

S7 Series Switches

Datasheet

Version: V1.2
Release Date: 2026/3

Product Overview

The S7 Series Switch features high-performance Layer 3 aggregation and data center switches powered by a next-generation MAC SoC. Leveraging advanced hardware processes, the series provides full Layer 3 networking capabilities for high-speed enterprise and operator environments



Highlight Features

- Unified Converged Core: Full MPLS (L2/L3 VPN) stack to support multi-tenant, converged network architectures.
- Carrier-Grade Reliability: MLAG support for Active-Active redundancy, providing device-level failover and hitless upgrades.
- Data Center Fabric: Hardware-accelerated VXLAN with BGP-EVPN control plane for scalable overlay networks.
- Line-Rate Security: MACsec (AES-CMAC) encryption for secure, hardware-based switch-to-switch link protection.
- Nanosecond Precision: IEEE 1588 PTP (Precision Timing Protocol) for time-sensitive synchronization.
- Advanced Routing: Comprehensive L2/IPv4/IPv6 stack including OSPF, BGP, and PIM (Multicast).

The S7 Series switches provide redundant hot-swappable power supplies (AC and DC are both available) and 4 bays with Field replaceable fan modules. Generally, airflow of this series is front to rear (AFO), but a customization of rear to front (AFI) airflow is also acceptable.

Feasible PSU and airflow

Items	AC	DC	AFO	AFI	Power Input	FAN
S7314CH-4N-EI	○	○	○	○	2	2
S7224N-8C	○	○	○	○	2	4

Feasible PSU and airflow

S7248N-4C-EI	○	○	○	○	2	4
S7248N-4C-SI	○	X	○	X	1	4
S7148X-8C-EI	○	○	○	○	2	4
S7148X-8C-SI	○	X	○	X	1	4
S7132X16N-4C-EI	○	○	○	○	2	4
S7132X16N-4C-SI	○	X	○	X	1	4
S7124X-8C-EI	○	○	○	○	2	4
S7124X-8C-SI	○	X	○	X	1	4

Family of the S7 Series switches

Models	Ethernet Ports	Management	PSU 1/PSU 2	Cooling
S7314CH-4N-EI	14 x 40G/100G QSFP28 + 4x 1G/10G/25G SFP28	Console: RJ45 to RS232 Ethernet: 1G Port Storage: USB	300W / 300W CRPS	2 x Fan Modules (front-to-back airflow)
S7224N-8C	24 x 1G/10G/25G SFP28 + 14 x 40G/100G QSFP28	Console: RJ45 to RS232 Ethernet: 1G Port Storage: USB	350W / 350W CRPS	4 x Fan Modules (front-to-back airflow)
S7248N-4C-EI	48 x 1G/10G/25G SFP28, 4 x 40G/100G QSFP28	Console: RJ45 to RS232 Ethernet: 1G Port Storage: USB	550W / 550W CRPS	4 x Fan Modules (front-to-back airflow)
S7248N-4C-SI	48 x 1G/10G/25G SFP28, 4 x 40G/100G QSFP28	Console: RJ45 to RS232 Ethernet: 1G Port Storage: USB	Fixed single power supply	4 x fixed fans (front-to-back airflow)
S7148X-8C-EI	48 x 1G/10G SFP+ + 8 x 40G/100G QSFP28	Console: RJ45 to RS232 Ethernet: 1G Port Storage: USB	550W / 550W CRPS	4 x Fan Modules (front-to-back airflow)
S7148X-8C-SI	48 x 1G/10G SFP+ + 8 x 40G/100G QSFP28	Console: RJ45 to RS232 Ethernet: 1G Port Storage: USB	Fixed single power supply	4 x fixed fans (front-to-back airflow)

Models	Ethernet Ports	Management	PSU 1/PSU 2	Cooling
S7132X16N-4C-EI	32 x 1G/10G SFP+ + 16 x 1G/10G/25G SFP28+ + 4 x 40G/100G QSFP28	Console: RJ45 to RS232 Ethernet: 1G Port Storage: USB	550W / 550W CRPS	4 x Fan Modules (front-to-back airflow)
S7132X16N-4C-SI	32 x 1G/10G SFP+ + 16 x 1G/10G/25G SFP28+ + 4 x 40G/100G QSFP28	Console: RJ45 to RS232 Ethernet: 1G Port Storage: USB	Fixed single power supply	4 x fixed fans (front-to-back airflow)
S7124X-8C-EI	24 x 10G SFP+ + 8 x 100G QSFP 28	Console: RJ45 to RS232 Ethernet: 1G Port Storage: USB	350W / 350W CRPS	2 x Fan Modules (front-to-back airflow)
S7124X-8C-SI	24 x 10G SFP+ + 8 x 100G QSFP 28	Console: RJ45 to RS232 Ethernet: 1G Port Storage: USB	Fixed single power supply	4 x fixed fans (front-to-back airflow)

Product Specifications

Packet Switch capacity (bidirectional)

- S7314CH-4N-EI: 3000 Gbps
- S7224N-8C: 2800 Gbps
- S7248N-4C-EI: 3200 Gbps
- S7248N-4C-SI: 3200 Gbps
- S7148X-8C-EI: 2560 Gbps
- S7148X-8C-SI: 2560 Gbps
- S7132X16N-4C-EI: 2240Gbps
- S7132X16N-4C-SI: 2240Gbps
- S7124X-8C-EI: 2080 Gbps
- S7124X-8C-SI: 2080 Gbps

Dimensions (W x H x D) without package

- S7314CH-4N-EI : 21.5x4.4x40.8cm
- S7224N-8C : 44.2 x 4.4 x 36cm
- S7248N-4C-EI: 44.2 x 4.4 x 42cm
- S7248N-4C-SI: 44.2 x 4.4 x 42cm
- S7148X-8C-EI: 44.2 x 4.4 x 42cm
- S7148X-8C-SI : 44.2 x 4.5 x 35.5cm
- S7132X16N-4C-EI: 44.2x4.4x42cm
- S7132X16N-4C-SI: 44.2x4.4x35.6cm
- S7124X-8C-EI: 44.2 x 4.4 x 41cm
- S7124X-8C-SI: 44.2 x 4,4 x 35.7cm

Layer 2/Layer 3 Throughput (Gpps)

- S7314CH-4N-EI: 4.46Gpps (bidirectional)
- S7224N-8C : 4.17 Gpps (bidirectional)
- S7248N-4C-EI: 4.76 Gpps (bidirectional)
- S7248N-4C-SI: 4.76 Gpps (bidirectional)
- S7148X-8C-EI: 3.8 Gpps (bidirectional)
- S7148X-8C-SI: 3.8 Gpps (bidirectional)
- S7132X16N-4C-EI: 3.3 Gpps (bidirectional)
- S7132X16N-4C-SI: 3.3 Gpps (bidirectional)
- S7124X-8C-EI: 3.09 Gpps (bidirectional)
- S7124X-8C-SI: 3.09 Gpps (bidirectional)

Weight (Net weight/Gross weight)

- S7314CH-4N-EI : 4.5kg/7kg
- S7224N-8C : 8kg/11.5kg
- S7248N-4C-EI: 8kg/11.5kg
- S7248N-4C-SI: 5.1kg/7.8kg
- S7148X-8C-EI: 8.18kg/10.3kg
- S7148X-8C-SI: 5.56kg/7.66kg
- S7132X16N-4C-EI: 7.5kg/9.7kg
- S7132X16N-4C-SI: 5kg/7.2kg
- S7124X-8C-EI: 5kg/8.5kg
- S7124X-8C-SI: 4.03kg/6.5kg

Product Specifications

Power consumption

Worst case, all ports used, line-rate traffic

- S7314CH-4N-EI : 133W
- S7224N-8C : 130W
- S7248N-4C-EI: 143W
- S7248N-4C-SI: 129.5W
- S7148X-8C-EI: 140.36W
- S7148X-8C-SI: 138.38W
- S7132X16N-4C-EI: 122W
- S7132X16N-4C-SI: 119.68W
- S7124X-8C-EI: 117W
- S7124X-8C-SI: 98.7W

CPU

- Dual-core processor, ARM A53

MTBF

- -EI \geq 90000H
- -SI \geq 70000H

Memory

- eMMC: 8GB on all models
- DRAM: 2GB on all models

Typical power consumption

- S7314CH-4N-EI : 123W
- S7224N-8C : 121W
- S7248N-4C-EI: 132W
- S7248N-4C-SI: 120.1W
- S7148X-8C-EI: 129.14W
- S7148X-8C-SI: 128.26W
- S7132X16N-4C-EI: 110W
- S7132X16N-4C-SI: 108.02W
- S7124X-8C-EI: 105W
- S7124X-8C-SI: 91.74W

Environmental ranges

- Operating temperature: 0°C to 45°C
- Storage temperature: -40°C to 70°C
- Running Humidity: 10% to 90% (No condensation)
- Store Humidity: 5 to 95% (No condensation)

Temperature alarm

- Alarm threshold: 50°C

The S7 Series supports a comprehensive range of management options, including CLI, Web-based, and Cloud-managed platforms. Administrators can utilize SNMP v1/v2/v3, Telnet, and FTP, while security is bolstered by SSH2.0. Additionally, integrated OAM support ensures streamlined operations and more convenient network maintenance.

Cloud management

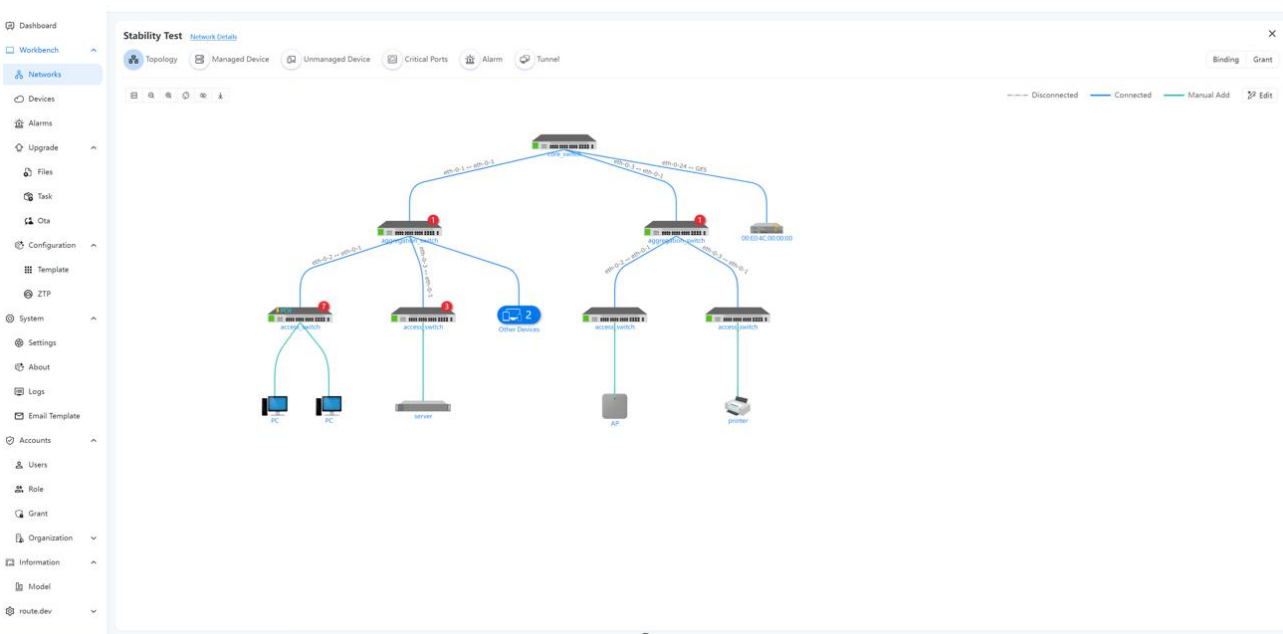
Leveraging deep expertise in campus and enterprise networking, ETHERNEXION introduces the UniCloud Management System. By integrating intelligent automation, UniCloud streamlines network maintenance, reduces operational costs, and ensures a secure, high-performance environment tailored to evolving user demands.

The platform designed to provide digital solutions for the entire lifecycle of network elements, including switches, routers, and wireless APs:

- **Unified Device Management:** Provides a centralized platform for managing configuration policies, firmware upgrades, and statistical analysis of device operating data.
- **Remote O&M Capabilities:** Utilizing a lightweight reverse proxy (FRP) and an integrated WebTerminal (SSH/Telnet), the system enables secure, cross-network access to intranet devices with latency under 200ms.
- **Automated Deployment & Topology:** Supports Zero-Touch Deployment for large-scale automation. It also uses LLDP to automatically discover and draw intuitive, real-time network topology maps.

- Advanced Monitoring:** Includes a distributed MQTT engine for real-time status reporting (latency <50ms) and a multimodal database architecture (MySQL, InfluxDB, Redis, Elasticsearch) for efficient data analysis and logging.
- Security & Access Control:** Features a multi-level RBAC permission system, high-risk command interception, and WAF protection to block network attacks.

The following is a diagram illustrating cloud-managed ETHERNEXION switches. For more detailed information, please refer to "ETHERNEXION Cloud Controller specification".



Visual WEB GUI

ENOS allows you to quickly configure common configuration items using a visual WEB GUI, which lowers the application threshold for users.

Monitor [Save] [admin] [Logout]

Device Information

Product ID:	Software:	Hardware Version: 1.1	Uptime: 0 days, 6 hours, 42 minutes
Location: --	Image Name: ulmage.is1023a.e080.d	EPLD Version: 0.2	Device Name: 5648X
WebImage Name:	Serial Number:	Contact: --	BootRom Version: v1.0.2
MAC Address: D8-5B-22-00-02-02			

Interface Panel [Active] [Inactive] [Shutdown]

100G Ethernet 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

Legend: Copper, Fiber, 40/100Gb

Usage

- CPU Usage: 7.53%
- Memory Usage: 36.94%

Temperature

Legend: OK, Failed

AROUND_CHIP: 40°C

SWITCH_CHIP: 50°C

Fan

Legend: OK, Failed

Fan 1-1: OK

Fan 1-2: OK

Fan 1-3: OK

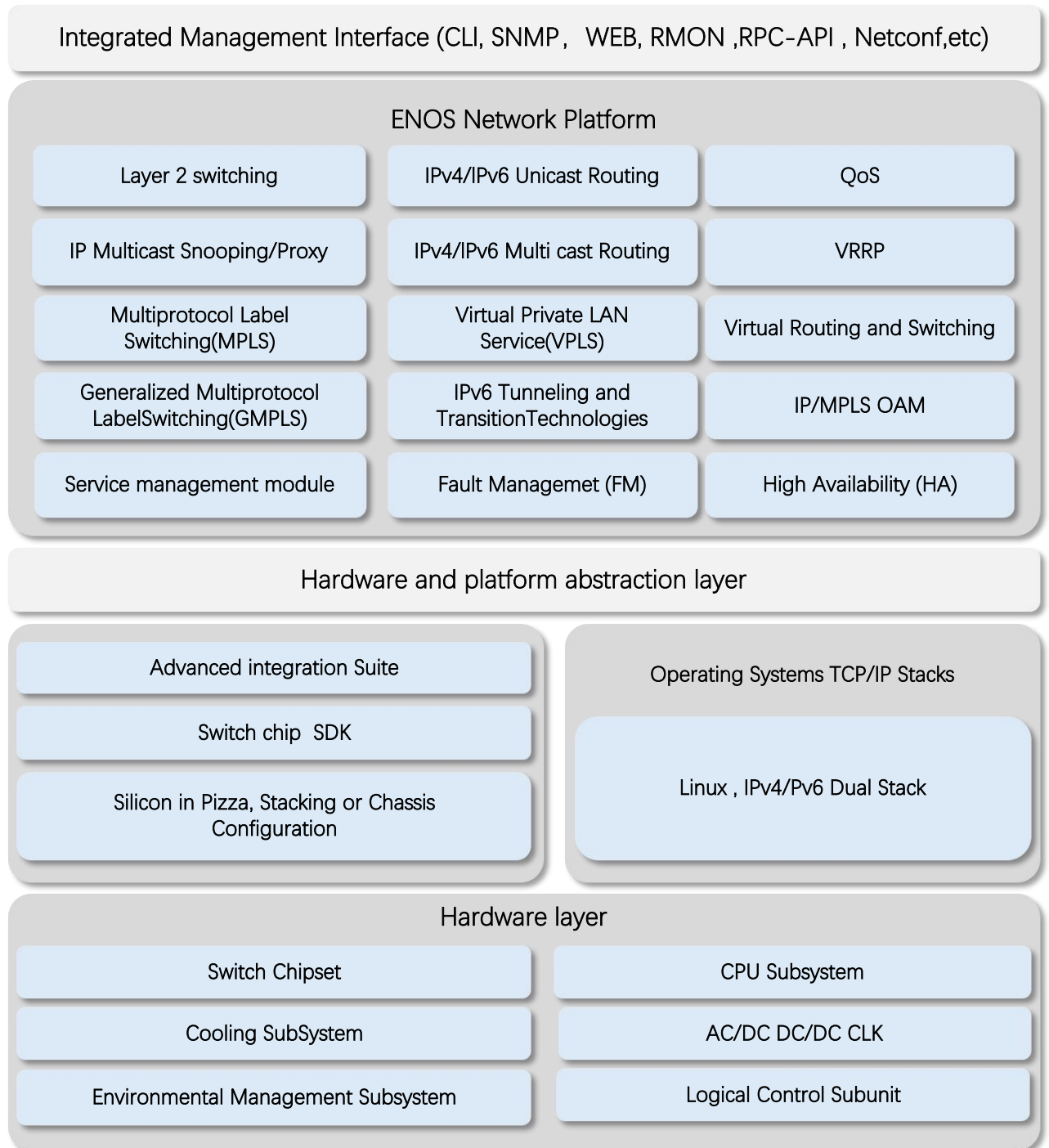
Fan 1-4: OK

Auto refresh: [Manual] [Refresh]

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Software Specifications

ETHERNEXION implements a unified software platform, and the software capabilities supported by the devices are listed in the document [‘ENOS Software features’](#).



- * All ETHERNEXION switches use a normalized software platform and image package file
- * Unified software version iteration plan
- * Unified user experience

Ordering Information

Items	Description
S7314CH-4N-EI	100G Data Center Switch with 14*100G QSFP28,4*25G SFP28, Dual power supply modules, 2*Intelligent fan modules
S7224N-8C	25G Data Center switch with 24*25G SFP28, 8*100G QSFP28, Dual power supply modules, 2*Intelligent fan modules
S7248N-4C-EI	25G Data Center Switch, with 48*25G SFP28, 4*100G QSFP28, Dual power supply modules(C13), 4*Intelligent fan modules.
S7248N-4C-SI	25G Data Center Switch, with 48*25G SFP28, 4*100G QSFP28, 1*Fixed power supply, 4*Fixed Fans
S7148X-8C-EI	10G Data Center Switch with 48*10G SFP+,8*100G QSFP28, Dual power supply modules, 4*Intelligent fan modules
S7148X-8C-SI	10G Enterprise and Campus Network Switch with 48*10G SFP+, 8*100G QSFP28, Fixed single power supply , 4 Fixed Fans
S7132X16N-4C-EI	10G Data Center Switch with 32*10G SFP+, 16*10G/25G SFP28, 4*100G QSFP28, Dual power supply modules, Intelligent fan modules
S7132X16N-4C-SI	10G Data Center Switch with 32*10G SFP+, 16*10G/25G SFP28, 4*100G QSFP28, Fixed single power supply, 4 Fixed Fans
S7124X-8C-EI	10G Data Center Switch with 24*10G SFP+, 8*100G QSFP28, Dual power supply modules, 2 Intelligent fan modules
S7124X-8C-SI	10G Enterprise and Campus Network Switch with 24*10G SFP+,8*100G QSFP28, Fixed single power supply , 4 Fixed Fans

AC/DC Power Supplies use for all models

Items	Description
PSU-200-AC-AFO	S7 Series 200 W AC power supply (front-to-back airflow)
PSU-350-AC-AFO	S7 Series 350 W AC power supply (front-to-back airflow)
PSU-350-DC-AFO	S7 Series 350W DC power supply (front-to-back airflow)
PSU-550-AC-AFO	S7 Series 550 W AC POE power supply (front-to-back airflow)
PSU-550-DC-AFO	S7 Series 550 W DC POE power supply (front-to-back airflow)

Software Licenses

Items	Description
Software License	MS, L3 enhance features software license key, Preinstalled
Software License	MA, MPLS features software license key

Accessory

Items	Front Mounting	Rear Mounting	Screw	Power Cord	Console (RS232 to RJ45)	Grounding Cable
S7314CH-4N-EI	2	2	14	2	1	1
S7224N-8C	2	2	14	2	1	1
S7248N-4C-EI	2	2	14	2	1	1
S7248N-4C-SI	2	2	14	1	1	1
S7148X-8C-EI	2	2	14	2	1	1
S7148X-8C-SI	2	/	14	1	1	1
S7132X16N-4C-EI	2	2	14	2	1	1
S7132X16N-4C-SI	2	/	14	1	1	1
S7124X-8C-EI	2	2	14	2	1	1
S7124X-8C-SI	2	/	14	1	1	1

About ETHERNEXION:

ETHERNEXION is an innovation-driven technology enterprise specializing in high-performance networking and communication solutions. Dedicated to creating tangible value for global clients, the company delivers a comprehensive portfolio of enterprise-grade, carrier-class hardware and intelligent, cloud-managed software. Ethernexion empowers enterprises, data centers, and small-to-medium service providers by providing high-performance, ultra-reliable, and highly cost-effective solutions that optimize operational efficiency and maximize return on investment. Driven by technical excellence, Ethernexion is committed to being a trusted partner in building scalable, secure, and future-ready network infrastructures.

Contact us:

ETHERNEXION NETWORKS PTE. LTD,

Singapore headquarter:

7500A BEACH ROAD #04-307 THE PLAZA SINGAPORE 199591

Corporate and Sales Email: business@ethernexion.com

Website: www.ethernexion.com