

Stellaris® LM3S9B90

Ethernet+USB-OTG Evaluation Kit

The Stellaris® LM3S9B90 Ethernet+USB-OTG Evaluation Kit provides a low-cost evaluation platform for the LM3S9B90 ARM® Cortex™-M3-based microcontroller. The kit includes two boards: the EK-LM3S9B90 evaluation board, and the BD-ICDI In-Circuit Debug Interface board. The evaluation board design highlights the LM3S9B90 microcontroller's 10/100 Mbit Ethernet port, full-speed USB-OTG port, In-Circuit Debug Interface (ICDI) board, and easy connection to the GPIO ports.



Features

The evaluation board uses the LM3S9B90 microcontroller which features a Hibernation module to efficiently power down the device to a low-power state during extended periods of inactivity. The LM3S9B90 microcontroller also features an external 16 MHz crystal that provides the main oscillator clock which can directly drive the ARM core clock or an internal PLL to increase the core clock up to 80 MHz. A 25 MHz crystal is used for the Ethernet clock and a 4.194304 MHz crystal is used for the real-time clock. The LM3S9B90 microcontroller also has an internal LDO voltage regulator that supplies power for internal use.

The Stellaris LM3S9B90 evaluation board includes the following features:

- Stellaris LM3S9B90 high-performance microcontroller with large memory
 - 32-bit ARM® Cortex™-M3 core
 - 256 KB main Flash memory, 96 KB SRAM
- Ethernet 10/100 port with two LED indicators
- USB 2.0 Full-Speed OTG port
- Virtual serial communications port capability
- Oversized board pads for GPIO access
- Reset pushbutton and power LED

- User pushbutton and LED
- Detachable In-Circuit Debug Interface (ICDI) board can be used for programming and debugging other Stellaris® boards

Kit Contents

The EK-LM3S9B90 evaluation kit comes with the following:

- EK-LM3S9B90 Evaluation Board (EVB)
- BD-ICDI In-Circuit Debug Interface Board
- Cables
 - USB cable
 - 10-pin ribbon cable for JTAG
 - 8-pin ribbon cable for power/UART connection
- Evaluation Kit CD containing:
 - Complete documentation
 - 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
 - Sourcery CodeBench development tools
 - Code Red Technologies Red Suite
 - Texas Instruments' Code Composer Studio™ IDE

Ordering Information

Product Number	Description
EKK-LM3S9B90	Stellaris® LM3S9B90 Low-Cost Evaluation Kit for Keil™ RealView® MDK-ARM (32 KB code-size limited)
EKI-LM3S9B90	Stellaris® LM3S9B90 Low-Cost Evaluation Kit for IAR Systems Embedded Workbench® (32 KB code-size limited)
EKC-LM3S9B90	Stellaris® LM3S9B90 Low-Cost Evaluation Kit for Sourcery CodeBench (30-day limited)
EKT-LM3S9B90	Stellaris® LM3S9B90 Low-Cost Evaluation Kit for Code Red Technologies Red Suite (90-day limited)
EKS-LM3S9B90	Stellaris® LM3S9B90 Low-Cost 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 © 2009–2011 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.

PB-LM3S9B90EK-05

 **TEXAS
INSTRUMENTS**

Cortex
Intelligent Processors by ARM

June 29, 2011

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

Audio	www.ti.com/audio
Amplifiers	amplifier.ti.com
Data Converters	dataconverter.ti.com
DLP® Products	www.dlp.com
DSP	dsp.ti.com
Clocks and Timers	www.ti.com/clocks
Interface	interface.ti.com
Logic	logic.ti.com
Power Mgmt	power.ti.com
Microcontrollers	microcontroller.ti.com
RFID	www.ti-rfid.com
RF/IF and ZigBee® Solutions	www.ti.com/lprf

Applications

Communications and Telecom	www.ti.com/communications
Computers and Peripherals	www.ti.com/computers
Consumer Electronics	www.ti.com/consumer-apps
Energy and Lighting	www.ti.com/energy
Industrial	www.ti.com/industrial
Medical	www.ti.com/medical
Security	www.ti.com/security
Space, Avionics and Defense	www.ti.com/space-avionics-defense
Transportation and Automotive	www.ti.com/automotive
Video and Imaging	www.ti.com/video
Wireless	www.ti.com/wireless-apps

TI E2E Community Home Page

e2e.ti.com

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265
Copyright © 2011, Texas Instruments Incorporated