



Product Bulletin No. 3072

Cisco SFS 7000P InfiniBand Server Switch

The Cisco SFS 7000P InfiniBand Server Switch provides a new class of data center infrastructure that interconnects discreet server resources together into a high performance 10Gbps, low-latency fabric. It brings many of the mainframe “backplane” technologies to industry standard servers, including Remote Direct Memory Access (RDMA) for transmitting large amount of data with very little overhead, as well as very low latency (<4 usec user-space latency). These technologies enable industry standard servers to be combined into effective high-performance clusters and grids, creating the kind of collective performance required for enabling the trend towards commoditization.

PRODUCT OVERVIEW

In addition to high performance computing, InfiniBand also offers the performance, security and control required for utility computing. The SFS 7000P interconnects servers via a high-performance, unified fabric, and when combined with SFS 3000 Multifabric Server Switches, enables shared pools of I/O and storage resources that can be mapped together by VFrame Server Fabric Virtualization Software to deliver virtual “compute services”.

The Cisco SFS 7000P InfiniBand Server Switch provides an ideal combination of price, performance, and packaging for building high-performance server clusters of all sizes. The Cisco SFS 7000P (Figure 1) provides 24 ports of 10-Gbps server connectivity and fully nonblocking 480-Gbps cross-sectional bandwidth with less than 200 nanoseconds (ns) port to port latency. The Cisco SFS 7000P comes with embedded fabric management capable of running clusters of up to thousands of nodes in a single, compact 1-rack-unit (RU) chassis.

The Cisco® SFS 7000P InfiniBand Server Switch provides an ideal combination of price, performance, and packaging for building high-performance server clusters of all sizes. The Cisco SFS 7000P provides the following customer benefits:

- Unmatched price-to-performance ratio for building high-performance computing clusters
- Ideal interconnect for high-performance computing, scientific, and enterprise applications
- Intelligent switch with embedded fabric management, capable of running clusters of thousands of nodes
- Based on high-performance, industry standards-based InfiniBand interconnect technology
- Fabric management allows the flexibility of adding and removing servers without disrupting any other servers on the fabric

The Cisco SFS 7000P integrates with other Cisco SFS 7000 Series InfiniBand server switches and Cisco SFS 3000 Series multifabric server switches for a wide range of IP Communications, storage, and WAN and LAN connectivity options. Table 1 lists the customer features of the Cisco SFS 7000P.

Table 1. Customer Features

Feature	Description
High-Performance Server Fabric	24 ports of 10-Gbps or 20-Gbps full-duplex, ultra low latency server fabric interconnect
Non-Blocking Architecture	Full bisectonal bandwidth for all 24 ports (480 Gbps) with 200 ns cut-through latency
Remote Direct Memory Access	Move data directly from one server's memory to another, bypassing the CPU(s) and kernel
High Availability	Fully redundant power and cooling, with hot-swappable field-replaceable units (FRU)
Rich System and Fabric Management	Command-line interface (CLI), Web, and Java-based systems and server fabric management options
Compact Architecture	1 rack unit (RU) stackable architecture, with 4-post rack mounting kit suitable for rack-based shipping

NEW FEATURES

New features for the Cisco SFS 7000P include the following:

- Support for Cisco pluggable optical modules (POM) that provide fiber InfiniBand connections up to 150 meters
- Advanced in-service and out-of-service diagnostic tests
- Compliant with Restrictions on Hazardous Substances (RoHS) standards

AVAILABILITY

The Cisco SFS 7000P is generally available now. New features for the Cisco SFS 7000P, including 4X InfiniBand Double Data Rate (DDR) and POM support, will begin shipping in December 2005. Table 2 lists ordering information for the Cisco SFS 7000P.

ORDERING INFORMATION

Table 2. Ordering Information

Part Number	Description
SFS7000P-SK9	Cisco SFS 7000P InfiniBand Server Switch, 24 4X InfiniBand ports, (2) power supply/cooling units
PWR-SFS7000P=	Cisco SFS 7000P Power Supply/Cooling FRU

FOR MORE INFORMATION

For more information about the Cisco SFS 7000P, visit <http://www.cisco.com/en/US/products/ps6418/index.html> or contact your local account representative at Cisco Systems®.

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