V5021
Dual Channel 10 Gigabit Ethernet FPGA PCI Express Card

Benefits

Achieve higher application performance by programming functionality right into the network card

Quickly develop and deploy new products on cost-effective server platforms

Preserve internal R&D efforts with a common platform that scales with new product features

Features

Standard half-length, full-height PCI Express server card

Available in a range of user-programmable Xilinx Virtex-5 FPGA options

High performance SDRAM and SRAM memory architecture

Two 10 Gigabit Ethernet SFP+ optical ports

10/100/1000BASE-T RJ-45 port

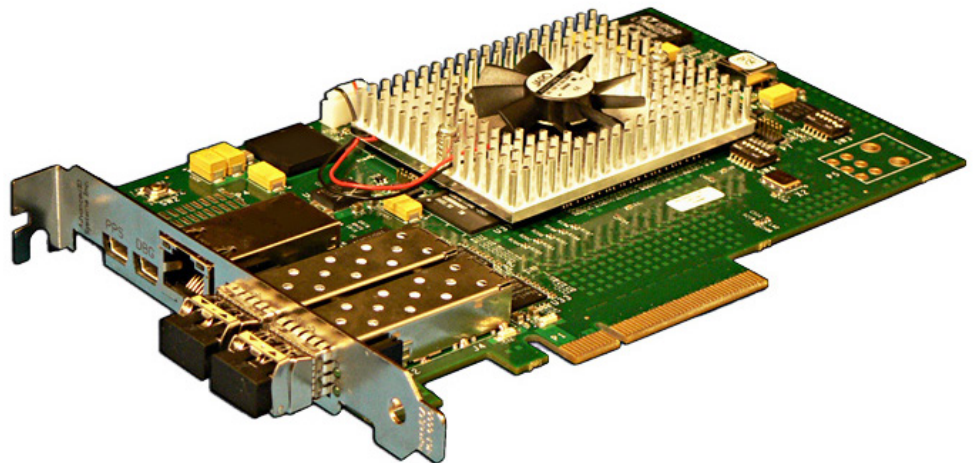Time stamp capability with microsecond resolution

Software in-system programming for field upgrades

Thermal sensors for monitoring card temperature

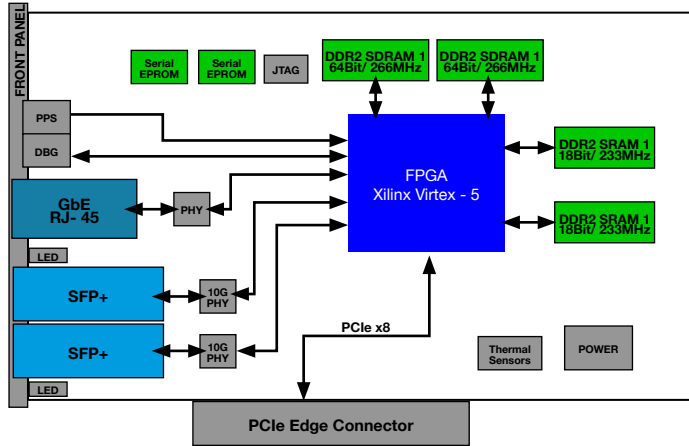RS-232 utility for fast application debuggin

Overview

This PCI Express card features dual 10 Gigabit Ethernet SFP+ optical ports and is available in a range of Xilinx Virtex-5 FPGA options providing scalable processing performance. Its memory architecture is based on multiple independent high-speed SDRAM and SRAM memory interfaces that enable advanced 10 Gigabit Ethernet network traffic processing. The V5021 comes standard with expressXG Development Framework, an advanced infrastructure that gives programmers the advantage to develop their own network security and monitoring applications rapidly and efficiently.

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> V1121 Dual Channel 10GE XMC Block Diagram

Our Commitment

New Wave DV is committed to providing the latest innovations in technology, architectures, and techniques to keep our customers one step ahead of the rest. Our products, complete with expressXG Development Framework, are intended to offer our customers an entirely unique out-of-the-box experience.

Technical Specifications

NETWORK INTERFACE
2 10GBASE-SR or 10GBSASE-LR SFP+ optical ports
10/100/1000BASE-T RJ-45 port

FPGA DEVICE
Xilinx Virtex-5 LX110T, LX220T, LX330T or SX240T

MEMORY
2 banks of 0.5GB or 1GB 64-bit 266MHz DDR2 SDRAM
2 banks of 36Mb or 72Mb 233MHz 2 DDR2 SRAM

FLASH
2 64MB or 128MB memory for storing a default configuration image and a recovery image

HOST INTERFACE
PCI Express x8 supporting 2.5 GT/s

EXTERNAL INTERFACE
PPS interface over USB mini-B type connector for time stamp
RS232 serial interface over USB mini-B type connector for debug

THERMAL SENSORS
2 digital temperature sensors

SYSTEM REQUIREMENTS
X86 64-bit processor 2GHz or better, 1GB memory
Free PCI Express x8 slot

COMPLIANCE
PCI Express Card Electromechanical Specification, Rev 2.0
IEEE 802.3ae 2002 10GBASE LAN
FCC 47 CFR Part 15, Subpart B (USA)
IEC 60950-1 (International)
RoHS Directive 2002/95EC

DIMENSIONS
111.15 mm x 167.65 mm (standard height, half-length)

POWER REQUIREMENTS
Maximum 25W

TEMPERATURE
Operating: 0 to 50° C
Storage: -40° C to 85° C