



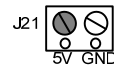
## The Stellaris® Family Development Kit

The Luminary Micro Stellaris® Family DK-LM3S801 Development Kit provides the hardware and software tools that engineers need to develop and prototype embedded applications right out of the box: the development board, demo applications, and software development tools. This kit supports development for the LM3S310, LM3S601, and LM3S801 microcontrollers.

### Development Board

The Stellaris Family Development Board is configured for immediate use. You just need to apply power to the board. To power the board, there are three options:

1. A free USB port on your PC can power the development board using the USB connector on J18. The USB is capable of sourcing up to 500 mA for each attached device, which is sufficient for the development board. If connecting the board through a USB hub, it must be a powered hub (500-mA port). To use the USB power option:
  - a. Slide switch S1 towards the board edge.
  - b. Connect a USB cable from the USB hub to the USB-B receptacle J18.
  - c. Slide switch S1 towards the board center to turn on power.
2. A 5-V (barrel-type connector) power supply can be connected to J19. The supply should be center lead positive. To use this option:
  - a. Slide switch S1 towards the center of the board.
  - b. Connect a 5-V supply with a 2.1-mm plug to power jack J19.
  - c. Slide switch S1 towards the board edge to turn on power.
3. A 5-V bench supply can be connected to J21. To use this option:
  - a. Slide switch S1 towards the center of the board.
  - b. Connect a 5-V supply with two wires to terminal block J21.
  - c. Connect the 5-V wire to J21-1 and the ground wire to J21-2.
  - d. Slide switch S1 towards the board edge to turn on power.



Once you apply power to the board, the power LEDs light up.

**Important:** When power is applied for the first time, you will be prompted that a new USB device has been found. If running Windows, select the “Advanced” driver installation option that allows you to point to a specific installation path. Point Windows to the Luminary Micro CD (specifically the Tools/FTDI/Win2k-XP directory) and select the driver file. You will need to install the driver twice; once for each of the two channels of the FTDI device (these will be called Channel A and Channel B).

### Quickstart Application

The development board comes preprogrammed with a quickstart application. Once you have powered the board, this application runs automatically. The Luminary Micro name and logo appear on the LCD for a few seconds and then the demo application begins to run. If it does not, ensure the daughterboard is firmly seated on the motherboard. See the *Stellaris® Family Development Board User’s Manual* for more information.



The quickstart application samples the potentiometer (POT1) using the on-chip comparator and uses a PWM and the buzzer to create a tone (beep). The frequency of the tone and the beep rate increases as the potentiometer is turned clockwise. The frequency of the tone and the beep rate decreases as the potentiometer is turned counterclockwise. The potentiometer setting along with the tone "note" is displayed on the LCD, and a log of the readings is output on the UART at 115,200, 8-n-1. Use the DB9 connector labeled SER0 on the board to view this output. The user pushbutton (SW3) can be used to mute the buzzer. When the buzzer is muted, the LCD and UART still show the setting.

The quickstart application source is available in the Firmware Development Package examples on the Luminary Micro Stellaris Family Development Kit CD as the DK-LM3S801 Quickstart Application example (qs\_dk-lm3s801).

## Software Development Tools

The next step is to install and run the software development tools included in the development kit. For more information, see the quickstart guides included on the Luminary Micro Stellaris Family Development Kit CD. Additional tools may be available through the Luminary Micro website at [www.luminarymicro.com](http://www.luminarymicro.com).

---

Copyright © 2006-2008 Luminary Micro, Inc. All rights reserved. Stellaris is a registered trademark and the Luminary Micro logo is a trademark of Luminary Micro, Inc. or its subsidiaries in the United States and other countries. 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.

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>  
[support@luminarymicro.com](mailto:support@luminarymicro.com)



## 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:

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

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