



The fb4XG@V6240 is a high performance OEM hardware platform for 10G Ethernet with a quad port SFP+ network interface.

The standard configuration is based on the Xilinx Virtex6 LX240T FPGA. The card is also offered with a variety of different FPGAs to provide flexibility for the intended application.

As an optional feature, the card can be fitted with two SATA connectors which can provide connectivity to a wide range of standard storage devices directly to the FPGA card.

HOST INTERFACE

- Physical bus connector: 8-lane PCIe
- PCIe bus type: 1-8 lane PCIe Gen1/Gen2

NETWORK INTERFACE

- IEEE standard: IEEE 802.3 10 Gbit/s Ethernet
- Physical interface: 4 SFP+ ports
- 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: 4 x 10 Gbit/s
- RXAUI interface between FPGA and quad Ethernet PHY

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

ON-BOARD MEMORY

- 2 x 64-bit DDR3@1066MT/s 4 GB (total 8 GB memory)
- 1 MB user configurable space in flash for permanent storage

ON-BOARD CLOCK

- PCIe clock: 100MHz
- 25MHz oscillator
- 156.25 MHz oscillator
- 150 MHz oscillator for SATA connector (optional)

CARD/FPGA VERSIONS AVAILABLE

- fb4XG@V6240: Xilinx Virtex6 LX240T-2
- Xilinx Virtex6 LX130T (optional)
- Xilinx Virtex6 LX195T (optional)

CARD/FPGA VERSIONS AVAILABLE (continued)

- Xilinx Virtex6 LX365T (optional)
- Xilinx Virtex6 SX315T (optional)
- Xilinx Virtex6 SX475T (optional)

ENVIRONMENT

- Physical dimensions: Half length, standard height PCIe
- Power consumption: Less than 10 Watts with uninitialized FPGA
- Operating temperature: 0 – 55 °C, 32 – 131 °F
- Operating humidity: 20 – 80%
- Hardware compliance: RoHS, CE
- Passive cooling (no on-board fan required)
- Active cooling (optional)

ADDITIONAL BOARD SUPPORT

- On-board temperature sensor
- Board status LED
- 3 user configurable dual color LED
- FPGA controlled Link and Activity LED for each port
- PPS clock synchronization connector
- 2 x SATA connector (optional)

ADDITIONAL INTELLECTUAL PROPERTY MODULES

- Flash configuration I/F
- DDR3 memory controller
- 8 lane PCIe
- MDIO controller (optional)
- Ethernet MAC (optional)
- I²C controller (optional)
- SPI master I/F (optional)
- TCP-offload engine (optional)

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Dedication to Performance