PCIe-PoE572bt

Wide-temperature 2-port 10GBASE-T Network Adapter with IEEE 802.3bt PoE++ supporting RDMA (RoCEv2), -25°C ~ 70°C with airflow

PCIe-N572

PCIe-PoE572bt

Key Features

· **Two 10GBASE-T with RDMA over Converged Ethernet (RoCEv2) by Broadcom 57416 controller**
· **Compliant with IEEE 802.3bt PoE++ to deliver 90W each port (total 180W)**
· **Rugged, -25°C to 70°C operation**
· **Single-slot low-profile/ standard-height PCIe card form factor**
· **Gen3 x4 PCIe interface**
· **Per-port PoE++ power on/off control via API**
· **Supports 10GbE with CAT 6a cable (Max. 100 meters)**
· **Supports up to 9.6KB Jumbo frames**

Introduction

The PCIe-PoE572bt is a rugged, wide-temperature dual-port 10G network adapter equipped with Remote Direct Memory Access (RDMA) and IEEE 802.3bt PoE++ support. Powered by the Broadcom® BCM57416 Ethernet controller, it supports jumbo frames up to 9.6 KB, making it ideal for applications such as RDMA-enabled cameras and outdoor Wi-Fi access points (APs).

As demand for 10 GigE industrial cameras grows in machine vision, traditional systems often suffer from high CPU usage due to packet handling and error checking. The PCIe-PoE572bt addresses this challenge with RDMA technology, reducing CPU usage by up to 90% compared to TCP/UDP protocols. RDMA enables direct, zero-copy data transfer to the host PC's memory, bypassing the CPU and operating system to free up computing resources for critical tasks like image processing algorithms.

The adapter also supports IEEE 802.3bt PoE++, providing up to 90W per port to power high-consumption PoE devices. Its -25 to 70°C wide operating temperature range ensures reliable performance in harsh environments, making it an excellent choice for powering PTZ cameras and outdoor Wi-Fi APs, which frequently require more than 30W and are exposed to outdoor conditions.

For enhanced flexibility, the PCIe-PoE572bt comes in a low-profile form factor, with a non-PoE version (PCIe-N572) available for applications not requiring PoE. As the first wide-temperature 10GbE RDMA frame grabber card with PoE++ support, the PCIe-PoE572bt delivers unparalleled performance and efficiency for machine vision, outdoor surveillance, and Wi-Fi infrastructure.

Specifications

	PCIe-PoE572bt	PCIe-N572
Bus Interface	x4, Gen3 PCI Express*	
# of 10 GbE Port	2x 10 GbE ports by Broadcom 57416 controller, supporting 9.6 KB jumbo frame	
Network Protocol Support	IEEE 802.3 Ethernet interface for 10GBASE-T (IEEE 802.3an) and 1000BASE-T (IEEE 802.3ab)	
Support Link Speed	Support 10G/ 1G / 100M/ 10M link speed	
PoE Capability	Compliant with IEEE 802.3bt PoE++ Type 3/Type 4 PSE, with a maximum output of 90W on a single port. Compatible with 802.3bt (PoE++), 802.3at (PoE+), and 802.3af (PoE) PD. Different configurable for PoE power budgets: Configuration A: 66W from PCIe connector Configuration B: 180W from 6-pin power connector	N/A
RDMA over Converge Ethernet	Support RoCEv2 *Throughput over 9.62 Gbps (verified through IB test)	
Cable Requirement	CAT 6a or better Ethernet cable (Max 100 meters)	
EMC	CE/FCC Class B, according to EN 55032 & EN 55035	
Operating Temperature*	-25°C to 70°C rugged operation with airflow	-25°C to 70°C fanless operation with airflow
Dimension	Low-Profile bracket: 167.65 mm (W) x 68.9 mm (H) Standard-Height bracket: 167.65 mm (W) x 111.2 mm (H)	

*Ensure 70°C ambient and 1.2 m/s airflow at the heatsink center to ensure 100% performance.
*PCIe-PoE572bt/PCIe-N572 supports x8, x4, x1 PCIe lanes

Ordering Information

Model No.	Product Description
PCIe-PoE572bt	Wide-temperature 2-port 10GBASE-T Network Adapter with IEEE 802.3bt PoE++ supporting RDMA (RoCEv2), -25°C ~ 70°C with airflow
PCIe-N572	Wide-temperature 2-port 10GBASE-T Network Adapter supporting RDMA (RoCEv2), -25°C ~ 70°C, fanless

Optional Accessories

AccsyBx-low profile bracket	2Low profile bracket kits for PCIe-PoE572bt

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