



fbC4XG Capture Card

Quad Port SFP+ 10 Gigabit Ethernet PCI Express Capture Card

Product Description

The Fiberblaze fbC4XG is a 4x10GE capture card that can capture and filter on four interfaces while providing the full suite of features offered via fbCAPTURE API.

It is a high performance OEM hardware platform with four SFP+ ports, allowing for optimal flexibility in connectivity. The card allows utilization of the transmission capabilities of these in conjunction with fbCAPTURE features.

The bandwidth of PCIe Gen2 (8-lane) can provide a card-to-host memory throughput capable of supporting at least 25 Gbit/s of sustained traffic capture load.

The card itself support capture and processing at full line rate on all interfaces (40Gbps). It is capable of handling traffic bursts, exceeding the PCIe bandwidth, through its on-board memory buffer.

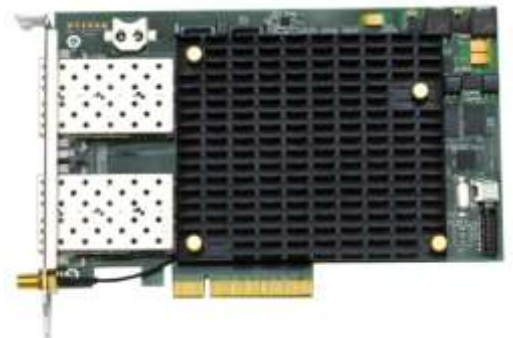
In solutions where only a subset of the traffic is to be captured to host memory, or for monitoring networks operating at less than high loads, this is a cost effective alternative to more powerful boards.

It is ideal for interfacing to network links in a redundant configuration as it fully supports one active link set at full line rate (20 Gbps).

The fbC4XG 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
- 4 x 10GE ports via 4 x SFP+ ports
- Full line rate for processing and burst capture
- Ideal for Active/Standby 10GE Links
- Capture to host memory at 25 Gbit/s
- Precision timestamping



- 3.2 nano second resolution
- Micro second latency
- fbCAPTURE API
- Hardware filtering and distribution
- Application acceleration and scalability
- 64 logical channels to DMA or egress via Tx

Technical Specifications

Host Interface:	
Physical bus connector:	8-lane PCIe
PCIe bus type:	1-8 lane PCIe Gen1/Gen2
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):	25 Gbps
Transmission rate (inline host DMA):	25 Gbps
Transmission rate (inline bypass):	Full line rate
Transmission rate (daisy chain):	Full line rate
General Technical Specifications	
Latency:	Less than 3.5 μ s to host memory Less than 3.5 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 External synchronization via PPS

	Customization for PTP IEEE 1588-2008 RJ45 Master/slave time sync between multiple cards
Network Interface:	
IEEE standard:	IEEE 802.3 10 Gbit/s Ethernet
Physical interface:	4 x SFP+ ports
Supported SFP+ modules:	Multimode SR (850 nm) Multimode LRM (850 nm) Singlemode LR (1310 nm) Singlemode ER (1310 nm) Singlemode ZR (1310 nm) Direct Attached Copper (Twinax)
Data rate:	4 x 10 Gbit/s
Environment:	
Physical dimensions:	Half length, standard height
PCIe:	111 x 169 mm
Weight:	268g
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 4 Multi-color status LEDs Link and Activity LEDs for each port

Order Information

P/N	Description	Notes
fbC4XG	Quad port SFP+ card supporting 4x10 Gigabit Ethernet, PCIe Gen2 x8 lanes	RoHS Compliant
fbC4XG-SR	Quad port (SR) card supporting 4x10 Gigabit Ethernet, PCIe Gen2 x8 lanes	RoHS Compliant
fbC4XG-LRM	Quad port (LRM) card supporting 4x10 Gigabit Ethernet, PCIe Gen2 x8 lanes	RoHS Compliant
fbC4XG-LR	Quad port (LR) card supporting 4x10 Gigabit Ethernet, PCIe Gen2 x8 lanes	RoHS Compliant
fbC4XG-ER	Quad port (ER) card supporting 4x10 Gigabit Ethernet, PCIe Gen2 x8 lanes	RoHS Compliant
fbC4XG-ZR	Quad port (ZR) card supporting 4x10 Gigabit Ethernet, PCIe Gen2 x8 lanes	RoHS Compliant
fbC4XG-DA	Quad port (DA) card supporting 4x10 Gigabit Ethernet, PCIe Gen2 x8 lanes	RoHS Compliant

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