Huawei CloudEngine S5735-L-Q-V2 Series Switches Datasheet

Huawei CloudEngine S5735-L-Q-V2 series are simplified gigabit Ethernet switches that provide 8/14/16/24 x GE downlink ports, 4 x GE or 10GE uplink ports.

Introduction

CloudEngine S5735-L-Q-V2 series switches are ideal for scenarios such as enterprise campus network access and gigabit to the desktop. Built on next-generation, high-performance hardware and software platform, CloudEngine S5735-L-Q-V2 switches stand out with compelling features such as intelligent stack (iStack), flexible Ethernet networking, and diversified security control. They support multiple Layer 3 routing protocols and provide high performance and service processing capabilities.

Product Overview

Models and Appearances

The following models are available in the CloudEngine S5735-L-Q-V2 series.

Models and appearances of the CloudEngine S5735-L-Q-V2 series

Models and Appearances	Description
 CloudEngine S5735-L8T4X-QA-V2	• 8 x 10/100/1000Base-T ports, 4 x 10GE SFP+ ports • Built-in AC • Forwarding performance: 72 Mpps • Switching capacity: 96 Gbps/520Gbps*
 CloudEngine S5735-L8P4X-QA-V2	• 8 x 10/100/1000Base-T ports, 4 x 10GE SFP+ ports • Built-in AC • PoE+ • Forwarding performance: 72 Mpps • Switching capacity: 96 Gbps/520 Gbps*
 CloudEngine S5735-L14P2S-QA-V2	• 14 x 10/100/1000Base-T ports(PoE+), 2 x GE SFP ports • Built-in AC • Forwarding performance: 24 Mpps • Switching capacity: 32 Gbps/520 Gbps*
 CloudEngine S5735-L14P2S-TQA-	• 14 x 10/100/1000Base-T ports(PoE+), 2 x GE SFP ports • Built-in AC • Forwarding performance: 24 Mpps

Models and Appearances	Description
V2**	• Switching capacity: 32 Gbps/520 Gbps*
 CloudEngine S5735-L16T4X-QA-V2	• 16 x 10/100/1000Base-T ports, 4 x 10GE SFP+ ports • Built-in AC • Forwarding performance: 84 Mpps • Switching capacity: 112 Gbps/520 Gbps*
 CloudEngine S5735-L16LP2X-QA-V2	• 16 x 10/100/1000Base-T ports(PoE+), 2 x 10GE SFP+ ports • Built-in AC • Forwarding performance: 54 Mpps • Switching capacity: 72 Gbps/520 Gbps*
 CloudEngine S5735-L16P2UM2X-QA-V2	• 16 x 10/100/1000Base-T ports(PoE+), 2 x 100M/1/2.5/5/10G Base-X ports(PoE++), 2 x 10GE SFP+ ports • Built-in AC • Forwarding performance: 84 Mpps • Switching capacity: 112 Gbps/520 Gbps*
 CloudEngine S5735-L16LP2UM2X-QA-V2	• 16 x 10/100/1000Base-T ports(PoE+), 2 x 100M/1/2.5/5/10G Base-X ports(PoE++), 2 x 10GE SFP+ ports • Built-in AC • Forwarding performance: 84 Mpps • Switching capacity: 112 Gbps/520 Gbps*
 CloudEngine S5735-L24T4X-QA-V2	• 24 x 10/100/1000Base-T ports, 4 x 10 GE SFP+ ports • Built-in AC • Forwarding performance: 96 Mpps • Switching capacity: 128 Gbps/520 Gbps*

*Note：The value before the slash (/) refers to the device's switching capability, while the value after the slash (/) means the system's switching capability.

**Note：‘-T ’means Hardware Trust Module(HTM), support hardware root of trust and measurement startup.

Product Features and Highlights

Flexible Ethernet Networking

- In addition to supporting traditional Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), and Multiple Spanning Tree Protocol (MSTP), CloudEngine S5735-L-Q-V2 is also designed with the industry's latest Ethernet Ring Protection Switching (ERPS) technology. ERPS is defined in ITU-T G.8032, and it implements millisecond-level protection switching based on traditional Ethernet MAC and bridging functions.
- CloudEngine S5735-L-Q-V2 supports Smart Link, which implements backup of uplinks. One CloudEngine S5735-L-Q-V2 switch can connect to multiple aggregation switches through multiple links, significantly improving reliability of access devices.

Diversified Security Control

- CloudEngine S5735-L-Q-V2 supports 802.1X authentication, MAC address authentication, and hybrid authentication on a per port basis, and implements dynamic policy delivery (VLAN, QoS, and ACL) to users.
- CloudEngine S5735-L-Q-V2 provides a series of mechanisms to defend against DoS attacks and user-targeted attacks. DoS attacks are targeted at switches and include SYN flood, Land, Smurf, and ICMP flood attacks. User-targeted attacks include bogus DHCP server attacks, IP/MAC address spoofing, DHCP request flood, and changing of the DHCP CHADDR value.

- CloudEngine S5735-L-Q-V2 sets up and maintains a DHCP snooping binding table, and discards the packets that do not match the table entries. The DHCP snooping trusted port feature ensures that users connect only to the authorized DHCP server.
- CloudEngine S5735-L-V2supports strict ARP learning. This feature prevents ARP spoofing attackers from exhausting ARP entries so that users can connect to the Internet normally.

Easy Operation and Maintenance

- CloudEngine S5735-L-Q-V2 supports Huawei Easy Operation, a solution that provides zero-touch deployment, replacement of faulty devices without additional configuration, USB-based deployment*, batch device configuration, and batch remote upgrade. The Easy Operation solution facilitates device deployment, upgrade, service provisioning, and other management and maintenance operations, and also greatly reduces O&M costs. CloudEngine S5735-L-Q-V2 can be managed and maintained using Simple Network Management Protocol (SNMP) V1, V2, and V3, Command Line Interface (CLI), web-based network management system, or Secure Shell (SSH) V2.0. Additionally, it supports remote network monitoring (RMON), multiple log hosts, port traffic statistics collection, and network quality analysis, paving the way for network optimization and reconstruction.
- CloudEngine S5735-L-Q-V2 supports MUX VLAN, which involves a principal VLAN and multiple subordinate VLANs. Subordinate VLANs are classified into group VLANs and separate VLANs. Ports in the principal VLAN can communicate with ports in subordinate VLANs. Ports in a subordinate group VLAN can communicate with each other, whereas ports in a subordinate separate VLAN cannot communicate with each other. CloudEngine S5735-L-Q-V2 also supports VLAN-Based Spanning Tree (VBST) protocol.

Note:Only those switches with USB ports can USB-based deployment.

iStack

- CloudEngine S5735-L-Q-V2 supports intelligent stack (iStack). This technology combines multiple switches into a logical switch. Member switches in a stack implement redundancy backup to improve device reliability and use inter-device link aggregation to improve link reliability.
- iStack provides high network scalability. You can increase ports, bandwidth, and processing capacity of a stack by simply adding member switches to the stack.
- iStack also simplifies device configuration and management. After a stack is set up, multiple physical switches are virtualized into one logical device. You can log in to any member switch in the stack to manage all the member switches in the stack. CloudEngine S5735-L-Q-V2 support stacking through electrical ports.
- Some CloudEngine S5735-L-Q-V2 supports two 12GE dedicated stack ports, which release uplink ports and do not need to be configured.

PoE Function

- **Perpetual PoE**: When a PoE switch is abnormal Power-off or the software version is upgraded, the power supply to PDs is not interrupted. This capability ensures that PDs are not powered off during the switch reboot.
- **Fast PoE**: PoE switches can supply power to PDs within seconds after they are powered on. This is different from common switches that generally take 1 to 3 minutes to start to supply power to PDs. When a PoE switch reboots due to a power failure, the PoE switch continues to supply power to the PDs immediately after being powered on without waiting until it finishes reboot. This greatly shortens the power failure time of PDs.

Network Slicing Functions

- CloudEngine S5735-L-Q-V2 provides a range of VLAN slicing functions to meet diversified SLA requirements of different services and customers. Service isolation and bandwidth guarantee are implemented based on QoS. Slices can be completely isolated from each other without affecting each other. Traffic is isolated at the physical layer, and network slicing is performed for services on the same physical network. The Network Slicing technology can be used at the access, aggregation, and core layers to meet differentiated SLA requirements of new services on campus networks.

Intelligent O&M

- CloudEngine S5735-L-Q-V2 provides telemetry technology to collect device data in real time and send the data to Huawei campus network analyzer CampusInsight. The CampusInsight analyzes network data based on the intelligent fault identification algorithm, accurately displays the real-time network status, effectively demarcates and locates faults in a timely manner, and identifies network problems that affect user experience, accurately guaranteeing user experience.

Intelligent Upgrade

- CloudEngine S5735-L-Q-V2 supports the intelligent upgrade feature. Specifically, CloudEngine S5735-L-Q-V2 obtains the version upgrade path and downloads the newest version for upgrade from the Huawei Online Upgrade Platform (HOUP). The entire upgrade process is highly automated and achieves one-click upgrade. In addition, preloading the version is supported, which greatly shortens the upgrade time and service interruption time.
- The intelligent upgrade feature greatly simplifies device upgrade operations and makes it possible for the customer to upgrade the version independently. This greatly reduces the customer's maintenance costs. In addition, the upgrade policies on the HOUP platform standardize the upgrade operations, which greatly reduces the risk of upgrade failures.

Cloud Management

- The Huawei cloud management platform allows users to configure, monitor, and inspect switches on the cloud, reducing on-site deployment and O&M manpower costs and decreasing network OPEX. Huawei switches support both cloud management and on-premise management modes. These two management modes can be flexibly switched as required to achieve smooth evolution while maximizing return on investment (ROI).

OPS

- CloudEngine S5735-L-Q-V2 supports Open Programmability System (OPS), an open programmable system based on the Python language. IT administrators can program the O&M functions of a CloudEngine S5735-L-Q-V2 switch through Python scripts to quickly innovate functions and implement intelligent O&M.

Licensing

CloudEngine S5735-L-Q-V2 supports both the traditional feature-based licensing mode and the latest Huawei IDN One Software (N1 mode for short) licensing mode. The N1 mode is ideal for deploying Huawei CloudCampus Solution in the on-premises scenario, as it greatly enhances the customer experiences in purchasing and upgrading software services with simplicity.

Software Package Features in N1 Mode

Switch Functions	N1 Basic Software	N1 Foundation Software Package	N1 Advanced Software Package
Basic network functions: Layer 2 functions, IPv4, IPv6 and others Note: For details, see the Service Features	√	√	√
Basic network automation based on the iMaster NCE-Campus: • Basic automation: Plug-and-play • Basic monitoring: Application visualization • NE management: Image and topology management and discovery • User access authentication	×	√	√
Advanced network automation and intelligent O&M: CampusInsight basic functions	×	×	√

Product Specifications

Functions and Features

Item	Description

Item	Description
MAC address table	MAC address learning and aging
	32K MAC entries (MAX)
	Static, dynamic, and blackhole MAC address entries
	Packet filtering based on source MAC addresses
	Interface-based MAC learning limiting
VLAN features	4K VLANs
	Voice VLAN
	MUX VLAN
	VLAN assignment based on MAC addresses, protocols, IP subnets, policies, and interfaces
	VLAN Stacking
Ethernet loop protection	Smart Link tree topology and Smart Link multi-instance, providing millisecond-level protection switchover
	ERPS (G.8032)
	STP (IEEE 802.1d), RSTP (IEEE 802.1w), and MSTP (IEEE 802.1s)
	BPDU protection, root protection, and loop protection
	BPDU tunnel
	LLDP, LLDP-MED
Multicast	PIM DM, PIM SM, PIM SSM
	IGMPv1/v2/v3, IGMPv1/v2/v3 snooping, MLD snooping
	Multicast load balancing among member ports of a trunk
	Interface-based multicast traffic statistics
	Multicast VLAN
IP routing	Static route, RIP, RIPng, OSPF, OSPFv3, VRRP, VRRP6, Routing Policy, Policy-Based Routing
	Up to 4096 FIBv4 entries (MAX)
	Up to 1024 FIBv6 entries (MAX)
IPv6 features	Up to 1024 ND entries (MAX)
	Path MTU (PMTU)
	IPv6 ping, IPv6 tracert, and IPv6 Telnet
Reliability	LACP
	VRRP
	BFD
	LLDP
QoS/ACL	Rate limiting on packets sent and received by an interface
	Packet redirection
	Interface-based traffic policing and two-rate and three-color CAR

Item	Description
	Eight queues on each interface
	DRR, SP, and DRR+SP queue scheduling algorithms
	Re-marking of the 802.1p priority and DSCP priority
	Packet filtering at Layer 2 to Layer 4, filtering out invalid frames based on the source MAC address, destination MAC address, source IP address, destination IP address, TCP/UDP port number, protocol type, and VLAN ID
	Rate limiting in each queue and traffic shaping on interfaces
	Network Slicing（VLAN）
Security	Hierarchical user management and password protection
	DoS attack defense, ARP attack defense, and ICMP attack defense
	Binding of the IP address, MAC address, interface number, and VLAN ID
	Port isolation, port security, and sticky MAC
	Blackhole MAC address entries
	Limit on the number of learned MAC addresses
	IEEE 802.1x authentication and limit on the number of users on an interface
	AAA authentication, RADIUS authentication, HWTACACS authentication, and NAC
	SSH V2.0
	Hypertext Transfer Protocol Secure (HTTPS)
	CPU defense
	Blacklist and whitelist
	DHCP client, DHCP relay, DHCP server, DHCP snooping
	DHCPv6 client, DHCPv6 relay
Management and maintenance	iStack
	Cloud management based on Netconf/Yang
	Virtual Cable Test (VCT)
	Remote configuration and maintenance using Telnet
	SNMPv1/v2/v3
	RMON
	eSight and web-based NMS
	HTTPS
	LLDP/LLDP-MED
	System logs and multi-level alarms
	802.3az EEE
	IFIT
	Port Mirroring

Item	Description
	Registration Center Deployment
Interoperability	Supports VBST (Compatible with PVST/PVST+/RPVST)

Hardware Specifications

Hardware specifications of CloudEngine S5735-L8T4X-QA-V2/L8P4X-QA-V2/L16T4X-QA-V2/L24T4X-QA-V2 models

Item		CloudEngine S5735-L8T4X-QA-V2	CloudEngine S5735-L8P4X-QA-V2	CloudEngine S5735-L16T4X-QA-V2	CloudEngine S5735-L24T4X-QA-V2
Physical specifications	Dimensions (H x W x D)	43.6 mm x 250 mm x 180 mm	43.6 mm x 320 mm x 210 mm	43.6 mm x 442 mm x 220 mm	43.6 mm x 442 mm x 220 mm
	Chassis height	1 U	1 U	1 U	1 U
	Chassis weight (including packaging)	2.21 kg	3.06 kg	3.46kg	3.48 kg
Fixed port	GE port	8	8(PoE+)	16	24
	GE SFP pot	NA	NA	NA	NA
	10GE port	4	4	4	4
Management port	Console port (RJ45)	Supported	Supported	Supported	NA
	USB Port	NA	NA	NA	NA
CPU	Frequency	1.1 GHz	1.1 GHz	1.1 GHz	1.1 GHz
	Core	2	2	2	2
Storage	Memory (DRAM)	2 GB	2 GB	2 GB	2 GB
	Flash memory	1 GB in total. To view the available flash memory size, run the display	1 GB in total. To view the available flash memory size, run the display	1 GB in total. To view the available flash memory size, run the display	1 GB in total. To view the available flash memory size, run the display
Ingress protection level	IP level	IP20	IP20	IP20	IP20
Power supply system	Power supply type	Built-in AC	Built-in AC	Built-in AC	Built-in AC
	Rated voltage range	100 V AC to 240 V AC, 50/60 Hz	100 V AC to 240 V AC, 50/60 Hz	100 V AC to 240 V AC, 50/60 Hz	100 V AC to 240 V AC, 50/60 Hz
	Maximum voltage range	• AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz	• AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz	• AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz	• AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz
	Maximum input current	0.8 A	3 A	0.8A	0.8A
	Maximum power consumption of the device	16.97 W	• 22.21 W (without PD) • 152.55 W (with PD, PD power consumption of 125 W)	24.29 W	29.96 W

Item		CloudEngine S5735-L8T4X-QA-V2	CloudEngine S5735-L8P4X-QA-V2	CloudEngine S5735-L16T4X-QA-V2	CloudEngine S5735-L24T4X-QA-V2
	Power consumption in the case of 30% traffic load[1]	16.2 W	21.16 W	21.42 W	26.13 W
	Power consumption in the case of 100% traffic load[1]	16.54 W	21.45 W	22.18 W	27.24 W
	Power consumption in the case of 0% traffic load[1]	10.05 W	15.24 W	13.33 W	14.94 W
Heat dissipation system	Heat dissipation mode	Natural heat dissipation	Natural heat dissipation	Natural heat dissipation	Natural heat dissipation
	Number of fan modules	0	0	0	0
	Airflow	Air intake from left and front, air exhaustion from right	NA	NA	NA
	Maximum heat dissipation of the device (BTU/hour)	57.73	• Without PDs: 79.16 • With PDs: 519.32	90.08	131.02
Environment parameters	Long-term operating temperature	• 0-1800 m altitude: -5°C to +50°C • 1800-5000 m altitude: The operating temperature reduces by 1ºC every time the altitude increases by 220 m.	• 0-1800 m altitude: -5°C to +50°C • 1800-5000 m altitude: The operating temperature reduces by 1ºC every time the altitude increases by 220 m.	• 0-1800 m altitude: -5°C to +50°C • 1800-5000 m altitude: The operating temperature reduces by 1ºC every time the altitude increases by 220 m.	• 0-1800 m altitude: -5°C to +50°C • 1800-5000 m altitude: The operating temperature reduces by 1ºC every time the altitude increases by 220 m.
	Short-term operating temperature	NA	NA	NA	NA
	Storage temperature	-40°C to +70°C	-40°C to +70°C	-40°C to +70°C	-40°C to +70°C
	Relative humidity	5%-95%(non-condensing)	5%-95%(non-condensing)	5%-95%(non-condensing)	5%-95%(non-condensing)
	Operating altitude	5000 m	5000 m	5000 m	5000 m
	Noise under normal temperature (sound power)	fanless, noise-free, <30dB (A)	fanless, noise-free, <30dB (A)	fanless, noise-free, <30dB (A)	fanless, noise-free, <30dB (A)
	Noise under high temperature (sound power)	fanless, noise-free, <30dB (A)	fanless, noise-free, <30dB (A)	fanless, noise-free, <30dB (A)	fanless, noise-free, <30dB (A)

Item		CloudEngine S5735-L8T4X-QA-V2	CloudEngine S5735-L8P4X-QA-V2	CloudEngine S5735-L16T4X-QA-V2	CloudEngine S5735-L24T4X-QA-V2
	Noise under normal temperature (sound pressure)	fanless, noise-free, <20dB (A)	fanless, noise-free, <20dB (A)	fanless, noise-free, <20dB (A)	fanless, noise-free, <20dB (A)
	Surge protection specification (RJ45 service port)	±7 kV in common mode	±7 kV in common mode	±7 kV in common mode	±7 kV in common mode
	Surge protection specification (power port)	• Differential mode: ± 6 kV • Common mode: ± 6 kV	• Differential mode: ± 6 kV • Common mode: ± 6 kV	• Differential mode: ± 6 kV • Common mode: ± 6 kV	• Differential mode: ± 6 kV • Common mode: ± 6 kV
Reliability	MTBF (year)	76.15	70.41	73.24	71.51
	MTTR (hour)	2	2	2	2
	Availability	> 0.99999	> 0.99999	> 0.99999	> 0.99999
Certification		• EMC certification • Safety certification • Manufacturing certification	• EMC certification • Safety certification • Manufacturing certification	• EMC certification • Safety certification • Manufacturing certification	• EMC certification • Safety certification • Manufacturing certification

Hardware specifications of CloudEngine S5735-L14P2S-QA-V2/-L14P2S-TQA-V2/-L16LP2X-QA-V2/-L16P2UM2X-QA-V2/-L16LP2UM2X-QA-V2 models

Item		CloudEngine S5735-L14P2S-QA-V2 CloudEngine S5735-L14P2S-TQA-V2	CloudEngine S5735-L16LP2X-QA-V2	CloudEngine S5735-L16P2UM2X-QA-V2	CloudEngine S5735-L16LP2UM2X-QA-V2
Physical specifications	Dimensions (H x W x D)	43.6 mm x250 mm x 245 mm	54 mm x250 mm x 245 mm	43.6 mm x250 mm x 245 mm	54 mm x250 mm x 245 mm
	Chassis height	1 U	1.24 U	1U	1.24U
	Chassis weight (including packaging)	3.2 kg	3.35 kg	3.3 kg	3.4 kg
Fixed port	GE Base-T port	14	16	16	16
	10GE Base-T port	NA	NA	2	2
	GE SFP port	2	NA	NA	NA
	10GE SFP+ port	NA	2	2	2
	Dedicated 12GE stack port	NA	NA	NA	NA
Management port	Console port (RJ45)	Supported	Supported	Supported	Supported

Item		CloudEngine S5735-L14P2S-QA-V2 CloudEngine S5735-L14P2S-TQA-V2	CloudEngine S5735-L16LP2X-QA-V2	CloudEngine S5735-L16P2UM2X-QA-V2	CloudEngine S5735-L16LP2UM2X-QA-V2
	USB port	USB 2.0	USB 2.0	USB 2.0	USB 2.0
CPU	Frequency	1.1 GHz	1.1 GHz	1.1 GHz	1.1 GHz
	Core	2	2	2	2
Storage	Memory (DRAM)	2 GB	2 GB	2 GB	2 GB
	Flash memory	1 GB in total. To view the available flash memory size, run the display	1 GB in total. To view the available flash memory size, run the display	1 GB in total. To view the available flash memory size, run the display	1 GB in total. To view the available flash memory size, run the display
Ingress protection level	IP level	IP20	IP40	IP20	IP20
Power supply system	Power supply type	Built-in AC	Built-in DC	Built-in AC	Built-in AC
	Rated voltage range	100 V AC to 240 V AC, 50/60 Hz	100 V AC to 240 V AC, 50/60 Hz	100 V AC to 240 V AC, 50/60 Hz	100 V AC to 240 V AC, 50/60 Hz
	Maximum voltage range	AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz	AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz	AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz	AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz
	Maximum input current	6 A	3 A	6 A	3 A
	Maximum power consumption of the device	• 26.02 W (without PD) • 292.1 W(with PD,PD Power consumption of :247 W）	• 25.41 W (without PD) • 162.82 W(with PD,PD Power consumption of :125 W）	• 29.8 W (without PD) • 296.12 W(with PD,PD Power consumption of :247W）	• 29.2W (without PD) • 166.4W(with PD,PD Power consumption of :125W）
	Power consumption in the case of 30% traffic load[1]	21.67 W	20.7 W	24.6 W	24.37 W
	Power consumption in the case of 100% traffic load[1]	22.92 W	22.2 W	25.98 W	25.78 W
	Power consumption in the case of 0% traffic load[1]	14.88 W	20.7 W	24.6 W	24.37 W
Heat dissipation system	Heat dissipation mode	Natural heat dissipation	Natural heat dissipation	Natural heat dissipation	Natural heat dissipation
	Number of fan modules	NA	NA	NA	NA
	Airflow	NA	NA	NA	NA
	Maximum heat dissipation of the	without PD :88.78	without PD :86.7	without PD :101.68	without PD :99.63

Item		CloudEngine S5735-L14P2S-QA-V2 CloudEngine S5735-L14P2S-TQA-V2	CloudEngine S5735-L16LP2X-QA-V2	CloudEngine S5735-L16P2UM2X-QA-V2	CloudEngine S5735-L16LP2UM2X-QA-V2
	device (BTU/hour)	with PD：996.57	with PD：555.56	with PD：1010.39	with PD：567.77
Environment parameters	Long-term operating temperature	• 0-1800 m altitude: -5°C to +45°C • 1800-5000 m altitude: The operating temperature reduces by 1ºC every time the altitude increases by 220 m.	• 0-1800 m altitude: -5°C to +45°C • 1800-5000 m altitude: The operating temperature reduces by 1ºC every time the altitude increases by 220 m.	• 0-1800 m altitude: -5°C to +45°C • 1800-5000 m altitude: The operating temperature reduces by 1ºC every time the altitude increases by 220 m.	• 0-1800 m altitude: -5°C to +45°C • 1800-5000 m altitude: The operating temperature reduces by 1ºC every time the altitude increases by 220 m.
	Short-term operating temperature	NA	NA	NA	NA
	Storage temperature	-40°C to +70°C	-40°C to +70°C	-40°C to +70°C	-40°C to +70°C
	Relative humidity	5%-95%(non-condensing)	5%-95%(non-condensing)	5%-95%(non-condensing)	5%-95%(non-condensing)
	Operating altitude	5000 m	5000 m	5000 m	5000 m
	Noise under normal temperature (sound power)	fanless, noise-free, <30dB (A)	fanless, noise-free, <30dB (A)	fanless, noise-free, <30dB (A)	fanless, noise-free, <30dB (A)
	Noise under high temperature (sound power)	fanless, noise-free, <30dB (A)	fanless, noise-free, <30dB (A)	fanless, noise-free, <30dB (A)	fanless, noise-free, <30dB (A)
	Noise under normal temperature (sound pressure)	fanless, noise-free, <20dB (A)	fanless, noise-free, <20dB (A)	fanless, noise-free, <20dB (A)	fanless, noise-free, <20dB (A)
	Surge protection specification (RJ45 service port)	±6 kV in common mode	±6 kV in common mode	±6 kV in common mode	±6 kV in common mode
	Surge protection specification (power port)	• Differential mode: ± 6 kV • Common mode: ±6 kV	• Differential mode: ± 6 kV • Common mode: ±6 kV	• Differential mode: ± 6 kV • Common mode: ±6 kV	• Differential mode: ± 6 kV • Common mode: ±6 kV
Reliability	MTBF (year)	59.25/60.66	59.41	55.2	55.16
	MTTR (hour)	2	2	2	2
	Availability	> 0.99999	> 0.99999	> 0.99999	> 0.99999
Certification		• EMC certification • Safety	• EMC certification • Safety	• EMC certification • Safety	• EMC certification • Safety

Item	CloudEngine S5735-L14P2S-QA-V2 CloudEngine S5735-L14P2S-TQA-V2	CloudEngine S5735-L16LP2X-QA-V2	CloudEngine S5735-L16P2UM2X-QA-V2	CloudEngine S5735-L16LP2UM2X-QA-V2
	certification • Manufacturing certification	certification • Manufacturing certification	certification • Manufacturing certification	certification • Manufacturing certification

NOTE

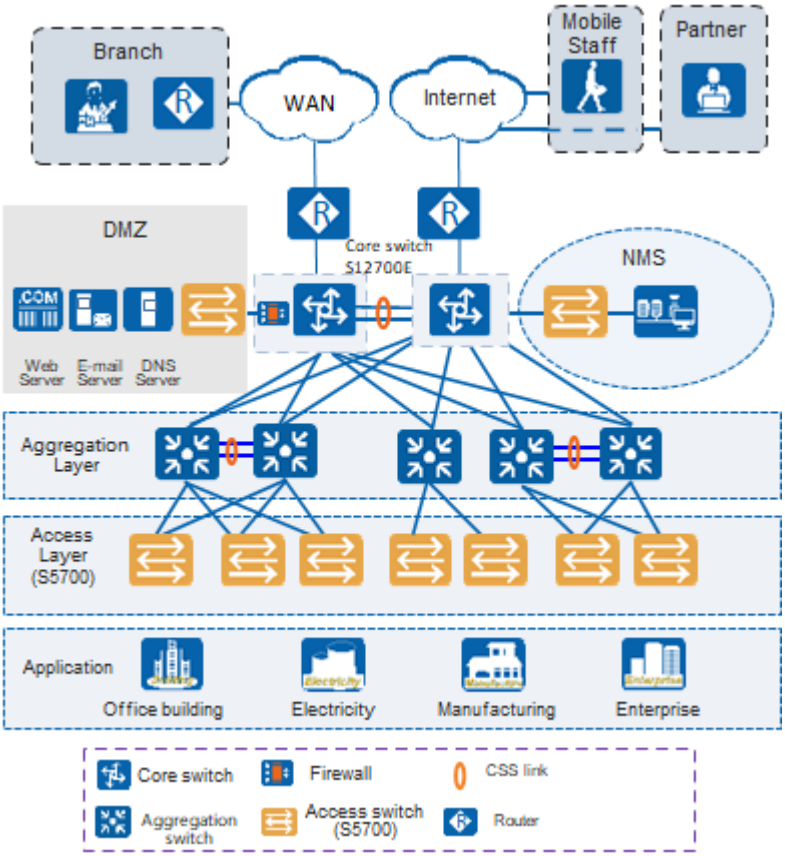
1: The Typical power consumption is calculated under 30% service traffic load conditions according to the ATIS standard. Additionally, the EEE function is enabled and there is no PoE power output.

The Static power consumption is calculated under 0% service traffic load conditions according to the ATIS standard. Additionally, the EEE function is enabled and there is no PoE power output.

Networking and Applications

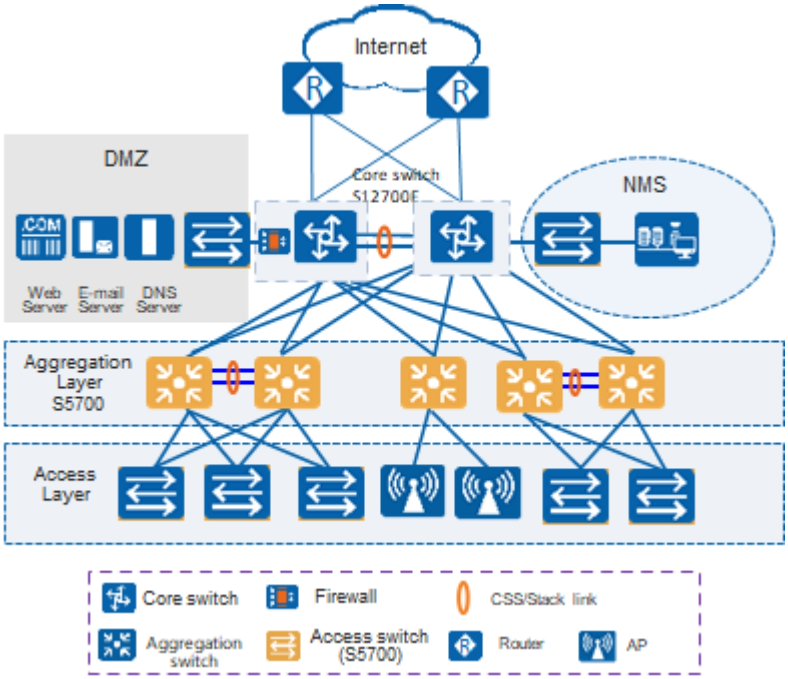
Large-Scale Enterprise Campus Network

CloudEngine S5735-L-Q-V2 series switches can be deployed at the access layer of a campus network to build a high-performance and highly reliable enterprise network.



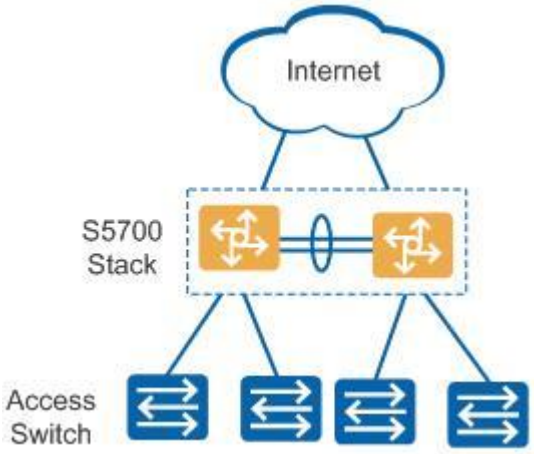
Small- or Medium-scale Enterprise Campus Network

CloudEngine S5735-L-Q-V2 series switches can be deployed at the aggregation layer of a campus network to build a high-performance, multi-service, and highly reliable enterprise network.



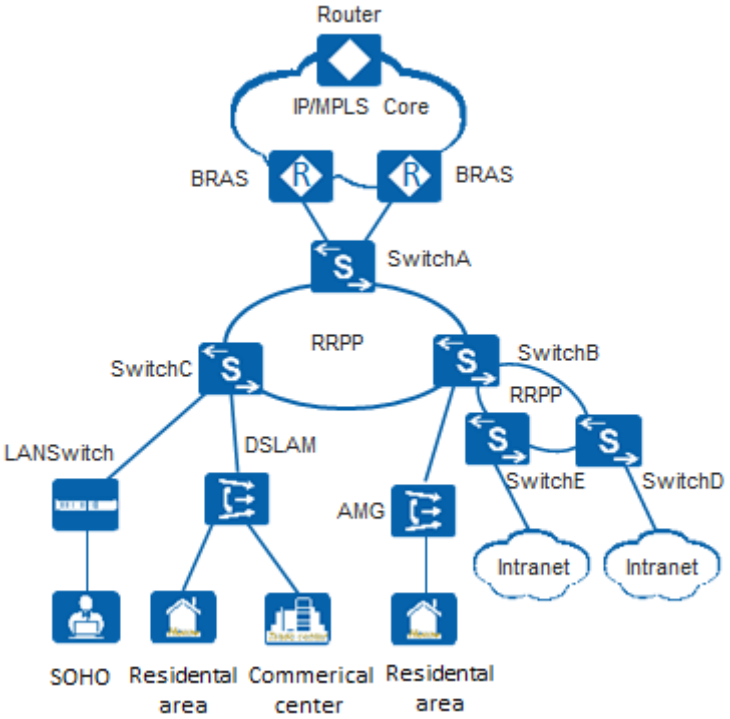
Small-scale Enterprise Campus Network

With powerful aggregation and routing capabilities of CloudEngine S5735-L-Q-V2 series switches make them suitable for use as core switches in a small-scale enterprise network. Two or more S5735-L-Q-V2 switches use iStack technology to ensure high reliability. They provide a variety of access control policies to achieve centralized management and simplify configuration.



Application on a MAN

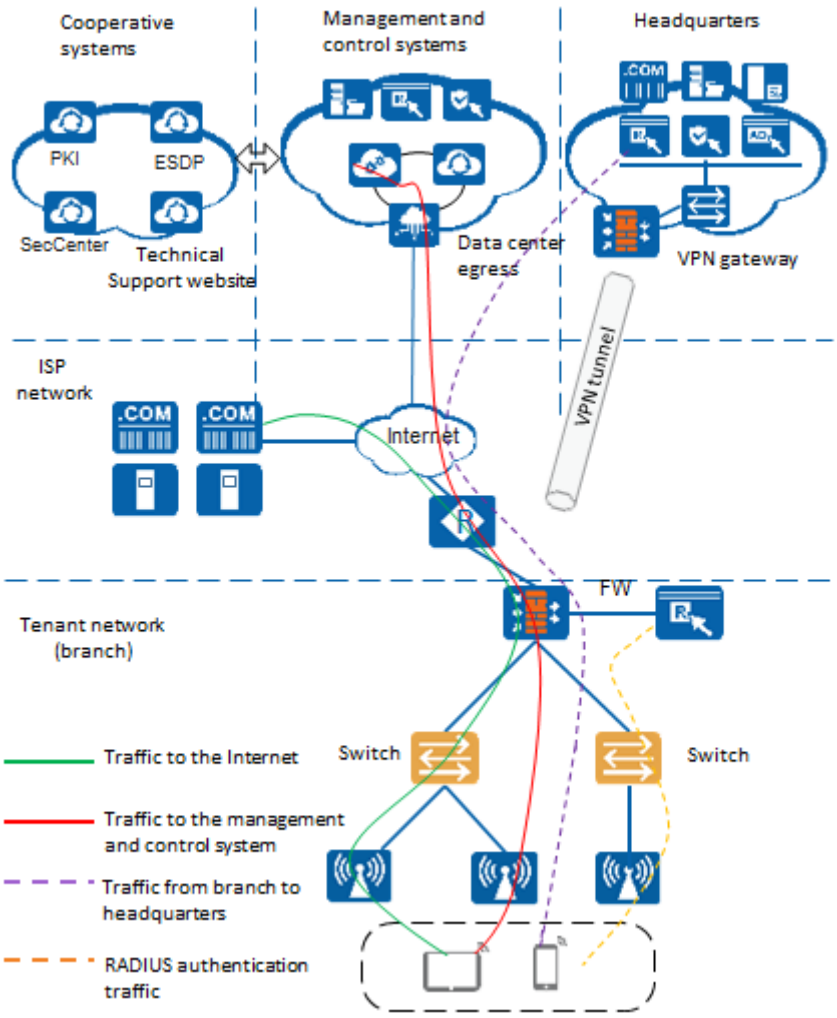
CloudEngine S5735-L-Q-V2 series switches can be deployed at the access layer of a MAN(Metropolitan Area Network) to build a high-performance, multi-service, and highly reliable ISP MAN network.



Application in Public Cloud

CloudCampus Solution is a network solution suite based on Huawei public cloud. CloudEngine S5735-L-Q-V2 series switches can be located at the access layer.

The switches are plug-and-play. They go online automatically after being powered on and connected with network cables, without the need for complex configurations, and use bidirectional certificate authentication to ensure management channel security. The switches provide the NETCONF and YANG interfaces, through which the management and control system delivers configurations to them. In addition, remote maintenance and fault diagnosis can be performed on the management and control system.



Safety and Regulatory Compliance

Safety and regulatory compliance of the CloudEngine S5735-L series

Certification Category	Description
Safety	• IEC 60950-1 • EN 60950-1/A11/A12 • UL 60950-1 • CSA C22.2 No 60950-1 • AS/NZS 60950.1 • CNS 14336-1
Laser safety	• IEC60825-1 • IEC60825-2 • EN60825-1 • EN60825-2
Electromagnetic Compatibility (EMC)	• CISPR22 Class A • CISPR24 • EN55022 Class A • EN55024

Certification Category	Description
	• ETSI EN 300 386 Class A • CFR 47 FCC Part 15 Class A • ICES 003 Class A • AS/NZS CISPR22 Class A • VCCI Class A • EN61000-3-2 • EN61000-3-3 • IEC61000-4-2 • ITU-T K 20 • ITU-T K 21 • ITU-T K 44 • CNS13438
Environment	• RoHS • REACH • WEEE

NOTE

- EMC: electromagnetic compatibility
- CISPR: International Special Committee on Radio Interference
- EN: European Standard
- ETSI: European Telecommunications Standards Institute
- CFR: Code of Federal Regulations
- FCC: Federal Communication Commission
- IEC: International Electrotechnical Commission
- AS/NZS: Australian/New Zealand Standard
- VCCI: Voluntary Control Council for Interference
- UL: Underwriters Laboratories
- CSA: Canadian Standards Association
- IEEE: Institute of Electrical and Electronics Engineers
- RoHS: restriction of the use of certain hazardous substances
- REACH: Registration Evaluation Authorization and Restriction of Chemicals
- WEEE: Waste Electrical and Electronic Equipment

MIB and Standards Compliance

Supported MIBs

Supported MIBs by the CloudEngine S5735-L-Q-V2 series

Category	MIB
Public MIB	• BRIDGE-MIB • DISMAN-NSLOOKUP-MIB • DISMAN-PING-MIB • DISMAN-TRACEROUTE-MIB • ENTITY-MIB

Category	MIB
	• EtherLike-MIB • IF-MIB • IP-FORWARD-MIB • IPv6-MIB • LAG-MIB • LLDP-EXT-DOT1-MIB • LLDP-EXT-DOT3-MIB • LLDP-MIB • NOTIFICATION-LOG-MIB • NQA-MIB • P-BRIDGE-MIB • Q-BRIDGE-MIB • RFC1213-MIB • RMON-MIB • SAVI-MIB • SNMP-FRAMEWORK-MIB • SNMP-MPD-MIB • SNMP-NOTIFICATION-MIB • SNMP-TARGET-MIB • SNMP-USER-BASED-SM-MIB • SNMPv2-MIB • SNMP-VIEW-BASED-ACM-MIB • TCP-MIB • UDP-MIB
Huawei-proprietary MIB	• HUAWEI-AAA-MIB • HUAWEI-ACL-MIB • HUAWEI-ALARM-MIB • HUAWEI-ALARM-RELIABILITY-MIB • HUAWEI-BASE-TRAP-MIB • HUAWEI-BRAS-RADIUS-MIB • HUAWEI-BRAS-SRVCFG-EAP-MIB • HUAWEI-BRAS-SRVCFG-STATICUSER-MIB • HUAWEI-CBQOS-MIB • HUAWEI-CDP-COMPLIANCE-MIB • HUAWEI-CONFIG-MAN-MIB • HUAWEI-CPU-MIB • HUAWEI-DAD-TRAP-MIB • HUAWEI-DATASYNC-MIB • HUAWEI-DEVICE-MIB • HUAWEI-DHCPR-MIB • HUAWEI-DHCPS-MIB • HUAWEI-DHCP-SNOOPING-MIB • HUAWEI-DIE-MIB • HUAWEI-DNS-MIB

Category	MIB
	• HUAWEI-DLDP-MIB • HUAWEI-ERPS-MIB • HUAWEI-ERRORDOWN-MIB • HUAWEI-ENERGYMNGT-MIB • HUAWEI-EASY-OPERATION-MIB • HUAWEI-ENTITY-EXTENT-MIB • HUAWEI-ENTITY-TRAP-MIB • HUAWEI-ETHARP-MIB • HUAWEI-ETHOAM-MIB • HUAWEI-FLASH-MAN-MIB • HUAWEI-FWD-RES-TRAP-MIB • HUAWEI-GARP-APP-MIB • HUAWEI-GTL-MIB • HUAWEI-HGMP-MIB • HUAWEI-HWTACACS-MIB • HUAWEI-IF-EXT-MIB • HUAWEI-INFOCENTER-MIB • HUAWEI-IPPOOL-MIB • HUAWEI-IPV6-MIB • HUAWEI-ISOLATE-MIB • HUAWEI-L2IF-MIB • HUAWEI-L2MAM-MIB • HUAWEI-L2VLAN-MIB • HUAWEI_LDT-MIB • HUAWEI-LLDP-MIB • HUAWEI-MAC-AUTHEN-MIB • HUAWEI-MEMORY-MIB • HUAWEI-MFF-MIB • HUAWEI-MFLP-MIB • HUAWEI-MSTP-MIB • HUAWEI-MULTICAST-MIB • HUAWEI-NTPV3-MIB • HUAWEI-PERFORMANCE-MIB • HUAWEI-PERFMGMT-MIB • HUAWEI-PORT-MIB • HUAWEI-PORTAL-MIB • HUAWEI-QINQ-MIB • HUAWEI-RM-EXT-MIB • HUAWEI-RRPP-MIB • HUAWEI-SECURITY-MIB • HUAWEI-SEP-MIB • HUAWEI-SNMP-EXT-MIB • HUAWEI-SSH-MIB • HUAWEI-STACK-MIB • HUAWEI-SWITCH-L2MAM-EXT-MIB

Category	MIB
	• HUAWEI-SWITCH-SRV-TRAP-MIB • HUAWEI-SYS-MAN-MIB • HUAWEI-TCP-MIB • HUAWEI-TFTPC-MIB • HUAWEI-TRNG-MIB • HUAWEI-UNIMNG-MIB • HUAWEI-USA-MIB • HUAWEI-XQOS-MIB

NOTE

For more detailed information of MIBs supported by the CloudEngine S5735-L-Q-V2 series, visit https://support.huawei.com/enterprise/en/switches/s5700-pid-6691579?category=reference-guides&subcategory=mib-reference.

Standard Compliance

Standard compliance list of the CloudEngine S5735-L-Q-V2 series

Standard Organization	Standard or Protocol
IETF	• RFC 768 User Datagram Protocol (UDP) • RFC 792 Internet Control Message Protocol (ICMP) • RFC 793 Transmission Control Protocol (TCP) • RFC 826 Ethernet Address Resolution Protocol (ARP) • RFC 854 Telnet Protocol Specification • RFC 951 Bootstrap Protocol (BOOTP) • RFC 959 File Transfer Protocol (FTP) • RFC 1058 Routing Information Protocol (RIP) • RFC 1112 Host extensions for IP multicasting • RFC 1157 A Simple Network Management Protocol (SNMP) • RFC 1256 ICMP Router Discovery • RFC 1305 Network Time Protocol Version 3 (NTP) • RFC 1349 Internet Protocol (IP) • RFC 1493 Definitions of Managed Objects for Bridges • RFC 1542 Clarifications and Extensions for the Bootstrap Protocol • RFC 1643 Ethernet Interface MIB • RFC 1757 Remote Network Monitoring (RMON) • RFC 1901 Introduction to Community-based SNMPv2 • RFC 1902-1907 SNMP v2 • RFC 1981 Path MTU Discovery for IP version 6 • RFC 2131 Dynamic Host Configuration Protocol (DHCP) • RFC 2460 Internet Protocol, Version 6 Specification (IPv6) • RFC 2461 Neighbor Discovery for IP Version 6 (IPv6) • RFC 2462 IPv6 Stateless Address Auto configuration • RFC 2463 Internet Control Message Protocol for IPv6 (ICMPv6) • RFC 2474 Differentiated Services Field (DS Field) • RFC 2863 The Interfaces Group MIB • RFC 2597 Assured Forwarding PHB Group

Standard Organization	Standard or Protocol
	• RFC 2598 An Expedited Forwarding PHB • RFC 2571 SNMP Management Frameworks • RFC 2865 Remote Authentication Dial In User Service (RADIUS) • RFC 3046 DHCP Option82 • RFC 3513 IP Version 6 Addressing Architecture • RFC 3579 RADIUS Support For EAP • draft-grant-tacacs-02 TACACS+ • RFC 6241 Network Configuration Protocol (NETCONF) • RFC 6020 YANG - A Data Modeling Language for the Network Configuration Protocol (NETCONF)
IEEE	• IEEE 802.1D Media Access Control (MAC) Bridges • IEEE 802.1p Traffic Class Expediting and Dynamic Multicast Filtering • IEEE 802.1Q Virtual Bridged Local Area Networks • IEEE 802.1ad Provider Bridges • IEEE 802.2 Logical Link Control • IEEE Std 802.3 CSMA/CD • IEEE Std 802.3ab 1000BASE-T specification • IEEE Std 802.3ad Aggregation of Multiple Link Segments • IEEE Std 802.3ae 10GE WEN/LAN Standard • IEEE Std 802.3x Full Duplex and flow control • IEEE Std 802.3z Gigabit Ethernet Standard • IEEE802.1ax/IEEE802.3ad Link Aggregation • IEEE 802.1ab Link Layer Discovery Protocol • IEEE 802.1D Spanning Tree Protocol • IEEE 802.1w Rapid Spanning Tree Protocol • IEEE 802.1s Multiple Spanning Tree Protocol • IEEE 802.1x Port based network access control protocol • IEEE 802.3af DTE Power via MIDI • IEEE 802.3at DTE Power via the MDI Enhancements • IEEE 802.3az Energy Efficient Ethernet
ITU	• ITU SG13 Y.17ethoam • ITU SG13 QoS control Ethernet-Based IP Access • ITU-T Y.1731 ETH OAM performance monitor
MEF	• MEF 2 Requirements and Framework for Ethernet Service Protection • MEF 9 Abstract Test Suite for Ethernet Services at the UNI • MEF 11 UNI Requirements and Framework • MEF 15 Requirements for Management of Metro Ethernet Phase 1 Network Elements • MEF 17 Service OAM Framework and Requirements • MEF 20 UNI Type 2 Implementation Agreement • MEF 23 Class of Service Phase 1 Implementation Agreement • XMODEM/YMODEM Protocol Reference

NOTE

The listed standards and protocols are fully or partially supported by Huawei switches. For details, visit http://e.huawei.com/en or contact your local Huawei sales office.

Ordering Information

Model	Product Description
CloudEngine S5735-L8T4X-QA-V2	CloudEngine S5735-L8T4X-QA-V2(8*10/100/1000BASE-T ports, 4*10GE SFP+ ports, AC power, Fanless)
CloudEngine S5735-L8P4X-QA-V2	CloudEngine S5735-L8P4X-QA-V2(8*10/100/1000BASE-T ports, 4*10GE SFP+ ports, PoE+, AC power, Fanless)
CloudEngine S5735-L16T4X-QA-V2	CloudEngine S5735-L16T4X-QA-V2 (16*10/100/1000BASE-T ports, 4*10GE SFP+ ports, AC power, Fanless)
CloudEngine S5735-L24T4X-QA-V2	CloudEngine S5735-L24T4X-QA-V2 (24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, AC power, Fanless)
CloudEngine S5735-L14P2S-QA-V2	CloudEngine S5735-L14P2S-QA-V2（14*10/100/1000BASE-T ports(POE+), 2*GE SFP ports, AC power）
CloudEngine S5735-L14P2S-TQA-V2	CloudEngine S5735-L14P2S-TQA-V2（14*10/100/1000BASE-T ports(POE+), 2*GE SFP ports, HTM, AC power）
CloudEngine S5735-L16LP2X-QA-V2	CloudEngine S5735-L16LP2X-QA-V2（16*10/100/1000BASE-T ports(POE+), 2*10GE SFP+ ports, AC power）
CloudEngine S5735-L16P2UM2X-QA-V2	CloudEngine S5735-L16P2UM2X-QA-V2(16*10/100/1000BASE-T ports(POE+), 2*100M/1G/2.5G/5G/10G Ethernet ports(POE++), 2*10GE SFP+ ports, AC power)
CloudEngine S5735-L16LP2UM2X-QA-V2	CloudEngine S5735-L16LP2UM2X-QA-V2(16*10/100/1000BASE-T ports(POE+), 2*100M/1G/2.5G/5G/10G Ethernet ports(POE++), 2*10GE SFP+ ports, AC power)
N1-S57L-M-Lic	S57XX-L Series Basic SW,Per Device
N1-S57L-M-SnS1Y	S57XX-L Series Basic SW,SnS,Per Device,1Year
N1-S57L-F-Lic	N1-CloudCampus,Foundation,S57XX-L Series,Per Device
N1-S57L-F-SnS	N1-CloudCampus,Foundation,S57XX-L Series,SnS,Per Device
N1-S57L-A-Lic	N1-CloudCampus,Advanced,S57XX-L Series,Per Device
N1-S57L-A-SnS	N1-CloudCampus,Advanced,S57XX-L Series,SnS,Per Device
N1-S57L-FToA-Lic	N1-Upgrade-Foundation to Advanced,S57XX-L,Per Device
N1-S57L-FToA-SnS	N1-Upgrade-Foundation to Advanced,S57XX-L,SnS,Per Device

More Information

For more information about Huawei Campus Switches, visit http://e.huawei.com or contact us in the following ways:

- Global service hotline: http://e.huawei.com/en/service-hotline
- Logging in to the Huawei Enterprise technical support website: http://support.huawei.com/enterprise/
- Sending an email to the customer service mailbox: support_e@huawei.com

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