

**LM3S1000 Series Block Diagram.** This block diagram shows the superset of features for the LM3S1000 series of microcontrollers.

## Product Features

- ARM® Cortex™-M3 Processor Core
  - 50-MHz operation; 60 DMIPS performance
  - ARM Cortex SysTick Timer
  - Nested Vectored Interrupt Controller (NVIC)
- On-Chip Memory
  - 128 KB single-cycle Flash memory
  - 20 KB single-cycle SRAM
  - Internal ROM loaded with StellarisWare® software:
    - Stellaris® Peripheral Driver Library
    - Stellaris® Boot Loader
- Advanced Serial Integration
  - 10/100 Ethernet MAC with Media Independent Interface (MII)
  - Three UARTs with IrDA and ISO 7816 support
  - Two I<sup>2</sup>C modules
  - Two Synchronous Serial Interface modules (SSI)
- System Integration
  - Direct Memory Access Controller (DMA)
  - System control and clocks including on-chip precision 16-MHz oscillator
  - Three 32-bit timers (up to six 16-bit)
  - Six Capture Compare PWM pins (CCP)
  - Lower-power battery-backed hibernation module

- Real-Time Clock
- Two Watchdog Timers
  - One timer runs off the main oscillator
  - One timer runs off the precision internal oscillator
- Up to 33 GPIOs, depending on configuration
  - Highly flexible pin muxing allows use as GPIO or one of several peripheral functions
  - Independently configurable to 2, 4 or 8 mA drive capability
  - Up to 4 GPIOs can have 18 mA drive capability

### ■ Analog

- 10-bit Analog-to-Digital Converter (ADC) with eight analog input channels and sample rate of one million samples/second
- Two analog comparators
- Eight digital comparators
- On-chip voltage regulator

### ■ JTAG and ARM Serial Wire Debug (SWD)

### ■ 64-pin LQFP package

### ■ Industrial (-40°C to 85°C) Temperature Range

## Target Applications

- Motion control
- Factory automation
- Fire and security
- HVAC and building control
- Test and measurement equipment
- Remote monitoring
- Electronic point-of-sale (POS) machines
- Network appliances and switches
- Gaming equipment



## Ordering Information

Orderable Part Number	Description
LM3S1J16-IQR50-C0	Stellaris® LM3S1J16 Microcontroller Industrial Temperature 64-pin LQFP
LM3S1J16-IQR50-C0T	Stellaris® LM3S1J16 Microcontroller Industrial Temperature 64-pin LQFP Tape-and-reel



## Development Kit

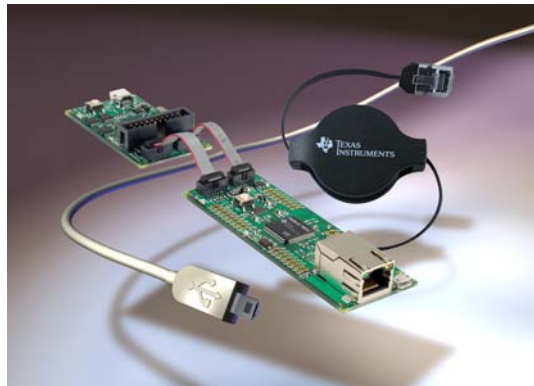
The Stellaris® LM3S9B96 Development Kit provides the hardware and software tools that engineers need to begin development quickly. Ask your distributor for part number DK-LM3S9B96. See the website for the latest tools available.



## Evaluation Kit

The Stellaris® LM3S9B90 and LM3S9B92 Ethernet and USB-OTG Evaluation Kits provide the hardware and

software tools to speed development using the LM3S9B90 and LM3S9B92 microcontrollers' integrated USB Full-Speed OTG port and 10/100 Ethernet controllers. Ask your distributor for part number EKK-LM3S9B90 or EKK-LM3S9B92 (ARM RealView® MDK tools), EKI-LM3S9B90 or EKI-LM3S9B92 (IAR Embedded Workbench® tools), EKC-LM3S9B90 or EKC-LM3S9B92 (CodeSourcery Sourcery G++ tools), or EKT-LM3S9B90 or EKT-LM3S9B92 (Code Red Technologies Red Suite tools). See the website for the latest tools available.



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