



## AT-2973SX

### PCI-Express Dual Port Fiber Gigabit Interface Card

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PCIe x 4 (channels) dual port fiber Gigabit interface card

#### Optimized for Virtualization

Using multi-port cards in virtualized environments critical to the application in order to provide redundancy and data connectivity for the workloads in the virtual machines. Due to specific slot limitations and the need for redundancy/data connectivity, it is usually recommended virtualized servers use at least six Gigabit ports to satisfy the I/O demands.

#### Virtual Machine Device Queues (VMware Direct Path)

VMware Direct Path (SR-IOV) reduces I/O overhead on the hypervisor in a virtualized server by performing data sorting and uniting it in the network silicon (this feature requires an O/S that supports VMDq). This technology makes use of multiple queues in the network controller. As data packets enter the card, they are sorted, and packets traveling to the same destination/ virtual machine get grouped together in a single queue. The packets are sent to the hypervisor, which directs them to their respective virtual machines. Taking the strain of packet filtering and sorting from the hypervisor improves overall CPU usage and throughput.

The AT-2973SX Gigabit interface card provides improved performance with the next-generation (VMDq) technology, which includes features such as loop back (inter-VM communication), priority-weighted bandwidth management, and doubling the number of data queues per port from 4 to 8. It also supports multicast and broadcast data on a virtualized server.

#### Superior Functionality

The AT-2973SX includes dedicated hardware and processors to process frames at the highest levels in the operating system for both transmit and receive paths - advantageous for virtualization applications.

The AT-2973SX enables convergence of all the networked communications possible in a server, such as data (LAN), storage networks (iSCSI), clustering, for example High Performance Computing (HPC), or Inter-Process Communications (IPC) by support of ROMA over TCP.

#### More Bandwidth with PCI-Express Interface

The PCI-Express (PCIe) design gives you the maximum possible bandwidth and bus efficiency. Other benefits are capability and low power consumption.

#### High Reliability

The AT-2973SX Gigabit interface card comes with a comprehensive Microsoft Windows utility that performs detailed tests, diagnostics and analysis.

#### Advanced Manageability

The priority queuing offered by AT-2973SX can help you set-up your network based on your own needs. The comprehensive diagnostics and configuration software suite provides system administrators and engineers with a profound tool to analyze the interface card to check specific data.

#### Dual Port Fiber Interfaces

Two fiber port interfaces give you the maximum protection against failure. If one link goes down, the other keeps sending data to prevent network down time. The two ports can also be trunked to increase bandwidth in server type applications.

#### Key Features

##### Management Software

- Fiber only
- VLAN support
- Link aggregation LACP
- Link aggregation smart switch
- Failover

##### Advance Properties

- Jumbo frames (9K)
- Checksum offloading
- PCI-Express (PCIe) v1.1
- PCI-Express (PCIe) v2.0 ready
- IEEE 802.1x flow control
- Processes receive and transmit frames at the highest level
- IEEE 802.1p-based traffic prioritization
- PXE remote boot support
- Low-profile and standard height brackets included
- Microsoft certified drivers
- RoHS compliant
- Load balancing
- Message Signal Interrupt (MSI and MSI-X)
- Receive Side Scaling
- On-board 78KB memory
- CPU task offload
- TCP segmentation
- TCP Offload Engine (TOE)
- SNMP
- IPv6
- iSCSI offloading



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## Specifications

### Management Features

WMI  
ACPI 1.1  
PXE 2.1 Boot ROM  
SNMP

### Bus Type

PCIe x4

### Ethernet Standards

IEEE 802.1p Quality of Service  
IEEE 802.1Q VLANs  
IEEE 802.2 LLC  
IEEE 802.3ac MAC  
IEEE 802.3ab Gigabit standard  
IEEE 802.3x Flow control auto-negotiation  
IEEE 802.3ad Link aggregation

### Drivers Supported

Citrix XenServer  
Windows 2003  
Windows 2003 64-bit  
Windows 2008  
Windows 2008 64-bit  
Windows 7  
Windows Hyper-V  
Linux 2.6  
VMware

### Available

Solaris  
NetWare

### Connectors

Fiber LC 850nm  
Maximum link lengths, see table below.

### Compliance

RoHS  
UL  
FCC/EN55022 Class B  
TUV  
EN55024  
CE  
C-TICK  
VCCI  
Chipset

## Environmental Specifications

Operating temperature 0°C to 50°C  
Storage temperature -25°C to 70°C  
Relative humidity 5% to 90% non-condensing

### Power

Power consumption 4.1 Watts (avg)  
Signaling voltage 3.3V

### Status Indicators

LED 2 port  
  
LNK ON 1000Mbps link up  
OFF 1000Mbps link down

ACT (link/activity)  
Blinking - activity

### Physical Characteristics

Dimensions 14.47cm x 5.61cm  
(W x H) (5.7" x 2.2")

Weight 0.05kg

Ships with low-profile bracket attached to interface card. Standard bracket is included in packaging.

### Network Type

1000SX/LC

### Network Speed

1000Mbps

### Network Controller

Broadcom BCM5709S

## Ordering Information

### AT-2973SX-x01

PCIe dual port fiber Gigabit interface card

Where xxx = 001 for single pack  
901 for single pack, Federal and Government

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Fiber Type	Modal bandwidth @ 850nm (min. overfilled launch) (MHz - km)	Link Length		Units
		Minimum	Maximum	
62.5 μm MMF	160	2	220	m
62.5 μm MMF	200	2	275	m
50 μm MMF	400	2	500	m
50 μm MMF	500	2	550	m

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