8UB10F8G-C-QFN20R
EFM8UB10F16G-C-QFN20
EFM8UB10F16G-C-QFN20R
EFM8UB10F16G-C-QFN28
EFM8UB10F16G-C-QFN28R
EFM8UB10P1098F16GM-C

EFM8UB10P1098F16GM-CR
EFM8UB10P1203F8GM-C
EFM8UB10P1203F8GM-CR
EFM8UB11F16G-C-QFN24
EFM8UB11F16G-C-QFN24R
EFM8UB11F16G-C-QSOP24
EFM8UB11F16G-C-QSOP24R

Last Date of Unchanged Product: 5/30/2018

Qualification Samples

Available upon request

Specific conditions of acceptance of this change will be considered on a case by case basis if written notice is submitted within 30 days of this notice. To request further data or inquire about this notification, please contact your local Silicon Labs sales representative. A list of Silicon Labs sales representatives is available at <http://www.silabs.com>.

In some cases rejection of a change notice may impact Silicon Labs product pricing, delivery, quality, or reliability.

Customer Early Acceptance Sign Off

Customers may approve early PCN acceptance by completing the information below:

Early Acceptance:

Date: _____

Name: _____

Company: _____

Email your early Acceptance approval to: PCNEarlyAcceptance@silabs.com

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>

Qualification Data

Ready upon request



Disclaimer

Silicon Labs intends to provide customers with the latest, accurate, and in-depth documentation of all peripherals and modules available for system and software implementers using or intending to use the Silicon Labs products. Characterization data, available modules and peripherals, memory sizes and memory addresses refer to each specific device, and "Typical" parameters provided can and do vary in different applications. Application examples described herein are for illustrative purposes only. Silicon Labs reserves the right to make changes without further notice and limitation to product information, specifications, and descriptions herein, and does not give warranties as to the accuracy or completeness of the included information. Silicon Labs shall have no liability for the consequences of use of the information supplied herein. This document does not imply or express copyright licenses granted hereunder to design or fabricate any integrated circuits. The products are not designed or authorized to be used within any Life Support System without the specific written consent of Silicon Labs. A "Life Support System" is any product or system intended to support or sustain life and/or health, which, if it fails, can be reasonably expected to result in significant personal injury or death. Silicon Labs products are not designed or authorized for military applications. Silicon Labs products shall under no circumstances be used in weapons of mass destruction including (but not limited to) nuclear, biological or chemical weapons, or missiles capable of delivering such weapons.

Trademark Information

Silicon Laboratories Inc.®, Silicon Laboratories®, Silicon Labs®, SiLabs® and the Silicon Labs logo®, Bluegiga®, Bluegiga Logo®, Clockbuilder®, CMEMS®, DSPLL®, EFM®, EFM32®, EFR, Ember®, Energy Micro, Energy Micro logo and combinations thereof, "the world's most energy friendly microcontrollers", Ember®, EZLink®, EZRadio®, EZRadioPRO®, Gecko®, ISModem®, Micrium, Precision32®, ProSLIC®, Simplicity Studio®, SiPHY®, Telegesis, the Telegesis Logo®, USBXpress®, Zentri and others are trademarks or registered trademarks of Silicon Labs. ARM, CORTEX, Cortex-M3 and THUMB are trademarks or registered trademarks of ARM Holdings. Keil is a registered trademark of ARM Limited. All other products or brand names mentioned herein are trademarks of their respective holders.



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

<http://www.silabs.com>