

High 10 Gigabit Ethernet density
for the data center edge

End-to-end 10 Gigabit Ethernet
data center solution

Standards-based Layer 2 features

High Performance, Low Latency 10 GbE Data Center Switches

The S2410 combines the industry's lowest Ethernet switching latency with industry leading 10 GbE density to provide IT managers with more flexible deployment options.

- 24-port 10 GbE fixed configuration 1-RU data center switch
- XFP or CX4 interfaces
- Ultra low (300 ns) 10 GbE switching latency

Key Applications

Coupled with the E-Series, which delivers unmatched resiliency and performance, the S2410 enables IT managers to deploy a reliable end-to-end 10 GbE data center solution, spanning from core aggregation to the server or storage edge.

- Ultra low latency interconnect switch for high performance cluster computing
- Low cost 10 GbE interconnect to network attached storage systems
- Low cost aggregation of 10 GbE uplinks from S50N switches in server racks
- Connects directly to 10 GbE servers
- Foundation for a virtualized applications model

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 bytes to 10,240 byte frames
- Switching Fabric capacity of 480 Gbps and forwarding capacity of 360 Mpps
- Supports Jumbo frames of up to 10,240 bytes supporting high-end server connectivity and network attached file servers
- 12 link aggregation groups with up to 12 members per group, using advanced hashing for even traffic distribution
- Built-in power redundancy
- CX4 interfaces support up to 1W of power per port for active cables or electrical to optical extenders



Specifications: S-Series S2410

Ordering Information

ORDER NUMBER	DESCRIPTION
S2410-01-10GE-24CP	S2410CP – 24-port 10 GbE switch with 20 10-GBase-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

Reliability:

S2410CP: MTBF 240,105 hours

S2410P: MTBF 271,331 hours

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



Force10 Networks, Inc.

350 Holger Way

San Jose, CA 95134 USA

www.force10networks.com

408-571-3500 PHONE

408-571-3550 FACSIMILE

© 2007 Force10 Networks, Inc. All rights reserved. Force10 Networks and E-Series are registered trademarks, and Force10, the Force10 logo, Reliable Business Networking, Force10 Reliable Networking, C-Series, P-Series, S-Series, EtherScale, TeraScale, FTOS, SFTOS, StarSupport and Hot Lock are trademarks of Force10 Networks, Inc. All other company names are trademarks of their respective holders. Information in this document is subject to change without notice. Certain features may not yet be generally available. Force10 Networks, Inc. assumes no responsibility for any errors that may appear in this document.

SSDS02

1007 v2.4