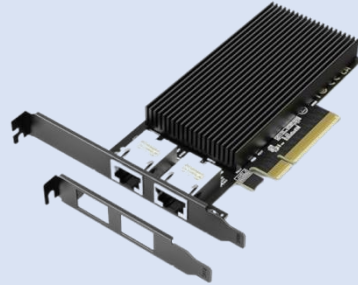# PCI Express x8 Dual RJ45 Port 10G Ethernet Server Network Card

CY-PT02-X540

Product Overview ▼

This server adapter features two fully integrated 10 Gigabit Ethernet Media Access Controllers (MACs) and RJ45 ports. In addition to managing the Ethernet MAC and PHY layers, this server adapter also performs traffic management on passing data packets. The controller offloads tasks from the host through hardware acceleration, such as TCP/UDP/IP checksum offload and TCP segmentation.

CY-PT02-X540 server adapter provides hardware-enhanced features optimized for multi-coreprocessors, including intelligent queueing technology. It features on-chip support for loadbalancing, enabling higher levels of 10 Gigabit Ethernet scalable performance. It offers IntelVirtualization Technology for Connectivity (VT-c) at the network level, significantly improving over all system performance in virtual server environments. Intel VT-c includes multiple hardware optimization features that can substantially reduce I/O bottlenecks, increase throughput, and reduce latency. A component of Intel VT-c, the Virtual Machine Device Queues (VMDq),significantly improves performance and reduces CPU utilization by offloading the data sorting work load from the Virtual Machine Monitor (VMM) to the network controller. Enhanced features include offloading inter-virtual machine switching within the server and direct virtual machineconnectivity (VMDc).

CY-PT02-X540

The CY-PT02-X540 server adapter provides multiple hardware optimization features, includingthose for I/O virtualization, and supports unified networking, transforming the data center withoutstanding reliability, scalability, and mobility. It allows LAN, SAN, and IPC traffic to share a singleEthernet network, providing higher performance support for high-bandwidth applications in theevolving virtualized data center. This server adapter also supports iSCSI boot. This feature enablesSAN and LAN traffic to share the existing Ethernet infrastructure without requiring a dedicatediSCSI adapter. The advanced features included in this adapter can greatly accelerate iSCSI trafficand support iSCSI remote boot.

Basic Features ▼

Controller	Intel x540
Transmission Medium	Cat 3/4/5/6 UTP, Cat 6/6A cable
Bracket Height	Low Profile and Full Height configurations
Max Power Consumption	13.4W
Port Type	2 x 10G/5G/1G RJ45 ports
PCIe Bus	PCI Express v2.0 (5.0 GT/s) x8; compatible with x16 slots
Data Transfer Rate	10000 Mbps

Technical Specifications ▼

Ethernet Power Management	Yes
Standards-compliant	IEEE 802.3an IEEE 802.3aq IEEE 802.3au IEEE 802.1Q IFEE802.3 2005 flow control support IEEE 802.3ad IEEE 1588
PXE Support	Yes

CY-PT02-X540

iSCSI Support	Yes
PCI-SIG*SR-IOV Support	Yes
VMDq Support	Yes
IPv4\IPv6 Support	Yes
RSS Support	Yes
Jumbo Frames Support	Yes

Environmental Parameters ▼

Operating Temperature	0℃ to 55℃ (32°F to 131°F)
Storage Temperature	-40℃ to 70℃ (-40°F to 158°F)
Storage Humidity	90% relative humidity non-condensing at 35℃
Certifications	FCC，CE，RoHS

Packaging Parameters ▼

产品尺寸（unit: mm)	155*120*21
包装尺寸（unit: mm)	207.5*142*27

Supported Operating Systems ▼

Windows 7/8/8.1/10	Linux kernel version 2.6.x/3.x/4.x or newer
Windows Server 2003 / R2	CentOS/RHEL 5.x/6.x or newer
Windows Server 2008 / R2	Ubuntu 14.x/16.x or newer
Windows Server 2012 / R2	FreeBSD 9/10/11 or newer
Windows Server 2016 / R2 Windows Server 2019 / R2	Vmware ESX/ESXi4.x/5.x/6.x or newer