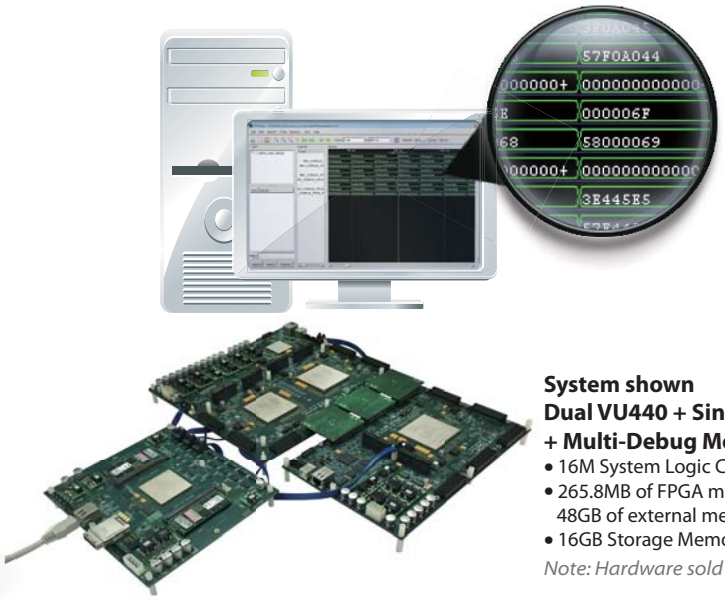
Prodigy Multi-Debug Module 2.0

The Prodigy Multi-Debug Module 2.0 (MDM2) allows for the concurrent debugging of multiple FPGAs. Prodigy MDM2 works within the Prodigy Player Pro cockpit to go beyond debug set up to specify trigger conditions then debug multiple FPGAs with the help of an external Prodigy MDM2 hardware module. The MDM2 external hardware enables deep tracing of the cause of bugs with the ability to store up to 8GB of waveforms. The high-speed Giga-Ethernet cables allow the captured data to be quickly transferred to the host computer. The MDM2 captures and stores waveforms continuously removing the need to consume design FPGA memory for debug.

Highlights

- Debug across 2 Prodigy Logic Modules (LM) simultaneously using a single logic analyzer
- Trace at speeds up to 80MHz using high-speed GT transceivers
- Trace up to 32K probes per FPGA in 8 groups of 4K probes each without re-compile
- Store up to 8GB of waveform data externally
- Compact form factor: 110mm * 180mm * 40mm (L * W * H)



System shown
Dual VU440 + Single VU440 + Multi-Debug Module
- 16M System Logic Cells
- 265.8MB of FPGA memories and 48GB of external memories
- 16GB Storage Memory for debug

Note: Hardware sold separately

Prodigy™ Multi- Debug Module 1.0 hardware setup

Features

In combination with Prodigy Player Pro, the advanced multiple FPGA debug capabilities include:

RTL-level Probing

The GUI allows you to mark and upload internal signals to the external MDM2 hardware for easy setting of trigger conditions and signal tracing.

Integrated In-Circuit Debug Setup

- Preserve internal FPGA probes before synthesis
- Probes are distributed to multiple FPGAs automatically based on partition results
- Set up trigger and trace signals in multiple FPGAs from a single console

Large Number of Probes Without Re-Compile

- Mark an unlimited number of internal FPGA probes before synthesis
- Trace up to 32K probes per FPGA in 8 groups of 4K probes each without FPGA re-compilation

Trigger Condition Specification

Users can easily set trigger events and combinational events

- Trigger events support: ==, !=, >=, <=, >, < and counting
- Combinational events support: !, &, |, ^, -> and counting
- Supports up to 8 event trigger blocks. Each block can run comparison, sequencing, occurrence and combination operations

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Features

8GB Deep Trace

- Store 8GB of waveforms on one 8GB DDR3 SO-DIMM memories on external MDM2 hardware
- Transfer captured waveforms to host computer through high-speed Giga-Ethernet cables
- Remove consumption of design FPGA memory for debug
- Capture and store waveforms continuously

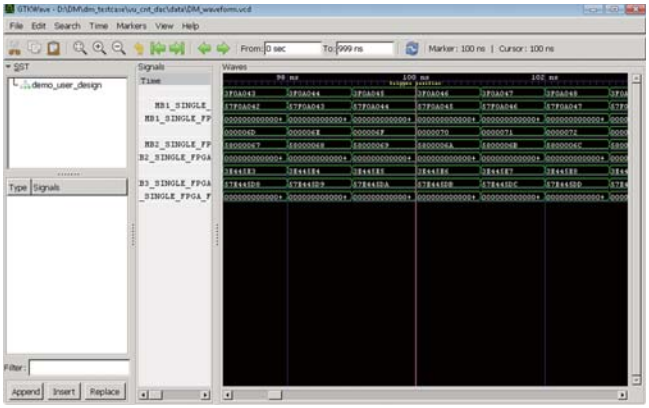
Concurrent Debug of Multiple FPGAs

- Debug across multiple FPGAs simultaneously using a single Logic Analyzer
- Transmit trigger and trace data from multiple FPGAs to the Prodigy MDM2 hardware through high-speed Gigabit transceivers
- Write the sample date in VCD/FSDB format for analysis

Integrated with Prototyping Setup Flow

Prodigy MDM2 works within the Prodigy Player Pro cockpit to go beyond debug set up to specify trigger conditions then debug multiple FPGAs with the help of an external Prodigy MDM2 hardware module.

Import	• Support Verilog, VHDL and EDIF
Set Up Analyzer	• Probe any wire and registers to MDM, select up to 32K probes per FPGA in 8 groups of 4K each and specify trace clock
Synthesis & PR	• Invoke commercial or FPGA vendor tool to run synthesis and place & route
Download	• Download bin files to FPGA via USB, Ethernet or Micro SD
Set Up MDM	• Select groups, set up Trigger conditions and ARM the Internal Logic Analyzer in one console
View Waveform	• Dump VCD/FSDB format debug waveform to host PC for analysis



Concurrent Debugging of Multiple FPGAs in one console

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