

Stellaris® LM3S3748

USB Host/Device Evaluation Kit

The Stellaris® LM3S3748 Evaluation Board (EVB) is a compact and versatile evaluation platform for the Stellaris LM3S3748 ARM® Cortex™-M3-based microcontroller. The evaluation board design highlights the LM3S3748 microcontroller's key features including a USB 2.0 full-speed (12 Mbps) Host/Device controller, Analog-to-Digital Converter (ADC), and serial interfaces.



Features

The LM3S3748 EVB has connectors for both embedded USB Host and USB Device operation, allowing a range of USB application options to be evaluated. In USB Device mode, a small switch selects between bus-powered and self-powered options. Four ADC signals are paired as two differential channels to implement a 1 MS/s oscilloscope application on the LCD display. The oscilloscope feature set includes USB Host and Device connectivity as well as SD card support. The EVB may be used either as an evaluation platform or as a low-cost in-circuit debug interface (ICDI). In Debug Interface mode, the on-board microcontroller is bypassed, allowing programming or debugging of an external target.

The Stellaris LM3S3748 Evaluation Board includes the following features:

- 50-MHz Stellaris LM3S3748 microcontroller with 128 K flash and 64 K SRAM
- 2-channel oscilloscope quickstart application
- USB Host and Device connectors
- Bus-powered or self-powered USB Device support
- Simple setup: USB cable provides serial communication, debugging, and power
- Color LCD graphics display with 128 x 128 pixel resolution
- User LED and navigation switch with press-to-select functionality
- 8Ω magnetic speaker with amplifier
- microSD card slot

- USB interface for debugging and power supply
- DC jack for optional 5 V power supply
- Standard ARM® 20-pin JTAG/SWD debug connector with input and output modes
- LM3S3748 microcontroller I/O available on labeled break-out pads

Kit Contents

The evaluation kit contains everything needed to develop and run USB applications using Stellaris microcontrollers including:

- LM3S3748 Evaluation Board (EVB)
- USB cables (1 each for device and debugger use)
- USB flash memory stick
- Four oscilloscope test leads for quickstart application
- 20-pin JTAG/SWD target cable
- CD containing:
 - Complete documentation
 - Evaluation version of the software tools
 - Quickstart (oscilloscope application) guide and source code
 - StellarisWare® Peripheral Driver Library and example source code
 - A supported evaluation version of one of the following:
 - Keil™ RealView® Microcontroller Development Kit (MDK-ARM)
 - IAR Embedded Workbench® development tools
 - Code Sourcery GCC development tools
 - Code Red Technologies Red Suite
 - Texas Instruments' Code Composer Studio™ IDE

Ordering Information

Product Number	Description
EKK-LM3S3748	Stellaris® LM3S3748 USB Host/Device Evaluation Kit for Keil™ RealView® MDK-ARM (32 KB code-size limited)
EKI-LM3S3748	Stellaris® LM3S3748 USB Host/Device Evaluation Kit for IAR Systems Embedded Workbench® (32 KB code-size limited)
EKC-LM3S3748	Stellaris® LM3S3748 USB Host/Device Evaluation Kit for CodeSourcery G++ GNU (30-day limited)
EKT-LM3S3748	Stellaris® LM3S3748 USB Host/Device Evaluation Kit for Code Red Technologies Red Suite (90-day limited)
EKS-LM3S3748	Stellaris® LM3S3748 USB Host/Device Evaluation Kit for Code Composer Studio™ IDE (board-locked)

Texas Instruments • 108 Wild Basin, Suite 350 • Austin, TX 78746
<http://www.ti.com/stellaris>

Copyright © 2008–2010 Texas Instruments, Inc. All rights reserved. Stellaris and StellarisWare are registered trademarks of Texas Instruments. ARM and Thumb are registered trademarks, and Cortex is a trademark of ARM Limited. Other names and brands may be claimed as the property of others.



IMPORTANT NOTICE

Texas Instruments Incorporated and its subsidiaries (TI) reserve the right to make corrections, modifications, enhancements, improvements, and other changes to its products and services at any time and to discontinue any product or service without notice. Customers should obtain the latest relevant information before placing orders and should verify that such information is current and complete. All products are sold subject to TI's terms and conditions of sale supplied at the time of order acknowledgment.

TI warrants performance of its hardware products to the specifications applicable at the time of sale in accordance with TI's standard warranty. Testing and other quality control techniques are used to the extent TI deems necessary to support this warranty. Except where mandated by government requirements, testing of all parameters of each product is not necessarily performed.

TI assumes no liability for applications assistance or customer product design. Customers are responsible for their products and applications using TI components. To minimize the risks associated with customer products and applications, customers should provide adequate design and operating safeguards.

TI does not warrant or represent that any license, either express or implied, is granted under any TI patent right, copyright, mask work right, or other TI intellectual property right relating to any combination, machine, or process in which TI products or services are used. Information published by TI regarding third-party products or services does not constitute a license from TI to use such products or services or a warranty or endorsement thereof. Use of such information may require a license from a third party under the patents or other intellectual property of the third party, or a license from TI under the patents or other intellectual property of TI.

Reproduction of TI information in TI data books or data sheets is permissible only if reproduction is without alteration and is accompanied by all associated warranties, conditions, limitations, and notices. Reproduction of this information with alteration is an unfair and deceptive business practice. TI is not responsible or liable for such altered documentation. Information of third parties may be subject to additional restrictions.

Resale of TI products or services with statements different from or beyond the parameters stated by TI for that product or service voids all express and any implied warranties for the associated TI product or service and is an unfair and deceptive business practice. TI is not responsible or liable for any such statements.

TI products are not authorized for use in safety-critical applications (such as life support) where a failure of the TI product would reasonably be expected to cause severe personal injury or death, unless officers of the parties have executed an agreement specifically governing such use. Buyers represent that they have all necessary expertise in the safety and regulatory ramifications of their applications, and acknowledge and agree that they are solely responsible for all legal, regulatory and safety-related requirements concerning their products and any use of TI products in such safety-critical applications, notwithstanding any applications-related information or support that may be provided by TI. Further, Buyers must fully indemnify TI and its representatives against any damages arising out of the use of TI products in such safety-critical applications.

TI products are neither designed nor intended for use in military/aerospace applications or environments unless the TI products are specifically designated by TI as military-grade or "enhanced plastic." Only products designated by TI as military-grade meet military specifications. Buyers acknowledge and agree that any such use of TI products which TI has not designated as military-grade is solely at the Buyer's risk, and that they are solely responsible for compliance with all legal and regulatory requirements in connection with such use.

TI products are neither designed nor intended for use in automotive applications or environments unless the specific TI products are designated by TI as compliant with ISO/TS 16949 requirements. Buyers acknowledge and agree that, if they use any non-designated products in automotive applications, TI will not be responsible for any failure to meet such requirements.

Following are URLs where you can obtain information on other Texas Instruments products and application solutions:

Products		Applications	
Amplifiers	amplifier.ti.com	Audio	www.ti.com/audio
Data Converters	dataconverter.ti.com	Automotive	www.ti.com/automotive
DLP® Products	www.dlp.com	Communications and Telecom	www.ti.com/communications
DSP	dsp.ti.com	Computers and Peripherals	www.ti.com/computers
Clocks and Timers	www.ti.com/clocks	Consumer Electronics	www.ti.com/consumer-apps
Interface	interface.ti.com	Energy	www.ti.com/energy
Logic	logic.ti.com	Industrial	www.ti.com/industrial
Power Mgmt	power.ti.com	Medical	www.ti.com/medical
Microcontrollers	microcontroller.ti.com	Security	www.ti.com/security
RFID	www.ti-rfid.com	Space, Avionics & Defense	www.ti.com/space-avionics-defense
RF/IF and ZigBee® Solutions	www.ti.com/lprf	Video and Imaging	www.ti.com/video
		Wireless	www.ti.com/wireless-apps

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265
Copyright © 2010, Texas Instruments Incorporated