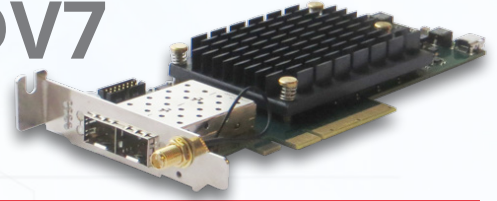


# Silicom Denmark A/S

## fb2XGhh@V7 series

FPGA SOLUTIONS



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.

### 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

### ON-BOARD MEMORY

- 1 x 64-bit DDR3@1800MT/s 4 GB
- 1 MB user configurable space in flash for permanent storage

### ON-BOARD CLOCK

- PCIe clock: 100MHz
- 125 MHz oscillator
- 156.25 MHz oscillator

### CARD/FPGA VERSIONS AVAILABLE

- 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 MODULES

- Flash configuration I/F
- 8 lane PCIe
- DDR3 Memory controller
- Fast Ethernet MAC (optional)
- MDIO controller (optional)
- I<sup>2</sup>C controller (optional)
- SPI master I/F (optional)
- TCP-offload engine (optional)

Silicom Denmark A/S  
Poppelgaardvej 11  
DK-2860 Soeborg  
Denmark  
Phone +45 46 32 74 55  
contactus@silicom.dk

Silicom Ltd.  
International Headquarters  
14 Atir Yeda St.  
Kfar Sava 4464323,  
Israel  
Tel: (972)-9-764-4555

Silicom Connectivity Solutions Inc.  
USA Office  
6 Forest Ave, Paramus  
New Jersey 07652  
USA  
Tel: 18004silicom (Toll Free no.)

**Dedication to Performance**