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**Revision History**

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<td>B00</td>
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The EFM32 always controls ownership of the display using the EFM_DISP_ENABLE signal.

The EFM32 Giant Gecko 11 Starter Kit

User Interfaces

User LEDs

Memory LCD-TFT Display & Multiplexer

User Pushbuttons

Touch Pads

Boost converter for 5V displays

EXP Header

EXP-Header Functionality
SDIO micro

SDIO slot is connected to SDIO location #0

External memory power switch

Quad SPI memory

EFM32 Giant Gecko 11 Starter Kit

External memory interfaces
ETH RMII is connected to EFM32 Ethernet location #1

Place close to ethernet jack

Ethernet PHY

Ethernet jack

EFM32 Giant Gecko 11 Starter Kit

Document number: BRD2204A

Sheet Created Date: Tuesday, October 25, 2016
Sheet Modified Date: Tuesday, April 18, 2017

Design Created Date: Wednesday, December 03, 2008

Sheet: 4 of 16
Power Select Switch: AEM/USB/BAT

SWITCH POS | MODE DESCRIPTION
--- | ---
AEM | AEM Enabled, VMCU sourced from external 3.3V LDO powered by EC USB 3V supply
USB | AEM Enabled, VMCU sourced from internal 3.3V LDO powered by MCU USB 5V supply
BAT | AEM Disabled, VMCU sourced from coin-cell battery or external power supply

USB Connection and ESD protection

USB Host Power enable

EFM32 Power and Decoupling

Switching to USB Power

Switching to AEM Power

Switching to BAT Power

Reset Pushbutton

Digital Supply

Analog Supply

USB Power

Capacitor for Backup Power Domain

Designed: HEL JNO

Approved: HEL JNO

Printed on: 5/11/2017

EFM32 Giant Gecko 11 Starter Kit

EFM32 Power & USB
Stereo microphones

Place on board reverse side
MCU power regulator

Isolation switch

Buffered feedback network

Suffered feedback network

MCU current sense

Input filter

Target USB Voltage Sense

Decoupling

*Bypass: remove R736 & R746 and add R745 to bypass current sense and filters completely if required for USB compliance testing.
Virtual COM Port Interface

Level Shift

3V3 Regulator

VMCU Voltage Mirror

Power Supply for Analog Switches

The USB VBUS voltage is used to bias these transistors, turning the P-Channel MOSFETs (Q700) off, and the N-Channel MOSFETs (Q701) on.

Connector for external reference designs boards

EFM32 Giant Gecko 11 Starter Kit