MDS FPGA Development Module

October 20, 1997 | Product Specification

Maria Aguilar, Project Coordinator
Memec Design Services
1819 S. Dobson Rd., Suite 203
Mesa, AZ 85202
Phone: +1 888-360-9044 (in the USA)
+1 602-491-4311 (international)
Fax: +1 602-491-4907
E-mail: info@memecdesign.com
URL: www.memecdesign.com

Features

- Xilinx FPGA-based hardware development module
  - Evaluate Memec Design Services AllianceCORE modules
  - Debug custom FPGA logic
- 40-pin DIP-compatible footprint
  - Small physical size
  - Replace obsolete devices in existing systems, without PCB re-layout
- Flexible FPGA programming options:
  - Serial download cable with readback capability
  - Socketed serial PROM
- Device read-back capability for debug
- Two versions available:
  - XC4005XL (up to 9,000 gates, including RAM)
  - XC5206 (up to 10,000 gates, no RAM)

General Description

The MDS FPGA Development Module is an ideal platform for Xilinx-based hardware development. The module provides a 40-pin DIP socket-compatible footprint for direct replacement of industry standard components using a Xilinx FPGA. It can be used to evaluate MDS cores in a target system, eliminating the need for custom board fabrication or relayout.

Functional Description

The module is built on a small profile PCB, slightly larger than a 40-pin DIP with a height of only 0.6 inches. It contains a single Xilinx FPGA and a socketed serial configuration PROM.

The module provides two options for FPGA configuration. One is an 8-pin DIP socket that makes changing serial

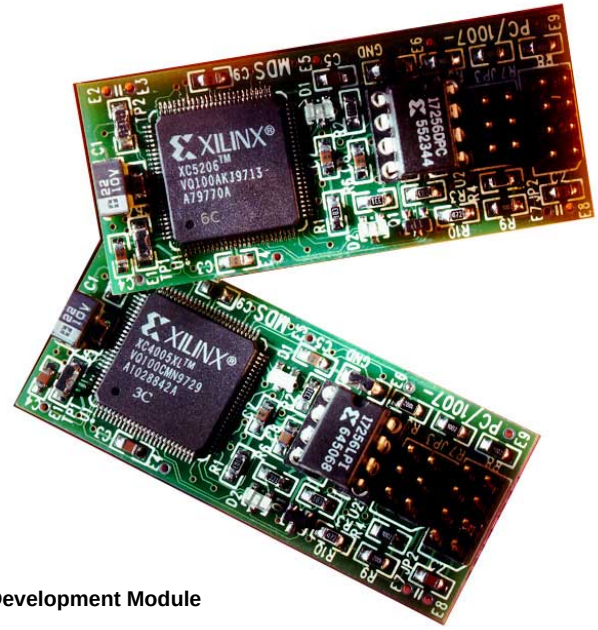

Figure 1: MDS FPGA Development Module

PROMs easy. This is also an option if the module is to be used in a permanent configuration, such as direct socket replacement of an existing device.

Alternatively, a serial download cable can be attached to on-board headers and used to configure the FPGA during the prototyping stage of the design. It can also be used to perform device readback during debug.

Two versions of the module are available. The first includes a Xilinx XC5206 FPGA that provides up to 10,000 logic gates for 5V systems.

The second includes a Xilinx XC4005XL 3.3V FPGA that provides up to 9000 gates, including on-chip RAM. This module can also be used in a 5V system that provides a regulator for the module power supply.

Module power and ground pins match industry-standard configuration where ground is at Pin 20 and V_{CC} is Pin 40.

Additional Support Products

Memec Design Services provides Xilinx FPGA design services and Xilinx FPGA cores.

MDS has available cores that, when implemented in a Development Module can form direct plug compatible replacements for the following industry functions:

- 8250 UART
- 8255 Programmable Peripheral Interface
- 8256 Peripheral and Multifunction UART
- 8279 Keyboard/Display Controller

Ordering Information

The MDS FPGA Development Module is provided under license from Memec Design Services for use in Xilinx programmable logic devices and Xilinx HardWire™ gate arrays. To purchase or make further inquiries about this or other Memec Design Services products, contact MDS directly at the location listed on the front page.

Information furnished by Memec Design Services is believed to be accurate and reliable. Memec Design Services reserves the right to change specifications detailed in this data sheet at any time without notice, in order to improve reliability, function or design, and assumes no responsibility for any errors within this document. Memec Design Services does not make any commitment to update this information.

Memec Design Services assumes no obligation to correct any errors contained herein or to advise any user of this text of any correction, if such be made, nor does the Company assume responsibility for the functioning of undescribed features or parameters. Memec Design Services will not assume any liability for the accuracy or correctness of any support or assistance provided to a user.

Memec Design Services does not represent that products described herein are free from patent infringement or from any other third-party right. No license is granted by implication or otherwise under any patent or patent rights of Memec Design Services.

Memec Design Services products are not intended for use in life support appliances, devices, or systems. Use of a Memec Design Services product in such application without the written consent of the appropriate Memec Design Services officer is prohibited.

Related Information

Xilinx Programmable Logic

For information on Xilinx programmable logic or development system software, contact your local Xilinx sales office, or:

Xilinx, Inc.
2100 Logic Drive
San Jose, CA 95124
Phone: +1 408-559-7778
Fax: +1 408-559-7114
URL: www.xilinx.com

For general Xilinx literature, contact:

Phone: +1 800-231-3386 (inside the US)
+1 408-879-5017 (outside the US)
E-mail: literature@xilinx.com

For AllianceCORE™ specific information, contact:

Phone: +1 408-879-5381
E-mail: alliancecore@xilinx.com
URL: www.xilinx.com/products/logicore/alliance/tblpart.htm