10G-PCIE2-8C2-2S-SYNC

Two-Port 10-Gigabit Ethernet Timecode-Enabled Network Adapters

TARGET MARKETS

10G-PCIE2-8C2-2S-SYNC network adapters are designed for applications where accurate timestamping, lossless packet sniffing and injection at line rate, and cutting edge latencies are required. These adapters are sold bundled with software to achieve optimum performance in specific vertical markets:

• Sniffer10G™ for Cybersecurity (optional)
10G-PCIE2-8C2-2S-SYNC adapters with Sniffer10G™ software provide the lossless packet capture and packet replay performance that is critical for cybersecurity and network monitoring applications. Myricom's solution provides a cost effective, high performance solution for even the most demanding installations.

• DBL™ for HIgh Frequency Trading (optional)
With DBL™ software running on 10G-PCIE2-8C2-2S-SYNC network adapters, end users can expect unmatched networking performance for UDP multicast and TCP order execution, all over industry-standard 10-Gigabit Ethernet. Users can achieve extreme performance without rewriting their applications or resorting to specialty networks.

• MVA™ for Industrial Imaging (optional)
10GBASE-T adapters with Myricom's MVA™ software provide a high-performance platform for GigE-Vision-enabled devices for machine vision applications including video surveillance, high-speed industrial imaging and quality control inspection within medical, semiconductor fabrication, food & beverage and automotive industries.

FEATURES

- Compatible with IRIG-B00X timecode formats
- Wire-speed performance from both network ports concurrently
- Firmware-controlled stateless offloads
- 2 million hour MTBF (500 FIT)

BENEFITS

- Connects to CDMA or GPS timecode sources, providing timestamps traceable back to UTC
- Allows synchronization with other 10G-PCIE2-8C2-2S-SYNC network adapters
- Increased throughput performance and low host-CPU utilization achieved with stateless offloads
- SFP+ sockets for 10GBase-SR, LR and LRM modules, as well as cost-effective Direct Attach copper* and EOE cables
- Latency performance equal to Myricom's lowest latency product: 10G-PCIE2-8C2-2S

TIMECODE SYNCHRONIZATION

Timecode-based synchronization provides more accurate time information than other approaches such as precision time protocol (PTP) and network time protocol (NTP).

Timecode-based synchronization is not subject to network delays, doesn't require a dedicated Ethernet network for time distribution, is easier to deploy and maintain, and allows full use of both adapter ports while maintaining timestamp accuracy.

*Myricom-certified DAC cables are supported.

CSPI

CSP, Inc. (CSPI) recently acquired Myricom, a technology leader in extreme-performance 10GbE solutions specialized for vertical markets. Myricom products deliver wire-speed UDP and TCP throughput, with optional firmware-accelerated offloads for financial trading, packet capture and injection, video streaming and IPTV, and other performance-sensitive applications.

For additional information, please visit www.myricom.com

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HOST PORT INTERFACE SPECIFICATIONS

Bus Interface

- PCI Express Gen2 (5 GT/s) x8

Optional PCI Express capabilities supported

Advanced Error Reporting, Function-Level Reset, Device Serial Number, up to 16 outstanding read requests, up to 2KB MaxPayloadSize for all packet types, MSI and MSI/X, SMBus access.

Compliance

- PCI Express Card Electromechanical Specification Rev. 2.0
- PCI Express Base Specification Rev. 2.0 at 5GT/s or 2.5 GT/s

TIMESTAMPING SPECIFICATIONS

- Timestamp precision: 1000ns
- Timestamp resolution: 500ns
- Maximum offset relative to timecode input: 15ns

ETHERNET SPECIFICATIONS

Throughput

- ~9.9 Gb/s with a 9KB MTU or ~9.5 Gb/s with a 1500B MTU per port

Ethernet Frame

- 1500 byte or 9000 byte MTU

Compliance

- IEEE 802.3x

Stateless offloads

- IP and TCP checksum offload, send and receive
- TSO (TCP Segmentation Offload, also known as Large Send Offload)
- LRO (Large Receive Offload)
- RSS (Receive-Side Scaling)
- Interrupt Coalescing
- Multicast filtering

MYRICOM SOFTWARE

- Myri10GE for Content Creation and high throughput video editing (included)
- Sniffer10G™ for lossless packet capture and injection at line rate in cybersecurity (optional)
- DBL™ for extremely low UDP and TCP communication latency in financial trading (optional)
- VideoPump™ for IPTV and video streaming (optional)
- MVA™ for machine vision cameras (optional)

PHYSICAL CHARACTERISTICS

Ports

- 10G-PCIE2-8C2-2S: dual 10Gb/s Ethernet

Timecode input

- SMB connector with internal 50Ω termination

Form Factor

- Low-profile PCI Express x8 add-in card
- 68.9mm x 167mm exclusive of the PCI faceplate
- Total thickness: 22mm
- Weight: 105.7g (0.233lb), inclusive of standard PCI faceplate

POWER

	Typical	Maximum
Direct Attach	14.8W	16.3W
SFP+ SR/LR	15.0W	16.5W
SFP+ LRM	16.5W	18.0W

ENVIRONMENTAL SPECIFICATIONS

Temperature

- Operating: 0°C to 55°C (32°F to 131°F) up to 10,000 foot altitude with 100LFM minimum airflow
- Storage: -40°C to 70°C (-40°F to 158°F)

Humidity

- Relative humidity (non-condensing): 15% to 80% @ 50°C
- Storage: Relative humidity 90% @ 65°C

Maximum Cable Distances

- SFP+ Direct Attach cables up to 7m
- SR, LR, and LRM length per IEEE specification

REGULATORY APPROVALS, COMPLIANCE

EMI and EMC (Class A)

- USA, Canada, Europe, Australia/New Zealand, Japan

Compliance

- TAA
- Reduction of Hazardous Substances (RoHS)

Laser Safety

- Class 1 when used with 10GBase-SR, 10GBase-LR or 10GBase LRM SFP+ transceivers

COUNTRY OF ORIGIN

- USA

ORDERING INFORMATION/ PRODUCT CODES

10G-PCIE2-8C2-2S-SYNC (dual port)

- Ships with standard-height PCI faceplate; low-profile faceplate included
- Does not include an SFP+ fiber transceiver or SFP+-terminated “Direct Attach” twinax copper cables

For additional information, please visit www.myricom.com