

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 one-RU data center switch
- Ultra low 10 GbE switching latency – 300 nanoseconds, comparable to specialty interconnects
- Cost-effective, line-rate 10 GbE for data centers

### 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.

- Low cost aggregation of 10 GbE uplinks from S50 switch in server racks
- Ultra low latency interconnect switch for high performance cluster computing
- Connecting directly to 10 GbE servers
- Low cost 10 GbE interconnect to network attached storage systems
- Foundation for a virtualized applications model

### Key Features

- 24 line-rate 10 GbE ports in a 1-RU form factor
  - 20 CX4 ports plus four 10 GbE pluggable XFP or CX4 interfaces
  - 24 XFP interfaces
- 300 nanosecond switching latency under full load
  - 64 bytes to 10,240 byte frames
- Supports Jumbo frames of up to 10,240 bytes
  - Ideal for 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
- Up to sixteen Port Mirroring sessions



# Specifications: S-Series S2410

## Ordering Information

ORDER NUMBER	DESCRIPTION
S2410-01-10GE-24C	20 Port 10 GbE CX4 Chassis with L2 Software and Slot for 4 Port 10 GbE module
S2410-01-10GE-24P	24 Port 10 GbE XFP Chassis with L2 Software
S2410-01-10GE-4P	4 Port 10 GbE XFP module for S2410-01-10GE-24C
S2410-01-10GE-4CP	4 Port 10 GbE module with 2 XFP and CX4 Ports for S2410-01-10GE-24C
SA-01-RMB-2	Rear (Universal) Mounting Bracket



S-Series S2410 (front)



S-Series S2410 (back)

## Physical

S2410C: 20 line rate 10GBase-CX4 ports plus four 10 GbE pluggable XFP or CX4 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: 12.0 lbs (5.5 Kg)

Power Supply: 100-240V AC, 50-60Hz, autosensing

Maximum power consumption:

S2410C: 100W

S2410P: 150W

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, GVRP

802.1s Multiple Spanning Tree Protocol

802.1w Rapid Spanning Tree Protocol

802.3AB Link Layer Discovery Protocol

802.3ad Link Aggregation with LACP

802.1D Bridging, GARP, GMRP

802.3x Flow Control

802.1ac Frame Extension for VLAN tagging

802.1X Port based Network Access 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

Per port rate limiting

Per queue rate limiting

Strict Priority and Weighted Round Robin Scheduling

Weighted Random Early Detect congestion control

## 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 and 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)



**Force10 Networks, Inc.**  
 350 Holger Way  
 San Jose, CA 95134 USA  
[www.force10networks.com](http://www.force10networks.com)

408-571-3500 PHONE  
 408-571-3550 FACSIMILE

© 2007 Force10 Networks, Inc. All rights reserved. Force10 and the Force10 logo are registered trademarks, and EtherScale, FTOS, SFTOS, and TeraScale are trademarks of Force10 Networks, Inc. All other brand and product names are trademarks or registered 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.