



Luminary Micro - DK-LM3S9B96 - Development Kit

Product Overview:

Texas Instruments' Stellaris® LM3S9B96 Microcontroller Development Kit (DK-LM3S9B96) is a full-featured development kit for LM3S9000 series devices. The LM3S9B96 development board has a maximum set of peripherals to demonstrate the microcontroller's capabilities and provides maximum flexibility with break-out header pads for all I/O.

The LM3S9B96 development board provides a platform for evaluating memory-demanding applications as well as applications that utilize the Tempest class of new capabilities such as I2S audio, extended peripheral interface (EPI) capability, and the simultaneous availability of Ethernet, USB OTG, and CAN communications. Target applications include networking, graphical user-interface (GUI), and connected Human Machine Interface (HMI) applications. The LM3S9B96 development board is also a useful development vehicle for systems programmed using tools such as Microsoft's .NET Micro Framework and Embedded Lab View from National Instruments.



Kit Contents:

The Stellaris® DK-LM3S9B96 Development Kit provides the tools engineers need to develop and prototype embedded applications right out of the box including:

- Stellaris® LM3S9B96 development board
- Mini-B USB cable (3-foot) for debug function
- Micro-A plug to Std-A receptacle (connects to USB 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
- Micro SD card
- CD with tools, documentation, and source code

Key Features:

Development Board

- 3.5" landscape color LCD graphics display
 - TFT LCD module with 320 x 240 resolutions
 - Resistive touch interface
- 80 MHz LM3S9B96 microcontroller with 256 K Flash, 96 K 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
- Safe **RTOS™** operating system in microcontroller ROM
- I2S stereo audio codec
 - Line Out – Headphone Out
 - Microphone In – Line In
- Controller Area Network (CAN) interface
- 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® 10-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-LM3S9B96 from Keil, IAR, Code Sourcery, and Code Red

- Supported by Texas Instruments' StellarisWare™ software including the graphics library and the Peripheral driver library

Ordering Information:

Product:

Part Number	Manufacturer	Farnell P/N	Newark P/N
DK-LM3S9B96	Luminary Micro	1712243	06R2344

Associated Products:

Part Number	Manufacturer	Description	Farnell P/N	Newark P/N
SN65HVD1050D	TI	EMC OPTIMIZED CAN TRANSCEIVER	1220984	70K4439
TPS2051BDBVR	TI	CURRENT-LIMITED, POWER-DISTRIBUTION SWITCHES	1412124	20M5870
LM4040B30IDBZR	TI	Precision Micro power Shunt Voltage Reference	1577137	66K2445
FAN5333B	Fairchild Semiconductor	High Efficiency, High Current Serial LED Driver with 30V Integrated Switch	1659466	64K0931
TLV320AIC23BIPW	TI	Low-Power Stereo CODEC with HP Amplifier	1212374	32H6515
MT48LC4M16A2P-7E:G:G	Micron	MT48LC4M16A2P-7E:G:G	1216285	97K6123

Similar Products:

Part Number	Manufacturer	Description	Support Device	Farnell P/N	Newark P/N
DK-LM3S828	Luminary Micro	LM3S828 Development Kit	LM3S828	1297878	45P3381
DK-LM3S818	Luminary	DK-LM3S818 Dev	LM3S818	1494124	45P3380

	Micro	Kit			
DK-LM3S808	Luminary Micro	DK-LM3S801 Dev Kit	LM3S801	1297875	45P3376

Document List:

Datasheets:

Part Number	Description	Size
LM3S9B96	LM3S9B96 Microcontroller	-
TPS2051BDBVR	CURRENT-LIMITED, POWER-DISTRIBUTION SWITCHES	1.77M
PQ1LA333MSPQ	Compact Surface Mount Type Low Power-Loss Voltage Regulators	133K
LM4040B30IDBZR	Precision Micro power Shunt Voltage Reference	731K
FAN5333B	High Efficiency, High Current Serial LED Driver with 30V Integrated Switch	539K
TLV320AIC23B	Low-Power Stereo CODEC with HP Amplifier	861K
MT48LC4M16A2P-7E: G:G	Synchronous DRAM	2.51M

Application Notes:

File Name	Size
SAFERTOS User's Manual	440k
LM3S9B96 Development Kit README First	-
Programming the On-Chip Flash Memory in a Stellaris Microcontroller	-
Clocking options for Stellaris Family Microcontrollers	-
Using a Stellaris Microcontroller as an I/O Processor	-
Adding 32KB of Serial SRAM to a Stellaris Microcontroller	-
Using AES Encryption and Decryption with Stellaris® Microcontrollers	-
Implementing RS-232 Flow Control on a Stellaris® Microcontroller	-
Using the Stellaris® Ethernet Controller with Micro IP (uIP)	-

Hardware & Software:

File Name	Size
Development Kit CD for the DK-LM3S9B96	-
FreeRTOS demo for LM3Sxxxx with Keil tools	-
FreeRTOS demo for LM3Sxxxx with IAR tools	-
FreeRTOS demo for LM3Sxxxx with GCC tools	-
CMX MicroNet for LM3S9xxx with Keil	-
CMX MicroNet for LM3S9xxx with IAR	-
CMX RTX for LM3S9xxx with Keil	-
CMX RTX for LM3S9xxx with IAR	-