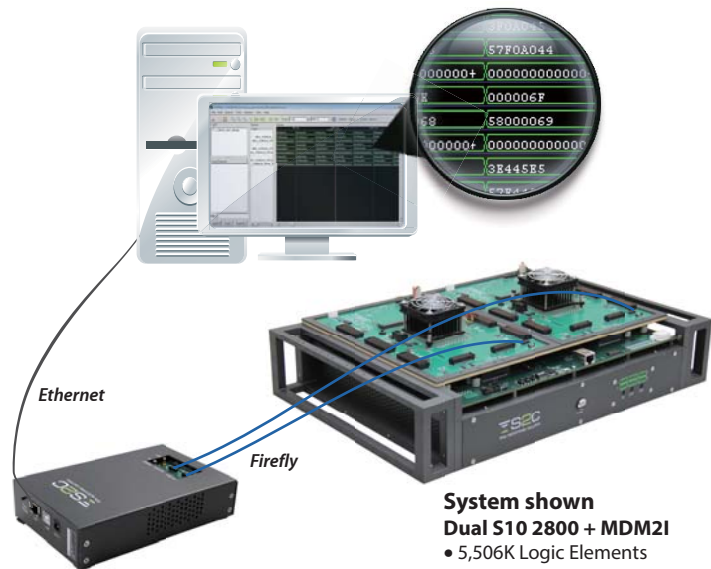


# Prodigy™ Multi-Debug Module 2.0 for Intel

The Prodigy Multi-Debug Module 2.0 for Intel (MDM2I) allows for the concurrent debugging of multiple FPGAs. Prodigy MDM2I 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 MDM2I hardware module. The MDM2I 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 MDM2I captures and stores waveforms continuously removing the need to consume design FPGA memory for debug.

## Highlights

- Debug across 2 FPGA modules of Prodigy Logic systems (LS)
- Trace at speeds up to 80MHz using high-speed 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:  
115mm \* 185mm \* 40mm (L \* W \* H)



### System shown

#### Dual S10 2800 + MDM2I

- 5,506K Logic Elements
- 458Mb of FPGA memories
- 8GB Storage Memory for debug

*Note: Hardware sold separately*

*Prodigy Multi-Debug Module 2.0 for Intel 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 MDM2I 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

## Features

### 8GB Deep Trace

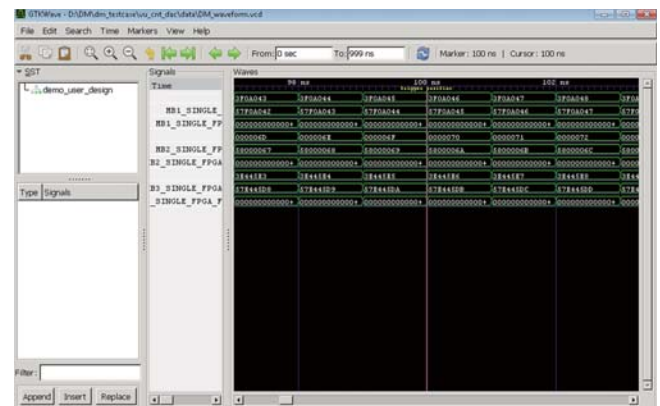
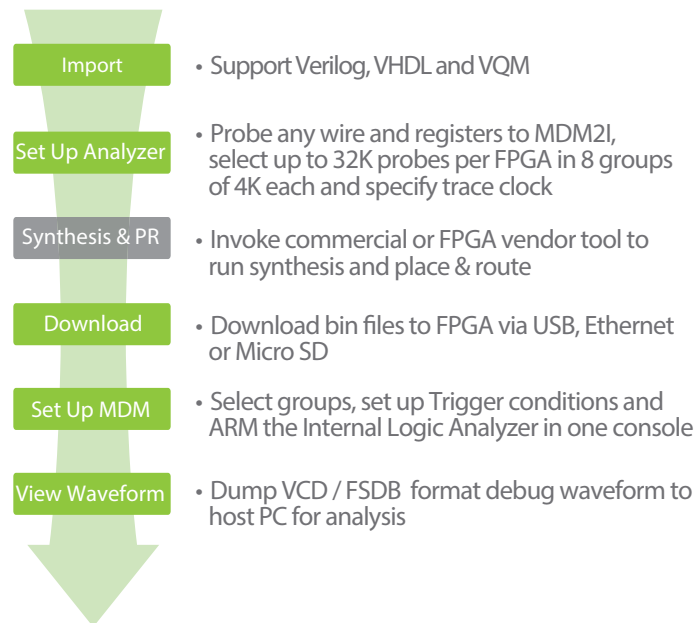
- Store 8GB of waveforms on external MDM2I DDR4 memory
- Transfer captured waveforms to host computer through high-speed Giga-Ethernet cables
- Remove consumption of design FPGA memory for debug
- Capture and store waveforms continuously

### 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 MDM2I hardware through high-speed Gigabit transceivers
- Write the sample data in VCD / FSDB format for analysis

## Integrated with Prototyping Setup Flow

Prodigy MDM2I 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 MDM2I hardware module.



*Concurrent Debugging of Multiple FPGAs in one console*