S-SERIES

S2410 Data Center 10 GbE Switch

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 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 S25N or 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
- Switching latency as low as 300 ns 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 1 W of power per port for active cables or electrical to optical extenders

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Specifications: S-Series S2410

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 modules required
S2410-01-10GE-24P	S2410P – 24-port 10 GbE switch with 24 XFP ports and layer 2 software – XFP modules 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

Physical

S2410CP: 20 line-rate 10GBase-CX4 ports plus four 10 GbE pluggable XFP ports
S2410P: 24 line-rate 10 GbE XFP ports

1 RJ45 console/management port with RS232 signaling
1 RJ45 Ethernet management port

Size: 1 RU, 1.73 h x 17 w x 16.73" d
(4.4 h x 43.2 w x 42.5 cm d)
Weight: 14.3 lbs (6.5 kg)
ISO 7779 A-weighted sound pressure level:
S2140CP: 61.5 dBA at 73.4°F (23°C)
S2140P: 61.5 dBA at 73.4°F (23°C)
Power supply: 100–240 VAC 50/60 Hz
Maximum power consumption:
S2410CP: 125 W
S2410P: 225 W
Maximum thermal output:
S2410CP: 426 BTU/h
S2410P: 768 BTU/h
Maximum current draw:
S2410CP: 1.15 A at 100/120 VAC, 0.575 A at 200/240 VAC
S2410P: 2.05 A at 100/120 VAC, 1.025 A at 200/240 VAC
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 273,332 hours
S2410P: MTBF 240,105 hours

S2410CP

S2410P

Redundancy

Link aggregation
Built-in power redundancy

Performance

Layer 2 MAC addresses: 16K
Switching fabric capacity: 480 Gbps (360 Mpps)
Link aggregation: 12 links per group, 12 groups per switch
Queues per port: 4 queues
VLANs: 1024 VLANs with 4096 tag value support
Line-rate Layer 2 switching: all protocols, including IPv4 and IPv6
Switching latency:
300 ns (CX4 ports), 700 ns (XFP ports)

IEEE Compliance

802.1D Bridging, STP
802.1p L2 Prioritization
802.1Q VLAN Tagging, Double VLAN Tagging
802.1s MSTP
802.1w RSTP
802.3ac Frame Extensions for VLAN Tagging
802.3ad Link Aggregation with LACP
802.3ae 10 Gigabit Ethernet (10GBASE-X)
802.3ak 10 Gigabit Ethernet (10GBASE-CX4)
802.3x Flow Control
MTU 10,240 bytes

RFC and I-D Compliance

General Internet Protocols

768 UDP
793 TCP
854 Telnet
783 TFTP
791 IPv4
792 ICMP
826 ARP
1042 IPv4 Transmission
1519 CIDR

Network Management

1155 SMIv1
1157 SNMPv1
1212 Concise MIB Definitions
1215 SNMP Traps
1905 SNMPv2
1907 SNMP MIB
1493 Bridges MIB
2096 IP Forwarding Table MIB
2233 Interfaces MIB
2570 SNMPv3
2576 Coexistence between SNMPv1/v2/v3
2578 SMIv2
2665 Ethernet-like Interfaces MIB
2865 RADIUS
draft-grant-tacacs-02 TACACS+

Management and Security

Industry familiar CLI with:
Command completion
Context sensitive help
Telnet, SSHv1/v2
SNMPv1/v2/v3
Syslog
RADIUS/TACACS+ authentication
Port mirroring
Layer 2 ACLs
Interface access control

Regulatory Compliance

Safety

UL/CSA 60950-1, 1st Edition
EN 60950-1, 1st Edition
IEC 60950-1, 1st Edition Including all National Deviations and Group Differences
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 Communication Systems
FDA Regulation 21 CFR 1040.10 and 1040.11

Emissions

Australia/New Zealand: AS/NZS CISPR 22: 2006, Class A
Canada: ICES-003, Issue-4, Class A
Europe: EN 55022: 2006 (CISPR 22: 2006), Class A
Japan: VCCI V3/2007.04 Class A
USA: FCC CFR 47 Part 15, Subpart B, Class A

Immunity

EN 300 386 V1.3.3: 2005 EMC for Network Equipment
EN 55024: 1998 + A1: 2001 + A2: 2003
EN 61000-3-2: Harmonic Current Emissions
EN 61000-3-3:Voltage Fluctuations and Flicker
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

RoHS

All S-Series components are EU RoHS compliant.

XFP Support

Any combination of Force10 SR, LR, ER, ZR, DWDM and CX4 XFPs may be populated. On the S2410P switch, the CX4 module overlaps with adjacent ports. XFP modules are sold separately.

FORCE10™

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