



fb2XGhh@V7 series FPGA Card

Dual Port 10 Gigabit FPGA Card

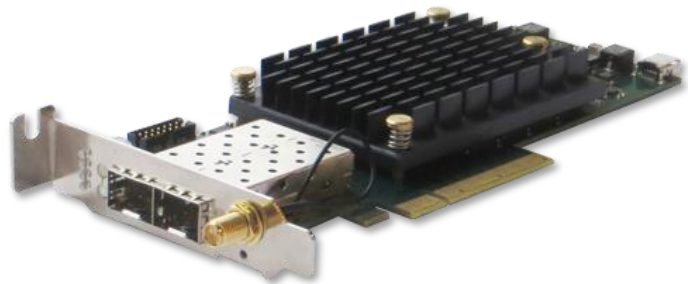
Product Description

The fb2XGhh@V7 series is a half-height high-performance OEM hardware platform for 10G 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

- 2 x SFP+ ports
- 1 x 4GB 64-bit DDR3@1800MT/s
- Configuration flash RAM for boot images
- On-board power and temperature sensors
- FPGA controlled link and status LEDs
- Passive cooling



Technical Specifications

Network Interface	
IEEE standard	IEEE 802.3 10GE
Interfaces	<ul style="list-style-type: none"> ▪ Physical interface: 2 x SFP+ slots ▪ Supported SFP+ modules: Multimode SR (850 nm), single-mode LR (1310 nm), multimode LRM (1310 nm), single-mode ER (1550 nm) or Direct Attached Copper (Twinax) ▪ Data rate: 2 x 10 Gbps ▪ Ethernet PHY directly embedded in FPGA for full packet control
Host Interface	
PCI bus	<ul style="list-style-type: none"> ▪ 1-8 lanes PCIe Gen1/Gen2/Gen3 ▪ PCIe compliant
General Technical Specifications	
Configuration	<ul style="list-style-type: none"> ▪ 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
On-board Memory	<ul style="list-style-type: none"> ▪ 1 x 64-bit DDR3@1800MT/s 4GB ▪ 1 MB user configurable space in flash for permanent storage
On-board Clock	<ul style="list-style-type: none"> ▪ PCIe clock: 100MHz ▪ 125 MHz oscillator ▪ 156.25 MHz oscillator

FPGA Versions Available	<ul style="list-style-type: none"> ▪ Xilinx Virtex7 XC7VX690T-2 ▪ Xilinx Virtex7 XC7VX330T-2 ▪ Xilinx Virtex7 XC7VX415T (optional) 	
Environment	<ul style="list-style-type: none"> ▪ 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	<ul style="list-style-type: none"> ▪ On-board temperature sensor ▪ Board status LED ▪ Two user configurable dual color LED ▪ FPGA controlled Link and Activity LED for each port ▪ PPS clock synchronization connector 	
Additional IP Modules	<ul style="list-style-type: none"> ▪ 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) 	
Ordering Information	fb2XGhh@V7330	Half height bracket
	fb2XGhh@V7330-F	Full height bracket

v2.2

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