CloudEngine S5735-L-I Series Extended-Temperature Switches Datasheet

CloudEngine S5735-L-I series extended-temperature switches have an industrial-grade operating temperature range as well as professional outdoor surge protection to withstand harsh outdoor cabinet environments. They can be widely used in scenarios such as Safe City and Ethernet to the x (ETTx).

Introduction

Huawei CloudEngine S5735-L-I series extended-temperature switches (S5735-L-I for short) are next-generation standard Layer 3 gigabit switches that provide flexible all-gigabit access and 10GE uplink ports.

Extended-temperature switches have an industrial-grade operating temperature range as well as professional outdoor surge protection to withstand harsh outdoor cabinet environments. As such, they can be widely used in access scenarios such as Safe City and Ethernet to the x (ETTx).

Product Overview

Models and Appearances

Models and appearances of the CloudEngine S5735-L-Iseries

Models and Appearances	Description
CloudEngine S5735-L8T4X-IA1	• 8 x 10/100/1000Base-T ports, 4 x 10 GE SFP+ ports • AC power supply • Forwarding performance: 72 Mpps • Switching capacity: 96 Gbps/336 Gbps
CloudEngine S5735-L8P4X-IA1	• 8 x 10/100/1000Base-T ports, 4 x 10 GE SFP+ ports • AC power supply • PoE+ • Forwarding performance: 72 Mpps • Switching capacity: 96 Gbps/336 Gbps
CloudEngine S5735-L24T4X-IA1	• 24 x 10/100/1000Base-T ports, 4 x 10 GE SFP+ ports • AC power supply • Forwarding performance: 96 Mpps • Switching capacity: 128 Gbps/336 Gbps

Product Features and Highlights

Industrial-Grade Reliability, withstanding harsh outdoor environments

- Extended operating temperature range (﹣40°C to +70°C), enabling it to work in harsh outdoor environments.

High-level integration and easy installation/deployment

- Supports Super Virtual Fabric (SVF) that virtualizes "Core/Aggregation + Access Switches" into a single logical device. The CloudEngine S5735-L-Ican function as the SVF client. SVF provides the innovative network management solution in the industry, simplifies device management, and supports plug-and-play of devices, as well as supporting service configuration profiles. These profiles are configured on the core device and automatically delivered to access devices, implementing centralized control, simplifying service configuration, and enabling flexible configuration modification.

- Supports zero-touch provisioning (ZTP), USB-based deployment, configuration-free replacement of a faulty device, batch configuration, and batch remote upgrade. These functions facilitate device deployment, service provisioning, and other management and maintenance work, greatly reducing O&M costs. The switch can be managed and maintained using Simple Network Management Protocol (SNMP) v1, v2c, and v3, command line interface (CLI), web system, or Secure Shell (SSH) v2.0. Additionally, it supports remote network monitoring (RMON), multiple log hosts, interface traffic statistics collection, and network quality analysis that facilitates network optimization and reconstruction.

Professional video surveillance features

- Smart Fault Diagnosis (SFD) of the downstream IP cameras (IPCs): Specifically, the switch works with Huawei's network management system—eSight—to implement fast fault diagnosis based on the device management status, port status, and alarms of the network path on which the IPC resides, and quickly demarcate the type of fault that led to the IPC disconnection (for example, an IPC fault, network device fault, power failure, or optical fiber link fault). This capability improves O&M efficiency, reduces O&M costs, and increases the IPC connectivity rate.

- eMDI video quality demarcation: The switch works with Huawei eSight to analyze video service quality and quickly demarcate the video quality problem type, such as artifacts and frame freezing on the screen when playing a video.

- Mechanical lock and alarm reporting upon cover being opened: It can quickly detect damage and intrusion, ensuring device security.

Powerful Service Processing Capability and Multiple Security Control Mechanisms

- Various Layer 2 and Layer 3 multicast protocols, including Protocol Independent Multicast Sparse Mode (PIM SM), PIM Dense Mode (DM), PIM Source-Specific Multicast (SSM), Multicast Listener Discovery (MLD), and Internet Group Management Protocol (IGMP) snooping, ensuring high-quality HD video surveillance services.

- Layer 3 features, such as Open Shortest Path First (OSPF), Intermediate System to Intermediate System (IS-IS), Border Gateway Protocol (BGP), and Virtual Router Redundancy Protocol (VRRP), meeting enterprise access and aggregation service requirements and supporting more voice, video, and data applications.

- MAC address authentication, 802.1X authentication, Portal authentication, and dynamic delivery of user policies (VLAN, QoS, and ACL).

- 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 the DHCP CHADDR value.

- Setting up and maintaining a DHCP snooping binding table, and discarding the packets that do not match the table entries. DHCP snooping allows a physical port to be configured as a trusted or untrusted port to ensure that users are connected to only authorized DHCP servers.

- Strict ARP learning, protecting the network against ARP spoofing attacks and ensuring normal network access.

Multiple Reliability Mechanisms

- Huawei-developed Smart Ethernet Protection (SEP) technology and the latest Ethernet ring protection switching (ERPS) standard in addition to the traditional Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), and Multiple Spanning Tree Protocol (MSTP). SEP is a ring protection protocol dedicated to the Ethernet link layer. It is applicable to various ring topologies such as open ring topology, closed ring topology, and cascading ring topology. SEP is reliable and easy to maintain, and implements fast protection switching (under 50 ms). ERPS is defined in ITU-T G.8032. It implements protection switching within milliseconds based on the traditional Ethernet MAC and bridging functions.

- Smart Link. One switch can be connected to multiple aggregation switches through multiple links to implement uplink backup, greatly improving the reliability of access devices.

- Ethernet OAM (IEEE 802.3ah/802.1ag), quickly detecting link faults.

- The all-in-one chassis supports current leakage protection, short-circuit protection, and automatic detection and recovery mechanisms. In the event of a short circuit, the CloudEngine S5735-L-Ican automatically power off to protect its components. In addition, it supports the short circuit detection and protection function for connected terminals. Once the short circuit is recovered, the switch automatically resumes power supply. Moverover, the switch supports current leakage protection, and has passed the 700 V DC and 1200 V AC surge test before delivery to ensure device security.

Mature IPv6 Technologies

- The CloudEngine S5735-L-Iseries video backhaul switch uses the mature, stable VRP platform and supports IPv4/IPv6 dual stack, IPv6 RIPng, and IPv6 over IPv4 tunnels including manually configured, 6to4, and Intra-Site Automatic Tunnel Addressing Protocol (ISATAP) tunnels. With these IPv6 features, the switch can be deployed on IPv4-only networks, IPv6-only networks, or networks that run both IPv4 and IPv6, meeting the requirements for IPv4-to-IPv6 transition.

Intelligent Upgrade

- Switches support the intelligent upgrade feature. Specifically, switches obtain the version upgrade path and download 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-Isupports 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-Iswitch through Python scripts to quickly innovate functions and implement intelligent O&M.

Licensing

CloudEngine S5735-L-Isupports 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 campus network deployments in enterprise private cloud mode, and 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, SVF, and others Note: For details, see the Functions and Features	√	√	√
Basic network automation based on the Agile Controller: • Basic automation: Plug-and-play • Basic monitoring: Application visualization	×	√	√

Switch Functions	N1 Basic Software	N1 Foundation Software Package	N1 Advanced Software Package
• NE management: Image and topology management and discovery • User access authentication			
Advanced network automation and intelligent O&M: VXLAN, free mobility, and CampusInsight basic functions	×	×	√

Note: Only V200R019C10 and later versions can support N1 mode

Product Specifications

Functions and Features

Function and feature metrics for the CloudEngine S5735-L-I series

Function and Feature		Description	CloudEngines S5735-L
Ethernet features	Ethernet basics	Full-duplex, half-duplex, and auto-negotiation	Yes
		Rate auto-negotiation on an interface	Yes
		Auto MDI and MDI-X	Yes
		Flow control on an interface	Yes
		Jumbo frames	Yes
		Link aggregation	Yes
		Load balancing among links of a trunk	Yes
		Transparent transmission of Layer 2 protocol packets	Yes
		Device Link Detection Protocol (DLDP)	Yes
		Link Layer Discovery Protocol (LLDP)	Yes
		Link Layer Discovery Protocol-Media Endpoint Discovery (LLDP-MED)	Yes
		Interface isolation	Yes
		Broadcast traffic suppression on an interface	Yes
		Multicast traffic suppression on an interface	Yes
		Unknown unicast traffic suppression on an interface	Yes
		VLAN broadcast traffic suppression	Yes
		VLAN multicast traffic suppression	Yes
		VLAN unknown unicast traffic suppression	Yes
	VLAN	VLAN specification	4094

Function and Feature		Description	CloudEngines S5735-L
		VLANIF interface specification	1024
		Access mode	Yes
		Trunk mode	Yes
		Hybrid mode	Yes
		QinQ mode	Yes
		Default VLAN	Yes
		VLAN assignment based on interfaces	Yes
		VLAN assignment based on protocols	Yes
		VLAN assignment based on IP subnets	Yes
		VLAN assignment based on MAC addresses	Yes
		VLAN assignment based on MAC address + IP address	Yes
		VLAN assignment based on MAC address + IP address + interface number	Yes
		Adding double VLAN tags to packets based on interfaces	Yes
		VLAN mapping	Yes
		Selective QinQ	Yes
		MUX VLAN	Yes
		Voice VLAN	Yes
		Guest VLAN	Yes
	GVRP	GARP	Yes
		GVRP	Yes
	VCMP	VCMP	Yes
	MAC	MAC address	32896(MAX)
		Automatic learning of MAC addresses	Yes
		Automatic aging of MAC addresses	Yes
		Static, dynamic, and blackhole MAC address entries	Yes
		Interface-based MAC address learning limiting	Yes
		Sticky MAC	Yes
		MAC address flapping detection	Yes
		MAC address spoofing defense	Yes
		Port bridge	Yes
	ARP	Static ARP	Yes

Function and Feature		Description	CloudEngines S5735-L
		Dynamic ARP	Yes
		ARP entry	4096(MAX)
		ARP aging detection	Yes
		Intra-VLAN proxy ARP	Yes
		Routed proxy ARP	Yes
Ethernet loop protection	MSTP	STP	Yes
		RSTP	Yes
		MSTP	Yes
		VBST	Yes
		BPDU protection	Yes
		Root protection	Yes
		Loop protection	Yes
		Defense against TC BPDU attacks	Yes
	Loopback detection	Loop detection on an interface	Yes
	SEP	SEP	Yes
	Smart Link	Smart Link	Yes
		Smart Link multi-instance	Yes
		Monitor Link	Yes
	RRPP	RRPP	Yes
		Single RRPP ring	Yes
		Tangent RRPP ring	Yes
		Intersecting RRPP ring	Yes
		Hybrid networking of RRPP rings and other ring networks	Yes
	ERPS	G.8032 v1	Yes
		G.8032 v2	Yes
		ERPS semi-ring topology	Yes
		ERPS closed-ring topology	Yes
IPv4/IPv6 forwarding	IPv4 and unicast routing	IPv4 static routing	Yes
		VRF	Yes
		DHCP client	Yes
		DHCP server	Yes
		DHCP relay	Yes
		Routing policies	Yes

Function and Feature		Description	CloudEngines S5735-L
		IPv4 routes	4096(MAX)
		RIPv1	Yes
		RIPv2	Yes
		OSPF	Yes
		Policy-based routing (PBR)	Yes
	Multicast routing features	IGMPv1/v2/v3	Yes
		PIM-DM	Yes
		PIM-SM	Yes
		MSDP	Yes
		IPv4 multicast routes	1500(MAX)
		IPv6 multicast routes	1500(MAX)
		Multicast routing policies	Yes
		RPF	Yes
	IPv6 features	IPv6 protocol stack	Yes
		ND	Yes
		ND entry	1024(MAX)
		ND snooping	Yes
		DHCPv6 snooping	Yes
		RIPng	Yes
		DHCPv6 server	Yes
		DHCPv6 relay	Yes
		OSPFv3	Yes
		IPv6 routes	1024(MAX)
		VRRP6	Yes
		MLDv1/v2	Yes
		PIM-DM for IPv6	Yes
		PIM-SM for IPv6	Yes
Layer 2 multicast features	-	IGMPv1/v2/v3 snooping	Yes
		IGMP snooping proxy	Yes
		MLD snooping	Yes
		Multicast traffic suppression	Yes
		Inter-VLAN multicast replication	Yes
Device reliability	Stacking	Service interface-based stacking	Yes
		Maximum number of stacked devices	9

Function and Feature		Description	CloudEngines S5735-L
		Stack bandwidth (Bidirectional)	80Gbps(MAX)
	VRRP	VRRP standard protocol	Yes
Ethernet OAM	EFM (802.3ah)	Automatic discovery of links	Yes
		Link fault detection	Yes
		Link troubleshooting	Yes
		Remote loopback	Yes
	CFM (802.1ag)	Software-level CCM	Yes
		802.1ag MAC ping	Yes
		802.1ag MAC trace	Yes
	OAM association	Association between 802.1ag and 802.3ah	Yes
	Y.1731	Unidirectional delay and jitter measurement	Yes
		Bidirectional delay and jitter measurement	Yes
QoS features	Traffic classification	Traffic classification based on ACLs	Yes
		Configuring traffic classification priorities	Yes
		Matching the simple domains of packets	Yes
	Traffic behavior	Traffic filtering	Yes
		Traffic policing (CAR)	Yes
		Modifying the packet priorities	Yes
		Modifying the simple domains of packets	Yes
		Modifying the packet VLANs	Yes
	Traffic shaping	Traffic shaping on an egress interface	Yes
		Traffic shaping on queues on an interface	Yes
	Congestion avoidance	Tail drop	Yes
	Congestion management	Priority Queuing (PQ)	Yes
		Weighted Deficit Round Robin (WDRR)	Yes
		PQ+WDRR	Yes
		Weighted Round Robin (WRR)	Yes
		PQ+WRR	Yes
ACL	Packet filtering at Layer 2 to Layer 4	Number of rules per IPv4 ACL	2K
		Number of rules per IPv6 ACL	2K
		Basic IPv4 ACL	Yes
		Advanced IPv4 ACL	Yes
		Basic IPv6 ACL	Yes

Function and Feature		Description	CloudEngines S5735-L
		Advanced IPv6 ACL	Yes
		Layer 2 ACL	Yes
		User-defined ACL	Yes
Configuration and maintenance	Login and configuration management	Command line interface (CLI)-based configuration	Yes
		Console terminal service	Yes
		Telnet terminal service	Yes
		SSH v1.5	Yes
		SSH v2.0	Yes
		SNMP-based NMS for unified configuration	Yes
		Web page-based configuration and management	Yes
		EasyDeploy (client)	Yes
		SVF	Yes
		Cloud management	Yes
		OPS	Yes
	File system	Directory and file management	Yes
		File upload and download	Yes
	Monitoring and maintenance	eMDI	Yes
		Hardware monitoring	Yes
		Log information output	Yes
		Alarm information output	Yes
		Debugging information output	Yes
		Port mirroring	Yes
		Flow mirroring	Yes
		Remote mirroring	Yes
		Energy saving	Yes
	Version upgrade	Version upgrade	Yes
		Version rollback	Yes
Security	ARP security	ARP packet rate limiting	Yes
		ARP anti-spoofing	Yes
		Association between ARP and STP	Yes
		Dynamic ARP Inspection (DAI)	Yes
		Static ARP Inspection (SAI)	Yes
		Egress ARP Inspection (EAI)	Yes
	IP security	ICMP attack defense	Yes

Function and Feature		Description	CloudEngines S5735-L
		IPSG for IPv4	Yes
		IPSG user capacity	1K
		IPSG for IPv6	Yes
		IPSGv6 user capacity	512
	Local attack defense	CPU attack defense	Yes
	MFF	MFF	Yes
	DHCP snooping	DHCP snooping	Yes
		Option 82 function	Yes
		Dynamic rate limiting for DHCP packets	Yes
	Attack defense	Defense against malformed packet attacks	Yes
		Defense against UDP flood attacks	Yes
		Defense against TCP SYN flood attacks	Yes
		Defense against ICMP flood attacks	Yes
		Defense against packet fragment attacks	Yes
		Local URPF	Yes
User access and authentication	AAA	Local authentication	Yes
		Local authorization	Yes
		RADIUS authentication	Yes
		RADIUS authorization	Yes
		RADIUS accounting	Yes
		HWTACACS authentication	Yes
		HWTACACS authorization	Yes
		HWTACACS accounting	Yes
	NAC	802.1X authentication	Yes
		MAC address authentication	Yes
		Portal authentication	Yes
		Hybrid authentication	Yes
	Policy association	Functioning as the access device	Yes
Network management	-	Ping	Yes
		Tracert	Yes
		NQA	Yes
		NTP	Yes
		sFlow	Yes

Function and Feature		Description	CloudEngines S5735-L
		SNMP v1	Yes
		SNMP v2c	Yes
		SNMP v3	Yes
		HTTP	Yes
		HTTPS	Yes
		RMON	Yes
		NETCONF/YANG	Yes
Interoperability	-	VLAN-based Spanning Tree (VBST)	Yes
		Link-type Negotiation Protocol (LNP)	Yes
		VLAN Central Management Protocol (VCMP)	Yes

Hardware Specifications

Item		CloudEngine S5735-L8T4X-IA1	CloudEngine S5735-L8P4X-IA1	CloudEngine S5735-L24T4X-IA1
Physical specifications	Dimensions (H x W x D)	43.6 mm x 300 mm x 220 mm	43.6 mm x 300 mm x 220 mm	43.6 mm x 442 mm x 220 mm
	Chassis height	1 U	1 U	1 U
	Chassis weight (including packaging)	2.78 kg	3.04 kg	3.3 kg
Fixed port	GE port	8	8	24
	10GE port	4	4	4
Management port	Console port (RJ45)	Supported	Supported	Supported
	USB port	USB 2.0	USB 2.0	USB 2.0
CPU	Frequency	1000 MHz	1000 MHz	1000 MHz
	Cores	2	2	2
Storage	Memory (RAM)	512 MB	512 MB	512 MB
	Flash memory	512 MB	512 MB	512 MB
Power supply system	Power supply type	Built-in AC power	Built-in AC power	Built-in AC power
	Rated voltage range	AC input: 100 V AC to 240 V AC, 50/60 Hz	AC input: 100 V AC to 240 V AC, 50/60 Hz	AC input: 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 264 V AC, 45 Hz to 65 Hz	AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz
	Maximum input current	2 A	3 A	2 A
	Maximum power consumption of	30 W	• 33 W (without PD) • 178 W (with PD, PD	46 W

Item		CloudEngine S5735-L8T4X-IA1	CloudEngine S5735-L8P4X-IA1	CloudEngine S5735-L24T4X-IA1
	the device		power consumption of 124 W)	
	Power consumption in the case of 30% traffic load[1]	23.5 W	26.2 W	29.8 W
	Power consumption in the case of 100% traffic load[1]	24.5 W	27 W	33.9 W
Heat dissipation system	Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment	Heat dissipation with fan, intelligent fan speed adjustment	Heat dissipation with fan, intelligent fan speed adjustment
	Number of fan modules	1	1	1
	Airflow	Air intake from left and front, air exhaustion from right	Air intake from left and front, air exhaustion from right	Air intake from left and front, air exhaustion from right
Environment parameters	Short-term operating temperature	-40℃～+70℃ **NOTE** • The device supports short-term operation when the temperature exceeds the normal operating range of 65°C.	-40℃～+70℃ **NOTE** • The device supports short-term operation when the temperature exceeds the normal operating range of 65°C.	-40℃～+70℃ **NOTE** • The device supports short-term operation when the temperature exceeds the normal operating range of 65°C.
	Long-term operating temperature	-40°C to +65°C **NOTE** • 1800-5000 m altitude: The operating temperature reduces by 1ºC every time the altitude increases by 220 m.	-40°C to +65°C **NOTE** • 1800-5000 m altitude: The operating temperature reduces by 1ºC every time the altitude increases by 220 m.	-40°C to +65°C **NOTE** • 1800-5000 m altitude: The operating temperature reduces by 1ºC every time the altitude increases by 220 m.
	Storage temperature	-40°C to +75°C	-40°C to +75°C	-40°C to +75°C
	Relative humidity	5% to 95% (non-condensing)	5% to 95% (non-condensing)	5% to 95% (non-condensing)
	Operating altitude	0-5000 m	0-5000 m	0-5000 m
	Noise under normal temperature (27°C, sound power)	43 dB(A)	42.2 dB(A)	39 dB(A)
	Service port surge protection	±10 kV in common mode	±10 kV in common mode	±10 kV in common mode
	Power supply surge protection	• Differential mode: ± 6 kV • Common mode: ± 6 kV	• Differential mode: ± 6 kV	• Differential mode: ± 6 kV

Item		CloudEngine S5735-L8T4X-IA1	CloudEngine S5735-L8P4X-IA1	CloudEngine S5735-L24T4X-IA1
			• Common mode: ± 6 kV	• Common mode: ± 6 kV
Reliability	MTBF (year)	67.07	62.46	62.05
	MTTR (hour)	2	2	2
	Availability	> 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

📖 **NOTE**

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

Networking and Applications

Video surveillance application, outdoor cabinet

CloudEngine S5735-L-Iseries switches supports extended operating temperature range, with professional surge protection capabilities, suitable for outdoor cabinet environment. CloudEngine S5735-L-Iseries switch can be used for safe city scenario to provide remote access for the camera.
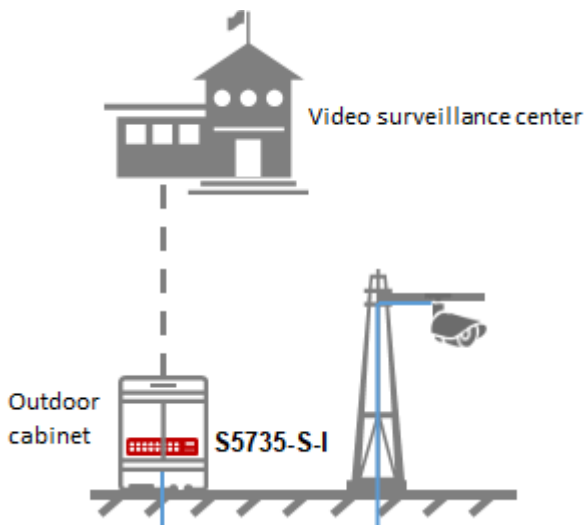
ETTx scenario

CloudEngine S5735-L-Iseries switches supports extended operating temperature and provides GE access and 10GE uplinks for ETTx access scenarios.
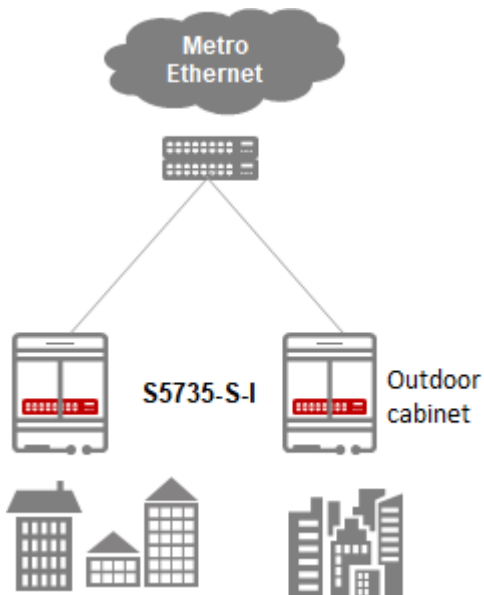
Safety and Regulatory Compliance

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 - 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

Certification Category	Description
	• 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 series

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

Category	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
	• 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

Category	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
	• 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

Standard Compliance

Standard compliance list of the CloudEngine S5735-L 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 - 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)

Standard Organization	Standard or Protocol
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 802.3ah Ethernet in the First Mile • IEEE 802.1ag Connectivity Fault Management • 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

Module	Description
CloudEngine S5735-L8T4X-IA1	CloudEngine S5735-L8T4X-IA1 (8*10/100/1000BASE-T ports, 4*10GE SFP+ ports, AC power)

Module	Description
CloudEngine S5735-L8P4X-IA1	CloudEngine S5735-L8P4X-IA1 (8*10/100/1000BASE-T ports, 4*10GE SFP+ ports, PoE+, AC power)
CloudEngine S5735-L24T4X-IA1	CloudEngine S5735-L24T4X-IA1 (24*10/100/1000BASE-T ports, 4*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

Huawei Technologies Co., Ltd.

Address:Huawei Industrial Base Bantian, Longgang Shenzhen 518129 People's Republic of China

Website:e.huawei.com