



180829382 Initial V0.1 Errata release for Si72xx

Bulletin Issue Date: 8/29/2018

Effective Date: 8/29/2018

Description of Change

Silicon Labs announces the initial release of Errata Rev 0.1 for Si72xx hall effect sensors. This Errata revision adds the following errata item:

RMU_E102—VDD brownout during sleep time causes lockup

Description:

If a Si72xx device is subject to a brownout event ($300\text{ mV} < VDD < 1.71\text{ V}$) during sleep time, the device may become unresponsive to host communication and operation will halt. In this locked up state, the device will:

- Draw a current of $\sim 60\text{ }\mu\text{A}$ from VDD.
- NACK all I2C transactions.

The output pin will maintain its state once the lockup occurs.

Impact:

If a brownout event occurs during the sensor's sleep time, sensor operation may halt. The sleep time occurs between burst measurements if the sensor is configured for sleep mode.

For Si7210 I2C parts, sleep mode is enabled if the sltimeena bit is set. For Si720x switch or latch parts, see the data sheet or ordering guide to identify if the part is configured for sleep mode.

Workaround:

To prevent lockup from occurring, guarantee that VDD is power cycled if the supply voltage drops below the minimum operating voltage of 1.71 V. A full reset will occur if VDD is brought below 300 mV.

If brownout occurs and the sensor locks up, the sensor operation can be restored by performing a full power cycle reset. For a Si7210 I2C part, lockup due to brownout can be avoided if the sensor is kept in idle mode.

Resolution:

There is no plan to resolve this issue.

Reason for Change

Further characterization of the Si72xx magnetic sensors.

Product Identification

SI7201-A-00-EV
SI7201-A-00-EVR
SI7201-A-00-FV
SI7201-A-00-FVR
SI7201-A-01-EB
SI7201-A-01-EBR
SI7201-A-01-EV
SI7201-A-01-EVR
SI7201-A-01-FV
SI7201-A-01-FVR
SI7201-A-02-EB
SI7201-A-02-EBR
SI7201-A-02-EV
SI7201-A-02-EVR
SI7201-A-02-FV
SI7201-A-02-FVR

SI7201-A-03-EB
SI7201-A-03-EBR
SI7201-A-03-EV
SI7201-A-03-EVR
SI7201-A-03-IV
SI7201-A-03-IVR
SI7201-A-04-IV
SI7201-A-04-IVR
SI7201-A-05-IV
SI7201-A-05-IVR
SI7201-A-06-IV
SI7201-A-06-IVR
SI7201-A-07-IV
SI7201-A-07-IVR
SI7201-A-08-IV
SI7201-A-08-IVR
SI7201-B-00-FB
SI7201-B-00-FBR
SI7201-B-00-FM
SI7201-B-00-FMR
SI7201-B-00-FV
SI7201-B-00-FVR
SI7201-B-01-FB
SI7201-B-01-FBR
SI7201-B-01-FV
SI7201-B-01-FVR
SI7201-B-02-FB
SI7201-B-02-FBR
SI7201-B-02-FV
SI7201-B-02-FVR
SI7201-B-03-IB
SI7201-B-03-IBR
SI7201-B-03-IV
SI7201-B-03-IVR
SI7201-B-04-IB
SI7201-B-04-IBR
SI7201-B-04-IV
SI7201-B-04-IVR
SI7201-B-05-IB
SI7201-B-05-IBR
SI7201-B-05-IV
SI7201-B-05-IVR
SI7201-B-06-IB
SI7201-B-06-IBR
SI7201-B-06-IV
SI7201-B-06-IVR
SI7201-B-07-IB
SI7201-B-07-IBR
SI7201-B-07-IV
SI7201-B-07-IVR
SI7201-B-08-IV
SI7201-B-08-IVR
SI7201-B-09-IB
SI7201-B-09-IBR
SI7201-B-11-IB
SI7201-B-11-IBR
SI7202-A-00-EB
SI7202-A-00-EBR
SI7202-A-00-EV
SI7202-A-00-EVR
SI7202-A-00-FV
SI7202-A-00-FVR
SI7202-A-01-IV
SI7202-A-01-IVR
SI7202-B-00-FB
SI7202-B-00-FBR
SI7202-B-00-FV

SI7202-B-00-FVR
SI7202-B-01-IB
SI7202-B-01-IBR
SI7202-B-01-IV
SI7202-B-01-IVR
SI7202-B-02-IV
SI7202-B-02-IVR
SI7202-B-04-IB
SI7202-B-04-IBR
SI7203-A-00-EV
SI7203-A-00-EVR
SI7203-A-00-FV
SI7203-A-00-FVR
SI7203-B-00-FV
SI7203-B-00-FVR
SI7204-A-00-EV
SI7204-A-00-EVR
SI7204-A-00-FV
SI7204-A-00-FVR
SI7204-B-00-FM
SI7204-B-00-FMR
SI7204-B-00-FV
SI7204-B-00-FVR
SI7205-A-00-EB
SI7205-A-00-EBR
SI7205-A-00-EV
SI7205-A-00-EVR
SI7205-A-00-IV
SI7205-A-00-IVR
SI7205-A-01-EB
SI7205-A-01-EBR
SI7205-A-01-EV
SI7205-A-01-EVR
SI7205-B-00-IB
SI7205-B-00-IBR
SI7205-B-00-IV
SI7205-B-00-IVR
SI7205-B-01-IB
SI7205-B-01-IBR
SI7206-A-00-EB
SI7206-A-00-EBR
SI7206-A-00-EV
SI7206-A-00-EVR
SI7206-A-00-IV
SI7206-A-00-IVR
SI7206-B-00-IB
SI7206-B-00-IBR
SI7206-B-00-IV
SI7206-B-00-IVR
SI7206-B-01-IB
SI7206-B-01-IBR
SI7210-A-00-EV
SI7210-A-00-EVR
SI7210-A-00-IV
SI7210-A-00-IVR
SI7210-A-01-EV
SI7210-A-01-EVR
SI7210-A-01-IV
SI7210-A-01-IVR
SI7210-A-02-EV
SI7210-A-02-EVR
SI7210-A-02-IV
SI7210-A-02-IVR
SI7210-A-03-EV
SI7210-A-03-EVR
SI7210-A-03-IV
SI7210-A-03-IVR

SI7210-A-04-EV
SI7210-A-04-EVR
SI7210-A-04-IV
SI7210-A-04-IVR
SI7210-A-05-EV
SI7210-A-05-EVR
SI7210-B-00-IM
SI7210-B-00-IMR
SI7210-B-00-IV
SI7210-B-00-IVR
SI7210-B-01-IM
SI7210-B-01-IMR
SI7210-B-01-IV
SI7210-B-01-IVR
SI7210-B-02-IM
SI7210-B-02-IMR
SI7210-B-02-IV
SI7210-B-02-IVR
SI7210-B-03-IM
SI7210-B-03-IMR
SI7210-B-03-IV
SI7210-B-03-IVR
SI7210-B-04-IM
SI7210-B-04-IMR
SI7210-B-04-IV
SI7210-B-04-IVR
SI7210-B-05-IM
SI7210-B-05-IMR
SI7210-B-05-IV
SI7210-B-05-IVR
SI7211-A-00-IV
SI7211-A-00-IVR
SI7211-A-01-EB
SI7211-A-01-EBR
SI7211-A-01-EV
SI7211-A-01-EVR
SI7211-A-01-IV
SI7211-A-01-IVR
SI7211-B-00-IB
SI7211-B-00-IBR
SI7211-B-00-IV
SI7211-B-00-IVR
SI7211-B-01-IM
SI7211-B-01-IMR
SI7211-B-02-IV
SI7211-B-02-IVR
SI7212-A-00-EB
SI7212-A-00-EBR
SI7212-A-00-EV
SI7212-A-00-EVR
SI7212-A-00-IV
SI7212-A-00-IVR
SI7212-B-00-IB
SI7212-B-00-IBR
SI7212-B-00-IV
SI7212-B-00-IVR
SI7213-A-00-IV
SI7213-A-00-IVR
SI7213-B-00-IV
SI7213-B-00-IVR
SI7214-A-00-EB
SI7214-A-00-EBR
SI7214-A-00-EV
SI7214-A-00-EVR
SI7214-A-00-IV
SI7214-A-00-IVR
SI7214-B-00-IB

SI7214-B-00-IBR
SI7214-B-00-IV
SI7214-B-00-IVR
SI7215-A-00-EB
SI7215-A-00-EBR
SI7215-A-00-EV
SI7215-A-00-EVR
SI7215-A-00-IV
SI7215-A-00-IVR
SI7215-B-00-IB
SI7215-B-00-IBR
SI7215-B-00-IV
SI7215-B-00-IVR
SI7216-A-00-IV
SI7216-A-00-IVR
SI7216-B-00-IB
SI7216-B-00-IBR
SI7216-B-00-IV
SI7216-B-00-IVR
SI7217-B-01-IV
SI7217-B-01-IVR

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.

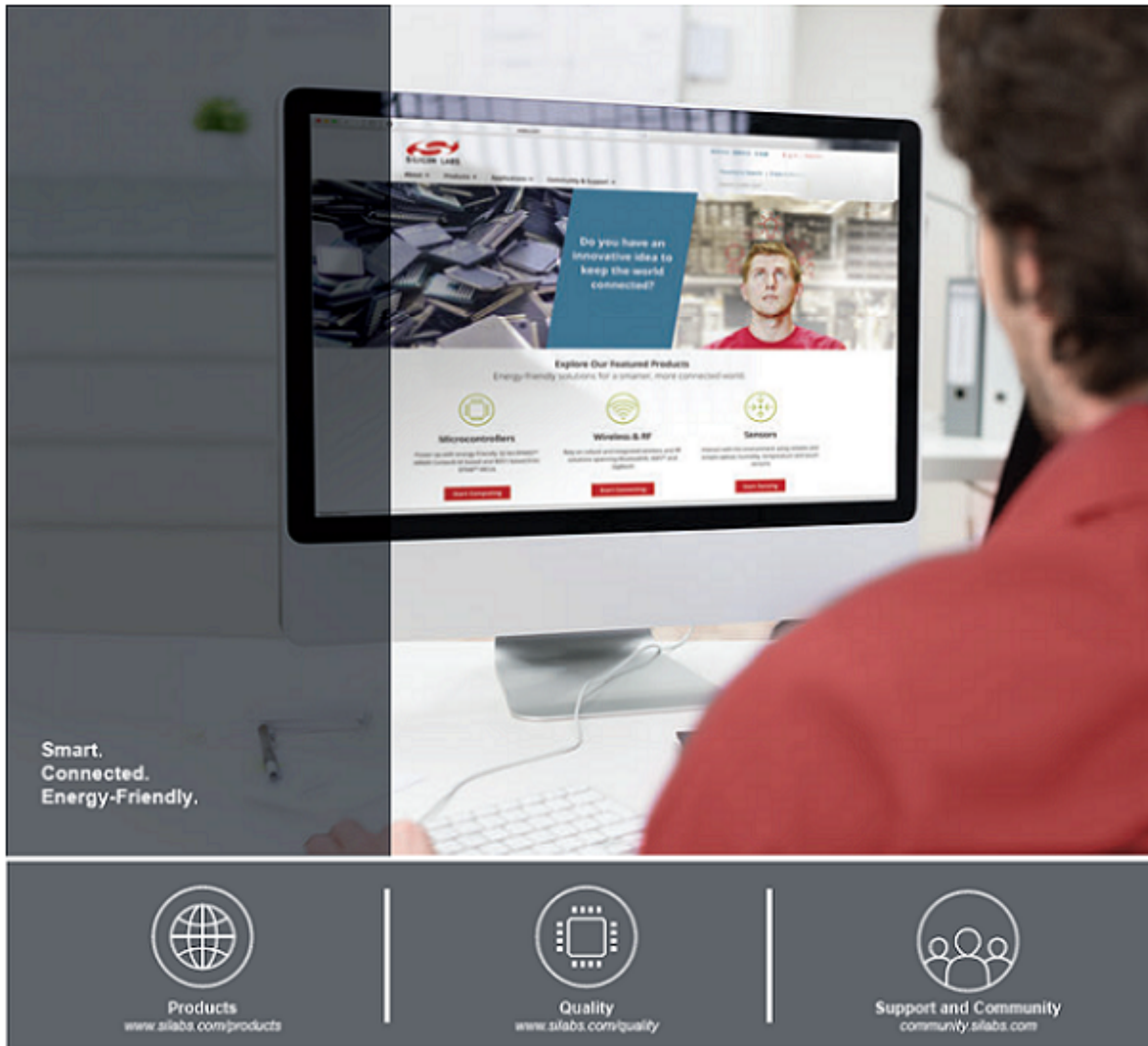
Please contact your local Silicon Labs sales representative with any questions about this notification. A list of Silicon Labs sales representatives may be found at <http://www.silabs.com>.

Customer Actions Needed:

Review the errata items and contact your Silicon Labs representative if questions arise. The errata can be found by searching Si72xx errata at [www.silabs.com/document library](http://www.silabs.com/document-library)

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>



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®, ISOModem®, 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>