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OpenVPX™

VR300
TEST RTM WITH ETHERNET SFP

The **VR300** is a Test RTM, typically used during firmware and software development and debugging cycles on the **VF360**. The rear panel contains two mini-USB connectors, a Dual mini-SAS (SFF-8088) connector and a SFP case.

The SFP cage provides a 1Gbps Ethernet connection to the DSP. Copper and optical SFP transceiver modules are supported.

The eight full-duplex High-Speed Serial Interface (HSSI) lanes on the Dual mini-SAS connects to the FPGA on the X8d[1:4] and X12d[1:4] OpenVPX signals. Typical protocols on the mini-SAS is PCIe, XAUI, SRIO, SerialLite II and others.

The FPGA mini-USB connector on the rear panel is part of a USB-Blaster, implemented on the **VF360**, that connects to the FPGA. It provides SignalTap® II and other JTAG based functionality.

The DSP mini-USB connector on the rear panel is part of an XDS100 emulator, implemented on the RTM, that connects to the DSP. It provides in-circuit emulation (ICE) functionality as well as a USB serial port for debugging.

A **VF360** Firmware Reference Design (FRD) provides an AURORA interface on the **VR300** mini-SAS connector for a cable connection to other cards in the same or other racks.

The **VF360** Parsec product is a 3U VPX carrier card with a Stratix® V FPGA, TMS320C667X DSP processor and FMC site.

Specifications

USB-Blaster II Functionality

- Mini USB connector
- Connects to Stratix® V FPGA
- SignalTap® II Logic Analyzer
- FPGA configuration via JTAG
- EPCQ Programming

XDS100 Functionality

- Mini USB connector
- Connect to TMS320C667X DSP
- In Circuit Emulation (ICE)
- USB Serial Port for debugging
- Compatible with Code Composer Studio

Rear Panel Ethernet Characteristics

- 1Gbps Ethernet connection to DSP
- SFP cage supports copper and optical SFP transceiver modules

Rear Panel Mini-SAS Characteristics

- Dual SFF-8088 connector
- 8x full-duplex High-Speed Serial Interface lanes
- Connect to FPGA on X8d[1:4] and X12d[1:4] OpenVPX signals
- Up to 6Gb/s data rate
- Up to 10m cables

Firmware Support

- VF360 Firmware Reference Design (FRD) with AURORA interface on Mini-SAS
- Firmware development services available on request

Application Examples

- FPGA debugging with SignalTap® II Logic analyzer
- DSP debugging and in-circuit emulation with XDS100
- 1Gbps Ethernet connection via SFP
- High-speed serial rear panel connection between cards

Ordering Information

Standard order code = VR300

intel FPGA Design Solutions Network Gold

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Block Diagram

REAR PANEL CONNECTORS

DSP | FPGA | SFP | Dual mini-SAS

USB

XDS100

USB | ETH | 4x HSSI | 4x HSSI

JTAG + EMU

RP0 – RP2

VPX REAR CONNECTORS