# Stellaris® LM3S9B92 Robotic Evaluation Board

The Stellaris® Robotic Evaluation Board (EVALBOT) is a robotic evaluation platform for the Stellaris LM3S9B92 microcontroller. The board also uses a range of Texas Instruments' analog components for motor drive, power supply, and communications functions. After a few minutes of assembly, the EVALBOT's electronics are ready-to-run.

When roaming, three AA batteries supply power to the EVALBOT. The EVALBOT automatically selects USB power when tethered to a PC as a USB device or when debugging. Test points are provided to all key EVALBOT signals. Two 20-pin headers enable future wireless communications using standardized Texas Instruments' low-power embedded radio modules (EM boards). Additional microcontroller signals are available on break-out pads arranged in rows adjacent to the microcontroller.

The EVALBOT has factory-installed quickstart software resident in on-chip Flash memory. For software debugging and Flash programming, an integrated In-Circuit Debug Interface (ICDI) requires only a single USB cable for debug and serial port functions.

The EVALBOT is available with a Stellaris-specific version of *µC/OS-III: The Real-Time Kernel* by Jean J. Labrosse. This book reveals how a real-time kernel works using Micrium's µC/OS-III and the Stellaris EVALBOT as references. In addition, the board is also available separately for those who already have the book.

## Features

The evaluation kit provides a hands-on mini robotic platform for learning and using the µC/OS-III real-time kernel. The evaluation kit includes the following features:

- Evaluation board with robotic capabilities
- Mechanical components assembled by user
- Stellaris® LM3S9B92 microcontroller
- MicroSD card connector
- $I^2S$ audio codec with speaker
- USB Host and Device connectors
- RJ45 Ethernet connector
- Bright 96 x 16 blue OLED display
- On-board In-Circuit Debug Interface (ICDI)
- Battery power (3 AA batteries) or power through USB
- Wireless communication expansion port
- Robot features
  - Two DC gear-motors provide drive and steering
  - Opto-sensors detect wheel rotation with 45° resolution
  - Sensors for "bump" detection

## Ordering Information

| Product Number | Description |
|---|---|
| EKB-UCOS3-BNDL | Stellaris® Robotic Evaluation Board with Micrium's *µC/OS-III: The Real-Time Kernel* by Jean J. Labrosse (board and book) |
| EKB-UCOS3-EVM | Stellaris® Robotic Evaluation Board for use with Micrium's µC/OS-III (board only) |
| EKB-UCOS3-BOOK | Micrium's *µC/OS-III: The Real-Time Kernel* by Jean J. Labrosse (book only) |

For more information:

www.ti.com/evalbot

www.Micrium.com/Books/Micrium-uCOS-III

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

## 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