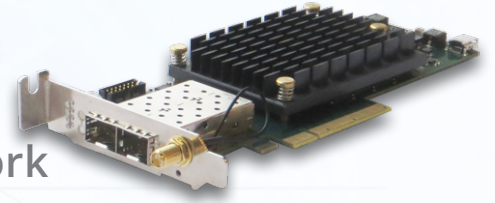


Silicom Denmark A/S

fbC2XGhh

supporting the fbCAPTURE framework

FPGA SOLUTIONS



The Silicom fbC2XGhh card is a 2 x 1/10GE capture solution that performs at full line rate with zero packet loss, on both interfaces.

The card is based on the successful four port, full-height fbC4XGg3 card. Similar to the full-height version, the 2 x 1/10GE card uses PCIe Gen3, ensuring that no bottlenecks will affect the packet capture to host memory capability. Supporting both 1GE and 10GE adds flexibility in deployments and simplifies configuration of devices.

It is a high performance OEM hardware platform with dual SPF/SFP+ ports, and with a form factor of half-height and half-length, it provides a high level of flexibility for integrating into almost any host platform.

NETWORK INTERFACE

- IEEE standard: IEEE 802.3 1/10 Gbit/s Ethernet
- Physical interface: 2 x SFP/SFP+ ports
- Supported SFP/SFP+ modules:
 - » RJ45 copper
 - » Multimode SX/SR (850 nm)
 - » Multimode LRM (850 nm)
 - » Singlemode LX/LR (1310 nm)
 - » Singlemode ER (1310 nm)
 - » Singlemode ZR (1310 nm)
 - » Direct Attached Copper (Twinax)
- Data rate: 2 x 1/10 Gbit/s.
- Ethernet PHY directly embedded in FPGA for full packet control

HOST INTERFACE

- Physical bus connector: 8-lane PCIe
- PCIe bus type: 1-8 lane PCIe Gen1/Gen2/Gen3
- PCIe compliant
- 64 logical channels that can be connected to DMA or egressed to physical output ports

ON-BOARD MEMORY

- 4 GB (1 x 4 GB 64-bit DDR3)

PERFORMANCE

- Capture rate (card internal): Full line rate
- Capture rate (bursts): Full line rate
- Capture rate (sustained): Full line rate
- Transmission rate (inline host DMA): Full line rate
- Transmission rate (inline bypass): Full line rate
- Transmission rate (daisy chain): Full line rate

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 AND SYNC

- Resolution = 3.2 ns
- Accuracy down to 20 ns
- Optional external synchronization via PPS
- Master/slave time sync between multiple cards

CONFIGURATION

- Dual boot images with automatic fallback to fail-safe image
- Full firmware upgrades via supplied tools or fbCAPTURE API

ENVIRONMENT

- Physical dimensions: Half length, half height
- PCIe: 111 x 169 mm
- Weight: 238 g
- Operational power consumption: Less than 39W
- 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

- fbCAPTURE API
- PF_RING and nTop suite support
- DPDK support
- libPCAP support
- On-board temperature sensor
- Multi-color status LEDs
- Link and Activity LEDs for each port

ORDERING INFORMATION

fbC2XGhh-H	Half height bracket, full height bracket spare
fbC2XGhh-F	Full height bracket, half height bracket spare

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.)	<h2 style="color: red;">Dedication to Performance</h2>
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