



### fb4G@V6130 FPGA Card

### Quad Port 1 Gigabit FPGA Card

#### Product Description

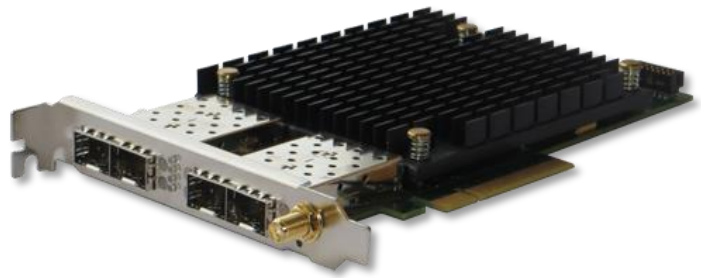
The fb4G@V6130 is a high-performance OEM hardware platform for 1G Ethernet with a quad port SFP network interface.

The standard configuration is based on the Xilinx Virtex6 LX130T 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.

#### Key Features

- 4 x SFP ports
- 2 x 2GB 64-bit DDR3@1066MT/s
- Configuration flash RAM for boot images
- On-board power and temperature sensors
- FPGA controlled link and status LEDs
- Passive cooling and active cooling alternative available



#### Technical Specifications

Network Interface	
IEEE standard	IEEE 802.3 1GE
Interfaces	<ul style="list-style-type: none"> <li>▪ Physical interface: 4 x SFP slots</li> <li>▪ 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)</li> <li>▪ Data rate: 4 x 1 Gbps</li> </ul>
Host Interface	
PCI bus	<ul style="list-style-type: none"> <li>▪ 1-8 lanes PCIe Gen1/Gen2</li> <li>▪ PCIe compliant</li> </ul>
General Technical Specifications	
Configuration	<ul style="list-style-type: none"> <li>▪ 16-bit fast parallel programming interface from supporting preprogrammed controller</li> <li>▪ Configuration flash supports two boot images with automatic fallback to fail safe image if first image fails</li> <li>▪ Support for encrypted FPGA bit file (optional)</li> <li>▪ Upload of FPGA configuration to flash via PCIe</li> </ul>
On-board Memory	<ul style="list-style-type: none"> <li>▪ 2 x 64-bit DDR3@1066MT/s 2GB (total 4GB memory)</li> <li>▪ 1 MB user configurable space in flash for permanent storage</li> </ul>
On-board Clock	<ul style="list-style-type: none"> <li>▪ PCIe clock: 100MHz</li> <li>▪ 25 MHz oscillator</li> <li>▪ 125 MHz oscillator</li> <li>▪ 150 MHz oscillator for SATA connector (optional)</li> </ul>

<b>FPGA Versions Available</b>	<ul style="list-style-type: none"> <li>▪ Xilinx Virtex6 LX130T-2</li> <li>▪ Xilinx Virtex6 LX240T-2 (optional)</li> <li>▪ Xilinx Virtex6 LX365T (optional)</li> <li>▪ Xilinx Virtex6 LX195T (optional)</li> <li>▪ Xilinx Virtex6 SX315T (optional)</li> <li>▪ Xilinx Virtex6 SX475T (optional)</li> </ul>	
<b>Environment</b>	<ul style="list-style-type: none"> <li>▪ Physical dimensions: half length, standard height PCIe</li> <li>▪ Power consumption: less than 7W with uninitialized FPGA</li> <li>▪ Operating temperature: 0 – 55°C, 32 – 131°F</li> <li>▪ Operating humidity: 20 – 80%</li> <li>▪ Hardware compliance: RoHS, CE</li> <li>▪ Passive cooling (no on-board fan required)</li> <li>▪ Active cooling (optional)</li> </ul>	
<b>Additional Board Support</b>	<ul style="list-style-type: none"> <li>▪ On-board temperature sensor</li> <li>▪ Board status LED</li> <li>▪ 3 user configurable dual color LED</li> <li>▪ FPGA controlled Link and Activity LED for each port</li> <li>▪ PPS clock synchronization connector</li> <li>▪ 2 x SATA connector</li> </ul>	
<b>Additional IP Modules</b>	<ul style="list-style-type: none"> <li>▪ Flash configuration I/F</li> <li>▪ 8 lane PCIe</li> <li>▪ DDR3 Memory controller</li> <li>▪ Fast Ethernet MAC (optional)</li> <li>▪ MDIO controller (optional)</li> <li>▪ I2C controller (optional)</li> <li>▪ SPI master I/F (optional)</li> <li>▪ TCP-offload engine (optional)</li> </ul>	
<b>Ordering Information</b>	fb4G@V6130	Xilinx Virtex6 LX130T-2

v2.2

**www.silicom-usa.com**

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.)

**www.silicom.dk**

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