IOI Technology Corporation

GE10-PCIE4XG202

Multi-Gigabit (10G/5G/2.5G/1000BASE-T/100BASE-TX) Ethernet to PCI Express x4 Gen 2 Host Card

Highlights

- Host Bus: PCIe x4 Gen 2 (20.0 Gb/s), Low-Profile PCI Form Factor
  - Compliant with PCI Express Base Specification Revision 2.0
- IEEE 802.3an 10G, 1G and 100M over up to 100m of Cat6a (or better) cables
- IEEE P802.3bz 10G, 5G, 2.5G, 1G and 100M on Cat5e (or better) cables
- 16K Jumbo Frames
- IP, TCP, UDP checksum offloading
- IEEE 802.1Q Tagged VLAN
- Virtual NIC support
- Reduced CPU utilization and improved throughput
- Provides lock mechanism for screw locking Type Ethernet Cable

Introduction

GE10-PCIE4XG202 is 10G/ 5G/ 2.5G/ 1000BASE-T/ 100BASE-TX Ethernet to PCI Express x4 Gen 2 Host Card.

Designed to support high-volume enterprise wireless local area network (WLAN) OEM systems requiring multi-Gigabit Ethernet connectivity, such as 802.11ac Wave 2 wireless access points, the GE10-PCIE4XG202 adapter reference design offers a low-power, small form factor and low cost solution enabling pervasive NBASE-T™ connectivity. NBASE-T™ technology boosts the speed of broadly deployed Cat5e twisted pair copper cabling up to 100 meters in length well beyond the designed limits of 1Gbps.

The GE10-PCIE4XG202 design supports auto-negotiation allowing the NBASE-T™ solution to optimally select the best speed: 10 Gigabit Ethernet (10GbE), 5 Gigabit Ethernet (5GbE), 2.5 Gigabit Ethernet (2.5GbE), 1Gigabit Ethernet (GbE) or 100 Megabit Ethernet (100MbE) over Cat5e/Cat6 or better cabling.

Technical Specifications

PCI Express	• PCI Express Rev 2.0 specification (5 GT/s) • PCI Express Gen2 x4 Host Bus interface

Ethernet Feature	• 10 Gigabit performance
	• Ethernet and Media support
	    • Jumbo frame support (16K)
	    • Full IEEE Std 802.3ae Compliant
	    • 10G/ 5G/ 2.5G/ 1000M/ 100M auto negotiation support
	    • IEEE 802.1Q VLAN
	    • RFC 2819 RMON MIB Statistics
	    • Multicast
	    • IEEE 802.3ad Link Aggregation
	• Performance enhancements
	    • Microsoft Scalable Networking
	    • Receive-side scaling (RSS)
	    • MSI
	    • IP, TCP and UDP checksum offloading
	    • Large Send (up to 64 KB)
	    • Low Latency (< 4 uS)
	• 100-meter over Cat 6A at 10G
	• 100-meter over Cat 5e and Cat 6 at 5G/ 2.5G/ 1G/ 100M

Power Input	• Voltage: 3.3V
	• Power consumption (Full bidirectional traffic, 100m cable):
	    • 10G speed: 6.1W
	    • 5G speed: 3.6 W
	    • 2.5G speed: 3.0W
	    • 1G speed: 2.7W
	    • 100M speed: 2.5W

LED Indicators	• Link / Activity
Number of Port	• One 10GBASE-T RJ45 port with Screw Holes for thumbscrew locking Type Ethernet Cable

Contact us

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