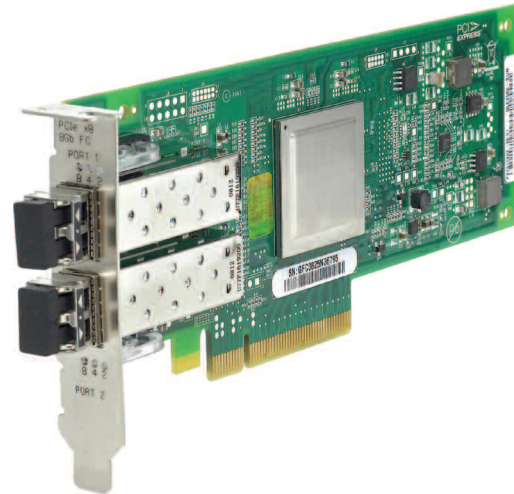


# Sun StorageTek™ 8 Gb FC PCIe Host Bus Adapter

Enabling 8 Gb FC storage area networks



The Sun StorageTek 8 Gb FC PCIe host bus adapter (HBA) family will optimize performance, virtualization, and power for Sun SPARC® and x64 PCIe servers.

## Highlights

- 8 Gb/4 Gb/2 Gb autonegotiation optimizes throughput speeds
- 8 Gb/sec FC increases aggregate throughput rate to 3.2 GB/sec (dual port) in full duplex mode
- Native PCI Express x4 host bus interface for high-throughput applications
- Single and dual 8 Gb/sec FC ports
- 200,000 I/O operations per second (IOPS) per port delivers high I/O transfer rates for storage applications
- QLogic SANsurfer® Pro allows for centralized management and remote control
- Three LEDs display realtime status and link activity information
- Overlapping protection domains for continuous protection of internal data paths
- Universal boot support manages multiple hardware platforms and boot options
- Storage Networking Industry Association (SNIA) HBA application programming interface (API) and Storage Management Interface Specification (SMI-S) compliant
- RoHS 6 compliant

## Performance optimized

Your next-generation datacenter requires the high-performance capabilities of Sun StorageTek 8 Gb FC PCIe Host Bus Adapter. Increase transfer rates for mission-critical data-center applications and reduce the window of time needed for backups. Sun products deliver throughputs of 1,600 MB per port (full duplex) and can sustain up to 200,000 IOPS per port for truly superior performance.

## Virtualization optimized

Sun StorageTek 8 Gb FC PCIe HBAs deliver enhanced security, quality of service (QoS), and dynamic provisioning. Virtualization is optimized through HBA virtualization technology, which enables a single physical FC HBA port to function as multiple logical (virtual) ports. Each logical connection has its own resources and can be managed independently, so you'll see improved utilization, reduced complexity, and fewer manual management tasks.

## Power optimized

Utilizing QLogic StarPower® Technology, Sun StorageTek 8 Gb FC PCIe HBAs help you reduce power and cooling costs in the datacenter. StarPower technology offers dynamic power management that provides optimized intelligent PCI Express link training, low power switching power supplies, and a thermally efficient layout requiring lower airflows. Use energy more efficiently with Sun HBAs and start lowering your datacenter costs.

## The Sun HBA advantage

Sun StorageTek 8 Gb FC PCIe HBAs have been designed specifically for use in Sun servers. They exceed the business requirements of the enterprise datacenter with higher performance, virtualization capabilities, and increased power and cooling efficiency. We solve enterprise-wide business challenges with a comprehensive offering of hardware, software, and services. And our Open SAN architecture simplifies SAN management to improve resource utilization and reduce your TCO.

## Sun StorageTek™ 8 Gb FC PCIe Host Bus Adapter Specifications

### Host bus interface

Speed	<ul style="list-style-type: none"> <li>• PCI Express Gen1 x8</li> <li>• PCI Express Gen2 x4</li> </ul>
Compliance	<ul style="list-style-type: none"> <li>• PCI Express Base Specification rev. 2.0, PCI Express Card Electromechanical Specification rev.</li> </ul>

### Fibre Channel

Speed	<ul style="list-style-type: none"> <li>• 8 Gb/sec, 4 Gb/sec, 2 Gb/sec auto-negotiation</li> </ul>
Compliance	<ul style="list-style-type: none"> <li>• SCSI-FCP, FC-PH, FC-PH-2, FC-PH-3, FC-AL-2, FC-FLA, FC-PLDA, FC-TAPE, FCP-2, FC-GS-3, FC-GS-3, FC-FS</li> </ul>
Topology	<ul style="list-style-type: none"> <li>• Point-to-point (N_Port), arbitrated loop (NL_Port), and switched fabric (N_Port)</li> </ul>
Class of service	<ul style="list-style-type: none"> <li>• Class 2 and 3</li> </ul>

### Logins and exchanges

Support for F\_Port and FL\_Port login. 2,048 concurrent logins and 2,048 active exchanges

### Physical

Ports	<ul style="list-style-type: none"> <li>• Single and Dual 8 Gb/sec FC</li> </ul>
LEDs	<ul style="list-style-type: none"> <li>• Three LEDs display real-time status and link activity information</li> </ul>
Media	<ul style="list-style-type: none"> <li>• Small form factor fixed (SFF) multimode optic with LC-style connector</li> </ul>
Form factor	<ul style="list-style-type: none"> <li>• Low-profile PCI Express card: 16.765 cm x 6.45 cm (6.6 in. x 2.54 in.)</li> </ul>

### Supported operating systems

- Solaris 10 SPARC
- Solaris 10 x86
- Red Hat Enterprise Linux 4
- RHEL AS/ES 4.6 or later
- Red Hat Enterprise Linux 5.1
- RHEL AS 5.0
- SUSE Linux Enterprise Server 9
- SUSE Linux Enterprise Server 10
- VMware ESX 3.01 & ESX 3.05
- Windows 2003 Standard and Enterprise Server
- Windows 2008 Standard and Enterprise Server

### Supported server platforms

- Sun Fire™ X4140 server
- Sun Fire X4150 server
- Sun Fire X4240 server
- Sun Fire X4250 server
- Sun Fire X4440 server
- Sun Netra x4450 server
- Sun Fire X4100 M2 server
- Sun Fire X4200 M2 server
- Sun Fire X4600 server
- Sun Fire X2100 server
- Sun Fire x2200 server
- Sun Fire X2250 server
- Sun Fire V445 server
- Sun Fire V245 server
- Netra T2000 server
- Sun SPARC® Enterprise T5120 server
- Sun SPARC Enterprise T5220 server
- Sun SPARC Enterprise T5140 server
- Sun SPARC Enterprise T5240 server
- Sun SPARC Enterprise T5440 server
- Sun SPARC Enterprise M4000 server
- Sun SPARC Enterprise M5000 server
- Sun SPARC Enterprise M8000 server
- Sun SPARC Enterprise M9000 server

### Environment and equipment

Temperature	<ul style="list-style-type: none"> <li>• Operating: 0°C/32°F to 55°C/131°F</li> <li>• Storage: -40°C/-4°F to 70°C/158°F</li> </ul>
Humidity	<ul style="list-style-type: none"> <li>• Relative (non-condensing): 10% to 90%</li> <li>• Storage: 5% to 93%</li> </ul>
Distance	<ul style="list-style-type: none"> <li>• 2 Gb/sec: 500 m (50/125 μm fibre), 300 m (62.5/125 μm fibre)</li> <li>• 4 Gb/sec: 380 m (50/125 μm fibre), 150 m (62.5/125 μm fibre)</li> <li>• 8 Gb/sec: 150 m (50/125 μm fibre), 70 m (62.5/125 μm fibre)</li> </ul>
Power dissipation	<ul style="list-style-type: none"> <li>• 5.5 W (single port), 6.2 W (dual port) (typical)</li> </ul>

### Learn More

To learn more about the Sun StorageTek 8 Gb FC PCIe Host Bus Adapter, visit [sun.com/storagetek/networking](http://sun.com/storagetek/networking)

### Agency approvals – product safety (preliminary)

#### US, Canada

- UL, cUL
  - UL60950
  - CSA C22.2 No.60950
  - Class 1 Laser Product per
  - DHHS 21CFRJ

#### Europe

- 73/23/ECC Low Voltage Directive:
  - TUV:
    - EN60950-1: 2001
    - EN60825-1: 1994+A1+A2
    - EN60825-2: 1994 +A1

### Agency approvals – EMI and EMC (preliminary)

U.S.	<ul style="list-style-type: none"> <li>• FCC Part 15, Class A</li> </ul>
Canada	<ul style="list-style-type: none"> <li>• Industry Canada ICES-003, Class A</li> </ul>
Europe	<ul style="list-style-type: none"> <li>• 89/336/EEC EMC Directive CE Mark:           <ul style="list-style-type: none"> <li>– EN55022: 1998 /CISPR22:1997 Class A</li> <li>– EN55024: 1998</li> <li>– EN61000-3-2:1995</li> <li>– EN61000-3-3:1994</li> </ul> </li> </ul>
Japan	<ul style="list-style-type: none"> <li>• VCCI V-3/2004.4, Class A</li> </ul>
Taiwan	<ul style="list-style-type: none"> <li>• BSMI (CNS 13438)</li> </ul>
New Zealand/Australia	<ul style="list-style-type: none"> <li>• AS/NZS 3548 Class A</li> </ul>
Korea	<ul style="list-style-type: none"> <li>• MIC</li> </ul>

### Order information – part number

- SG-XPCIE1FC-QF8-Z (single channel)
- SG-XPCIE2FC-QF8-Z (dual channel)