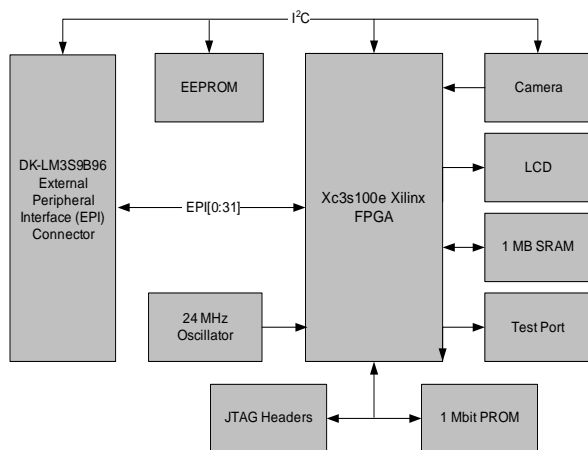


# Stellaris® FPGA Expansion Board for DK-LM3S9B96

The Stellaris® FPGA Expansion Board (DK-LM3S9B96-FPGA) from Texas Instruments is an optional expansion board which connects directly to the External Peripheral Interface (EPI) port of the Stellaris DK-LM3S9B96 development board to demonstrate the machine-to-machine (M2M), high-bandwidth, parallel interface capability of the Stellaris microcontroller. Right out of the box, users are able to control and display the FPGA expansion board's video on the DK-LM3S9B96 development board's large, 3.5" touchscreen display.

Users can explore and prototype the EPI port's many options and select the one best for their application by testing their own code on the Xilinx Spartan 3E FPGA.

The DK-LM3S9B96 development board (sold separately) provides a complete platform for evaluating the LM3S9000 series of Stellaris microcontrollers, featuring extensive connectivity options such as 10/100 Ethernet, Controller Area Network (CAN), Universal Serial Bus (USB) Full Speed On-The-Go, and Inter-IC Sound (I<sup>2</sup>S).



## Features

The FPGA expansion board has the following features:

- Xilinx Spartan 3E FPGA with 100k system gates
- 1/13" CMOS VGA (640x480) Color Camera Module
- 1 Megabyte of asynchronous 10 nsec SRAM for graphics/video buffers
- 1 kilobit of I<sup>2</sup>C memory for storing configuration data
- Standard 1 x 6 and 2 x 5 headers for FPGA programming
- 8 FPGA test pads provide 5 inputs and 3 I/Os for the user

- EPI operation in GPM D16-A12 mode at 50 MHz
- Video software features including:
  - Color, motion video display at QVGA (320 x 240) resolution (full screen on the DK-LM3S9B96 LCD display)
  - Graphical on-screen-display (OSD) overlaid on moving video
  - Widget-based touchscreen user interface
  - Freeze/resume motion with screen capture to SDCard in Windows bitmap (BMP) format
  - Brightness, saturation, and contrast picture controls
  - Mirror and flip picture control



## Package Contents

Along with the DK-LM3S9B96 Development Kit, the FPGA expansion board provides the tools engineers need to develop and prototype embedded applications right out of the box including:

- Stellaris® DK-LM3S9B96-FPGA Expansion Board with Xilinx Spartan FPGA
- Omnivision Color VGA image sensor

## Ordering Information

Product Number	Description
DK-LM3S9B96-FPGA	Stellaris® FPGA Expansion Board for DK-LM3S9B96
DK-LM3S9B96	Stellaris® LM3S9B96 Microcontroller Development Kit (sold separately)

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