

S52 Series Switches

Datasheet

Version: V1.2

Release Date: 2026/3

Product Overview

The S52 Series features high-performance Layer 3 Access 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

- High-Power PoE: Support for 802.3bt (PoE++) delivering up to 90W per port for high-draw IoT and Wi-Fi 7 devices.
- 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.
- Line-Rate Security: MACsec (AES-CMAC) encryption for secure, hardware-based switch-to-switch link protection.
- Advanced Routing: Comprehensive L2/IPv4/IPv6 stack including OSPF, BGP, and PIM (Multicast).

The S52 Series ensures high availability through redundant, hot-swappable power supplies—supporting both AC and DC—and four field-replaceable fan modules. While the standard configuration features front-to-rear (AFO) airflow, rear-to-front (AFI) customization is available to meet specific cooling requirements.

Feasible PSU and airflow

Items	AC	DC	PoE Ports	AFO	AFI	Power Input	FAN
S5248M-4X2Q-EI	○	○	X	○	○	2	2
S5248M-4X2Q-SI	○	X	X	○	×	1	4

Items	AC	DC	PoE Ports	AFO	AFI	Power Input	FAN
S5240M8TP-4N2Q-EI	○	○	48	○	○	2	2
S5232M16TP-8N-EI	○	○	48	○	○	2	2
S5216M8TP-8N-EI	○	○	24	○	○	2	2

Family of the S52 Series switches

Models	Ethernet Ports	Management	PSU 1/PSU 2	Cooling
S5248M-4X2Q-EI	48 x 100M/1G/2.5G Base-T, 4 x 25G/10G SFP28, 2 x 40G QSFP+	Console: RJ45 to RS232 Ethernet: 1G Port	350W/350W	2 x Fan modules (front-to-back airflow)
S5248M-4X2Q-SI	48 x 100M/1G/2.5G Base-T, 4 x 25G/10G SFP28, 2 x 40G QSFP+	Console: RJ45 to RS232 Ethernet: 1G Port	Fixed single power supply	4 x Fixed fans (front-to-back airflow)
S5240M8TP-4N2Q-EI	40 x 100M/1G/2.5G Base-T, 8 x 10G Base-T, 4 x 25G/10G SFP28, 2 x 40G QSFP+	Console: RJ45 to RS232 Ethernet: 1G Port Storage: USB	1200W/1200W	2 x Fan modules (front-to-back airflow)
S5232M16TP-8N-EI	32 x 100M/1G/2.5G Base-T, 16 x 10G Base-T, 8 x 25G/10G SFP28	Console: RJ45 to RS232 Ethernet: 1G Port Storage: USB	1200W/1200W	2 x Fan modules (front-to-back airflow)
S5216M8TP-8N-EI	16 x 100M/1G/2.5G Base-T, 8 x 10G Base-T, 8 x 25G/10G SFP28	Console: RJ45 to RS232 Ethernet: 1G Port Storage: USB	600W/600W	2 x Fan modules (front-to-back airflow)

Product Specifications

Model	Switch capacity (bidirectional)	Throughput	Dimensions (W x H x D)	Consumption(W)	Weight(kg) (Net/Gross)
S5248M-4X2Q-EI	600Gbps	892.8Mbps	442*44*357	TBD	7.2KG/10.3KG
S5248M-4X2Q-SI	600Gbps	892.8Mbps	442*44*290	66	6KG/8.3KG
S5240M8TP-4N2Q-EI	720Gbps	1071.36Mbps	442*44*420	161.2	7.9kg/11.1kg
S5232M16TP-8N-EI	880Gbps	1309.44Mbps	442*44*449	152.2	8.3kg/11.5kg
S5216M8TP-8N-EI	640Gbps	952.32Mbps	442*44*420	98.8	7.2kg/10.4kg

Product Specifications

CPU

- Dual-core processor, ARM A53

Memory

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

MTBF

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

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

Management

The S52 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.

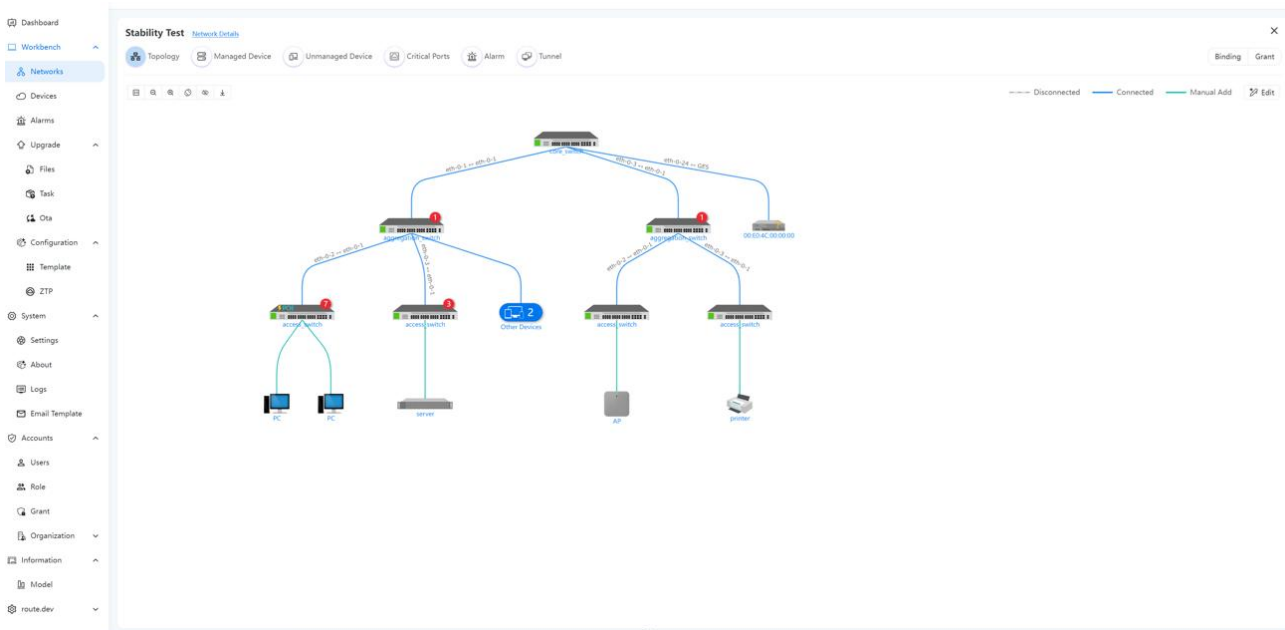
Cloud management

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.

The screenshot shows the Visual WEB GUI for a network device. The interface includes a sidebar with navigation options like Monitor, Configuration, Maintenance, and Network. The main content area is divided into several sections:

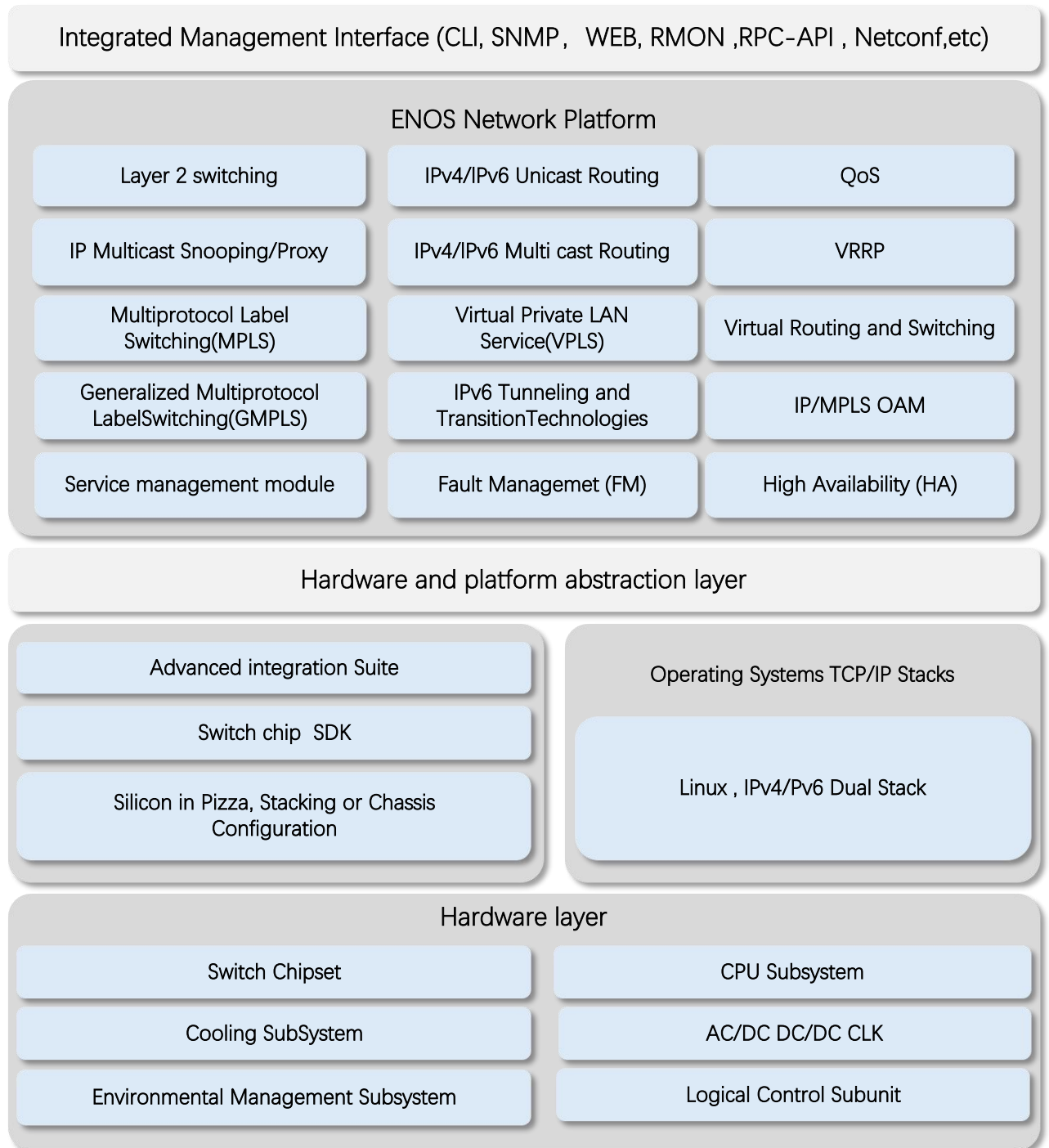
- Device Information:** A table showing key device details:

Product ID:	Software:	Hardware Version: 1.1	Uptime: 0 days, 6 hours, 42 minutes
Location: --	Image Name: ulmage.k1023a.e680.d	EPLD Version: 0.2	Device Name: 5645X
WebImage Name:	Serial Number:	Contact: --	BootRom Version: v1.0.2
MAC Address: D8-5B-22-00-02-02			
- Interface Panel:** A grid of interface status indicators (Active, Inactive, Shutdown) for various ports, with a legend for Copper, Fiber, and 40/100Gb.
- Usage:** Two progress bars showing CPU Usage at 7.53% and Memory Usage at 36.94%.
- Temperature:** A bar chart showing temperatures for ARROUND_CHIP0 and SWITCH_CHIP0.
- Fan:** A bar chart showing fan status for four fans (1-1, 1-2, 1-3, 1-4), with a legend for OK and Failed.

At the bottom, there is an 'Auto refresh' dropdown set to 'Manual' and a 'Refresh' button. The footer contains the copyright notice: 'Copyright ©. All Rights Reserved.'

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
S5248M-4X2Q-EI	2.5G enterprise switch, with 48 x 100M/1G/2.5G Base-T, 4 x 25G/10G SFP28, 2 x 40G QSFP+, Dual power supply modules, 2 Intelligent fan modules.
S5248M-4X2Q-SI	2.5G enterprise switch, with 48 x 100M/1G/2.5G Base-T, 4 x 25G/10G SFP28, 2 x 40G QSFP+, Fixed single power supplies, 4 Fixed fans.
S5240M8TP-4N2Q-EI	2.5G enterprise switch, with 40 x 100M/1G/2.5G Base-T(PoE++90W), 10 x 10G Base-T(PoE++90W), 4 x 25G/10G SFP28, 2 x 40G QSFP+, Dual power supply modules, 2 x Intelligent fan modules.
S5232M16TP-8N-EI	2.5G enterprise switch, with 32 x 100M/1G/2.5G Base-T(PoE++90W), 16 x 10G Base-T(PoE++90W), 8 x 25G/10G SFP28, Dual power supply modules, 2 x Intelligent fan modules.
S5216M8TP-8N-EI	2.5G enterprise switch, with 16 x 100M/1G/2.5G Base-T(PoE++90W), 8 x 10G Base-T(PoE++90W), 8 x 25G/10G SFP28, Dual power supply modules, 2 x Intelligent fan modules.

AC/DC Power Supplies use for all models

Items	Description
PSU-350-AC-AFO	S52 Series 350 W AC power supply (front-to-back airflow)
PSU-600-AC-AFO	S52 Series 600W AC power supply (front-to-back airflow)
PSU-1200-AC-AFO	S52 Series 1200W AC power supply (front-to-back airflow)

Software Licenses

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

Accessory

- Mounting components pack
- Power Cord
- Serial Console cable

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