



FB2CG@S10GX2100 FPGA Card

Dual port QSFP28 200 Gigabit Ethernet, PCIe Gen3 x16 Intel® Stratix 10GX Based

Product Description

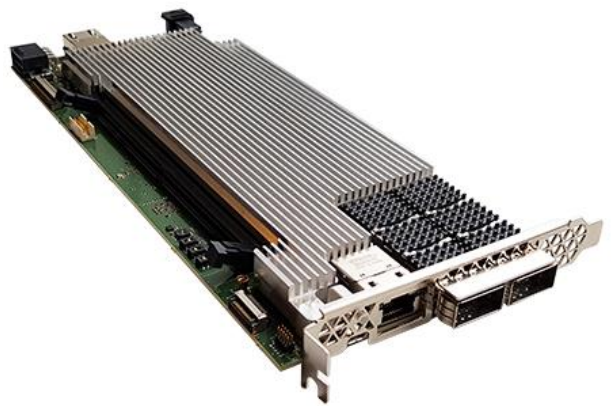
The FB2CG@S10GX2100 is a high performance OEM FPGA hardware platform intended for 10/25/40/100 GbE with dual port QSFP28 network interface.

The standard configuration is based on Intel® Stratix 10GX FPGA. The card is also offered with a variety of different FPGAs and memory configurations to provide flexibility for the intended application.

The FB2CG@S10GX2100 is capable as PCIe Gen3 x16 or Gen4 x8 and 200G board to board capability (FireFly).

The FB2CG@S10GX2100 is targeted for network applications such as Data center and Cloud computing, high performance computing, military and defense, finance, broadcast and video.

For more options on alternate hardware configuration see ordering information or contact Silicom.

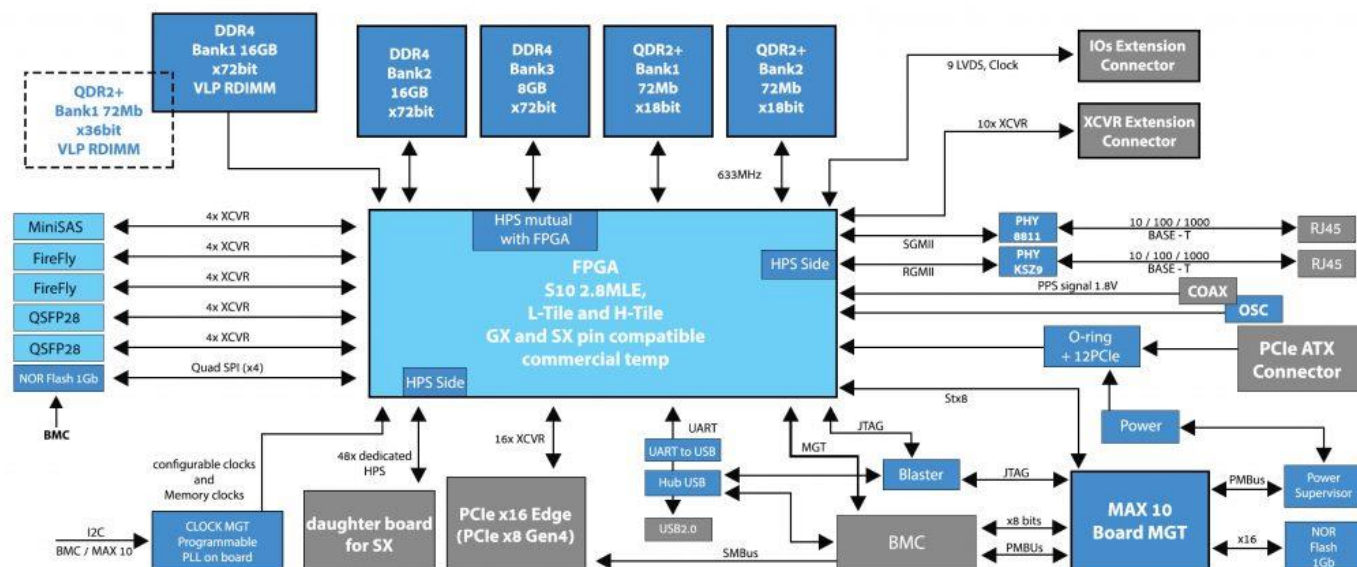


Key Features

- Full height PCIe board using Intel® Stratix 10GX or SX 2100 KLE
- Designed for acceleration and low latency applications
- PCIe Gen3 x16, Gen4 x8 capable
- 2 independent banks on board DDR4
- 2 independent banks on board QDR2+Xtrem
- 1 RDIMM Memory expansion connector
- Dual QSFP28 optical cages, 10/25/40/100 GbE ports
- 200G board to board capability (FireFly)
- Board management controller (BMC) with IPMI features
- IO and transceiver extension connectors



Technical Specifications



Network Interface:	
IEEE standard:	High precision oscillator, clock accuracy 20MHz- 0.05ppm for Precision Time Protocol (PTP) IEEE 1588
Physical interface:	2x QSFP28 quad optical cage (2 x 4 XCVR : 17 Gb/s or 28 Gb/s per link) 2x FireFly SAMTEC quad connector (17 Gb/s or 28Gb/s each XCVR) – 1 FireFly connected to 100G IP
Host interface:	Board Management Controller (BMC) for monitoring, EPCQ and clock programming, IPMI features
Communication Interface:	
PCIe bus type:	PCI Gen3 x16 (Gen4 x8 capable)
On Board Memory:	
On Board Memory:	1x bank VLP RDIMM 25° socket with the option of <ul style="list-style-type: none"> • DDR4 16GBytes, x72bit, up to 2400 MT/s • 1x bank QDR2+ Xtrem 2 chips 72Mbit, x36bit, up to 633MHz • Custom RDIMM on request 1x bank DDR4, 16GBytes, x72bit, up to 2400MT/s 1x bank DDR4, 8GBytes, x72bit, up to 2400MT/s (HPS bank mutual with FPGA) 2x banks QDR2+ Xtrem 72Mbit each x18bit, up to 633MHz
Environment:	
Physical dimensions:	254mm x 111.15mm
Weight:	0°C to 40°C
Storage Temp Range:	0°C to 70°C

Power:	<ul style="list-style-type: none"> • Max 240W, Delivered with a custom 1 slot PCIe passive heat-sink • 8-pin ATX Power supply connector with Oring protection
General Technical Specifications:	
FPGA Configurations:	<ul style="list-style-type: none"> • Stratix 10 GX, L-tile and H-tile compatible • 10M16SAU169I7G MAX10 CPLD • USB2.0 Micro connector for JTAG, UART and BMC design • 1x Nor Flash 1GB quad SPI FPGA AS configuration • 1x Nor Flash 1GB for configuration mode ST8
Additional Card Support:	Board Support Package (Manuals, HDL test Designs, Extension connectors FPGA pinout connection)
General Technical Specifications:	
Operating system support:	<ul style="list-style-type: none"> • Kernel Linux support, U-boot bootloader and comprehensive user documentation • Operating System Support (Software package support for DDR4 SDRAM, eMMC flash, Quad SPI flash, USB host, Gigabit Ethernet, U-boot bootloader and comprehensive user documentation)

Order Information

P/N	Description	Notes
FB2CG@S10GX2100-2-0-P	FPGA Intel® Stratix 10 GX 2100 «Turbo L-Tile» version, No RDIMM module, Passive cooled	<ul style="list-style-type: none"> • RoHS/REACH Compliant • UL certified • ISO9001 Facility

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