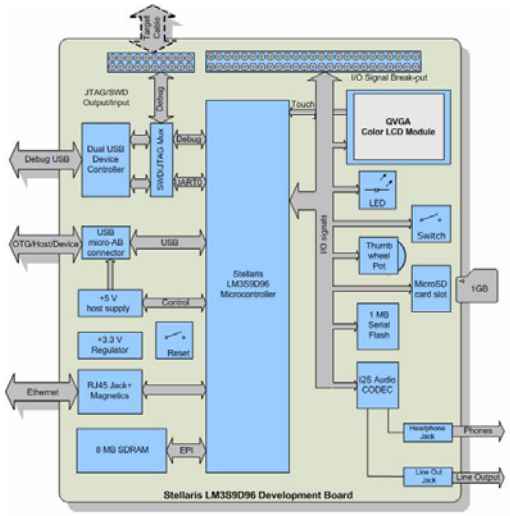
Stellaris® LM3S9D96 Microcontroller Development Kit

Texas Instruments' Stellaris® LM3S9D96 Microcontroller Development Kit (DK-LM3S9D96) is a full-featured development kit for LM3S9000 series devices. The LM3S9D96 development board has a maximum set of peripherals to demonstrate the microcontroller's capabilities and provides maximum flexibility with break-out jumpers for all I/O.

The LM3S9D96 development board provides a platform for evaluating memory-demanding applications as well as applications that utilize the new Tempest class capabilities such as I^2S audio, extended peripheral interface (EPI), and the simultaneous availability of Ethernet, USB OTG, and CAN communication. Target applications include networking, graphical user-interface (GUI), and connected Human Machine Interface (HMI) applications. The LM3S9D96 development board is also a useful development vehicle for systems programmed using tools such as Microsoft's .NET Micro Framework and Embedded LabView from National Instruments.

Features



Development Board

- 3.5" landscape color LCD graphics display
  - TFT LCD module with 320 x 240 resolution
  - Resistive touch interface
- 80 MHz LM3S9D96 microcontroller with 512 KB Flash, 96 KB SRAM, and integrated Ethernet MAC+PHY, USB OTG, and CAN communications
  - 8 MB SDRAM (plug-in EPI option board)
  - Break-out board for External Peripheral Interface (EPI) signals
- 1 MB serial Flash memory
- Precision 3.00 V voltage reference
- Controller Area Network (CAN) interface
- SafeRTOS™ operating system in microcontroller ROM
- I^2S stereo audio codec
  - Line Out
  - Headphone Out
  - Microphone In
  - Line In
- 10/100 BaseT Ethernet
- USB OTG connector
  - Device, Host, and OTG modes
- User LED and pushbutton
- Thumbwheel potentiometer
- MicroSD card slot

Development Kit

- Standard ARM® 20-pin JTAG debug connector
- Integrated In-Circuit Debug Interface (ICDI)
- USB virtual com port
- Jumper shunts to conveniently reallocate I/O resources
- Easy to customize
  - Includes full source code, example applications, and design files
  - Develop using tools supporting the DK-LM3S9D96 from Keil, IAR, Sourcery CodeBench, Code Red, and Texas Instruments
  - Supported by Texas Instruments' StellarisWare® software including the graphics library and the peripheral driver library

Kit Contents

The Stellaris® DK-LM3S9D96 Development Kit provides the tools engineers need to develop and prototype embedded applications right out of the box including:

- Stellaris® LM3S9D96 development board
- Mini-B USB cable (3-foot) for debug function
- Micro-A plug to Std-A receptacle (connects to USB flash drive)
- Std-A plug to Micro-B plug (connects to PC as a USB device)
- USB Flash Drive (128 MB)
- 20-way target cable, Ethernet cable
- MicroSD card
- CD with tools, documentation, and source code

DK-LM3S9D96 (continued)

Ordering Information

Product Number	Description
DK-LM3S9D96	Stellaris® LM3S9D96 Microcontroller Development Kit

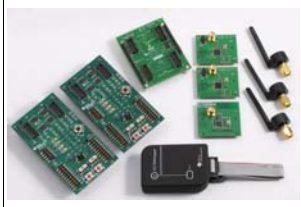
Optional Expansion Boards

Optional memory expansion boards for the Stellaris® LM3S9D96 Microcontroller Development Kit are available and sold separately. These boards also work with the predecessor to the DK-LM3S9D96, the DK-LM3S9B96 Microcontroller Development Kit.

- Stellaris® Flash and SRAM Memory Expansion Board (DK-LM3S9B96-FS8)
  - Provides 8 MB of Flash memory, 1 MB of SRAM, and memory-mapped LCD I/F for improved LCD performance
- Stellaris® FPGA Expansion Board (DK-LM3S9B96-FPGA)
  - Video capture using a color VGA CMOS image sensor connected to a Xilinx Spartan 3E FPGA
  - Display Stellaris® FPGA Expansion Board's camera-captured video on the DK-LM3S9D96's large, 3.5-inch touchscreen display.
- Stellaris® EM2 Expansion Board (DK-LM3S9B96-EM2)
  - Provides a transition between the Stellaris EPI connector and RF Evaluation Module (EM) connector
  - Enables wireless application development using Low Power RF (LPRF), RF ID, and Bluetooth® evaluation modules

Each board works with the External Peripheral Interface (EPI) of the Stellaris microcontroller.

Stellaris® Wireless Kits (each sold separately)

DK-EM2-2500S	DK-EM2-7960R	DK-EM2-2520Z	DK-EM2-2560B
			
Stellaris® 2.4 GHz SimpliciTI Wireless Kit (includes CC2500 Evaluation Module Kit and DK-LM3S9B96-EM2 Expansion Board) www.ti.com/dk-em2-2500s	**Stellaris® 13.56 MHz RFID Wireless Kit** (includes TRF7960TB Evaluation Module and DK-LM3S9B96-EM2 Expansion Board) www.ti.com/dk-em2-7960r	**Stellaris® 2.4 GHz ZigBee Wireless Kit** (includes CC2520 Evaluation Module Kit and DK-LM3S9B96-EM2 Expansion Board) www.ti.com/dk-em2-2520z	Stellaris® 2.4 GHz CC2560 *Bluetooth*® Wireless Kit (includes CC2560 *Bluetooth* Transceiver and DK-LM3S9B96-EM2 Expansion Board) www.ti.com/dk-em2-2560b

Stellaris® DK-LM3S9B96 Expansion Boards (each sold separately)

DK-LM3S9B96-FS8	DK-LM3S9B96-FPGA	DK-LM3S9B96-EM2
		
Stellaris® Flash and SRAM Memory Expansion Board (sold separately) www.ti.com/dk-lm3s9b96-fs8	**Stellaris® FPGA Expansion Board** (sold separately) www.ti.com/dk-lm3s9b96-fpga	**Stellaris® EM2 Expansion Board** (sold separately) www.ti.com/dk-lm3s9b96-em2

For more information on Stellaris wireless solutions: www.ti.com/stellariswireless

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