



DSP Development Kit, Cyclone III Edition

from *Altera Corporation*

The DSP Development Kit, Cyclone III Edition is RoHS compliant and delivers a complete digital signal processing (DSP) development environment for design engineers. The kit facilitates the entire design process from design conception through hardware implementation. The DSP Development Kit, Cyclone III Edition includes the Cyclone III development board, the Data Conversion high-speed mezzanine card (HSMC), the DSP Builder development tool, Quartus II development software, MATLAB/Simulink evaluation software, evaluation intellectual property (IP) cores, design examples, power supplies, cables, and documentation.

Development Kit Contents

The DSP Development Kit Cyclone III Edition features:

- Cyclone III Development Board
 - Featured Device
 - Cyclone III EP3C120F780 FPGA
 - Display and general user input/output
 - 128 x 64 graphics LCD
 - 2-line x 16-character LCD
 - Buttons, dip-switches, LEDs, 7-segment display, speaker header
 - Memory
 - 256 Mbytes of dual-channel DDR2 SDRAM with ECC
 - 8 Mbytes of synchronous SRAM
 - 64 Mbytes of flash
 - Components and interfaces
 - 10/100/1000 Ethernet (RGMII)
 - USB 2.0 (Type B)
 - Two high-speed mezzanine (HSMC) connectors
- Data Conversion HSMC
 - Dual 14-bit, 150-MSPS A/D converter
 - Dual 14-bit, 250-MSPS D/A converter
 - Audio in/out/mic
- Cyclone III FPGA Development Kit, CD-ROM
 - Design examples for the Cyclone III FPGA development board
 - Complete documentation
 - User guide
 - Reference manual
 - Board schematic and layout
 - Bill of materials
 - Product and partner information
- MATLAB/Simulink evaluation software
- Altera Complete Design Suite DVD
 - Quartus II design software
 - Subscription Edition (optional feature, available for purchase)
 - Web Edition (no charge, Windows only)
 - ModelSim-Altera software
 - Altera Edition (optional feature, available for purchase)
 - Web Edition (no charge, Windows only)
 - MegaCore IP Library including Nios II processor OpenCore Plus evaluation

- Nios II Embedded Design Suite, Evaluation Edition (free)
- DSP Builder
- Video demos of Quartus II software and the Nios II processor
- System reference designs and labs
 - DSP Builder filtering design
 - Nios II processor reference designs

HSMC Interface

Altera developed the specification for the HSMC, which is based on the Samtec mechanical connector, to define and standardize the interface between optional daughter cards and host boards. This specification outlines both the electrical and mechanical properties of the interface between daughter card and host. You can also create your own HSMC interface compatible daughter cards.

Figure 1 shows the Cyclone III development board.

Figure 1. Cyclone III FPGA Development Board



Figure 2 shows the data conversion HSMC.

Figure 2. Cyclone III Data Conversion HSMC



