



fbC8XG Capture Card

Dual QSFP+ Port 10 Gigabit Ethernet PCI Express Capture Card

Product Description

The Fiberblaze fbC8XG Card with fbCAPTURE API is a high port density packet capture and processing PCIe device. It performs at full line rate with zero packet loss on all eight 10GE ports, with a wide variety of functions.

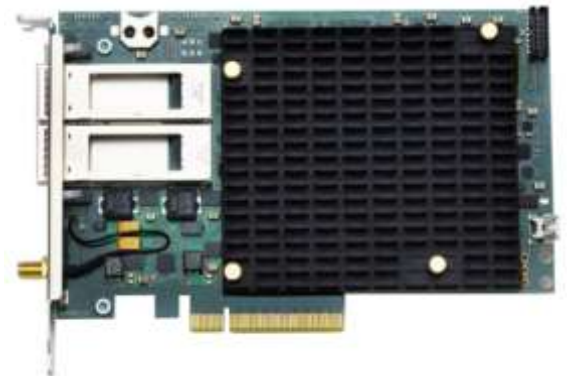
The card's high port density is ideal for the data capture, processing, inline applications and special purpose function of fbCAPTURE.

With the high port density, it imbues applications with unprecedented scalability by offering traffic load balancing using the Tx channels of the ports. In a simple star architecture it can load balancing across 8 additional external processing appliances, as well as via DMA to the card's host appliance itself.

Based on powerful FPGA Hardware technology, fbC8XG is a high performance OEM hardware platform intended for 10GE interfacing. Via its dual QSFP+ slots fitted with fanout modules it exposes all eight bidirectional 10GE interfaces of the QSFP+ ports.

With its PCIe Gen3 support, it features unrivaled performance in transfers to and from host systems.

The fbC8XG is part of the fbCAPTURE family which provides a powerful and flexible Software API, as well as standard libpcap integration. Through the integration of fbCAPTURE API, applications gain support for all fbCAPTURE cards, covering Ethernet speeds from 1GE to 100GE.



Key Features

- 10 Gbit/s Ethernet, IEEE 802.3
- 8 x 10GE ports via 2 x QSFP+ ports
- Capture at full line rate on all interfaces
- Precision timestamping
- 3.2 nano second resolution
- Micro second latency
- PCIe Gen3, 8 lanes

- fbCAPTURE API
- Hardware filtering and distribution
- Application acceleration and scalability
- 64 logical channels to DMA or egress via Tx

Technical Specifications

Network Interface:	
IEEE standard:	IEEE 802.3 10 Gbit/s Ethernet
Physical interface:	2 x QSFP+ ports
Data rate:	8 x 10 Gbit/s
Supported QSFP+ modules with 4x10GE fan-out:	4-channel 10GBASE-SR fan-out 4-channel 10GBASE-LR fan-out QSFP+ Fanout to 4 x 10G SFP+ DAC
Host Interface:	
Physical bus connector:	8-lane PCIe
PCIe bus type:	1-8 lane PCIe Gen1/Gen2/Gen3
On Board Memory:	8 GB (2x4GB 64 bit DDR3)
Performance:	
Capture rate (card internal):	Full line rate
Capture rate (bursts):	Full line rate
Capture rate (sustained):	55 Gbps
Transmission rate (inline host DMA):	40 Gbps
Transmission rate (inline bypass):	68 Gbps
Transmission rate (daisy chain):	Full line rate

General Technical Specifications	
Latency:	Less than 3 μ s to host memory Less than 3 μ s from host memory to Tx Non-blocking sending, allowing user applications to operate independently
Time Stamping & Sync:	Resolution = 3.2 ns Accuracy down to 20 ns Optional external synchronization via PPS Customization for PTP IEEE 1588-2008 RJ45 Master/slave time sync between multiple cards
Environment:	
Physical dimensions:	Half length, standard height
PCIe:	111 x 169 mm
Weight:	292g
Operational power consumption:	Less than 39W
Operating temperature:	0 – 55°C, 30 – 130°F
Operating humidity:	20 – 80%
Hardware compliance:	RoHS, CE
Additional Board Support:	fbCAPTURE API On-board temperature sensor Internal board multi-color status LED Link and Activity LED for each port

Order Information

P/N	Description	Notes
fbC8XG	Dual QSFP+ port card supporting 8x10G Ethernet, PCIe Gen3 x8 lanes	RoHS Compliant
fbC8XG-SR	Dual port (SR) card supporting 8x10G Ethernet, PCIe Gen3 x8 lanes	RoHS Compliant
fbC8XG-LR	Dual port (LR) card supporting 8x10G Ethernet, PCIe Gen3 x8 lanes	RoHS Compliant

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