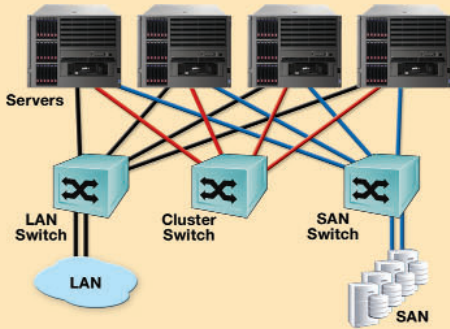


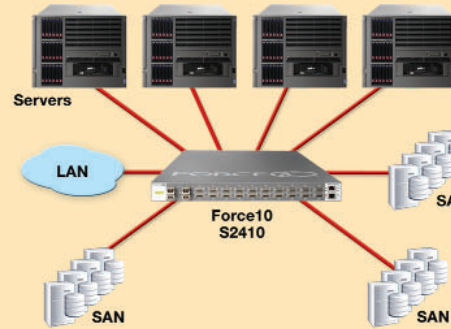
- 10 GbE low latency, non-blocking storage solution
- Unified data center fabric delivers maximum performance for I/O while reducing costs
- Combines the reliability of iSCSI with the performance of 10 GbE

UNIFIED DATA CENTER FABRIC SIMPLIFIES AND REDUCES COSTS



Traditional Network

- Each I/O has dedicated network
- Bandwidth cannot be shared
- Many connections to server
- Can be expensive



Multifunction Network

- LAN, SAN & cluster over one wire
- Fewer connections to server
- Reduces hardware and support
- More effective use of bandwidth
- Cost savings can be significant

Security, Reliability & Quality of Service of iSCSI ERL2

Standards-based Ethernet Delivers Lowest TCO

Ease of Installation & Management

Unified Network Leveraging One Low Latency & Non-Blocking Fabric

High Performance, Low Latency Ethernet Solutions for Storage Networks

The transition to 10 GbE is under way in the data center, and the ubiquity and reliability of Ethernet make it a desirable solution for delivering a high performance data center LAN. iSCSI and Ethernet technology have reached a maturity where replacing Fibre Channel with iSCSI is a compelling proposition. iSCSI supports high throughput and error recovery mechanisms, providing robust and highly-available storage solutions. The mass-market availability of 10 GbE adapters and switches enables Ethernet-based SANs to deliver high bandwidth, high throughput and low latency Ethernet solutions for the rigorous demands of data center storage applications.

Designed for virtualizing physical media, iSCSI is ideal for storage applications such as databases, streaming media servers, and clustered computing. Without any distance limitations, iSCSI enables virtualized networks with nodes located physically around the world to appear as a single logical network. Data centers require high-availability, and the ERL2 feature set of iSCSI provides active/active task migration of connections which prevents session and data loss — identical in behavior to the dual loopback featured in Fibre Channel implementations.

The combined best-of-breed 10 GbE technology of Force10 Networks high performance switches and iSCSI storage solutions enable IT staff to leverage existing skills and tools. The result is a reduced total cost of ownership and complexity of data center operations with common spares, common software, and common training for networking, storage, and clustering. Data center managers can now fully realize high data throughput with extremely low overhead while remaining completely compatible with existing Ethernet infrastructures.

Key Applications

Ultra low latency switch for high performance Ethernet storage networks

- Low cost 10 GbE interface to network attached storage systems
- Connects directly to 10 GbE servers
- Low latency data center interconnect switch

Key Features

Resilient and scalable high density, low latency 10 GbE switch for high performance Ethernet environments

- 24 line-rate 10 GbE ports in a 1-RU form factor
 - S2410CP: 20 CX4 ports plus four 10 GbE pluggable XFP interfaces
 - S2410P: 24 XFP interfaces
- 300 nanosecond switching latency under full load
- 64 byte to 10,240 byte frames
- Switching fabric capacity of 480 Gbps and forwarding capacity of 360 Mpps

Ordering Information

ORDER NUMBER	DESCRIPTION
S2410-01-10GE-24CP	S2410CP – 24-port 10 GbE switch with 20 10GBase-CX4, four 10 GbE XFP ports with Layer 2 software – XFP optics required
S2410-01-10GE-24P	S2410P – 24-port 10 GbE switch with 24 XFP ports and Layer 2 software – XFP optics required
CBL-CX4-1M	Qualified 1m 10GBase-CX4 cable*
CBL-CX4-3M	Qualified 3m 10GBase-CX4 cable*
CBL-CX4-5M	Qualified 5m 10GBase-CX4 cable*
CBL-CX4-10M	Qualified 10m 10GBase-CX4 cable*
CBL-CX4-15M	Qualified active 15m 10GBase-CX4 cable*
SA-01-RMB-2	Rear (universal) mounting bracket

* Only qualified cables can be used with the S2410



S2410CP



S2410P

Physical

S2410CP: 20 line rate 10GBase-CX4 ports plus four 10 GbE pluggable XFP interfaces
 S2410P: 24 line rate 10 GbE XFP ports
 1 RJ-45 console/management port with RS-232 signaling
 1 RJ-45 Ethernet management port
 Size: 17 w x 16.73 d x 1.73" h (432 x 425 x 44 mm)
 Weight: 14.3 lbs (6.5 Kg)
 Power Supply: 100-240V AC, 50-60Hz, autosensing
 Maximum Power Consumption:
 S2410CP: 125W
 S2410P: 225W
 Maximum Thermal Output:
 S2410CP: 426 BTU/hour
 S2410P: 768 BTU/hour
 Maximum Current Draw:
 S2410CP: 1.15A 100/120 VAC, 0.575A 200/240 VAC
 S2410P: 2.05A 100/120 VAC, 1.025A 200/240 VAC
 19" rack mountable
 Standard 1U chassis height
 Maximum Operating Specifications:
 Temperature: 32° to 104°F (0° to 40°C)
 Operating humidity: 10 to 90 percent (RH), non-condensing
 Maximum Non-operating Specifications:
 Storage Temperature: -4° to 158°F (-20 to 70°C)
 Storage humidity: 10 to 95 percent (RH), non-condensing

Redundancy

Load-balancing and Redundant AC Power

Performance

Layer 2/MAC Addresses: 16K
 Switching Fabric Capacity: 480 Gbps (360 Mpps)
 Jumbo Frame Support: 10,240 byte packet support
 Link Aggregation: 12 members per link aggregation group and 12 groups per system
 Queues per port: 4
 VLANs: 1024 VLANs with 4096 tag value support

IEEE Compliance

802.3ae 10 Gigabit Ethernet
 802.3ak 10 Gigabit Ethernet CX4
 802.1p L2 Prioritization
 802.1Q VLAN Tagging
 802.1ac Frame Extension for VLAN Tagging
 802.1s Multiple Spanning Tree Protocol
 802.1w Rapid Spanning Tree Protocol
 802.3ad Link Aggregation with LACP
 802.1D Bridging
 802.3x Flow Control

RFC Compliance

Security:

1492 TACACS+
 2865 RADIUS
 3128 Protection Against a Variant of the Tiny Fragment Attack
 3580 IEEE 802.1x RADIUS Usage
 Ietf-draft SSH v2, SSL, Layer 2 ACLs

MAC Address Security
 Port Access Control

Quality of Service:

4 queues per port
 IEEE 802.1p

Management and SNMP:

Industry familiar CLI with
 - Scripting
 - Command completion
 - Context sensitive help

Web Based Management

768 UDP
 783 TFTP
 791 IP
 792 ICMP
 826 ARP
 951 BootP
 1157 SNMP v1
 1212 Concise MIB Definition
 1213 SNMP v2 (MIB-II)
 1493 Bridge MIB
 1643 Ethernet-like MIB
 1901 Community based SNMPv2
 1905 Protocol Operations for SNMPv2
 1906 Transport Mappings for SNMPv2
 1907 Management Information Base for SNMPv2
 1908 Coexistence between SNMPv1 & SNMPv2
 2096 IP forwarding table MIB
 2131 DHCP Server
 2233 The Interfaces Group MIB using SMI v2
 2570 SNMP v3
 2665 Ethernet-like interfaces

Compliances

Safety

CUS 60950, 3rd edition (US NRTL through CSA)
 CSA 60950, 3rd edition
 CE Mark (EN 60950)
 CB Report, all country deviations
 EN 60825-1 Safety of Laser Products-Part 1: Equipment Classification Requirements and User's Guide
 EN 60825-2 Safety of Laser Products-Part 2: Safety of Optical Fibre Communications Systems
 21 CFR 1040.10 and 1040.11 FDA laser device requirements

EMC

USA: FCC CFR47 Part 15, Subpart J, Class A
 Canada: ICES-003, Issue-2, Class A
 Europe: EN55022 1998 (CISPR 22: 1997), Class A
 Japan: VCCI V3/01.4 Class A

EN 61000-4-2 ESD
 EN 61000-4-3 Radiated Immunity
 EN 61000-4-4 EFT
 EN 61000-4-5 Surge
 EN 61000-4-6 Low Frequency Conducted Immunity
 EN 300 386 V1.3.1 (2001-09) EMC for Network Equipment
 EN 55024 1998

Telecoms

JATE (for Japan)

RoHS Compliance

All S2410 components are EU RoHS compliant with the exception of lead, which is exempt from the directive for network equipment



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