fb2XGhh@V7 FPGA Card

Dual SFP+ Port 1/10 Gigabit Ethernet PCI Express FPGA Card

Product Description

The fb2XGhh@7 series is a half height high performance OEM hardware platform for 1G and 10 Gigabit Ethernet with dual port SFP+ network interface.

The standard configuration is based on Xilinx Virtex7 VX690T FPGA. The card is also offered with a variety of different FPGAs to provide flexibility for the intended application.

Key Features

Host Interface:

- Physical bus connector: 8-lane PCIe

- PCIe bus type: 1-8 lane PCIe Gen1/Gen2/Gen3

Network Interface:

- IEEE standard: IEEE 802.3 10 Gbit/s Ethernet

- Physical interface: 2 x SFP+ ports

- Supported SFP+ modules: Multimode SR (850 nm), singlemode LR (1310 nm), multimode LRM (1310 nm), singlemode ER (1550 nm) or Direct Attached Copper (Twinax)

- Data rate: 2 x 10 Gbit/s

- Ethernet PHY directly embedded in FPGA for full packet control

Configuration:

- 16 bit fast parallel programming interface from supporting preprogrammed controller

- Configuration flash supports two boot images with automatic fallback to fail safe image if first image fails

- Support for encrypted FPGA bit file (optional)

- Upload of FPGA configuration to flash via PCIe

Technical Specifications

General Technical Specifications	
On Board Clock:	PCIe clock: 100MHz 125 MHz oscillator 156.25 MHz oscillator
On Board Memory:	1 x 64 bit DDR3@1800MT/s 4GB 1 MB user configurable space in flash for permanent storage
FPGA:	fb2XGhh@V7690: Xilinx Virtex7 XC7VX690T-2 fb2XGhh@V7330: Xilinx Virtex7 XC7VX330T-2 Xilinx Virtex7 XC7VX415T (optional)
Environment:	
Physical dimensions:	half length, half height PCIe
Power consumption:	less than 6W with uninitialized FPGA
Operating temperature:	0 – 55°C, 30 – 130°F
Operating humidity:	20 – 80%
Hardware compliance:	RoHS, CE
Passive cooling:	no on-board fan required
Additional Board Support:	On board temperature sensor Board status LED 2 user configurable dual color LED FPGA controlled Link and Activity LED for each port PPS clock synchronization connector
Additional Intellectual Property Support:	Flash configuration I/F 8 lane PCIe DDR3 Memory controller Fast Ethernet MAC (optional) MDIO controller (optional) I2C controller (optional) SPI master I/F (optional) TCP-offload engine (optional)

Order Information

P/N	Description	Notes
fb2XGhh@V7	FPGA Card- Dual SFP+ port card supporting 2x1GE/10GE, half-height, PCIe Gen3 x8 lanes	RoHS Compliant

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