

# S55 Series Switches

## Datasheet

Version: V1.2

Release Date: 2026/3

### Product Overview

The S55 Series features high-performance Layer 3 Access / Aggregation 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 S55 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
S5506Q-2C-EI	○	○	X	○	1	1
S5506Q-2C-SI	○	X	X	X	1	2

## Family of the S55-Series switches

Models	Ethernet Ports	Management	PSU 1/PSU 2	Cooling
S5506Q-2C-EI	6 x 40G QSFP+ + 2 x 100G QSFP28	Console: RJ45 RS232 Ethernet: 1G Port Storage: USB	350W CRPS	1 x Intelligent Fan Module (front-to-back airflow)
S5506Q-2C-SI	6 x 40G QSFP+ + 2 x 100G QSFP28	Console: RJ45 RS232 Ethernet: 1G Port Storage: USB	150W Fixed single power supply	2 x fixed fans (front-to-back airflow)

## Product Specifications

Model	Switch capacity (bidirectional)	Throughput	Dimensions (W x H x D) cm	Consumption (W)	Weight(kg) (Net/Gross)
S5506Q-2C-EI	880 Gbps	1309.44Mpps	21.5x4.4x35.5	56	3.3kg/6.2kg
S5506Q-2C-SI	880 Gbps	1309.44Mpps	21.5x4.4x35.5	56	3kg/6kg

### CPU

- Dual-core processor, ARM A53

### Memory

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

### MTBF

- -EI  $\geq 900000$ H
- -SI  $\geq 700000$ H

### 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 S55 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.

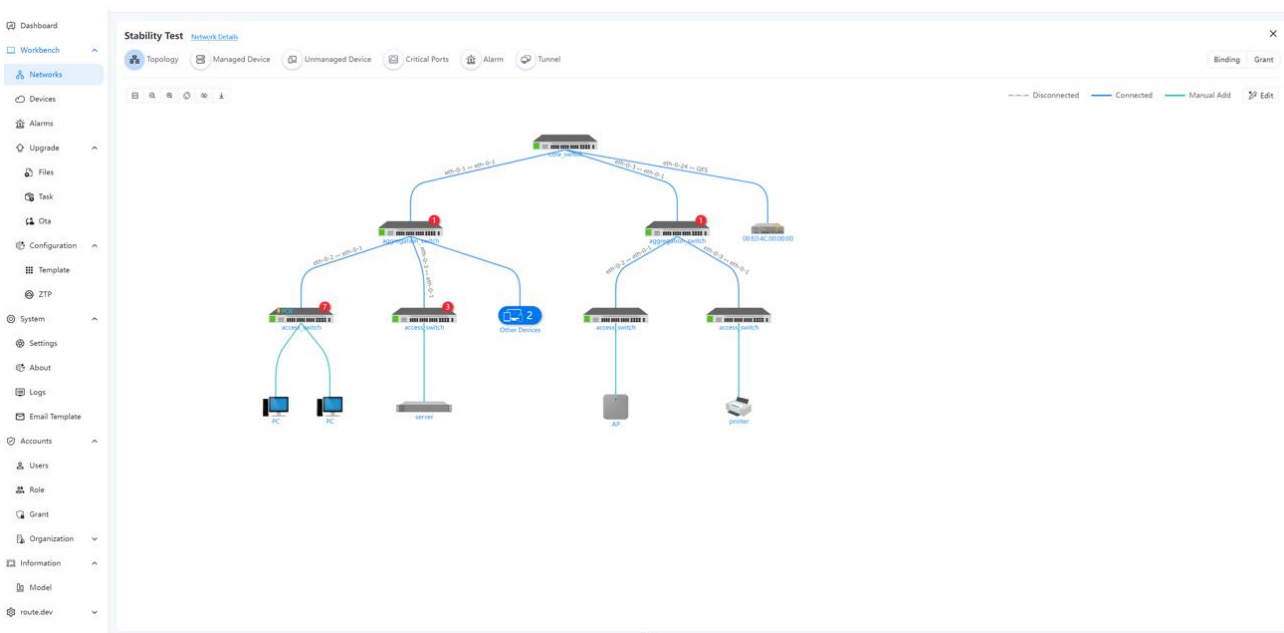
### Cloud management

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”.

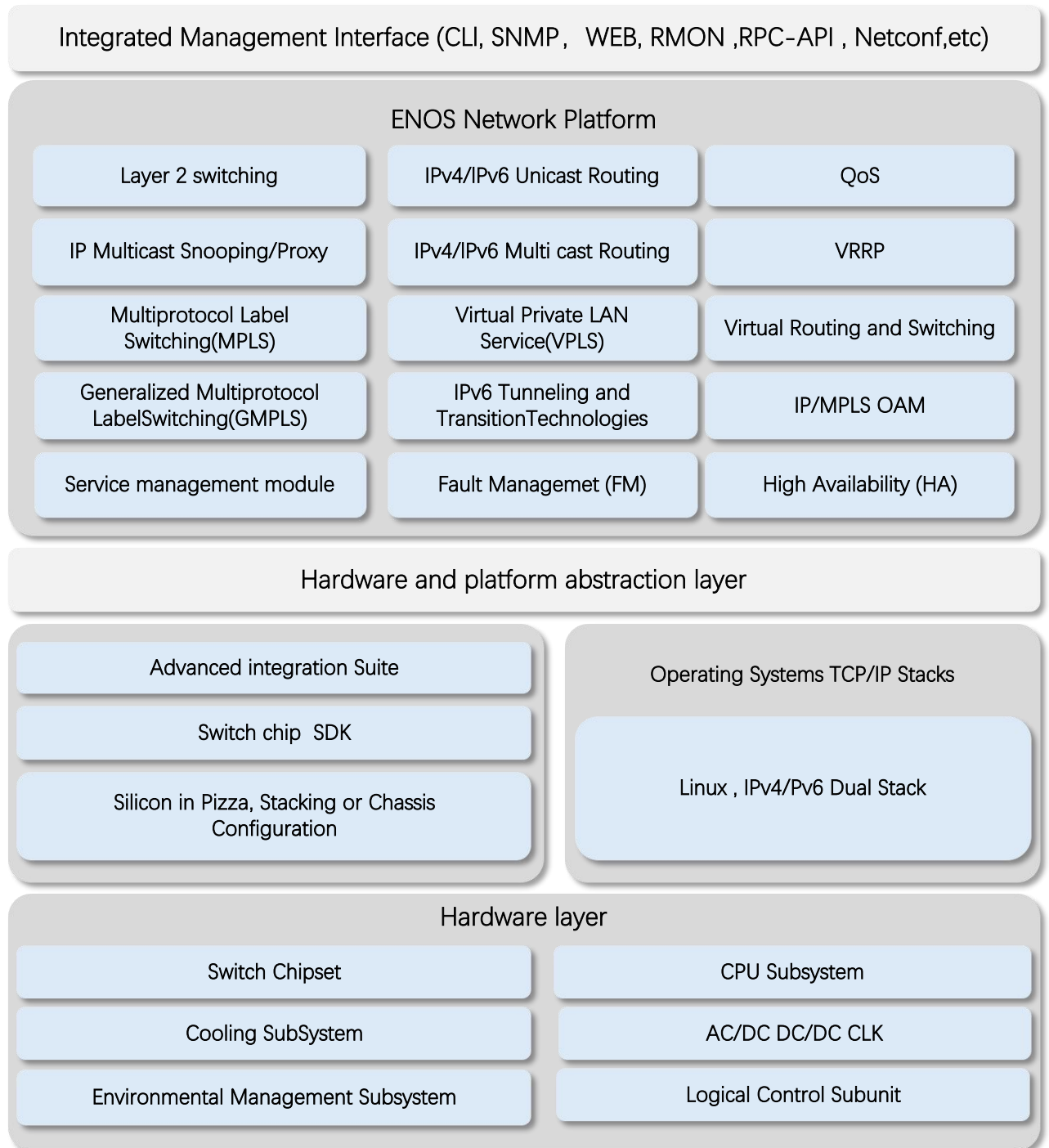


## Visual WEB GUI

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

## 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
S5506Q-2C-EI	40G enterprise switch, with 6*40G QSFP+ One CRPS power supply module, 1 Intelligent fan module.
S5506Q-2C-SI	40G enterprise switch, with 6*40G QSFP+ One fixed power supply, 2 fixed Fans.

## AC/DC Power Supplies use for all models

Items	Description
PSU-350-AC-AFO	S55 Series 350 W AC power supply (front-to-back airflow)
PSU-550-DC-AFO	S55 Series 550 W DC 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.

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