



**THE DATASHEET OF  
EKK-LM3S6965**





## Stellaris® LM3S2965 (Rev. A) Evaluation Board and LM3S6965 (Rev. A) Evaluation Board User's Manuals

**Note:** This addendum only applies to Revision A LM3S2965 and LM3S6965 evaluation boards. Revision B and subsequent revisions do not require special procedures when using SWD out.

The board part and revision numbers are marked in copper on the back of the evaluation board using the following format: EK-LM3S2965-A or EK-LM3S6965-A. The last letter indicates the revision number.

The Evaluation Board (EVB) can be used as a USB-to-SWD In-Circuit Debug Interface (ICDI). ICD Interface Mode is one of several debugging modes described in Chapter 2 of the Evaluation Board User's Manual. Using the EVB in SWD Out Mode requires additional steps compared to JTAG Out Mode. This procedure is not necessary when connecting to the EVB's on-board microcontroller or when using JTAG.

To use SWD to connect to an external Stellaris microcontroller target:

- 1) Use GDB to flash the small `gpio_jtag` program into the EVB's memory. `gpio_jtag` is located in the StellarisWare\boards\ek-lm3sx965 directory. Programming must be done before an external target is connected.
- 2) Power-down the EVB by removing the USB cable.
- 3) Connect the EVB to the target board using the 20-pin target cable.
- 4) Re-apply power to the EVB while holding the Reset switch. The red Debug Out LED remains lit. `gpio_jtag` will not execute at this point.
- 5) Connect using GDB. This attempt to connect fails, but the EVB exits reset state and the `gpio_jtag` program starts running.
- 6) Press the Select switch to toggle to GPIO mode. The current state is shown on the OLED display. Once the microcontroller is in GPIO mode, it ignores SWD operations.
- 7) Connect again using GDB. You will now be successfully connected to the external target.

These steps do not need to be repeated each time you want to connect. It is only necessary to repeat these steps if the EVB is power-cycled or the USB connection is interrupted.

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Luminary Micro, Inc.  
108 Wild Basin, Suite 350  
Austin, TX 78746  
Main: +1-512-279-8800  
Fax: +1-512-279-8879  
<http://www.luminarymicro.com>  
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