

ACCESSING & INDUSTRIAL SWITCH

PRODUCTION CATALOGUE



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KOC Communication Co., Ltd.
Fiber Optic Components Global Supplier



Company Profile

Established in 2001, KOC Group is a state and municipal level Hitech Company, located in Longhua District, Shenzhen, China. KOC started its fiber optic connection trading at its early stage. After more than 10-year's developments, it becomes a professional manufacturer specialized in telecom, fiber optic network connection, passive devices, data center cabling etc.

KOC products are extensively applicable to telecom operators, fiber optic engineering, CCTV, broadband networks, FTTH, data center in more than 80 countries worldwide.

KOC provides reliable products and services to customers under the concept of high quality orientation.

Why KOC Can Promise Fast Delivery?

- "Ready to produce" materials
- Special designed textures & tools
- Simplified order handling process
- Well trained operators for multi-tasks
- Target to deliver assemblies to site
- 3~7 days from Receipt of PO
- The most rational and fast way of logistics
- Engineers: earliest entrants in fiber industry of China
- Sales: overseas working experiences
- Operation team: fortune global 500 working experience

2,500 m²
Production Area

1,000 m²
Office Area

42 staff
Bachelor degree or higher

90 staff
10+ years working experience

KOC

Fiber Optic Components Global Supplier

Development History

Content

- 2001 • • **KOC founded**
- 2004 • • Path cord Production base set up in Yintan, Jiangxi Province.
- 2006 • • Production base relocated in Hitec Cluster - Shenzhen
- 2008 • • Sub-companies established for adapters, connectors and other components. Moved to Unibuilt.
- 2010 • • Set up PLC production Lines
- 2015 • • **Acquired and integrated companies under KOC, Set up ODN/PON , Passivde device and data center divisions. KOC Group established.**
- 2020 • • Establishment of Sichuan KOC Communication Co., Ltd
- 2023 • • **New factory build in Sichuan**

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S2500-C Series



Product Overview

S2500-C Series is a new-generation intelligent gigabit access switch designed for carrier's IP MAN and enterprise networks. Based on the new-generation high-performance hardware and software platform, it supports functions such as ACL, QinQ and QoS. Its simple management mode and flexible installation can meet the requirement of any complicated scenarios. S2500-C Series has 2 models: **S2510-C & S2528-C**.

Product Characteristics

Carrier-Level Ethernet Access Switch

S2500-C Series supports the carrier-level Ethernet-ring protection protocol with less than 50ms recovery time, STP/RSTP/MSTP, backup uplink ports, and LACP link aggregation to cater to the requirements of high reliability of carriers; S2500-C Series has powerful ACL functions to access and control L2-L7 data based on physical port, providing carriers flexible and various policy control methods; S2500-C Series supports In-Service Software Upgrade (ISSU) to ensure the unremitting data forwarding during system upgrade; S2500-C Series supports various L2 multicast functions such as IGMP-snooping, fast-leave and MVR to fully meet the operation requirements of carrier's IPTV.

Comprehensive IPv6 Solutions

S2500-C Series supports the IPv6 protocol suite, IPv6 neighbor discovery, ICMPv6 and Path MTU discovery. S2500-C Series supports Ping, Traceroute, Telnet, SSH and ACL on the basis of IPv6, meeting IPv6 networks' equipment management requirements and service control requirements;

Enhanced QoS

S2500-C Series supports priority retagging and complicated flow classification based on VLAN, MAC, source address, destination address, IP or priority, better streamlining carrier's services. S2500-C Series provides flexible bandwidth control policies, supporting port-/flow-based flow limit, ensuring the line speed forwarding of each port. S2500-C Series supports multiple queue schedule algorithms such as SP, WRR and "SP + WRR".

Security+

Equipment-level security: The advanced hardware infrastructure design realizes the level-based packet schedule and packet protection, prevents DoS-/TCP-related SYN Flood, UDP Flood, Broadcast Storm or large traffic attacks, and supports level-based command line protection, endowing different levels of users with different management permissions. Perfect security authentication mechanisms: IEEE 802.1x, Radius and Tacacs+. S2500-C Series supports storm/multicast/unicast limit, ensuring the normal running of equipment in harsh network conditions. S2500-C Series supports perfect ring detection mechanism, ensuring the long-term stable running of network. S2500-C Series supports port isolation within the same VLAN, DHCP-Snooping, and IP + MAC + Port binding.

Easy Management and Maintenance

S2500-C Series supports many management modes such as the CLI, Telnet, SSH, SSL and SNMP. S2500-C Series supports the WEB management mode, which is easy and efficient for installing and debugging the device. S2500-C Series supports FTP, TFTP and SFTP. S2500-C Series supports ISSU (In-Service Software Upgrade). S2500-C Series supports SNMP and NMS smart network management platform. The combination realizes automatic equipment discovery, network topology management, equipment configuration management, performance data statistics and analysis and trouble management. S2500-C Series supports Zero Touch Provisioning (ZTP) function to minimize manual operator intervention and helps reduce customers' initial deployment costs.



Supports Maximum 24 GE TX Ports and 4 GE SFP Uplink Ports



Advanced Hardware Architecture and Industry-leading Port Density



Carrier-Level High Reliability Layer-3 Routing Functions



Varied Service Characteristics Versatile IPv6 Solution Complete Security Mechanism

Model lists

S2510-C



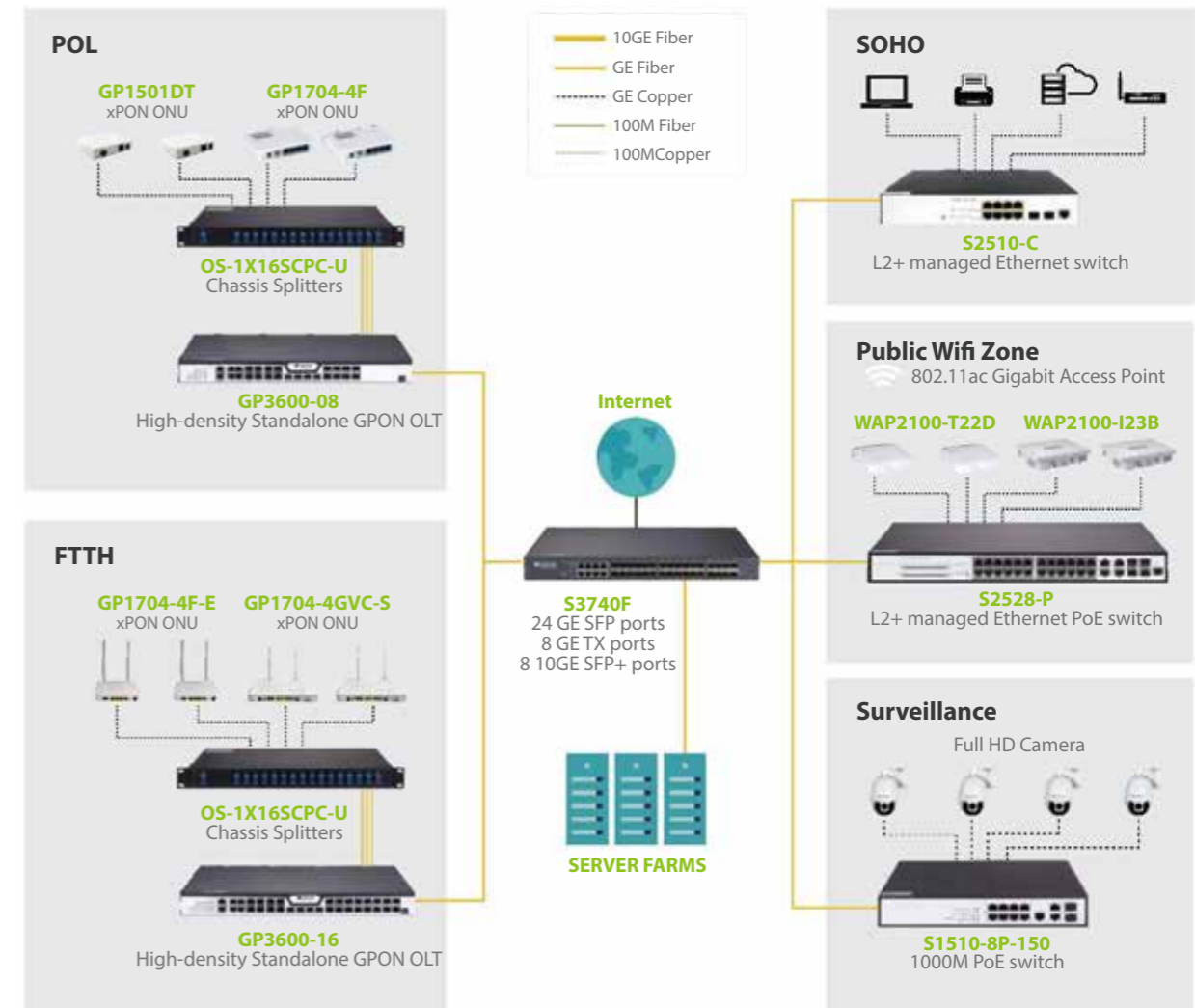
• 8 GE TX port • 2 100/1000M SFP ports

S2528-C



• 24 GE TX ports • 4 100/1000M SFP ports

Application Diagram



Product Specifications

Item	S2510-C	S2528-C
Interface	8 GE TX ports, 2 100/1000M SFP ports	24 GE TX ports, 4 100/1000M SFP ports
Console	1 RJ45 port, 1 RST button	1 RJ45 port, 1 RST button
Backplane	20 Gbps	56 Gbps
Forwarding rate	15 Mpps	42 Mpps
Chassis	Dimensions (WxDxH)	280x180x44 mm
	Weight (empty)	1.55 KG
Package	Dimensions (WxDxH)	346x289x92 mm
	Weight	2.55 KG
Power consumption	no-load	<3 W
	full-load	10 W
Power supply (AC: 100V-240V, 50Hz±10%)	15 W	25 W
Total output BTU (1000BTU/H=293W)	51.19	85.32
Fan number	no	
Noise@25°C(dBA)	0	
MTBF(H)	>50,000	
Forwarding mode	Store-forward	
Flash (MB)	16	
DRAM (MB)	128	
MAC	8K	
Buffer size(Mb)	4.1	
Jumbo frame	9K	
Total SVI	10	

Features

VLAN

- 4K Active VLAN
- QinQ & Selective QinQ
- GVRP, Private VLAN
- Voice VLAN

Spanning Tree

- 802.1D (STP)
- 802.1W (RSTP) and 802.1S (MSTP)
- BPDU guard, root guard and loopback guard

Multicast

- IGMP v1/2/3
- IGMP Snooping
- IGMP Fast Leave
- IGMP Filter
- MVR

IP

- Static route
- RIP, OSPF
- 512 routing table
- IP v4/v6 dual stack
- DHCP Server/Client/Relay

QoS

- CAR, HQoS, MAC/IP/TCP/UDP/VLAN/COS/DSCP/TOS based
- QoS,802.1P/DSCP priority relabeling, SP, WRR, and "SP+WRR",
- Tail-Drop, WRED, flow monitoring and traffic shaping.

Security

- Port isolation, Port security, and "IP+MAC+port" binding, MAC sticky, DHCP Snooping and option 82, DAI & IP source guard, PPPoE+, IEEE 802.1x, Radius and Tacacs+L2/L3/L4 ACL flow identification and filtration
- Anti-attack from. DDoS, TCP's SYN Flood, UDP Flood, etc.
- Broadcast/multicast/unknown unicast storm-control
- MD5, SHA-256, RSA-1024, AES256, etc.

Reliability

- Static/LACP link aggregation, Interface backup EAPS and ERPS
- ISSU

Management

- Console, Telnet, SSH v1/2, HTTP, HTTPS, SNMP v1/v2/v3, RMON
- TFTP, FTP, SFTP
- NTP
- ZTP(Zero Touch Provisioning)SPAN, RSPAN

Accessories

- Power cord, rackmount kits, console cable, anti-slipping pad

Environment

- Operating temperature/humidity: 0°C -50°C, 10%-90% non-condensing
- Storage temperature/humidity: -20°C -70°C, 5%-95% non-condensing

Certification

CE, FCC, ROHS

Ordering Information

Item	Description
S2500-C Series switch	
S2510-C	Ethernet switch with 8 GE TX ports and 2 GE SFP ports (1 console port, 8 GE TX ports, 2 100/1000M SFP ports, 1 standard AC220V power supply, fanless, 1U, desktop installation)
S2528-C	Ethernet switch with 24 GE TX ports and 4 GE SFP ports (1 console port, 24 GE TX ports, 4 100/1000M SFP ports, 1 standard AC220V power supply, fanless, 1U, 19-inch rack-mounted installation)
Optical Modules	
100M Optical Modules	
FSFP-SX-1310	100M SFP multi-mode (2Km, 1310nm, LC, DDM)
FSFP-LX-15	100M SFP single-mode (15Km, 1310nm, LC, DDM)
FSFP-LX-40	100M SFP single-mode (40Km, 1310nm, LC, DDM)
FSFP-ZX-80	100M SFP single-mode (80Km, 1550nm, LC, DDM)
FSFP-LX-SM1310-20-BIDI	100M SFP single-mode, single fiber (20Km, TX1310/RX1550, LC, DDM)
FSFP-LX-SM1550-20-BIDI	100M SFP single-mode, single fiber (20Km, TX1550/RX1310, LC, DDM)
FSFP-LX-SM1310-40-BIDI	100M SFP single-mode, single fiber (40Km, TX1310/RX1550, LC, DDM)
FSFP-LX-SM1550-40-BIDI	100M SFP single-mode, single fiber (40Km, TX1550/RX1310, LC, DDM)
FSFP-LX-SM1310-80-BIDI	100M SFP single-mode, single fiber (80Km, TX1310/RX1550, LC, DDM)
FSFP-LX-SM1550-80-BIDI	100M SFP single-mode, single fiber (80Km, TX1550/RX1310, LC, DDM)
GE Optical Modules	
GSFP-TX-B	GE SFP-to-RJ45 module
GSFP-SX-D	GE SFP multi-mode(500m,850nm,LC,DDM)
GSFP-LX-10-D	GE SFP single-mode(10Km,1310nm,LC,DDM)
GSFP-LX-20-D	GE SFP single-mode (40Km, 1310nm, LC, DDM)
GSFP-LX-40-D	GE SFP single-mode (40Km, 1310nm, LC, DDM)
GSFP-ZX-80-D	GE SFP single-mode (80Km, 1550nm, LC, DDM)
GSFP-ZX-120-D	GE SFP single-mode (120Km, 1550nm, LC, DDM)
GSFP-LX-SM1310-10-BIDI	GE SFP single-mode, single fiber (10Km, TX1310/RX1550, LC, DDM)
GSFP-LX-SM1550-10-BIDI	GE SFP single-mode, single fiber (10Km, TX1550/RX1310, LC, DDM)
GSFP-LX-SM1310-20-BIDI	GE SFP single-mode, single fiber (20Km, TX1310/RX1550, LC, DDM)
GSFP-LX-SM1550-20-BIDI	GE SFP single-mode, single fiber (20Km, TX1550/RX1310, LC, DDM)
GSFP-LX-SM1310-40-BIDI	GE SFP single-mode, single fiber (40Km, TX1310/RX1550, LC, DDM)
GSFP-LX-SM1550-40-BIDI	GE SFP single-mode, single fiber (40Km, TX1550/RX1310, LC, DDM)
GSFP-LX-SM1490-80-BIDI	GE SFP single-mode, single fiber (80Km, TX1490/RX1550, LC, DDM)
GSFP-LX-SM1550-80-BIDI	GE SFP single-mode, single fiber (80Km, TX1550/RX1490, LC, DDM)
GSFP-LX-SM1490-120	GE SFP single-mode, single fiber (120Km, TX1490/RX1550, LC, DDM)
GSFP-LX-SM1550-120	GE SFP single-mode, single fiber (120Km, TX1550/RX1490, LC, DDM)

S2500-P Series



Product Overview

S2500-P Series is a new-generation intelligent PoE access switch designed for carrier's IP MAN and enterprise networks. Based on the new-generation high-performance hardware and software platform, it supports functions such as ACL, QinQ and QoS. Its simple management mode and flexible installation can meet the requirement of any complicated scenarios. S2500-P Series has 3 models: **S2510-P, S2520-P and S2528-P.**

Product Characteristics

Carrier-Level Ethernet Access Switch

S2500-P Series supports the carrier-level Ethernet-ring protection protocol with less than 50ms recovery time, STP/RSTP/MSTP, backup uplink ports, and LACP link aggregation to cater to the requirements of high reliability of carriers; S2500-P Series has powerful ACL functions to access and control L2-L7 data based on physical port, providing carriers flexible and various policy control methods; S2500-P Series supports In-Service Software Upgrade (ISSU) to ensure the unremitting data forwarding during system upgrade; S2500-P Series supports various L2 multicast functions such as IGMP-snooping, fast-leave and MVR to fully meet the operation requirements of carrier's IPTV.

Intelligent PoE+

S2500-P Series supports IEEE 802.3AF/AT PoE standard, and power mapping scales up to a maximum of 370W of PoE+ power;

S2500-P Series supports PoE non-stop power supply. The PoE+ power is maintained during a switch reload; S2500-P Series supports manual and dynamic PoE power allocation; S2500-P Series supports up to 2KV thunder-proof of the PoE port and power supply;

Enhanced QoS

S2500-P Series supports priority retagging and complicated flow classification based on VLAN, MAC, source address, destination address, IP or priority, better streamlining carrier's services; S2500-P Series provides flexible bandwidth control policies, supporting port-/flow-based flow limit, ensuring the line speed forwarding of each port; S2500-P Series supports multiple queue schedule algorithms such as SP, WRR and "SP + WRR";

Security+

Equipment-level security: The advanced hardware infrastructure design realizes the level-based packet schedule and packet protection, prevents DoS-/TCP-related SYN Flood, UDP Flood, Broadcast Storm or large traffic attacks, and supports level-based command line protection, endowing different levels of users with different management permissions. Perfect security authentication mechanisms: IEEE 802.1x, Radius and Tacacs+. S2500-P Series supports storm/multicast/unicast limit, ensuring the normal running of equipment in harsh network conditions. S2500-P Series supports perfect ring detection mechanism, ensuring the long-term stable running of network. S2500-P Series supports port isolation within the same VLAN, DHCP-Snooping, and IP + MAC + Port binding.

Easy Management and Maintenance

S2500-P Series supports many management modes such as the CLI, Telnet, SSH, SSL and SNMP; S2500-P Series supports the WEB management mode, which is easy and efficient for installing and debugging the device; S2500-P Series supports FTP/TFTP and SFTP; S2500-P Series supports ISSU (In-Service Software Upgrade); S2500-P Series supports SNMP and NMS smart network management platform. The combination realizes automatic equipment discovery, network topology management, equipment configuration management, performance data statistics and analysis and trouble management; S2500-P Series supports Zero Touch Provisioning(ZTP) function to minimize manual operator intervention and helps reduce customers' initial deployment costs.



Supports Maximum 24 GE PoE Ports and 4 GE SFP Uplink Ports



Advanced Hardware Architecture and Industry-leading Port Density



Carrier-Level High Reliability Layer-3 Routing Functions

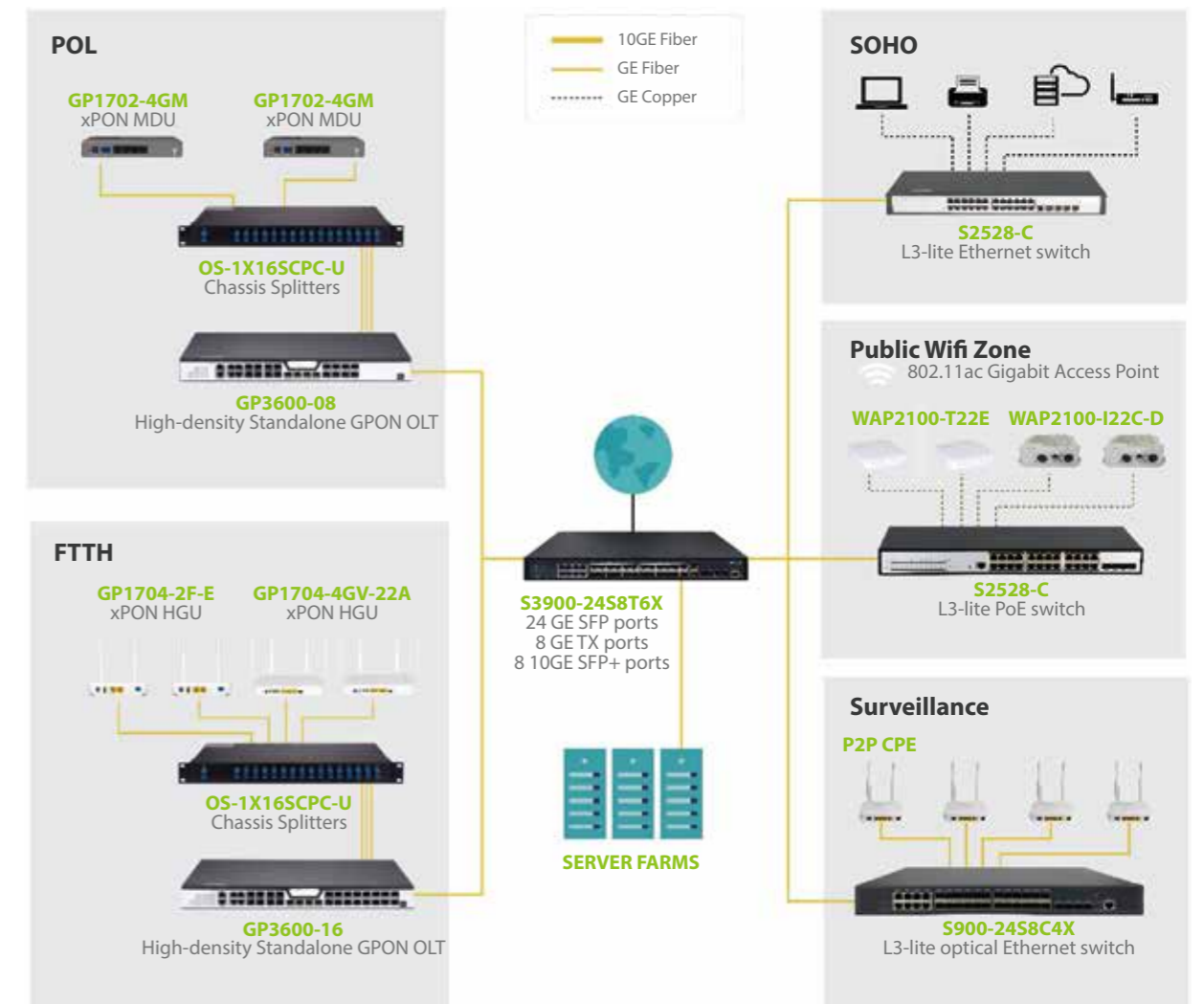


Varied Service Characteristics Versatile IPv6 Solution Complete Security Mechanism

Model lists



Application Diagram



Product Specifications

Item	S2510-P	S2520-P	S2528-P
Interface	8 GE PoE ports, 2 100/1000M SFP ports	16 GE PoE ports, 2 GE TX/SFP combo ports 2 100/1000M SFP ports	24 GE PoE ports, 4 GE TX/SFP combo ports
Console	1 RJ45 port, 1 RST button	1 RJ45 port, 1 RST button	1 RJ45 port, 1 RST button
Backplane	20 Gbps	40 Gbps	56 Gbps
Forwarding rate	15 Mpps	30 Mpps	42 Mpps
Chassis	Dimensions (WxDxH)	280x180x44 mm	440x210x44 mm
	Weight (empty)	1.6 KG	2.8 KG
Package	Dimensions (WxDxH)	346x289x92 mm	555x295x88 mm
	Weight	2.4 KG	3.9 KG
Power consumption	no-load	<7 W	<15 W
	full-load	142.5 W	261.4 W
Power supply (AC: 100V-240V, 50Hz±10%)	150 W	265 W	400 W
POE power budget	130 W	250W	370 W
Total output BTU (1000BTU/H=293W)	511.95	892.15	1365.19
Fan number	/	2	2
Noise@25°C(dBA)	0	37.5	37.5
MTBF(H)	>50,000		
Forwarding mode	Store-forward		
Flash (MB)	16		
DRAM (MB)	128		
MAC	8K		
Buffer size(Mb)	4.1		
Jumbo frame	9K		
Total SVI	10		

Features

VLAN

- 4K Active VLAN
- QinQ & Selective QinQ
- GVRP, Private VLAN
- Voice VLAN

Spanning Tree

- 802.1D (STP)
- 802.1W (RSTP) and 802.1S (MSTP)
- BPDU guard, root guard and loopback guard

Multicast

- IGMP v1/2/3
- IGMP Snooping
- IGMP Fast Leave
- IGMP Filter
- MVR

IP

- Static route
- RIP, OSPF
- 512 routing table
- IP v4/v6 dual stack
- DHCP Server/Client/Relay

Certification

CE, FCC, ROHS

QoS

- CAR, HQoS, MAC/IP/TCP/UDP/VLAN/COS/DSCP/TOS based
- QoS,802.1P/DSCP priority relabeling, SP, WRR, and "SP+WRR",
- Tail-Drop, WRED, flow monitoring and traffic shaping.

Security

- Port isolation, Port security, and "IP+MAC+port" binding, MAC sticky, DHCP Snooping and option 82, DAI & IP source guard, PPPoE+,
- IEEE 802.1x, Radius and Tacacs+
- L2/L3/L4 ACL flow identification and filtration Anti-attack from. DDoS, TCP's SYN Flood, UDP Flood, etc.
- Broadcast/multicast/unknown unicast storm-control
- MD5, SHA-256, RSA-1024, AES256, etc.

Reliability

- Static/LACP link aggregation, Interface backup
- EAPS and ERPS
- ISSU

Management

- Console, Telnet, SSH v1/2, HTTP, HTTPS, SNMP v1/v2/v3, RMON
- TFTP, FTP, SFTP
- NTP
- ZTP(Zero Touch Provisioning)SPAN, RSPAN

Accessories

- Power cord, rackmount kits, console cable, anti-slipping pad

Environment

- Operating temperature/humidity: 0°C -50°C, 10%-90% non-condensing
- Storage temperature/humidity: -20°C -70°C, 5%-95% non-condensing

Ordering Information

Item	Description
S2500-P Series PoE Switches	
S2510-P	Ethernet PoE switch with 10 GE ports (1 console port, 8 GE PoE ports, 2 100/1000M SFP ports, 1 standard AC220V power supply, 150W, fanless, 1U, rack-mounted installation)
S2520-P	Ethernet PoE switch with 20GE ports (1 console port, 16 GE PoE ports, 2 100/1000M SFP ports, 2GE TX/SFP combo ports, 1 standard AC220V power supply, 265W, thecooling fan, 1U, standard 19-inch rack-mounted installation)
S2528-P	Ethernet PoE switch with 28 GE ports (1 console port, 24 GE PoE ports, 4 GE TX/SFP combo ports, 1 standard AC220V power supply, 400W, the cooling fan, 1U, standard 19-inch rack-mounted installation)
Optical Modules	
100M Optical Modules	
FSFP-SX-1310	100M SFP multi-mode (2Km, 1310nm, LC, DDM)
FSFP-LX-15	100M SFP single-mode (15Km, 1310nm, LC, DDM)
FSFP-LX-40	100M SFP single-mode (40Km, 1310nm, LC, DDM)
FSFP-ZX-80	100M SFP single-mode (80Km, 1550nm, LC, DDM)
FSFP-LX-SM1310-20-BIDI	100M SFP single-mode, single fiber (20Km, TX1310/RX1550, LC, DDM)
FSFP-LX-SM1550-20-BIDI	100M SFP single-mode, single fiber (20Km, TX1550/RX1310, LC, DDM)
FSFP-LX-SM1310-40-BIDI	100M SFP single-mode, single fiber (40Km, TX1310/RX1550, LC, DDM)
FSFP-LX-SM1550-40-BIDI	100M SFP single-mode, single fiber (40Km, TX1550/RX1310, LC, DDM)
FSFP-LX-SM1310-80-BIDI	100M SFP single-mode, single fiber (80Km, TX1310/RX1550, LC, DDM)
FSFP-LX-SM1550-80-BIDI	100M SFP single-mode, single fiber (80Km, TX1550/RX1310, LC, DDM)
GE Optical Modules	
GSFP-TX-B	GE SFP-to-RJ45 module
GSFP-SX-D	GE SFP multi-mode (500m, 850nm, LC, DDM)
GSFP-LX-10-D	GE SFP single-mode (10Km, 1310nm, LC, DDM)
GSFP-LX-20-D	GE SFP single-mode (20Km, 1310nm, LC, DDM)
GSFP-LX-40-D	GE SFP single-mode (40Km, 1310nm, LC, DDM)
GSFP-ZX-80-D	GE SFP single-mode (80Km, 1550nm, LC, DDM)
GSFP-ZX-120-D	GE SFP single-mode (120Km, 1550nm, LC, DDM)
GSFP-LX-SM1310-10-BIDI	GE SFP single-mode, single fiber (10Km, TX1310/RX1550, LC, DDM)
GSFP-LX-SM1550-10-BIDI	GE SFP single-mode, single fiber (10Km, TX1550/RX1310, LC, DDM)
GSFP-LX-SM1310-20-BIDI	GE SFP single-mode, single fiber (20Km, TX1310/RX1550, LC, DDM)
GSFP-LX-SM1550-20-BIDI	GE SFP single-mode, single fiber (20Km, TX1550/RX1310, LC, DDM)
GSFP-LX-SM1310-40-BIDI	GE SFP single-mode, single fiber (40Km, TX1310/RX1550, LC, DDM)
GSFP-LX-SM1550-40-BIDI	GE SFP single-mode, single fiber (40Km, TX1550/RX1310, LC, DDM)
GSFP-LX-SM1490-80-BIDI	GE SFP single-mode, single fiber (80Km, TX1490/RX1550, LC, DDM)
GSFP-LX-SM1550-80-BIDI	GE SFP single-mode, single fiber (80Km, TX1550/RX1490, LC, DDM)
GSFP-LX-SM1490-120	GE SFP single-mode, single fiber (120Km, TX1490/RX1550, LC, DDM)
GSFP-LX-SM1550-120	GE SFP single-mode, single fiber (120Km, TX1550/RX1490, LC, DDM)

S2900 Series



Product Overview

S2900 L3-lite Series is a next-generation aggregation 10 GE switch. It is targeted at the IP MAN (metropolitan area network), government and enterprise networks, Internet cafe and diskless working environment. It is developed on the basis of high performance hardware and software platform with own independent intellectual property rights. It supports functions such as powerful ACL, flexible QinQ, 1:1 or N:1 VLAN switching, Ethernet OAM, carrier-level QoS and industry level 10GE Ether-ring, ensuring this switch series meets application requirements in all kinds of complicated sites. It also supports layer-3 routing protocol 2900. S2900 L3-lite Series has 5 models: **S2900-24T4X, S2900-24S8C4X, S2900-24P4X, S2900-48T6X and S2900-48P6X.**

Product Characteristics

Innovative Virtual Cluster Switching Technique

S2900 L3-lite Series virtualizes multiple physical devices into one. The performance, reliability and management of the virtual system are superior to the physical one. Improved Performance: BVSS system makes full use of each link in the physical devices, which avoids STP blocking the link and protects the original link to the maximum extent.

High Reliability: Based on the advanced distribution mechanism and efficient cross-physical link aggregation link function, the logic control plane, service control plane and service data plane are separated. Thus, S2900 L3-lite Series can support continuous layer-3 routing forwarding, avoiding service interruption as a result of a single point of failure. **Easy Management:** BVSS realizes single IP management, greatly improving the networking efficiency and lowering the operating cost.

Industrial Ethernet Ring with Zero Delay and Zero Packet Loss

Supports industry-level EAPS and their protection shift time is less than 50ms. Their high reliability is represented by the null packet loss, which has been proved by many years of application in the Grid, rail transportation and defense systems.

Telecom-Level Ethernet Switch

Supports the telecom-level Ethernet-ring protection protocol with a protection shift time of less than 50ms, STP/RSTP/MSTP, backup of active and standby uplinks and LACP link aggregation to cater to the requirements of high reliability of carriers. Support Ethernet standard 802.3u, 802.3x, 802.3ad, 802.1d, 802.1p, 802.1q, 802.1w, 802.1ad. Support system status LED, port dynamic IED. Provides the perfect Ethernet OAM mechanism to monitor the network running status in real time for rapid trouble locating and detection. Supports powerful ACL functions to access and control L2-L7 data based on physical port, VLAN, MAC, IP and protocol port ID, and providing carriers flexible and various policy control methods. Supports In-Service Software Upgrade (ISSU) to ensure the unremitting data forwarding during system upgrade. Supports various L2 multicast functions, including IGMP-Snooping, fast-leave and trans-vlan.

Flexible and Convenient Management and Maintenance

Supports management modes such as the console port, Telnet, SSH, etc. Supports the WEB management mode, which is easy and efficient so that it makes installation and debugging convenient. Supports TFTP-patterned file upload/download management. Supports ISSU (In-Service Software Upgrade). Supports SNMP and NMS smart network management platform to realize automatic equipment discovery, network topology management, equipment configuration management, performance data statistics and analysis and trouble management.

Carrier-Level QoS Policies

Supports priority retagging and complicated flow classification based on VLAN, MAC, source address, destination address, IP or priority to better streamline carrier's services. Supports provides flexible bandwidth control policies and supports port-/flow-based flow limit, and ensuring the line speed forwarding of each port to make sure the high quality of video, audio and data services. Supports 8 priority queues by each port. Supports multiple queue schedule algorithms such as SP, WRR, and SP+WRR.

Intelligent PoE+

S2900-24P4X and S2900-48P6X support IEEE 802.3af/at PoE standard, and power mapping scales up to a maximum of 740W of PoE+ power; S2900-24P4X and S2900-48P6X support PoE non-stop power supply. The PoE+ power is maintained during a switch reload. S2900-24P4X and S2900-48P6X support manual and dynamic PoE power allocation; S2900-24P4X and S2900-48P6X support up to 6KV thunder-proof of the PoE port and power supply.

Versatile IPv6 Solutions

Supports the IPv6 protocol suite, IPv6 neighbor discovery, ICMPv6, path MTU discovery, etc. Supports Ping, Traceroute, Telnet, SSH, ACL and so like on the basis of IPv6, meeting IPv6 networks' equipment management requirements and service control requirements.

Perfect Security Mechanisms

Equipment-level security: The advanced hardware infrastructure design realizes the level-based packet schedule and packet protection, prevents DoS-/TCP-related SYN flood, UDP flood, broadcast storm or large traffic attacks, and supports level-based command line protection, endowing different levels of users with different management permissions. Supports perfect security authentication mechanisms: IEEE 802.1x, Radius and Tacacs+. Supports storm/multicast/unicast limit to ensure the normal running of equipment in harsh network conditions. Supports a perfect ring detection mechanism to ensure the long-term stable running of network. Supports port isolation within the same VLAN, DHCP-Snooping, and IP plus MAC plus Port binding for ensuring user data security;



Supports Maximum 24 GE PoE Ports and 4 GE SFP Uplink Ports



Advanced Hardware Architecture and Industry-leading Port Density



Carrier-Level High Reliability Layer-3 Routing Functions



Varied Service Characteristics Versatile IPv6 Solution Complete Security Mechanism

Model lists

S2900-24T4X



• 24 GE TX ports • 4 10GE/GE SFP+ ports

S2900-24S8C4X



• 16 GE SFP ports • 8 GE SFP/TX combo ports • 4 10GE/GE SFP+ ports

S2900-24P4X



• 24 GE POE ports • 4 10GE/GE SFP+ ports

S2900-48T6X



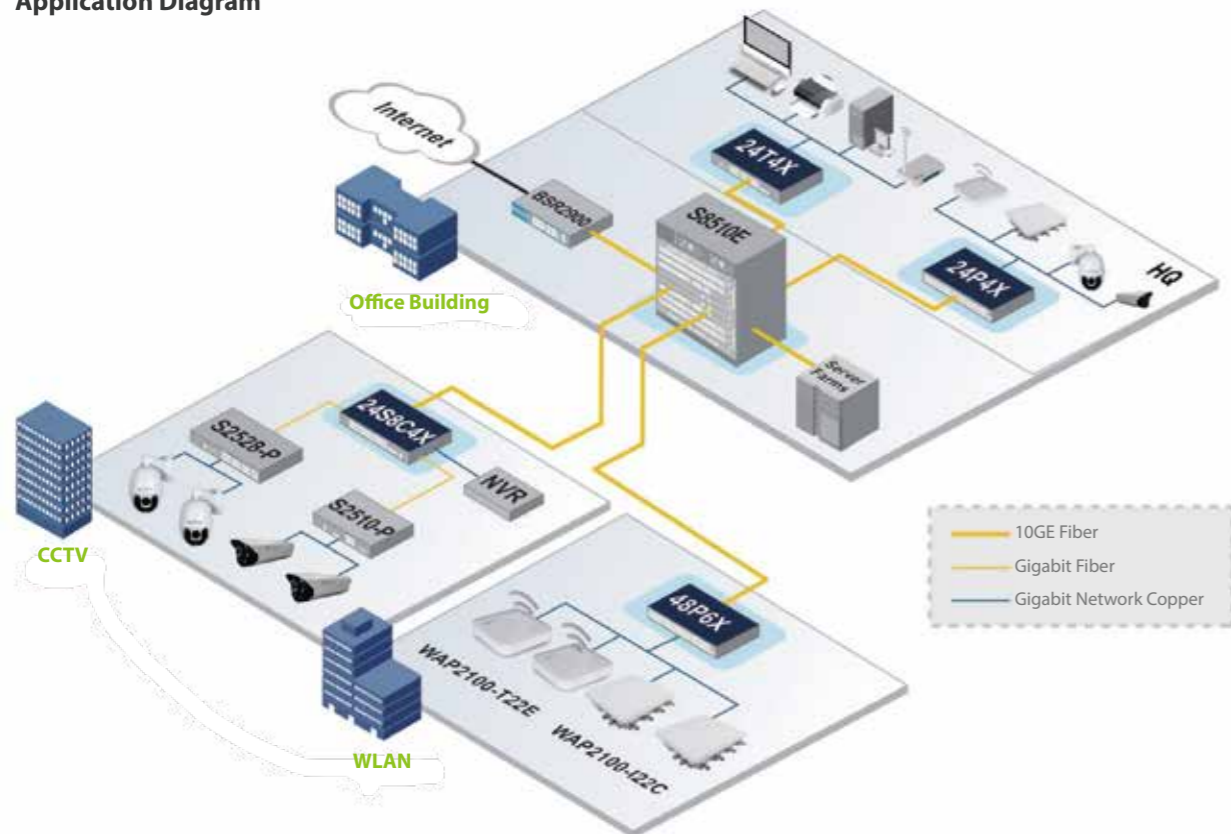
• 48 GE TX ports • 6 10GE/GE SFP+ ports

S2900-48P6X



• 48 GE POE ports • 6 10GE/GE SFP+ ports

Application Diagram



Product Specifications

Item	S2900-24T4X	S2900-24S8C4X	S2900-24P4X	S2900-48T6X	S2900-48P6X	
Interface	24 GE TX 4 10GE/GE SFP+	16 100/1000M SFP 8 GE SFP/TX combo 4 10GE/GE SFP+	24 GE POE 4 10GE/GE SFP+	48 GE TX 6 10GE/GE SFP+	48 GE TX 6 10GE/GE SFP+	
Console	1	1	1	1	1	
Backplane	128 Gbps	128 Gbps	128 Gbps	216 Gbps	216 Gbps	
Forwarding rate(Mpps with 64 bytes)	96 Mpps	96 Mpps	96 Mpps	162 Mpps	162 Mpps	
Chassis	Dimensions (WxDxH)	440x180x44 mm	440x280x44 mm	440x280x44 mm	440x300x44 mm	
	Weight (empty)	2.6 KG	4 KG	3 KG	4.3 KG	5.2 KG
Package	Dimensions (WxDxH)	500x320x80 mm	576x448x94 mm	555x295x88 mm	576x448x94 mm	576x448x94 mm
	Weight	3.9 KG	5.2 KG	4.1 KG	5.5 KG	6.1 KG
Power consumption	no-load	<22 W	<18 W	<25 W	<25 W	<25 W
	full-load	35 W	<38 W	<408 W	48 W	<48 W(without POE)
Power supply (AC: 100V-240V, DC: 36-72V)	45 W	45 W	410 W	50 W	450 W AC, 800 W DC	
POE power budge	/	/	370 W	/	370 W AC / 740 W DC	
Total output BTU (1000BTU/H=293W)	153.58	153.58	1392.49	163.82	1535.84@AC, 2730.38@DC	
Fan number	/	2	2	2	2	
Noise@25°C(dBA)	0	45	37.5	45	45	
MTBF(H)	> 200,000	> 200,000	> 200,000	> 200,000	> 200,000	
Forwarding mode	Store-forward	Store-forward	Store-forward	Store-forward	Store-forward	
Flash (MB)	16	16	16	16	16	
DRAM (MB)	256	256	256	512	512	
MAC	16K	16K	16K	16K	16K	
Buffer size(Mb)	1.5	1.5	1.5	1.5	1.5	
Interface vlan	64	64	64	64	64	
Routing table	512	512	512	512	512	
Jumbo frame	9K	9K	9K	9K	9K	

Features

VLAN

- 4K Active VLAN, QinQ & Selective QinQ, GVRP, Private VLAN, Voice-VLAN

Spanning Tree

- 802.1D (STP), 802.1W (RSTP) and 802.1S (MSTP)
- BPDU guard, root guard and loopback guard

Multicast

- IGMP v1/v2/v3, IGMP Snooping, IGMP Fast Leave, MVR, IGMP filter

IP

- Static route, RIP, OSPF
- IPv4/v6 dual stack

IPv6

- ICMPv6, DHCPv6, ACLv6 and Ipv6 Telnet
- IPv6 neighbor discovery, Path MTU discovery
- MLD V1, MLD snooping
- IPv6 Static Routing, RIPng, OSPFv3
- Manual tunnel, ISATAP tunnel, 6 to 4 tunnel

QoS

- CAR, HQoS, MAC/IP/TCP/UDP/VLAN/ COS/ DSCP/ TOS based QoS, 802.1P/ DSCP priority re-labeling, SP, WRR, and "SP+WRR", Tail-Drop, WRED, flow monitoring and traffic shaping

Security

- Port isolation, Port security, and "IP+MAC+port" binding, MAC sticky, DAI & IP source guard, PPPoE+,
- IEEE 802.1x, AAA, Radius and Tacacs+
- L2/L3/L4 ACL flow identification and filtration Anti-attack from. DDoS, TCP's SYN Flood, UDP Flood, etc.
- Broadcast/multicast/unknown unicast storm-control
- MD5, SHA-256, RSA-1024, AES256, etc.

DHCP

- DHCP server/relay/client
- DHCP snooping/option82

Certification

CE, FCC, ROHS

Reliability

- Static/LACP link aggregation, Interface backup
- EAPS and ERPS
- ISSU uninterrupted system upgrade
- VRRP BVSS, ups to 16-units per stack UDLD

Management

- Console, Telnet, SSH v1/2, HTTP, HTTPS, SNMP v1/v2/v3, RMON
- TFTP, FTP, SFTP
- NTP
- ZTP
- SPAN, RSPAN
- Dying gasp*

Environment

- Operating temperature/humidity: 0°C -50°C, 10%-90% non-condensing
- Storage temperature/humidity: -20°C -70°C, 5%-95% non-condensing

Accessories

- Power cord, rackmount kits, console cable, anti-slipping pad

Ordering Information

Item	Description
S2900 L3-lite series switch	
S2900-24T4X	Ethernet Layer-3 lite switch with 24 GE and 4 10GE ports (1 Console port, 24GE TX ports, 4 10GE/GE SFP+ ports; 100 to 240 VAC input, 60 HZ, fanless, 1U, standard 19-inch rack-mounted installation)
S2900-24S8C4X	Ethernet Layer-3 lite switch with 24 GE and 4 10GE ports (1 Console port, 16 100M/1000M SFP ports, 8 GE SFP/TX combo ports, 4 10GE/GE SFP+ ports; 100 to 240 VAC input, 60 HZ, the cooling fan, 1U, standard 19 inch rack-mounted installation)
S2900-24P4X	Ethernet Layer-3 lite POE switch with 24 GE ports and 4 10GE ports (1 console port, 24 GE POE TX ports, 4 10GE/GE SFP ports; standard AC220V power supply, 370W POE power, the cooling fan; 1U; standard 19-inch rack-mounted installation)
S2900-48T6X	Ethernet Layer-3 lite switch with 48 GE and 6 10GE/GE SFP+ ports (1 Console port, 48 GE TX ports, 6 10GE/GE SFP+ ports; 100 to 240 VAC input, 60 HZ, the cooling fan, 1U, standard 19 inch rack-mounted installation)
S2900-48P6X	Ethernet Layer-3 lite POE switch with 48 GE ports and 6 10GE/GE ports (1 console port, 48 GE POE TX ports, 6 10GE/GE SFP+ ports; standard AC220V power supply, 370W AC POE power, 740W DC POE power, the cooling fan; 1U; standard 19-inch rack-mounted installation)

Ordering Information

Item	Description
Optical Modules	
10GE optical modules	
SFP+TX	10GE SFP+to-RJ45 module
SFP+SX	10GE SFP+ multi-mode (300m, 850nm, LC)
SFP+LX-10	10GE SFP+ single-mode (10Km, 1310nm, LC, DDM)
SFP+LX-20	10GE SFP+ single-m ode (20Km, 1310nm, LC, DDM)
SFP+LX-40	10GE SFP+ single-mode (40Km, 1310nm, LC, DDM)
SFP+LX-80	10GE SFP+ single-m ode (80Km, 1550nm, LC, DDM)
SFP+LX-SM-1270-10	10GE SFP+ single-mode, single-fiber (10Km, TX1270/RX1330, LC, DDM)
SFP+LX-SM-1330-10	10GE SFP+ single-mode, single-fiber (10Km,TX1330/RX1270, LC, DDM)
SFP+LX-SM-1270-20	10GE SFP+ single-mode, single-fiber (20Km, TX1270/RX1330, LC, DDM)
SFP+LX-SM-1330-20	10GE SFP+ single-mode, single-fiber (20Km,TX1330/RX1270, LC, DDM)
SFP+LX-SM-1270-40	10GE SFP+ single-mode, single-fiber (40Km, TX1270/RX1330, LC, DDM)
SFP+LX-SM-1330-40	10GE SFP+ single-mode, single-fiber (40Km,TX1330/RX1270, LC, DDM)
GE Optical Modules	
GSFP-TX-B	GE SFP-to-RJ45 module
GSFP-SX-D	GE SFP multi-mode (500m, 850nm, LC, DDM)
GSFP-LX-10-D	GE SFP single-mode (10Km, 1310nm, LC, DDM)
GSFP-LX-20-D	GE SFP single-mode (40Km, 1310nm, LC, DDM)
GSFP-LX-40-D	GE SFP single-mode (40Km, 1310nm, LC, DDM)
GSFP-ZX-80-D	GE SFP single-m ode (80Km, 1550nm, LC, DDM)
GSFP-ZX-120-D	GE SFP single-m ode (120Km, 1550nm, LC, DDM)
GSFP-LX-SM1310-10-BIDI	GE SFP single-mode, single fiber (10Km, TX1310/RX1550, LC, DDM)
GSFP-LX-SM1550-10-BIDI	GE SFP single-mode, single fiber (10Km, TX1550/RX1310, LC, DDM)
GSFP-LX-SM1310-20-BIDI	GE SFP single-mode, single fiber (20Km, TX1310/RX1550, LC, DDM)
GSFP-LX-SM1550-20-BIDI	GE SFP single-mode, single fiber (20Km, TX1550/RX1310, LC, DDM)
GSFP-LX-SM1310-40-BIDI	GE SFP single-mode, single fiber (40Km, TX1310/RX1550, LC, DDM)
GSFP-LX-SM1550-40-BIDI	GE SFP single-mode, single fiber (40Km, TX1550/RX1310, LC, DDM)
GSFP-LX-SM1490-80-BIDI	GE SFP single-mode, single fiber (80Km, TX1490/RX1550, LC, DDM)
GSFP-LX-SM1550-80-BIDI	GE SFP single-mode, single fiber (80Km, TX1550/RX1490, LC, DDM)
GSFP-LX-SM1490-120	GE SFP single-mode, single fiber (120Km, TX1490/RX1550, LC, DDM)
GSFP-LX-SM1550-120	GE SFP single-mode, single fiber (120Km, TX1550/RX1490, LC, DDM)

* No logical restriction for operation with third party SFPs

S3900 Series



Product Overview

S3900 Series is a new generation of aggregation 10G switches. It is targeted at the IP MAN (metropolitan areanetwork), campus networks and enterprise networks. It is developed on the basis of high performance hardware and software platform with own independent intellectual property rights. It supports multiple services like IPv6, VPN and network security based on L2/L3/L4 wire-speed switchingservice. It also supports non stop upgrade,-continuous forwarding, graceful restarting and redundancy protection. S3900 Series has 5 models: **S3900-24T6X, S3900-24S8T6X, S3900-48T6X, S3900-48M6X and S3900-48P6X**. It supports up to 48 gigabit ports and 6 10GE ports.

Product Characteristics

Innovative Virtual Cluster Switching Technique

BVSS system makes full use of each link in the physical devices, which avoids STP blocking the link and protects the original link to the maximum extent.

Improved Performance: virtualize multiple physical devices into one. The performance, reliability and management of the virtual system are superior to the physical ones.

High Reliability: Based on the advanced distribution mechanism and efficient cross-physical link aggregation link function, the logic control plane, service control plane and service data plane are separated. Thus, the device can support continuous layer-3 routing forwarding, avoiding service interruption as a result of a single point of failure.

Easy Management: BVSS realizes single IP management, greatly improving the networking efficiency and lowering the operating cost.

Carrier-Level QoS Policies

Supports priority retagging and complicated flow classification based on VLAN, MAC, source address, destination address, IP or priority to better streamline carrier's services.Supports flexible bandwidth control policies and supports port-/flow-based flow limit, and ensuring the line speed forwarding of each port to make sure the high quality of video, audio and data services. Supports 8 priority queues by each port.Supports multiple queue schedule algorithms such as SP, WRR, and SP+WRR.

Varied Service Characteristics

Supports layer-2 and layer-3 multicast routing protocol, which enable the device can access to IPTV, HD video surveillance and HD video conference.Supports layer-3 routing protocol and super-large routing table capacity, which enables the device is available in large campus networks, enterprise networks and industry networks.

Versatile IPv6 Solution

Supports the IPv6 protocol suite, IPv6 neighbor discovery, ICMPv6, path MTU discovery, DHCPv6, etc.Supports Ping, Traceroute, Telnet, SSH, ACL. Supports MLD, MLD Snooping, IPv6 static routing, RIPng, OSPFv3 and BGP4+, etc. Supports IPv6 tunnel: manual tunnel, automatic tunnel, GRE tunnel, 6to4, ISATAPSupports IPv4 transits to IPv6: IPv6 manual tunnel, automatic tunnel, 6 to 4 tunnel, ISATAP tunnel.

Industrial Ethernet Ring with Zero Delay and Zero Packet Loss

Supports industry-level EAPS and ERPS, and their protection recovery time is less than 50ms. Their high reliability is represented by the null packet loss, which has been proved by many years of application in the Grid, rail transportation and defense systems.

Intelligent PoE+

S3900-48P6X supports IEEE 802.3af/at PoE standard, and power mapping scales up to a maximum of 760W of PoE+ power;S3900-48P6X supports PoE non-stop power supply. The PoE+ power is maintained during a switch reload; S3900-48P6X supports manual and dynamic PoE power allocation; S3900-48P6X supports up to 6KV thunder-proof of the PoE port and power supply;

Complete Security Mechanism

Equipment-Level Security: The advanced hardware infrastructure design realizes the level-based packet schedule and packet protection, prevents DoS-/TCP-related SYN Flood, UDP Flood, Broadcast Storm or large traffic attacks, and supports level-based command line protection, endowing different levels of users with different management permissions. Security Authentication Mechanism: IEEE 802.1x, Radius and Tacacs+Enhanced Service Security Mechanism: supports the plaintext or MD5 authentication of relevant routing protocol, URPF, deep inspection of hardware packet, control packet and data packet and filtering technology.

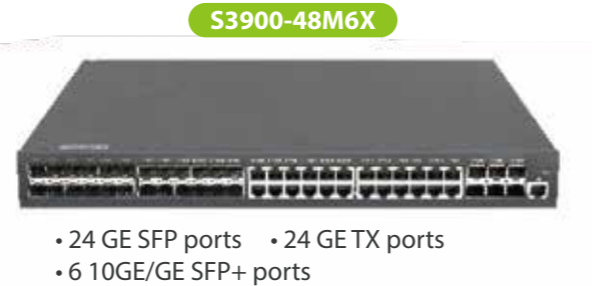
Innovative Energy-Saving Design

Intelligent power management: The power system of S3900 series supports real-time monitoring the device and the slow-start. It is also power-saving. Intelligent fan management system: The fan system of S3900 Series supports automatic speed regulation, which efficiently slow the fan speed and mitigate the noise. Complies with the international standard IEEE 802.3a

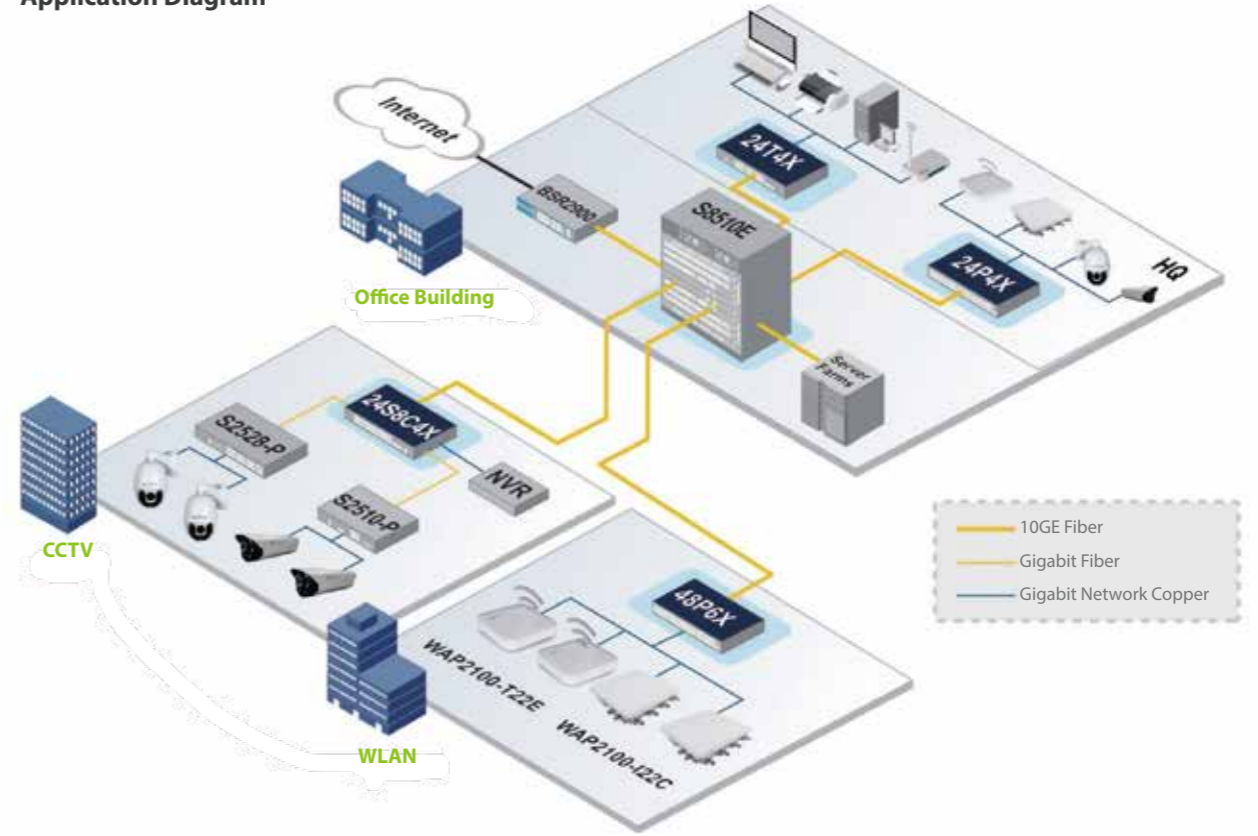
Flexible and Convenient Management and Maintenance

Supports management modes such as the console port, Telnet, SSH, etc. Supports the WEB management mode, which is easy and efficient so that it makes installation and debugging convenient. Supports TFTP-patterned file upload/download management. Supports ISSU (In-Service Software Upgrade). Supports SNMP and NMS smart network management platform to realize automatic equipment discovery, network topology management, equipment configuration management, performance data statistics and analysis and trouble management.

Product Specifications



Application Diagram



Product Specifications

Item		S3900-24T6X	S3900-24S8T6X	S3900-48T6X	S3900-48M6X	S3900-48P6X
GE Interface	TX	24	8	48	24	48
	SFP	/	24	/	24	/
10GE Interface		6 10GE/GE				
Console		1 RJ45 Port				
Backplane		216 Gbps				
Forwarding rate		126 Mpps	138 Mpps	162 Mpps	162 Mpps	162 Mpps
Physical Specifications						
Chassis	Dimensions (WxDxH)	440x350x44 mm				
Package	Dimensions (WxDxH)	576x448x94 mm				
Power						
Power supply (AC: 100V-240V, 50Hz±10%)		75 W	75 W	75 W	75 W	≤1000W (POE)
Total output BTU (1000BTU/H=293W)		255.97	255.97	255.97	255.97	3412.96
Noise@25°C(dBA)		45				
MTBF(H)		>200,000				
Forwarding mode		Store-forward				
Flash (MB)		16				
DRAM (MB)		512				
MAC		32K				
Buffer size(Mb)		2				
Jumbo frame		9K				
Routing table	IPv4	12K				
	IPv6	6K				
ARP table	IPv4	12K				
	IPv6	2K				
Total SVI		1K				



Supports Maximum 48 GE Ports and 6 10GE SFP+ Uplink Ports



Advanced Hardware Architecture and Industry-leading Port Density



Carrier-Level High Reliability Full Layer-3 Functions



Varied Service Characteristics Versatile IPv6 Solution Complete Security Mechanism

Features

VLAN

- 4K Active VLAN,
- QinQ & Selective QinQ,
- GVRP,
- Voice-VLAN

Spanning Tree

- 802.1D (STP),
- 802.1W (RSTP) and 802.1S (MSTP)
- BPDU guard,
- root guard and loopback guard

Multicast

- PIM-SM, PIM-DM, IGMP v1/v2/v3,
- IGMP Snooping, IGMP Fast Leave,
- MVR, IGMP filter

IPv4

- Static routing, RIP v1/v2, OSPF, BGP, PBR, ECMP
- BFD for OSPF, BGP

DHCP

- DHCP server/relay/client
- DHCP snooping/option82

MPLS

- Multi-VRF

Certification

CE, FCC, ROHS

IPv6

- ICMPv6, DHCPv6, ACLv6 and IPv6 Telnet
- IPv6 neighbor discovery, Path MTU discovery
- MLD V1/V2, MLD snooping
- IPv6 Static Routing, RIPng, OSPFv3, BGP4+
- Manual tunnel, ISATAP tunnel, 6 to 4 tunnel

QoS

- CAR, HQoS, MAC/IP/TCP/UDP/VLAN/COS/DSCP/TOS based QoS, 802.1P/DSCP priority re-labeling, SP, WRR, and “SP+WRR”, Tail-Drop, WRED, flow monitoring and traffic shaping

Security

- Port isolation, Port security, and “IP+MAC+port” binding, MAC sticky, DAI & IP source guard, PPPoE+
- IEEE 802.1x, Radius and Tacacs+
- L2/L3/L4 ACL flow identification and filtration Anti-attack from DDoS, TCP’s SYN Flood, UDP Flood, etc.

Reliability

- Static/LACP link aggregation, Interface backup
- BVSS virtual-stacking
- EAPS and ERPS
- URPF, LLDP
- ISSU
- VRRP
- 1+1 power backup

Management

- Console, Telnet, SSH v1/2, HTTP, HTTPS
- SNMP v1/v2/v3, RMON
- TFTP, FTP, SFTP
- NTP, SPAN, RSPAN
- sFlow

Environment

- Operating temperature/humidity: 0°C -50°C, 10%-90% non-condensing
- Storage temperature/humidity: -20°C -70°C, 5%-95% non-condensing

Accessories

- Power cord, rackmount kits, console cable

Ordering Information

Item	Description
S3900 Series Non-POE Power Modules	
PWR-75-AC	Hot-swap AC Power for S3900 Series (75W max, AC100~240V input)
PWR-75-DC	Hot-swap DC Power for S3900 Series (75W max, DC-36~72V input)
S3900 Series POE Power Modules	
POE-500-AC	Hot-swap power supply of S3900 POE switch series (500W max power, 380W max POE power, AC100~240V input, the isolated cooling fan)
Optical Modules	
10GE optical modules	
SFP+TX	10GE SFP+to-RJ45 module
SFP+SX	10GE SFP+ multi-mode (300m, 850nm, LC)
SFP+LX-10	10GE SFP+ single-mode (10Km, 1310nm, LC, DDM)
SFP+LX-20	10GE SFP+ single-m ode (20Km, 1310nm, LC, DDM)
SFP+LX-40	10GE SFP+ single-mode (40Km, 1310nm, LC, DDM)
SFP+LX-80	10GE SFP+ single-m ode (80Km, 1550nm, LC, DDM)
SFP+LX-SM-1270-10	10GE SFP+ single-mode, single-fiber (10Km, TX1270/RX1330, LC, DDM)
SFP+LX-SM-1330-10	10GE SFP+ single-mode, single-fiber (10Km,TX1330/RX1270, LC, DDM)
SFP+LX-SM-1270-20	10GE SFP+ single-mode, single-fiber (20Km, TX1270/RX1330, LC, DDM)
SFP+LX-SM-1330-20	10GE SFP+ single-mode, single-fiber (20Km,TX1330/RX1270, LC, DDM)
SFP+LX-SM-1270-40	10GE SFP+ single-mode, single-fiber (40Km, TX1270/RX1330, LC, DDM)
SFP+LX-SM-1330-40	10GE SFP+ single-mode, single-fiber (40Km,TX1330/RX1270, LC, DDM)
GE Optical Modules	
GSFP-TX-B	GE SFP-to-RJ45 module
GSFP-SX-D	GE SFP multi-mode (500m, 850nm, LC, DDM)
GSFP-LX-10-D	GE SFP single-mode (10Km, 1310nm, LC, DDM)
GSFP-LX-20-D	GE SFP single-mode (40Km, 1310nm, LC, DDM)
GSFP-LX-40-D	GE SFP single-mode (40Km, 1310nm, LC, DDM)
GSFP-ZX-80-D	GE SFP single-m ode (80Km, 1550nm, LC, DDM)
GSFP-ZX-120-D	GE SFP single-m ode (120Km, 1550nm, LC, DDM)
GSFP-LX-SM1310-10-BIDI	GE SFP single-mode, single fiber (10Km, TX1310/RX1550, LC, DDM)
GSFP-LX-SM1550-10-BIDI	GE SFP single-mode, single fiber (10Km, TX1550/RX1310, LC, DDM)
GSFP-LX-SM1310-20-BIDI	GE SFP single-mode, single fiber (20Km, TX1310/RX1550, LC, DDM)
GSFP-LX-SM1550-20-BIDI	GE SFP single-mode, single fiber (20Km, TX1550/RX1310, LC, DDM)

Ordering Information

Item	Description
S3900 series switch	
S3900-24T6X	Ethernet routing switch with 24 GE and 6 10GE ports (1 RJ45 console port, 24 GE TX ports, 6 10GE/GE SFP+ ports; 2 power slots with 1 hot-swap AC220V power supply; the cooling fan, 1U, standard 19-inch rack-mounted installation)
S3900-24S8T6X	Ethernet routing switch with 32 GE and 6 10GE ports (1 RJ45 console port, 24 100M/ 1000M SFP ports, 8 GE TX ports, 6 10GE/GE SFP+ ports; 2 power slots with 1 hot-swap AC220V power supply; the cooling fan, 1U, standard 19-inch rack-mounted installation)
S3900-48T6X	Ethernet routing switch with 48 GE and 6 10GE ports (1 RJ45 console port, 48 GE TX ports, 6 10GE/GE SFP+ ports; 2 power slots with 1 hot-swap AC220V power supply; the cooling fan, 1U, standard 19-inch rack-mounted installation)
S3900-48M6X	Ethernet routing switch with 48 GE and 6 10GE ports (1 RJ45 console port, 24 GE TX ports, 24 100M/1000M SFP ports, 6 10GE/GE SFP+ ports; 2 power slots with 1 hot-swap AC220V power supply; the cooling fan, 1U, standard 19-inch rack-mounted installation)
S3900-48P6X	Ethernet routing switch with 48 GE POE and 6 10GE ports (1 RJ45 console port, 48 GE POE TX ports, 6 10GE/GE SFP+ ports; 2 power slots with 1 hot-swap AC220V power supply; the cooling fan, 1U, standard 19-inch rack-mounted installation)

S5800 Series



Product Overview

S5800 Series is a new generation of full-10GE TOR switches, oriented for high-performance computing, data center and high-end campuses. The S5800 Series adopts our most advanced hardware architecture designs. S5800 Series (1U height) supports up to 2.56Tbps switching capacity and 48 10GE ports + 2 40GE ports + 4 100G ports or 72 10GE ports. Developed on the basis of software platform with its own independent intellectual property rights, S5800 Series provides high-performance L2/L3/L4 wire speed switching capacity by integrating services such as IPv6, VPN, network security, flow analysis, virtualization, with high reliable techniques including continuous forwarding, graceful restarting and loop network protection, all which works efficiency withing the S5800 Series fabric for guaranteed maximum runtime. S5800 Series supports the "GreenTouch" architecture and "Smart@CHIP". Its power consumption is lower than 200W. S5800 series has 2 models: **S5828** and **S5864H**.

Product Characteristics

Carrier-Level Aggregation Layer-3 Ethernet Switch Innovative virtualize multiple physical devices into one. The performance, reliability and management capabilities of the virtual system combine to outperform that of individual physical devices; **Improved Performance:** BVSS system makes full use of each link in the physical device cluster, which avoids STP blocking on links and protects the original link to the maximum; **High Reliability:** Based on the advanced distribution mechanism and efficient cross-physical link aggregation function, the logic control plane, service control plane and service data plane are separated. Thus, the device can support continuous layer3 routing forwarding, avoiding service interruption as a result of a single point of failure;

Easy Management: BVSS system realizesingle IP management, greatly improving the networking efficiency and lowering operating costs.

Rich Data Center Services

S5800 Series supports BVSS, which can virtualize multiple physical devices into a single logical element. The virtualized system is superior to the independent physical device in performance, reliability, flexibility and management. **Doubled Performance:** The virtualized system makes the best use of each link in the device and avoids blocking of STP to the links. **High-reliability:** Based on the advanced distributed processing technique and the efficient function of cross-physical device link aggregation, , the S5800 Series provides non-stop layer-3 routing forwarding and avoids single points of failure. **Data Center Level High-reliability Flexibility:** The virtual cluster function of the S5800 allows the distance of a cluster system to expand over up to 80KM, breaking the geographic restrictions of traditional cluster techniques. **Easy Management:** The whole virtual system realizes single IP unified management and simplifies the management of network device and network topology.

Security+

Equipment-level security: The advanced hardware infrastructure design realizes the level-based packet schedule and packet protection, prevents DoS-/TCP-related SYN Flood, UDP Flood, Broadcast Storm or large traffic attacks, and supports level-based command line protection, endowing different levels of users with different management permissions. **Perfect security authentication mechanisms:** IEEE 802.1x, Radius. S5800 series supports perfect ring detection mechanisms, ensuringlong-termnetworkperformancestability. S5800 series supports port isolation within the same VLAN, DHCP-Snooping, and IP + MAC + Port binding.

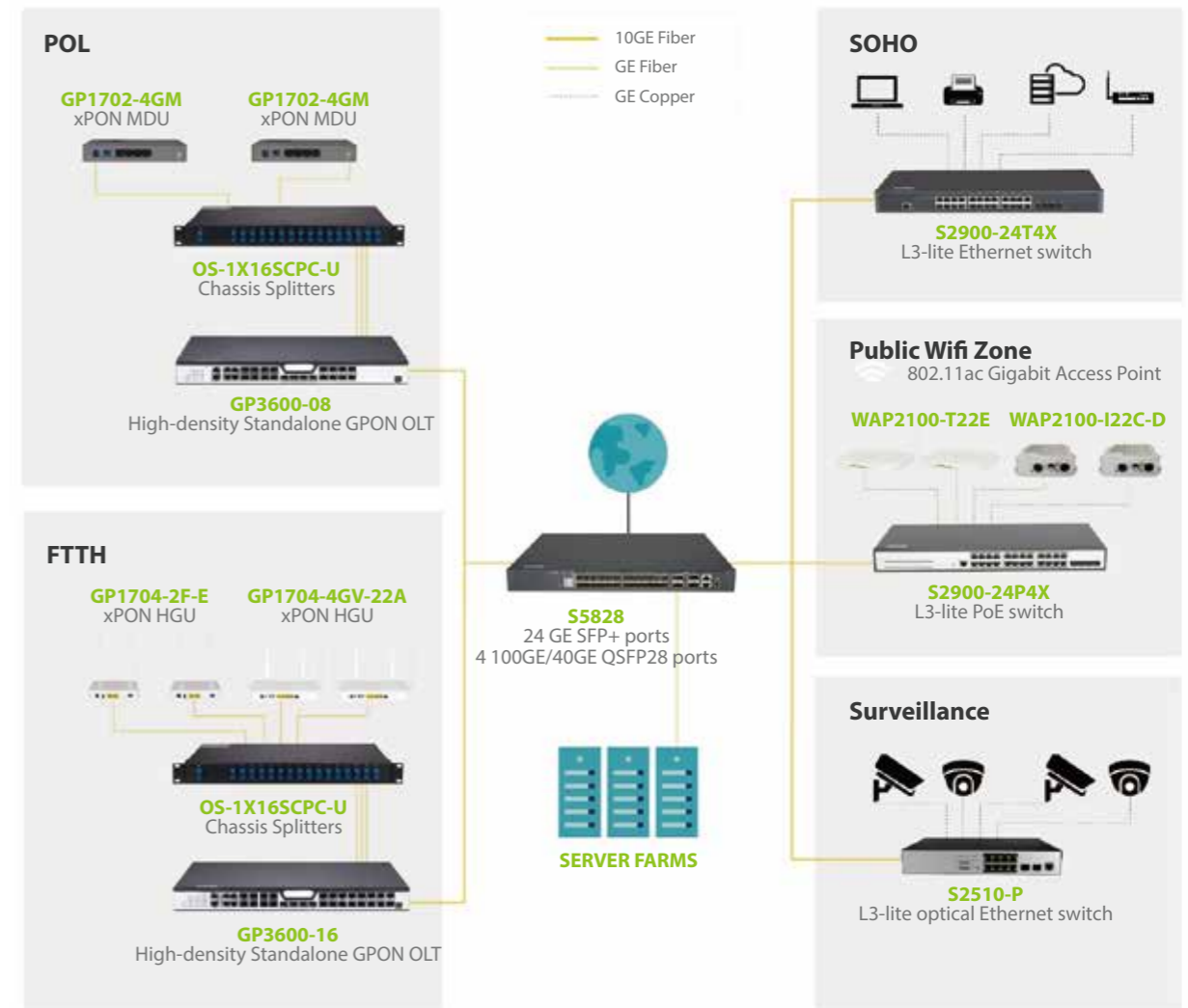
Versatile IPv6 Solution

S5800 Series supports the IPv6 protocol suite, IPv6 neighbor discovery, ICMPv6, path MTU discovery, DHCPv6, etc.; S5800 Series supports Ping, Traceroute, Telnet, SSH, ACL based on IPv6; S5800 Series supports MLD, MLD Snooping, IPv6 static routing, RIPng, OSPFv3 and BGP4+, etc.; Supports IPv6 tunnel: manual tunnel, automatic tunnel, GRE tunnel, 6to4 tunnel, ISATAP; S5800 Series supports IPv4 transiting to IPv6: IPv6 manual tunnel, automatic tunnel, 6 to 4 tunnel, ISATAP tunnel.

Data Center Level High-reliability

S5800 Series adopts HPS (Hitless Protection System). The key components of he S5800 Series such as the power system and the fan system supports redundancy in design. All system modules support hot-swap and seamless switching without need of manual intervention. S5800 Series supports redundancy protection mechanisms such as STP/RSTP/MSTP protocol, VRRP protocol, ring network protection, dual uplink active/-standby link protection and LACP link aggregation. S5800 Series supports ISSU (In-Service Software Upgrade), guaranteeing non-stop forwarding of service data while the system is upgrading. S5800 Series supports BFD and realizes fault detection and service recovery in seconds through linking with layer-2 or layer-3 protocol. S5800 Series has perfect Ethernet OAM, 802.3ah, 802.1ag and ITU-Y.1731 which can monitor the network operating state in real time and rapidly detect and locate the malfunction. **High Reliability (99.999%):** The MTTR of the S5800 Series is 50ms, satisfying the requirement for reliable delivery of carrier-level service.

Application Diagram



Model lists A

S5828



- 24 10GE/GE SFP+ ports
- 4 100GE/40GE QSFP28 ports

S5864H



- 48 10GE/GE SFP+ ports
- 2 40GE QSFP+ ports
- 4 100GE/40GE QSFP28 ports

Product Specifications

Item	S5828	S5864H
Interface	24 10GE/GE SFP+ ports, 4100GE/40GEQSFP28ports	48 10GE/GE SFP+ ports, 2 40GE QSFP+ ports, 4 100GE/40GE QSFP28 ports
Console	1 RJ45 console, 1 MGMT	1 RJ45 console, 1 MGMT
Backplane	800Gbps	1920Gbps
Forwarding rate	600Mpps	1440Mpps
Chassis	Dimensions (WxDxH)	440x350x44 mm
	Weight (empty)	7.1 KG
Package	Dimensions (WxDxH)	576x448x94 mm
	Weight	8.3 KG
Power consumption	no-load	45 W
	full-load	70 W
Power supply (AC: 100V-240V, 50Hz±10%)	2	2
Power status monitoring	Support	Support
Total output BTU (1000BTU/H=293W)	238.91	501.71
Fan number	4	4
Noise@25°C(dBA)	57	57
MTBF(H)	>200,000	>200,000
Forwarding mode	Store-forward	Store-forward
Flash (MB)	64	54
DRAM (MB)	1024	1024
MAC	32K	64K
Jumbo frame	16K	16K
Routing table	IPv4	16K
	IPv6	12K
ARP table	IPv4	10K
	IPv6	10K
Total SVI	1K	1K

Features

VLAN

- 4K Active VLAN, QinQ & Selective QinQ, GVRP, Private VLAN

Spanning Tree

- 802.1D (STP)
- 802.1W (RSTP) and 802.1S (MSTP)
- BPDU guard, root guard and loopback guard

Multicast

- PIM-SM, PIM-DM,
- IGMP v1/v2/v3,
- IGMP Snooping,
- IGMP Fast Leave,
- MVR, IGMP filter

IPv4

- Static routing, RIP v1/v2,
- OSPF, BGP, PBR, ECMP
- BFD for OSPF, BGP

Certification

CE, FCC, ROHS

IPv6

- ICMPv6, DHCPv6, ACLv6 and IPv6 Telnet
- IPv6 neighbor discovery, Path MTU discovery
- MLD snooping
- IPv6 Static Routing, RIPng, OSPFv3, BGP4+
- Manual tunnel, ISATAP tunnel, 6 to 4 tunnel

MPLS

- Multi-VRF

QoS

- CAR, HQoS, MAC/IP/TCP/UDP/VLAN/COS/DSCP/TOS based QoS,
- 802.1P/DSCP priority re-labeling, SP, WRR, and “SP+WRR”, Tail-Drop,
- WRED, flow monitoring and traffic shaping

Security

- Port isolation, Port security, and “IP+MAC+port” binding, MAC sticky,
- DHCP Snooping and option 82, DAI & IP source guard, PPPoE+,
- IEEE 802.1x, Radius and Tacacs+L2/L3/L4 ACL flow identification and filtration Anti-attack from.
- DDoS, TCP’s SYN Flood, UDP Flood, etc.
- Broadcast/multicast/unknown unicast storm-control
- MD5, SHA-256, RSA-1024, AES256, etc.

Management

- Console, Telnet, SSH v1/2, HTTP/HTTPS
- SNMP v1/v2/v3, RMON
- TFTP, FTP, SFTP NTP, SPAN, RSPAN

Ordering Information

Item	Description
S5800 series switches	
S5828	Ethernet routing optical switch with 24 10GE ports+4 100G ports (1 console port, 1 out-band port, 1 USB2.0, 24 10GE/GE SFP+ ports, 4 100GE/40GE QSFP28 ports(can expand to 4 10GE ports)); 2 hot-swap power slots with dual AC220 power supplies; 4 fans; 1U, 19-inch rack-mounted installation)
S5864H	Ethernet routing switch with 48 10GE ports, 2 40GE ports and 4 100GE ports (1 console port, 1 out-band port, 48 10GE/GE SFP+ ports, 2 40GE QSFP+ ports, 4 100GE (can expand to 4 10GE ports), 2 power slots with 2 hot-swap AC220V power supplies; 4 fan slots, including 4 fans; 1U, 19-inch rack-mounted installation)
Optical Modules	
100G Optical Modules	
QSFP28-SR4-100m	100G multi-mode QSFP28 optical module(100m, 850nm, MPO, DDM)
QSFP28-LR4-10	100G single-mode QSFP28 optical module(10km,1310nm,LC,DDM)
QSFP28-LR4-20	100G single-mode QSFP28 optical module(20Km,1310nm,LC,DDM)
40GE optical modules	
QSFP+SR4-100m	40G multi-mode QSFP+ optical module (100m, 850nm, MPO, DDM, supports 1 to 4)
QSFP+LR4-10	40G single-mode QSFP+ optical module (10km, 1310nm, LC, DDM)
QSFP+LR4-20	40G single-mode QSFP+ optical module(20Km, 1310nm, LC, DDM)
QSFP+ER4-40	40G single-mode QSFP+ optical module(40Km, 1310nm, LC, DDM)
10GE optical modules	
SFP+TX	10GE SFP+-to-RJ45 module
SFP+SX	10GE SFP+ multi-mode (300m, 850nm, LC)
SFP+LX-10	10GE SFP+ single-mode (10Km, 1310nm, LC, DDM)
SFP+LX-20	10GE SFP+ single-mode (20Km, 1310nm, LC, DDM)
SFP+LX-40-1310	10GE SFP+ single-mode (40km, 1310nm, LC, DDM)
SFP+LX-80	10GE SFP+ single-mode (80Km, 1550nm, LC, DDM)
SFP+LX-SM-1270-10	10GE SFP+ single-mode, single-fiber (10Km, TX1270/RX1330, LC, DDM)
SFP+LX-SM-1330-10	10GE SFP+ single-mode, single-fiber (10Km,TX1330/RX1270, LC, DDM)
SFP+LX-SM-1270-20	10GE SFP+ single-mode, single-fiber (20Km, TX1270/RX1330, LC, DDM)
SFP+LX-SM-1330-20	10GE SFP+ single-mode, single-fiber (20Km,TX1330/RX1270, LC, DDM)
SFP+LX-SM-1270-40	10GE SFP+ single-mode, single-fiber (40Km, TX1270/RX1330, LC, DDM)
SFP+LX-SM-1330-40	10GE SFP+ single-mode, single-fiber (40Km,TX1330/RX1270, LC, DDM)
GE Optical Modules	
GSFP-TX-B	GE SFP-to- RJ45 module
GSFP-SX-D	GE SFP multi-mode (500m, 850nm, LC, DDM)
GSFP-LX-10-D	GE SFP single-mode (10Km, 1310nm, LC, DDM)
GSFP-LX-20-D	GE SFP single-mode (20Km, 1310nm, LC, DDM)
GSFP-LX-40-D	GE SFP single-mode (40Km, 1310nm, LC, DDM)
GSFP-ZX-80-D	GE SFP single-mode (80Km, 1550nm, LC, DDM)
GSFP-ZX-120-D	GE SFP single-mode (120Km, 1550nm, LC, DDM)
GSFP-LX-SM1310-10-BIDI	GE SFP single-mode, single core bidirectional (10Km, TX1310/RX1550, LC, DDM)
GSFP-LX-SM1550-10-BIDI	GE SFP single-mode, single core bidirectional (10Km, TX1550/RX1310, LC, DDM)
GSFP-LX-SM1310-20-BIDI	GE SFP single-mode, single core bidirectional (20Km, TX1310/RX1550, LC, DDM)
GSFP-LX-SM1550-20-BIDI	GE SFP single-mode, single core bidirectional (20Km, TX1550/RX1310, LC, DDM)
GSFP-LX-SM1310-40-BIDI	GE SFP single-mode, single core bidirectional (40Km, TX1310/RX1550, LC, DDM)
GSFP-LX-SM1550-40-BIDI	GE SFP single-mode, single core bidirectional (40Km, TX1550/RX1310, LC, DDM)
GSFP-LX-SM1490-80-BIDI	GE SFP single-mode, single core bidirectional (80Km, TX1490/RX1550, LC, DDM)
GSFP-LX-SM1550-80-BIDI	GE SFP single-mode, single core bidirectional (80Km, TX1550/RX1490, LC, DDM)
GSFP-LX-SM1490-120	GE SFP single-mode, single core bidirectional (120Km, TX1490/RX1550, LC, DDM)
GSFP-LX-SM1550-120	GE SFP single-mode, single core bidirectional (120Km, TX1550/RX1490, LC, DDM)

Amber200-5GE-4PA-24V



5-Port Unmanaged PoE Industrial Ethernet Switch

Product Overview

Amber200-5GE-4PA-24V is an unmanaged PoE/PoE+ industrial Ethernet switch with 5*10/100/1000M auto sensing electrical ports. Four of the copper ports support PoE/PoE+, with up to 30W output each port. The switch is powered by 9~36VDC so that it is right choice in the application where 12VDC or 24VDC power is available. Industrial level 3 protection design and IP40 enclosure protection makes the product suitable for applications in harsh environments.



Features

- -40~+75°C operating temperature
- 6KV port surge protection
- 9~36VDC power input
- EMC industrial level 3 protection
- Maximum 30W power on each PoE port
- DIN or wall mount

Product Specifications

Amber200-5GE-4PA-24V	Item	Parameter
Ports	Electrical	5*10/100/1000Base-T (RJ45)
Switch Performance	Capacity	10Gbps
	Switch Delay	7μS
	MAC Table	2K
	Memory Buffer	1M
	LED Indicator	Power
Power	Power Input	9~36VDC input, 5-pin terminal
	Power Consumption	<3W; ≤30W on each PoE port
	Maximum Total Power	80W
	Overload Current Protection	Support
	Reverse Polarity Protection	Support
Environment	Storage Temperature	-40°C ~ +85°C
	Operating Temperature	-40°C ~ +75°C
	Operating Humidity	5%~95% non-condensing
Mechanical	Enclosure	Metal
	IP Level	IP40
	Dimensions(W x D x H)	62 x 103 x 100mm
	Weight	0.6 KG
	Installation	DIN / Wall mount

Amber600-4GE2GX



6-Port Managed Industrial Ethernet Switch

Product Overview

The Amber600-4GE2GX is a high performance, managed Gigabit switch with 4*10/100/1000Base-T auto sensing Ethernet ports and 2*1000M SFP ports. The switch supports Ethernet Ring Protection Switching (ERPS) as well as STP/RSTP/MSTP. It also supports Web-based network management, VLAN, QoS, SNMP, IGMP snooping etc. Rugged design with IP40 enclosure and industrial level 3 protection makes it suitable for applications such as Intelligent Transportation Systems, IP surveillance and industrial networks.



Features

- -40~+75°C operating temperature
- 12~57VDC power input
- Lock port function based on MAC address
- DIN or wall mount
- Support SNMPv1/v2/v3
- Support IGMP snooping and MLD snooping
- Support Web、Telnet、Console、SSH
- Support ITU-T G.8032 Ethernet ring protection, typical restoration < 50ms

Product Specifications

Amber600-4GE2GX	Item	Parameter	
Ports	Ethernet	4*10/100/1000Base-T	
	SFP	2*1000Base-FX SFP	
	Console	Micro USB 2.0,115200bps,8,N,1	
	Alarm	Relay output for fault event alarm	
	Switch Performance	Capacity	12Gbps
Switch Performance	Switch Delay	7μS	
	Priority Queues	8	
	VLAN	4096	
	VLAN ID Range	1~4096	
	MAC Table	8K	
	Memory Buffer	4M	
	Protocols	Flow Control	802.1P; 802.3x; GVRP
		MLD Feature	GMRP; MVR; IGMPv1/v2
		Redundancy	ERPS; STP; RSTP; MSTP
		Security Feature	Enable/disable ports; Port based network access control (802.1x); VLAN (802.1Q); MAC based port security; RADIUS centralized password management; SNMP V1/V2c/V3 encrypted authentication and access security; SSH
Time Management		NTP	
QoS		802.1P	
Device Management		LED Indicator	Power1; Power2; RUN; ALARM
	Management	IPv4/IPv6;SNMP V1/V2/V3;LLDP;RMON;DHCP Server/Client;TFTP;HTTP;HTTPS;Telnet	
Power	Power Input	Dual 12~57V DC input, 5-pin terminal	
	Power Consumption	<6W	
	Overload Current Protection	Support	
	Reverse Polarity Protection	Support	
Environment	Storage Temperature	-40°C ~ +85°C	
	Operating Temperature	-40°C ~ +75°C	
	Operating Humidity	5%~95% non-condensing	
Mechanical	Enclosure	Metal	
	IP Level	IP40	
	Dimensions(W x D x H)	62 x 103 x 100mm	
	Weight	0.6KG	
	Installation	DIN / Wall mount	

Amber600-8GE4GX-8PA



12-Port Managed PoE Industrial Ethernet Switch

Product Overview

The Amber600-8GE4GX-8PA is a high performance, managed Gigabit PoE switch with 8*10/100/1000Base-T auto sensing Ethernet ports and 4*1000M SFP ports. All 8 Ethernet ports support PoE/PoE+, each port offering maximum 30W power. The switch supports Ethernet Ring Protection Switching (ERPS) as well as STP/RSTP/MSTP. It also supports Web-based network management, VLAN, QoS, SNMP, IGMP snooping etc. Rugged design with IP40 enclosure and industrial level 3 protection makes it suitable for applications such as Intelligent Transportation Systems, IP surveillance and industrial networks.



Features

- 40~+75°C operating temperature
- 45~57VDC power input
- Maximum 30W power on each PoE port
- Lock port function based on MAC address
- DIN or wall mount
- Support SNMPv1/v2c/v3
- 6KV Ethernet port surge protection
- Support IGMP snooping and MLD snooping
- Support Web、Telnet、Console、SSH
- Support ITU-T G.8032 Ethernet ring protection, restoration < 50ms

Product Specifications

Amber600-8GE4GX-8PA	Item	Parameter
Ports	Ethernet	8*10/100/1000Base-T
	SFP	4*1000Base-FX SFP
	Console	Micro USB 2.0,115200bps,8,N,1
	Alarm	Relay output for fault event alarm
Switch Performance	Capacity	24Gbps
	Throughput	17.8Mpps
	Switch Delay	7μS
	Priority Queues	8
	VLAN	4096
	VLAN ID Range	1~4096
	MAC Table	8K
	Memory Buffer	4M
Protocols	Flow Control	802.1P; 802.3x; GVRP
	MLD Feature	GMRP; MVR; IGMPv1/v2
	Redundancy	ERPS; STP; RSTP; MSTP
	Security Feature	Enable/disable ports; Port based network access control (802.1x); VLAN (802.1Q); MAC based port security; RADIUS centralized password management; SNMP V1/V2c/V3 encrypted authentication and access security; SSH
	Time Management	NTP
	QoS	802.1P
Device Management	LED Indicator	Power1; Power2; RUN; ALARM
	Management	IPv4/IPv6;SNMP V1/V2/V3;LLDP;RMON;DHCP Server/Client;TFTP;HTTP;HTTPS;Telnet
Power	Power Input	Dual 45~57V DC input, 5-pin terminal
	Power Consumption	<10W; ≤30W on each PoE port
	Overload Current Protection	Support
	Reverse Polarity Protection	Support
Environment	Storage Temperature	-40°C ~ +85°C
	Operating Temperature	-40°C ~ +75°C
	Operating Humidity	5%~95% non-condensing
Mechanical	Enclosure	Metal
	IP Level	IP40
	Dimensions(W x D x H)	68 x 120.5 x 146mm
	Weight	1KG
	Installation	DIN / Wall mount

Amber600-16GE4GX



20-Port Managed Industrial Ethernet Switch

Product Overview

The Amber600-16GE4GX is a high performance, managed Gigabit switch with 16*10/100/1000Base-T auto sensing Ethernet ports and 4*1000M SFP ports. The switch supports Ethernet Ring Protection Switching (ERPS) as well as STP/RSTP/MSTP. It also supports Web-based network management, VLAN, QoS, SNMP, IGMP snooping etc. Rugged design with IP40 enclosure and industrial level 3 protection makes it suitable for applications such as Intelligent Transportation Systems, IP surveillance and industrial networks.



Features

- 40~+75°C operating temperature
- 12~57VDC power input
- Lock port function based on MAC address
- DIN or wall mount
- Support SNMPv1/v2c/v3
- Support IGMP snooping and MLD v1/v2c/v3
- Support Web、Telnet、Console、SSH
- Support ITU-T G.8032 Ethernet ring protection, restoration < 50ms

Product Specifications

Amber600-16GE4GX	Item	Parameter
Ports	Ethernet	16*10/100/1000Base-T
	SFP	4*1000Base-FX SFP
	Console	Micro USB 2.0,115200bps,8,N,1
	Alarm	Relay output for fault event alarm
Switch Performance	Capacity	40Gbps
	Throughput	29.76Mpps
	Switch Delay	7μS
	Priority Queues	8
	VLAN	4096
	VLAN ID Range	1~4096
	MAC Table	8K
	Memory Buffer	4M
Protocols	Flow Control	802.1P; 802.3x; GVRP
	MLD Feature	GMRP; MVR; IGMPv1/v2
	Redundancy	ERPS; STP; RSTP; MSTP
	Security Feature	Enable/disable ports; Port based network access control (802.1x); VLAN (802.1Q); MAC based port security; RADIUS centralized password management; SNMP V1/V2c/V3 encrypted authentication and access security; SSH
	Time Management	NTP
	QoS	802.1P
Device Management	LED Indicator	Power1; Power2; RUN; ALARM
	Management	IPv4/IPv6;SNMP V1/V2/V3;LLDP;RMON;DHCP;Server/Client;TFTP;HTTP;HTTPS;Telnet
Power	Power Input	Dual 12~57V DC input, 5-pin terminal
	Power Consumption	<18W
	Overload Current Protection	Support
	Reverse Polarity Protection	Support
Environment	Storage Temperature	-40°C ~ +85°C
	Operating Temperature	-40°C ~ +75°C
	Operating Humidity	5%~95% non-condensing
Mechanical	Enclosure	Metal
	IP Level	IP40
	Dimensions(W x D x H)	102 x 106 x 146mm
	Weight	1.1KG
	Installation	DIN / Wall mount

VEC11T-EC

1*BNC, 1*RJ45

Product Overview

The VEC11T-EC is a three-in-one Ethernet over Coax 1-channel transmitter. This transmitter provides connectivity for one 10/100Mbps IEEE standard twisted pair copper port over a 75ohm coaxial cable. Power is supplied from one of the headend receivers, VEC116R-PC, VEC18R-PC, or VEC11R-PC Ethernet over Coax switch through the coaxial cable by Power over Coax (PoC) technology. This transmitter provides PoE/PoE+ support with maximum power of 30W. Varying data rates are supported depending on cable distance and quality. The plug-and-play design ensures ease of installation with no electrical adjustment needed. LED indicators are provided to clearly show the operational status of the unit.

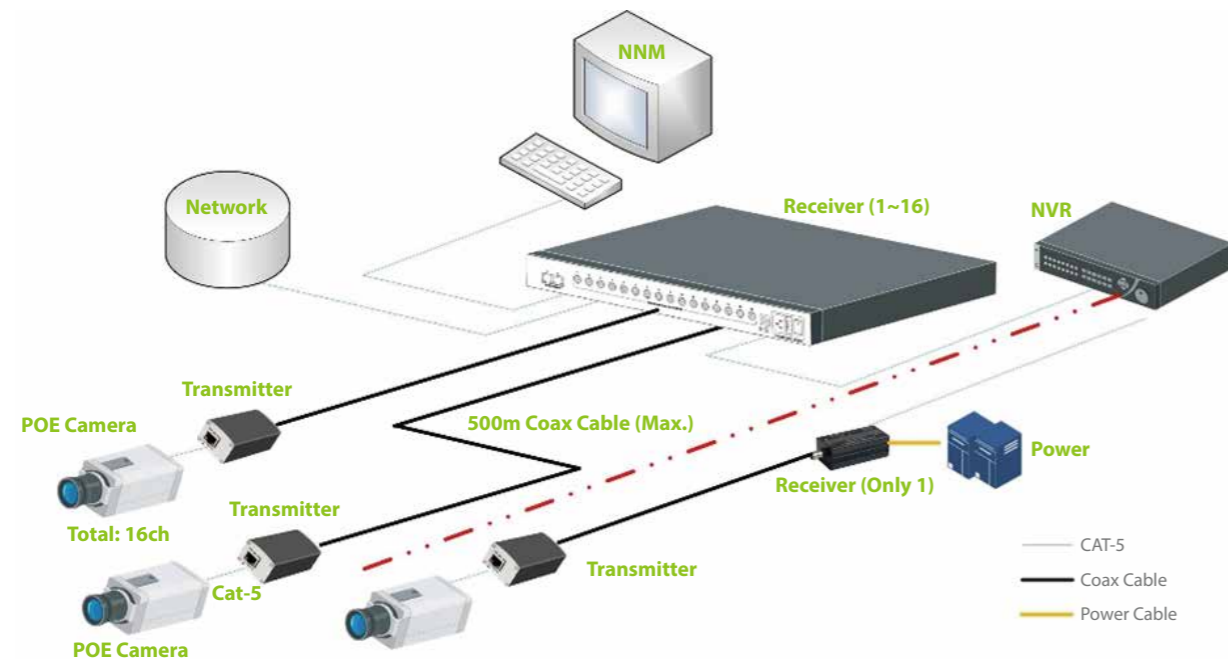


Features

- IEEE802.3, IEEE802.3u compliant
- 500m transmission distance
- Multi-layer PCB design with improved surge, static, and lightning protection
- Compact design for minimal space
- Maximum PoE power of 30W
- EoC, PoC, PoE three-in-one
- Industrial wide temperature range -20~+75°C

Application

The EoC products are used in pairs, with 1ch transmitter connecting to 1ch receiver, or 1ch transmitter(s) connecting to 8/16ch receiver. The following graph shows the connection of 1ch transmitter with 1ch receiver and 16ch receiver.



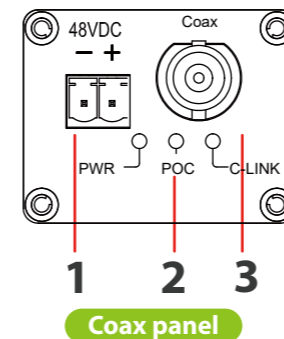
• **Application 1:** 1ch EoC transmitter VEC11T-EC + 16ch EoC receiver VEC116R-PC. As shown on the left of the red dotted line, a maximum of 16 transmitters may be connected to the receiver.

• **Application 2:** 1ch EoC transmitter VEC11T-EC + 1ch EoC receiver VEC11R-PC. As shown on the right of the red dotted line, this kind of connection is suited for more scattered applications.

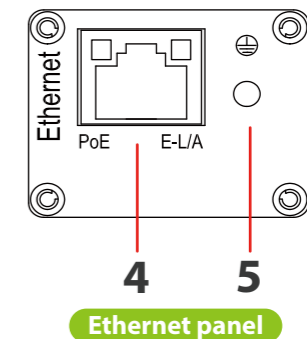
Product Specifications

VEC11T-EC	Item	Parameter
Power	Power Supply	PoC (Power over Coax)
	Consumption	<2W (without PoE)
Coax Port	Transmission Medium	75-5 or above coax cable
	Operating Frequency	2M~28M
	Modulation	Wavelet-OFDM
	Transmission Rate	210M (Max)
	Transmission Distance (PoE)	0~500M (75-5 cable)
	Transmission Distance (Non PoE)	0~2000M (75-5cable)
Ethernet Port	Transmission Medium	Cat5e/6
	Standard	IEEE802.3, IEEE802.3U
	Ethernet Delay	<1ms
Protection	ESD	IEC61000-4-2: 6KV (contact), 8KV (air)
	Anti-Thunder Protection	IEC61000-4-5: 1KV (DM), 2KV (CM)
Environment	Operating Temperature	-20°C ~ +75°C
	Storage Temperature	-40°C ~ +85°C
	Humidity	0~90% (non-condensing)
Mechanical	Dimensions(W x D x H)	29 x 37 x 76mm
	Material	Aluminum
	Color	Black
	Weight	0.2Kg

Panel Views and LED Indicators



1. Power input
2. LED indicators
3. Coax cable connector
4. Ethernet RJ45 port
5. Grounding terminal



LED	Color	Status	Description
PWR	Orange	On	Power supply is normal.
PoC	Green	On	PoC power supply is normal.
C-LINK	Green	On	EoC connection is normal.
PoE	Green	On	Successful handshake with PD and supplying power to PD.
E-L/A	Orange	On/Blink	On: Ethernet link is normal. / Blink: The data is active.

VEC116R-PC-500W

16*BNC, 3*RJ45

Product Overview

The VEC116R-PC-500W is an Ethernet over Coax (EoC) switch with 16 coax ports with Power over Coax (PoC) and 3*10/100/1000M Ethernet ports. This switch provides connectivity up to 16 units of VEC11T-EC transmitter. Power is supplied to the transmitters through the coaxial cable. Varying data rates are supported depending on cable distance and quality. This product also provides PoC management which allows the operator to remotely switch power on or off to any of the coax channels. Plug-and-play design ensures ease of installation with no electrical adjustment needed. LED indicators are provided to show the operational status of the unit clearly.

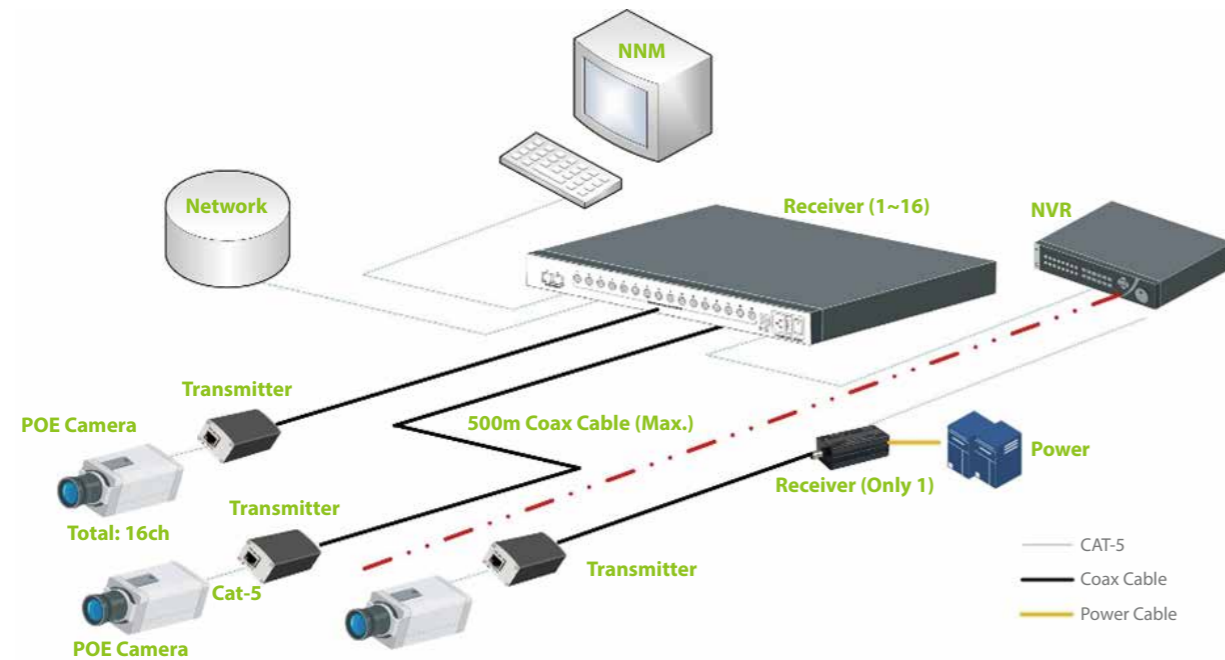


Features

- IEEE802.3, IEEE802.3u, IEEE802.3ab compliant
- 500m transmission distance
- Multi-layer PCB design with improved surge, static, and lightning protection
- 1U rack mount
- Wide temperature range -20~+50 °C
- EoC, PoC two-in-one
- 1S power negotiation cycle

Application

The EoC products are used in pairs, with 1ch transmitter connecting to 1ch receiver, or 1ch transmitter(s) connecting to 8/16ch receiver. The following graph shows the connection of 1ch transmitter with 1ch receiver and 16ch receiver.



• **Application 1:** 1ch EoC transmitter VEC11T-EC + 16ch EoC receiver VEC116R-PC. As shown on the left of the red dotted line, a maximum of 16 transmitters may be connected to the receiver.

• **Application 2:** 1ch EoC transmitter VEC11T-EC + 1ch EoC receiver VEC11R-PC. As shown on the right of the red dotted line, this kind of connection is suited for more scattered applications.

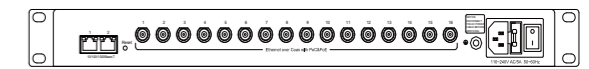
Product Specifications

VEC116R-PC-500W	Item	Parameter
Power	Power Supply	100-240V AC/5A 50-60HZ
	Consumption	<10W (without PoC), <500W (with PoC)
Coax Port	Transmission Medium	75-5 or above coax cable
	Operating Frequency	2M~28MHz
	Modulation	Wavelet-OFDM
	Power Negotiation Cycle	1S
	Overcurrent	720mA
	Overcurrent Protection Time	<2mS
	Output Voltage	+48V
	Transmission Rate	210Mbps (Max.)
Ethernet Port	Transmission Medium	Cat5e/6
	Standard	IEEE802.3, IEEE802.3U, IEEE802.3ab
	Ethernet Delay	<1ms
Protection	ESD	IEC61000-4-2: 6KV (contact), 8KV (air)
	Anti-Thunder Protection	IEC61000-4-5: Coax port 2KV (DM), 4KV (CM)
Environment	Operating Temperature	-20°C ~ +50°C
	Storage Temperature	-40°C ~ +85°C
	Humidity	0~90% (non-condensing)
Mechanical	Dimensions	44 x 280 x 440mm
	Material	Aluminum
	Color	Black
	Weight	1.6Kg

Panel Views and LED Indicators



Front panel



Rear Panel

LED	Color	Status	Description
PWR	Orange	On	Power supply is normal.
IP-LINK	Green	On	3*10/100/1000M Ethernet link is normal.
C-LINK	Green	On	EoC connection is normal.
I-MAX	Red	On	Total power of 4 channels more than 175W.
PoC1~16	Green	On	PoC is connected.

VDS810S-NMN

1*10/100/1000Base-T, 1*1000Base-X SFP Slot

Product Overview

The VDS810S-NMN is an industrial level gigabit media converter with 1*10/100/1000Base-T auto sensing electrical port and 1*1000M SFP slot. VDS810S-NMN extends communications distance with gigabit performance via fiber optic cable, providing media conversion between 10/100/1000Base-T and 1000Base-SX/LX interfaces such as multi-mode LC/SC connectors (500m), single-mode LC/SC connectors (20~120km) for various fiber optic applications. Plug-and-play design makes installation straightforward, with no electrical or optical adjustment needed. LED indicators are provided to show the operational status of the unit. Rugged design in both enclosure and electrical protection makes it suit for application in harsh environment. The series is available in wall or DIN mount, and 2U passive rack DV212 is available for purchase.



Features

- 6KV Surge protection on electrical port
- EMC level 3 protection
- IP40 Enclosure
- Plug-and-play, no adjustment required
- -40~+75°C operating temperature

Product Specifications

VDS810S-NMN	Item	Parameter
Electrical	Data Port	1 (RJ45)
	Data Rate	10/100/1000Mbps auto sensing
	Surge Protection	6KV (CM); 2KV (DM)
Optical	Optical Port	1 (SFP slot)
	Connector	SFP module
	Wavelength	850/1310/1550nm
	Data Rate	1000Mbps
	Fiber Type	Single mode/multi-mode; 1 or 2 fibers
	Typical Transmission Distance	500m (MM); 20km (SM); Longer distance is available
Power	Power input	220VAC to 12VDC/1A
Environment	Storage Temperature	-40°C ~ +85°C
	Operating Temperature	-40°C ~ +75°C
	Operating Humidity	5%~95% non-condensing
Mechanical	Dimensions(W x D x H)	74 x 94 x 33mm
	Weight	0.2KG
	Installation	DIN / Wall / rack mount

Ordering Information

Item	Description
5-Port Unmanaged PoE Industrial Ethernet Switch	
Amber200-5GE-4PA-24V	Unmanaged industrial Ethernet switch with 4*10/100/1000Base-T PoE/PoE+ ports, 1*10/100/1000Base-T port. 9~36VDC power input. Power adapter not included. Wall/DIN mount.
6-Port Managed Industrial Ethernet Switch	
Amber600-4GE2GX	Managed industrial Ethernet switch with 4*10/100/1000M Ethernet ports, 2 gigabit SFP slots. 12~57VDC power input. SFP transceiver not included. Wall or DIN mount.
1G SFP Transceiver (VDF-3232-ISL)	SFP 1G, 2 fibers, 1310nm, 3.3V, 20km, LC, single-mode, DDM
1G SFP Transceiver (VDF-31352-ISL)	SFP 1G, 1 fiber, 1310/1550nm, 3.3V, 20km, LC, single-mode, DDM
1G SFP Transceiver (VDF-31532-ISL)	SFP 1G, 1 fiber, 1550/1310nm, 3.3V, 20km, LC, single-mode, DDM
12-Port Managed PoE Industrial Ethernet Switch	
Amber600-8GE4GX-8PA	Managed industrial Ethernet switch with 8*10/100/1000M PoE/PoE+ Ethernet ports, 4 gigabit SFP slots. 45~57VDC power input. SFP transceiver not included. Wall or DIN mount.
Industrial Power Adapter (SPA12)	12V/1A, -20~60°C
Industrial Power Adapter (SPA24)	12V/2A, -20~60°C
Industrial Power Adapter (SPA60)	48V/1.25A, -20~60°C
Industrial Power Adapter (SPA120)	48V/2.5A, -20~60°C
1G SFP Transceiver (VDF-3232-ISL)	SFP 1G, 2 fibers, 1310nm, 3.3V, 20km, LC, single-mode, DDM
1G SFP Transceiver (VDF-31352-ISL)	SFP 1G, 1 fiber, 1310/1550nm, 3.3V, 20km, LC, single-mode, DDM
1G SFP Transceiver (VDF-31532-ISL)	SFP 1G, 1 fiber, 1550/1310nm, 3.3V, 20km, LC, single-mode, DDM
20-Port Managed Industrial Ethernet Switch	
Amber600-16GE4GX	Managed industrial Ethernet switch with 16*10/100/1000M Ethernet ports, 4 gigabit SFP slots. 12~57VDC power input. SFP transceiver not included. Wall or DIN mount.
1G SFP Transceiver (VDF-3232-ISL)	SFP 1G, 2 fibers, 1310nm, 3.3V, 20km, LC, single-mode, DDM
1G SFP Transceiver (VDF-31352-ISL)	SFP 1G, 1 fiber, 1310/1550nm, 3.3V, 20km, LC, single-mode, DDM
1G SFP Transceiver (VDF-31532-ISL)	SFP 1G, 1 fiber, 1550/1310nm, 3.3V, 20km, LC, single-mode, DDM
Gigabit Media Converter	
VDS810S-NMN	Stand-alone industrial Ethernet media converter with 1*10/100/1000M electrical port and 1 gigabit SFP slot, with 12V/1A UK/US/EU/AU/CH power adapter. Wall/DIN/rack mount.
1G SFP Transceiver (VDF-3232-ISL)	SFP 1G, 2 fibers, 1310nm, 3.3V, 20km, LC, single-mode, DDM
1G SFP Transceiver (VDF-31352-ISL)	SFP 1G, 1 fiber, 1310/1550nm, 3.3V, 20km, LC, single-mode, DDM
1G SFP Transceiver (VDF-31532-ISL)	SFP 1G, 1 fiber, 1550/1310nm, 3.3V, 20km, LC, single-mode, DDM
2U Passive Rack (DV212)	2U 19" rack for up to 12 stand-alone media converters, without power supply.
1ch Ethernet over Coax transmitter	
VEC11T-EC	1 channel EoC transmitter with PoC/PoE, PSE included. 1 fixed BNC port, 1 fixed 10/100M RJ45 Ethernet port. 37~57VDC PoC input. Metal clip mount.
16ch Ethernet over Coax receiver	
VEC116R-PC-500W	16 channel EoC receiver with PoC management. 16 BNC ports, 3*10/100/1000M RJ45 ports. 100~240VAC input. 1U rack mount.

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