Huawei CloudEngine S5755-H Series High-Quality 2.5GE Optical Switches Datasheet

CloudEngine S5755-H series High-Quality 2.5GE Optical switches are brand-new access switches that provide 24/48 optical ports, and provide four 1/10/25GE and two 40/100GE uplink ports and one extended slot.

Introduction

CloudEngine S5755-H series High-Quality 2.5GE Optical Switches are brand-new GE switches developed by Huawei for the Wi-Fi 6/Wi-Fi 7. The CloudEngine S5755-H builds on Huawei's unified Platform and boasts various IDN features. For example, the VXLAN functionality implements network virtualization. With these merits, the CloudEngine S5755-H can function as core switches for small-sized campus networks and branches of medium- and large-sized campus networks, and also work as access switches for Metropolitan Area Network.

Product Overview

Models and Appearances

The following models are available in the CloudEngine S5755-H series.

Models and Appearances	Description
CloudEngine S5755-H24J8T4Y2CZ 	• 24*FE/GE/2.5GE SFP, 8*10/100/1000BASE-Tports, 4*1GE/2.5GE/10GE/25GE SFP28, 2*40GE/100GE QSFP28，support hardware trust module (HTM) • One extended slot • 1+1 power backup • Forwarding performance: 450 Mpps • Switching capacity*: 936 Gbps/2.4 Tbps
CloudEngine S5755-H48J4Y2CZ 	• 48 x FE/GE/2.5GE SFP, 4 x 1GE/2.5G/10GE/25GE SFP28, 2 x 40/100GE QSFP28 ports，support hardware trust module (HTM) • One extended slot • 1+1 power backup • Forwarding performance: 450 Mpps • Switching capacity*: 1.04 Tbps/2.4 Tbps

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.

Subcards

The following table lists the subcards applicable to the CloudEngine S5755-H.

Technical specifications of the subcards applicable to the CloudEngine S5755-H series

Subcards	Technical Specifications	Applied Switch Model
 HSIC-X08S000	• 8*10GE SFP+ or 4*25GE SFP28 (only ports 1 to 4 support 25GE) • Dimensions without packaging (H x W x D) [mm(in.)]: 39.1 mm x 100.1 mm x 220 mm (1.54 in. x 3.94 in. x 8.66 in.) • Weight without packaging [kg(lb)]: 0.44 kg (0.97 lb) • Maximum power consumption [W]: 38.5 W • Maximum heat dissipation [BTU/hour]: 131.37 BTU/hour	• CloudEngine S5755-H24J8T4Y2CZ • CloudEngine S5755-H48J4Y2CZ
 HSIC-Y08S000	• 8*25GE SFP28 • Dimensions without packaging (H x W x D) [mm(in.)]: 80 mm x 160 mm x 305 mm (3.15 in. x 6.30 in. x 12.01 in.) • Weight without packaging [kg(lb)]: 0.44 kg (0.97 lb) • Maximum power consumption [W]: 38.5 W • Maximum heat dissipation [BTU/hour]: 131.37 BTU/hour	• CloudEngine S5755-H24J8T4Y2CZ • CloudEngine S5755-H48J4Y2CZ

Fan Models

The following table lists the fan module applicable to the CloudEngine S5755-H.

Technical specifications of the fan module applicable to the CloudEngine S5755-H series

Fan Module	Technical Specifications	Applied Switch Model
 FAN-031A-B	• Dimensions (W x D x H): 40 mm x 100.3 mm x 40 mm • Number of fans: 1 • Weight: 0.1 kg (0.22 lb) • Maximum power consumption: 21.6 W • Maximum fan speed: 24500±10% revolutions per minute (RPM) • Maximum wind rate: 31 cubic feet per minute (CFM) • Hot swap: Supported	• CloudEngine S5755-H24J8T4Y2CZ • CloudEngine S5755-H48J4Y2CZ

Power Supply

The following table lists the power supplies applicable to the CloudEngine S5755-H.

Technical specifications of the power supplies applicable to the CloudEngine S5755-H series

Power Module	Technical Specifications	Applied Switch Model
 PAC180S12-CN	• Dimensions (H x W x D): 39.6 mm x 66 mm x 215 mm (1.56 in. x 2.6 in. x 8.46 in.) • Weight without packaging [kg(lb)]: 0.67 kg (1.48 lb) • Rated input voltage [V]: – 100 V AC to 240 V AC, 50/60 Hz – 240 V DC	• CloudEngine S5755-H24J8T4Y2CZ • CloudEngine S5755-H48J4Y2CZ

Power Module	Technical Specifications	Applied Switch Model
	• Input voltage range [V]: – 90 V AC to 290 V AC, 45 Hz to 66 Hz – 190 V DC to 290 V DC • Maximum input current [A]: 3 A • Rated output current [A]: 15 A • Rated output voltage [V]: 12 V • Rated output power [W]: 180 W • Hot swap: Supported	
 PDC240S12-CN	• Dimensions (H x W x D): 39.6 mm x 66 mm x 215 mm (1.56 in. x 2.6 in. x 8.46 in.) • Weight without packaging [kg(lb)]: 0.61 kg (1.34 lb) • Rated input voltage [V]: – +48 V DC – -48 V DC to -60 V DC • Input voltage range [V]: – +40 V DC to +57 V DC – -38.4 V DC to -72 V DC • Maximum input current [A]: 8A • Rated output voltage [V]: 12 V • Rated output current [A]: – –25°C to +55°C (–13°F to +131°F): 20 A – 55°C to 65°C (131°F to 149°F): 15 A • Rated output power [W]: – –25°C to +55°C (–13°F to +131°F): 240 W – 55°C to 65°C (131°F to 149°F): 180 W • Hot swap: Supported	• CloudEngine S5755-H24J8T4Y2CZ • CloudEngine S5755-H48J4Y2CZ
 PAC600S12-PB	• Dimensions (H x W x D): 39.6 mm x 66 mm x 215 mm (1.56 in. x 2.6 in. x 8.46 in.) • Weight without packaging [kg(lb)]: 1 kg (2.20 lb) • Rated input voltage [V]: – 100 V AC to 240 V AC, 50/60 Hz – 240 V DC • Input voltage range [V]: – 90 V AC to 290 V AC, 45 Hz to 66 Hz – 190 V DC to 290 V DC • Maximum input current [A]: – 100 V AC to 240 V AC: 8 A – 240 V DC: 4 A • Rated output current [A]: 50 A • Rated output voltage [V]: 12 V • Rated output power [W]: 600 W • Hot swap: Supported	• CloudEngine S5755-H24J8T4Y2CZ • CloudEngine S5755-H48J4Y2CZ

Power Module	Technical Specifications	Applied Switch Model
 PDC400S12-CB	• Dimensions (H x W x D): 39.6 mm x 66.0 mm x 215 mm (1.56 in. x 2.6 in. x 8.46 in.) • Weight: 0.679 kg (1.5 lb) • Rated input voltage [V]: – +48 V DC – -48 V DC to -60 V DC • Input voltage range [V]: – +40 V DC to +57 V DC – -38.4 V DC to -72 V DC • Maximum input current [A]: 12A • Rated output current [A]: 35.52A • Rated output voltage [V]: 12.3 V • Rated output power [W]: 400 W • Hot swap: Supported	• CloudEngine S5755-H24J8T4Y2CZ • CloudEngine S5755-H48J4Y2CZ

Product Features and Highlights

Enabling Networks to Be More Agile for Services

- The CloudEngine S5755-H series is equipped with built-in high-speed, flexible processors dedicated for Ethernet, which offer flexible packet processing and traffic control capabilities. This ensures that the series is ready for both current and future service requirements, helping enterprises build highly scalable networks.
- The series supports user-defined traffic forwarding modes, forwarding behaviors, and search algorithms. In addition, microcode programmability enables new services to be provisioned within just six months, without the need to replace hardware.
- In addition to offering the capabilities of traditional switches, the CloudEngine S5755-H series provides open interfaces and supports user-defined forwarding processes to meet service customization requirements of enterprises. By leveraging these open interfaces at all levels, enterprises can develop new protocols and functions independently or in collaboration with equipment vendors, ultimately creating campus networks tailored to their specific needs.

Delivering Abundant Services More Agilely

- The CloudEngine S5755-H series integrates Wireless Access Controller (WAC) functionality and can manage up to 1K Access Points (APs). Compared with a standalone WAC, this series helps users save costs on equipment purchase, installation, deployment, and daily Operations and Maintenance (O&M). More importantly, it enables wired and wireless convergence, eliminating the forwarding performance bottleneck of standalone WACs and facilitating smooth evolution toward the high-speed wireless era.
- The CloudEngine S5755-H series supports unified user management, eliminating differences in access device capabilities and access methods. It supports multiple authentication modes such as 802.1X, MAC address, and Portal authentication, and is capable of managing users based on user groups, domains, and time ranges. With full visibility and control of users and services, the series enables a shift from device-centric management to user experience–centric management.
- The CloudEngine S5755-H series delivers excellent Quality of Service (QoS) capabilities, featuring comprehensive queue scheduling and congestion control algorithms and innovative priority scheduling and multi-level queue scheduling mechanisms. These capabilities enable fine-grained scheduling of data flows at multiple levels, meeting the QoS requirements of different user terminals and diverse enterprise services.

Note: The CloudEngine S5755-H series can manage 16 APs by default. If more APs need to be managed, purchase licenses as required.

Providing Fine Granular Network Management More Agilely

- The CloudEngine S5755-H series supports Native-IP In-situ Flow Information Telemetry (IFIT), formerly known as iPCA 2.0. Native-IP IFIT is an in-band Operations, Administration and Maintenance (OAM) measurement technology that directly

measures service packets to obtain an IP network's real performance indicators, such as the packet loss rate and delay. It can significantly improve the timeliness and effectiveness of network O&M, driving the development of intelligent O&M.

- Currently, Native-IP IFIT supports three modes: application-level quality measurement, tunnel-level quality measurement, and native-IP IFIT measurement. However, the CloudEngine S5755-H series supports only native-IP IFIT measurement. Specifically, in-band measurement enables real-time monitoring of key indicators such as delay and packet loss rate in service flows. It also enables visualized O&M by centrally managing networks and graphically displaying performance data. With high precision and easy deployment, native-IP IFIT lays the foundation for intelligent, future-ready O&M.
- The series also supports Intelligent Flow (iFlow), a measurement technology implemented at the transport layer. iFlow can monitor the quality of both long-flow and short-flow services, extending the full-lifecycle monitoring capability of key applications. It provides one-stop, visualized all-flow quality deterioration analysis services for applications and networks.

Flexible Ethernet Networking

- In addition to supporting traditional Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), and Multiple Spanning Tree Protocol (MSTP), the CloudEngine S5755-H series also supports the latest Ethernet Ring Protection Switching (ERPS) standard. Defined in ITU-T G.8032, ERPS provides millisecond-level protection switching based on traditional Ethernet MAC and bridging functions.
- The CloudEngine S5755-H series also supports Smart Link and Virtual Router Redundancy Protocol (VRRP), which implement backup of uplinks. One CloudEngine S5755-H switch can connect to multiple aggregation switches through multiple links, significantly improving reliability of access devices.

Various Security Control Methods

- The CloudEngine S5755-H series supports 802.1X authentication, Portal authentication, and MAC address authentication. It can dynamically deliver user policies such as Virtual Local Area Networks (VLANs), QoS policies, and Access Control Lists (ACLs), and manage users based on user groups.
- The CloudEngine S5755-H series provides comprehensive mechanisms to defend against Denial of Service (DoS) and user-targeted attacks. DoS attacks are targeted at switches and include SYN flood, Land, Smurf, and Internet Control Message Protocol (ICMP) flood attacks. User-targeted attacks include bogus Dynamic Host Configuration Protocol (DHCP) server attacks, IP/MAC address spoofing, DHCP request flood, and change of the DHCP Client Hardware Address (CHADDR) value.
- The CloudEngine S5755-H series sets up and maintains a DHCP snooping binding table, and discards the packets that do not match the table entries. Users can specify DHCP snooping trusted and untrusted ports to ensure that users connect only to the authorized DHCP server.
- The CloudEngine S5755-H series supports strict Address Resolution Protocol (ARP) entry learning, which protects against ARP spoofing attacks and ensures reliable Internet access for authorized users.
- The CloudEngine S5755-H series supports 256-bit Media Access Control Security (MACsec) that provides Layer 2 data link-level encryption to ensure data transmission security.

Mature IPv6 Features

- The CloudEngine S5755-H series is developed on a mature, stable platform and supports IPv4/IPv6 dual stack and IPv6 routing protocols (such as RIPng, OSPFv3, BGP4+, and IS-IS for IPv6). With these features, the CloudEngine S5755-H series can be deployed on pure IPv4 networks, pure IPv6 networks, or shared IPv4/IPv6 networks, facilitating the transition from IPv4 to IPv6.

Intelligent Stack (iStack)

- The CloudEngine S5755-H series features the Intelligent Stack (iStack) function, which combines multiple switches into a logical switch.
- Member switches in a stack provide redundancy to enhance device reliability and use link aggregation between devices to improve link reliability.
- iStack delivers high network scalability, so that users can expand ports, bandwidth, and processing capacity simply by adding member switches.
- iStack also simplifies configuration and management. Once a stack is set up, users can log in to any member switch to manage the entire stack.

Inter-Device Link Aggregation, Ensuring High Efficiency and Reliability

- The CloudEngine S5755-H supports Multichassis Link Aggregation Group (M-LAG) to implement link aggregation among multiple devices, improving link reliability from the card level to the device level.
- Switches in an M-LAG all work in active state to share traffic and back up each other, enhancing system reliability.
- Switches in an M-LAG system can be upgraded independently. During the upgrade, other switches in the system take over traffic forwarding to ensure uninterrupted services.
- M-LAG supports dual-homing to Ethernet, VXLAN, and IP networks, allowing for flexible networking.

VXLAN Features

- The CloudEngine S5755-H series is Virtual Extensible Local Area Network (VXLAN)-capable and offers both centralized and distributed VXLAN gateway deployment modes. It also supports the BGP EVPN protocol for dynamically establishing VXLAN tunnels, and can be configured using NETCONF/YANG.
- The CloudEngine S5755-H series leverages VXLAN to construct a Unified Virtual Fabric (UVF), enabling multiple service or tenant networks to run on the same physical infrastructure while remaining isolated from each other. This capability delivers "one network for multiple purposes," allowing data transmission for different services or customers, reducing network construction costs, and improving network resource utilization.

Intelligent O&M

- The CloudEngine S5755-H series supports Telemetry to collect device data in real time and forward it to Huawei's campus network analyzer, iMaster NCE-CampusInsight. By leveraging intelligent fault identification algorithms, iMaster NCE-CampusInsight analyzes network data, accurately displays the real-time network status, quickly demarcates and locates faults, and identifies network issues that affect user experience—ensuring optimal user experience.
- The CloudEngine S5755-H series also supports WebMaster, an embedded local management platform. WebMaster automatically discovers the network topology and provides full-network visibility, including topology, Network Elements (NEs), and device alarms. It also enables unified management of switches, AR routers, and APs—without requiring an external network management system. WebMaster offers a graphical interface for intuitive operations, including guided service provisioning, one-click batch upgrades, zero-configuration device replacement, and automatic authentication and onboarding of NEs, as well as detection and automatic elimination of loops caused by incorrect cable connections. With WebMaster, a single device can deliver full visibility, management, and control of the entire campus network.

Intelligent Upgrade

- Based on the Huawei Online Upgrade Platform (HOUP), the CloudEngine S5755-H series supports the smart upgrade feature. The switches obtain version upgrade paths from the HOUP and download new versions automatically. The upgrade process is highly automated, enabling true one-click upgrades. In addition, preloading versions is supported, which greatly shortens upgrade time and minimizes service downtime.
- Smart upgrade significantly simplifies device upgrade operations, making customer-driven upgrades possible and greatly reducing maintenance costs. With the HOUP's standardized upgrade strategies, upgrade paths are regulated, which substantially lowers the risk of upgrade failures.

Big Data Security Collaboration

- The CloudEngine S5755-H series uses NetStream to collect campus network data and report the data to Huawei HiSec Insight. This is done to detect network security threats, display the overall security posture, and enable both automated or manual responses to threats. HiSec Insight delivers security policies to iMaster NCE-Campus (or Agile Controller), which then distributes the policies to switches that handle security events accordingly. Together, these capabilities ensure campus network security.

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).

Link Layer Security

- This series switches support MACsec. MACsec protects transmitted Ethernet data frames through identity authentication, data encryption, integrity check, and anti-replay protection, reducing the risks of information leakage and malicious network attacks. With MACsec, these switch models are able to address strict information security requirements of customers in industries such as government and finance.

Open Programmability System (OPS)

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

Licensing

IDN One Software

The CloudEngine S5755-H series supports both traditional feature-based licensing and IDN One Software (N1) licensing. The N1 licensing mode is ideal for on-premises deployments of Huawei's campus network solution, as it greatly simplifies the customer experience in purchasing and upgrading software services.

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, SSID, and AP group management • Basic monitoring: Application visualization • NE management: Image and topology management and discovery • User access authentication	×	√	√
Automation and intelligent O&M: Basic functions for intelligent network analysis of CampusInsight.	×	√	√
Advanced network automation and intelligent O&M: VXLAN, free mobility, Endpoint plug&play of iMaster NCE-Campus and Application analysis function of CampusInsight.	×	×	√

Product Specifications

Functions and Features

Category	Service Feature
MAC address table	Automatic MAC address learning, synchronization, and aging
	Up to 256K MAC address entries

Category	Service Feature
	Static MAC address and dynamic MAC address management
	Static, dynamic, and blackhole MAC address entries
	Packet filtering based on source MAC addresses
	MAC address learning limiting based on ports
VLAN	Support for 4K VLANs simultaneously
	Voice VLAN
	MUX VLAN
	Super-VLAN and sub-VLAN
	VLAN stacking and VLAN mapping
	LNP, VCMP, and GVRP
	Basic QinQ and selective QinQ
Layer 2 ring network protocol	Smart Link tree topology and Smart Link multi-instance, providing millisecond-level protective switchover
	ERPS (G.8032) support, enabling less than 50 ms switchover upon a fault
	STP (IEEE 802.1d), RSTP (IEEE 802.1w), MSTP (IEEE 802.1s), and VBST
	BPDU protection, root protection, and loop protection
	BPDU tunnel
	SEP
Detection protocol	LBDT, L2PT, and DLDP
	Smart Link and Monitor Link
	802.1ag, 802.3ah, and Y.1731
Multicast	PIM DM, PIM SM, and PIM SSM
	IGMP v1/v2/v3, IGMP v1/v2/v3 snooping, and MLD snooping
	IPv4/IPv6 multicast routing and multicast load balancing
	Multicast traffic statistics on a per-port basis
	Multicast VLAN and static multicast MAC
IP services	Dual-stack IPv4 and IPv6
	ARP
	Neighbor discovery (ND)
	DNS
	DHCPv4 client, DHCPv4 relay, DHCPv4 server, and DHCPv4 snooping
	DHCPv6 client, DHCPv6 relay, DHCPv6 server, and DHCPv6 snooping
	URPF
	6to4 Tunnel、6over4 Tunnel、4over6 Tunnel、6PE
	IPv4/v6 ping, tracert, and telnet

Category	Service Feature
IP routing	Static route, routing policy, and policy-based routing
	RIPv1/v2, RIPng, OSPFv2, OSPFv3, IS-IS, ISISv6, BGP, and BGP4+
	Up to 192K FIBv4 entries
	Up to 96K FIBv6 entries
MPLS	MPLS LDP
	MPLS TE
	MPLS QoS
VPN	MPLS L2VPN (VPLS/VPWS) and MPLS L3VPN
	MPLS BGP VPN
	GRE
Segment routing	SRv6 BE (L3 EVPN)
	BGP EVPN
	SRv6 configuration through NETCONF
VXLAN	VXLAN distributed gateway and centralized gateway modes
	BGP EVPN
	VXLAN Layer 2 forwarding
	VXLAN Layer 3 forwarding
	VXLAN configuration through NETCONF and SDN-based automated wired network deployment
	VXLAN over IPv6 (static)
	VXLAN-Routing, VXLAN-Bridge, VXLAN-Tunnel, and VXLAN-Access
Reliability	LACP
	M-LAG
	VRRP
	BFD
	LLDP
User access and authentication	Multiple authentication modes, including AAA, RADIUS, RADIUS over DTLS, and HWTACACS
	Policy association
	Endpoint identification and unauthorized access prevention
	Free mobility
	802.1X, MAC address, and Portal authentication
QoS/ACL	Rate limiting on packets sent and received by a port
	Packet redirection
	Port-based traffic policing and two-rate three-color CAR
	Eight queues on each port

Category	Service Feature
	SP, DRR, WDRR, SP+DRR, and SP+WDRR queue scheduling algorithms
	WRED
	Marking of 802.1p and DSCP priorities of packets
	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 source port number/destination port number, protocol type, and VLAN ID
	Rate limiting in each queue and traffic shaping on ports
	VLAN slicing
Security features	Hierarchical user management and password protection
	DoS attack defense, ARP attack defense, and ICMP attack defense
	Binding of the IP address, MAC address, port number, and VLAN ID
	Port isolation, port security, and sticky MAC
	ARP security features including ARP snooping, ND snooping, ARP conflict detection, Dynamic ARP Inspection (DAI), and Egress ARP Inspection (EAI).
	Blackhole MAC addresses
	Unknown unicast, unknown multicast, and broadcast storm control on a per-port basis
	IEEE 802.1X authentication, with per-port maximum user limits
	IP Source Guard (IPSG)
	Public Key Infrastructure (PKI)
	SSH v2.0
	HTTPS
	MACsec
	CPU attack defense
	CPU protection
	Blacklist and whitelist mechanisms
	Host Intrusion Prevention System (HIPS) and Federal Information Processing Standard (FIPS)
	Source Address Validation Improvement (SAVI)
Network management and monitoring	iStack and fast stack upgrade
	Up to 9 switches in a stack
	SNMPv1/v2c/v3
	NETCONF/YANG-based cloud management
	Management via the eSight or web system
	RMON
	iPCA, Netstream, sFlow, NQA, and Telemetry
	Port mirroring, traffic mirroring, RSPAN, and ERSPAN
	Packet loss visibility

Category	Service Feature
	Application identification
	iFlow-based full-flow quality degradation analysis
	USB-based deployment, deployment through the registration query center, and SZTP
	RESTCONF, gRPC, and EVA
Network maintenance	Telnet for remote configuration and maintenance
	Ping and traceroute
	Virtual Cable Test (VCT)
	FTP, SFTP, and TFTP file management
	Time management
	CPU and memory resource monitoring
	System logs and hierarchical alarms
	Hot patching
	User operation logs
	IEEE 802.3az Energy-Efficient Ethernet (EEE)
	Configuration rollback
	Webmaster-based management
Wireless management (integrated WAC): Basic WLAN services	Hot backup for devices with integrated WAC functionality in cluster mode
	2.4 GHz & 5 GHz load balancing
	5 GHz-prior access
Wireless management (integrated WAC): AP management	Up to 1K APs managed
	IPv4 network between an AP and a WAC
	AP blacklist
	AP whitelist
	Setting of the AP access control mode
	AP configuration and management
	AP LLDP topology awareness
Wireless management (integrated WAC): Wireless user management	User roaming within a WAC
	AP-based user location
	802.1X authentication
	MAC address authentication
	Portal authentication
Wireless management (integrated WAC): CAPWAP	Direct forwarding over Layer 2/Layer 3 networks
	Tunnel forwarding over Layer 2/Layer 3 networks
	CAPWAP tunnel encryption

Category	Service Feature
Wireless management (integrated WAC): RF management	802.11a/b/g/n
	802.11ac wave1/wave2
	802.11ax
	802.11be
	Sets RF interference monitoring and avoidance
	Detects co-channel interference, adjacent-channel interference, and interference from other devices and STAs
	Automatically selects channels and power when APs go online
	Dynamically optimizes power and channels
Wireless management (integrated WAC): WLAN QoS	Rate limiting of upstream and downstream traffic on the air interface based on the VAP
	Rate limiting of upstream and downstream traffic on the air interface based on users
	CAR for WLAN users
Interoperability	VBST (compatible with PVST/PVST+/RPVST)

Hardware Specifications

The following table lists the hardware specifications of the CloudEngine S5755-H.

Hardware specifications of CloudEngine S5755-H models

Item		CloudEngine S5755-H24J8T4Y2CZ	CloudEngine S5755-H48J4Y2CZ
Physical specifications	Dimensions (H x W x D, mm)	43.6 x 442 x 420	43.6 x 442 x 420
	Chassis height	1 U	1 U
	Weight with packaging [kg(lb)]	9.39kg	9.7kg
Fixed port	GE RJ45 port	8	NA
	2.5GE SFP port	24	48
	25GE SFP28 port	4	4
	100GE QSFP28 port	2	2
Extended slot	HSIC-X08S000	8*10GE SFP+ ports or 4*25GE SFP28 ports (only ports 1 to 4 support 25GE)	
	HSIC-Y08S000	8*25GE SFP28 ports	
Management port	ETH port (RJ45)	Supported	Supported
	Console port (RJ45)	Supported	Supported
	USB port	USB 2.0	USB 2.0
CPU	Frequency	2 GHz	2 GHz
	Cores	4	4
Storage	Memory (RAM)	4 GB	4 GB
	Flash memory	2 GB	2 GB

Item		CloudEngine S5755-H24J8T4Y2CZ	CloudEngine S5755-H48J4Y2CZ
Power supply system	Power supply type	• 180 W AC (pluggable) • 240 W DC (pluggable) • 600 W AC (pluggable) • 400W DC (pluggable)	• 180 W AC (pluggable) • 240 W DC (pluggable) • 600 W AC (pluggable) • 400W DC (pluggable)
	Rated voltage range	• AC input: 100 V AC to 240 V AC; 50/60 Hz • High-voltage DC input: 240 V DC • DC input: –48 V DC to –60 V DC; +48 V DC	• AC input: 100 V AC to 240 V AC; 50/60 Hz • High-voltage DC input: 240 V DC • DC input: –48 V DC to –60 V DC; +48 V DC
	Input voltage range [V]	• AC input: 90 V AC to 290 V AC, 45 Hz to 66 Hz • High-Voltage DC input: 190 V DC to 290 V DC • DC input: -38.4 V DC to -72 V DC; +40 V DC to +57 V DC	• AC input: 90 V AC to 290 V AC; 45 Hz to 66 Hz • High-voltage DC input: 190 V DC to 290 V DC • DC input: –38.4 V DC to –72 V DC; +40 V DC to +57 V DC
	Maximum power consumption	100% traffic under the ATIS standard, dual power modules: • 116 W (all ports used, two 180 W AC power modules) • 105 W (all ports used, two 240 W DC power modules)	100% traffic under the ATIS standard, dual power modules: • 155 W (all ports used, two 180 W AC power modules) • 144 W (all ports used, two 240 W DC power modules)
	Typical power consumption	30% traffic under the ATIS standard, dual power modules: • 110 W (all ports used, two 180 W AC power modules) • 97 W (all ports used, two 240 W DC power modules)	30% traffic under the ATIS standard, dual power modules: • 146 W (all ports used, two 180 W AC power modules) • 134 W (all ports used, two 240 W DC power modules)
	Static power consumption	60 W	76 W
Heat dissipation system	Heat dissipation mode	Air cooling for heat dissipation, intelligent fan speed adjustment	Air cooling for heat dissipation, intelligent fan speed adjustment
	Number of fan modules	2 (redundant)	2 (redundant)
	Airflow	Air intake from front and right and air exhaust from rear	Air intake from front and right and air exhaust from rear
	Maximum heat dissipation of the device (BTU/hour)	100% traffic under the ATIS standard, dual power modules: • 395.80 (all ports used, two 180 W AC power modules) • 358.27 (all ports used, two 240 W DC power modules)	100% traffic under the ATIS standard, dual power modules: • 528.88 (all ports used, two 180 W AC power modules) • 491.34 (all ports used, two 240 W DC power modules)
Environment parameters	Long-term operating temperature	• 0-1800 m: -5°C to 45°C (23°F to 113°F) • 1800-5000 m: The operating temperature decreases 1°C every time the altitude increases 220 m	• 0-1800 m: -5°C to 45°C(23°F to 113°F) • 1800-5000 m: The operating temperature decreases 1°C every time the altitude increases 220 m
	Short-term operating temperature	• 0-1800 m: -5°C to 50°C • 1800-5000 m: The operating	• 0-1800 m: -5°C to 50°C • 1800-5000 m: The operating

Item		CloudEngine S5755-H24J8T4Y2CZ	CloudEngine S5755-H48J4Y2CZ
		temperature decreases 1°C every time the altitude increases 220 m	temperature decreases 1°C every time the altitude increases 220 m
	Storage temperature	–40°C to +70°C (–40°F to +158°F)	-40°C to +70°C(–40°F to +158°F)
	Relative humidity	5%–95% (non-condensing)	5%–95% (non-condensing)
	Operating altitude	5000 m	5000 m
	Noise under normal temperature (sound power)	56.8 dB(A)	55.4 dB(A)
	Noise under normal temperature (sound pressure)	40.1 dB(A)	38.7 dB(A)
	Surge protection specification (power port)	• AC power port: ±6 kV in differential mode, ±6 kV in common mode • DC power port: ±2 kV in differential mode, ±4 kV in common mode	• AC power port: ±6 kV in differential mode, ±6 kV in common mode • DC power port: ±2 kV in differential mode, ±4 kV in common mode
Reliability	MTBF (year)	86.27 years	86.27 years
	Availability	> 0.99999	> 0.99999
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.

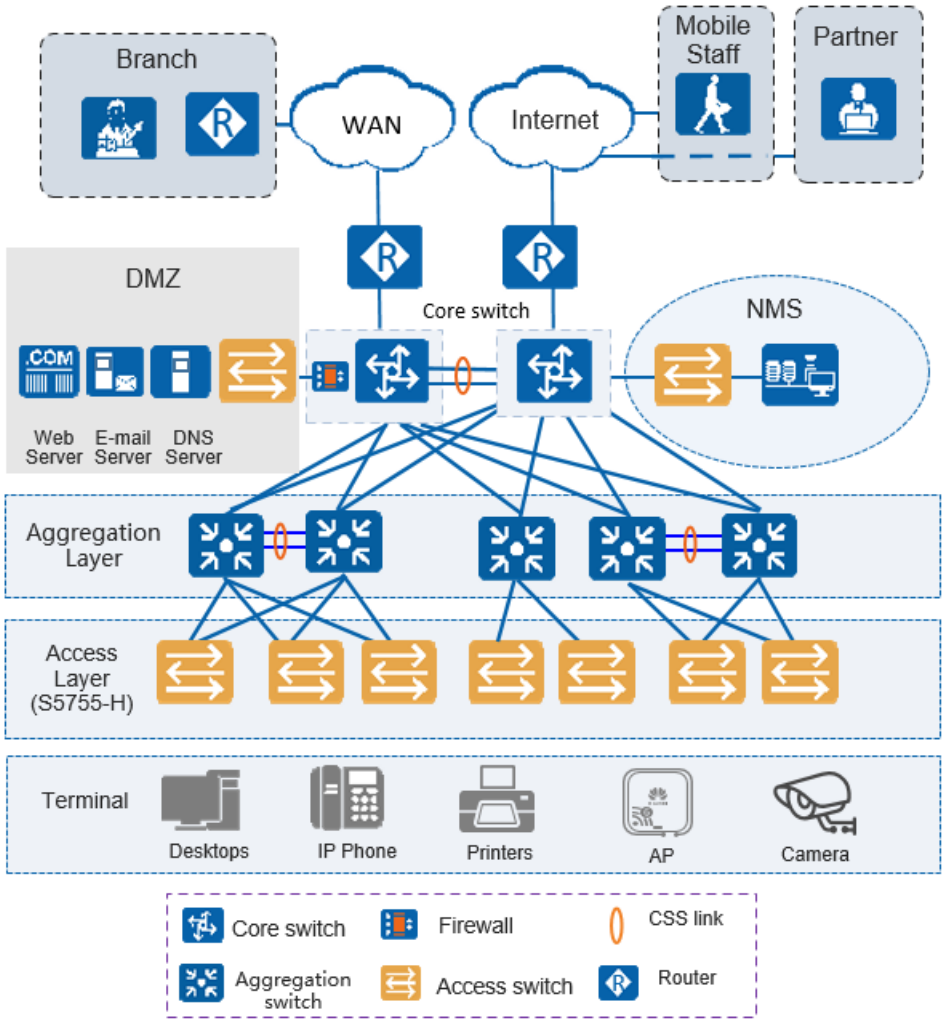
2: The reliability parameter values are calculated based on the typical configuration of the device. The parameter values vary according to the modules configured by the customer.

Networking and Applications

The CloudEngine S5755-H series features full-port MACsec support, high performance, and large table capacity, ensuring zero packet loss even during burst traffic. The series enables seamless wired and wireless convergence with unified device, user, and service management. These capabilities make the CloudEngine S5755-H series an ideal choice as access switches in large campuses, aggregation switches in midsize campuses, and core switches in enterprise branches and small campuses, helping customers build campus networks that are scalable, easy to manage, and highly reliable.

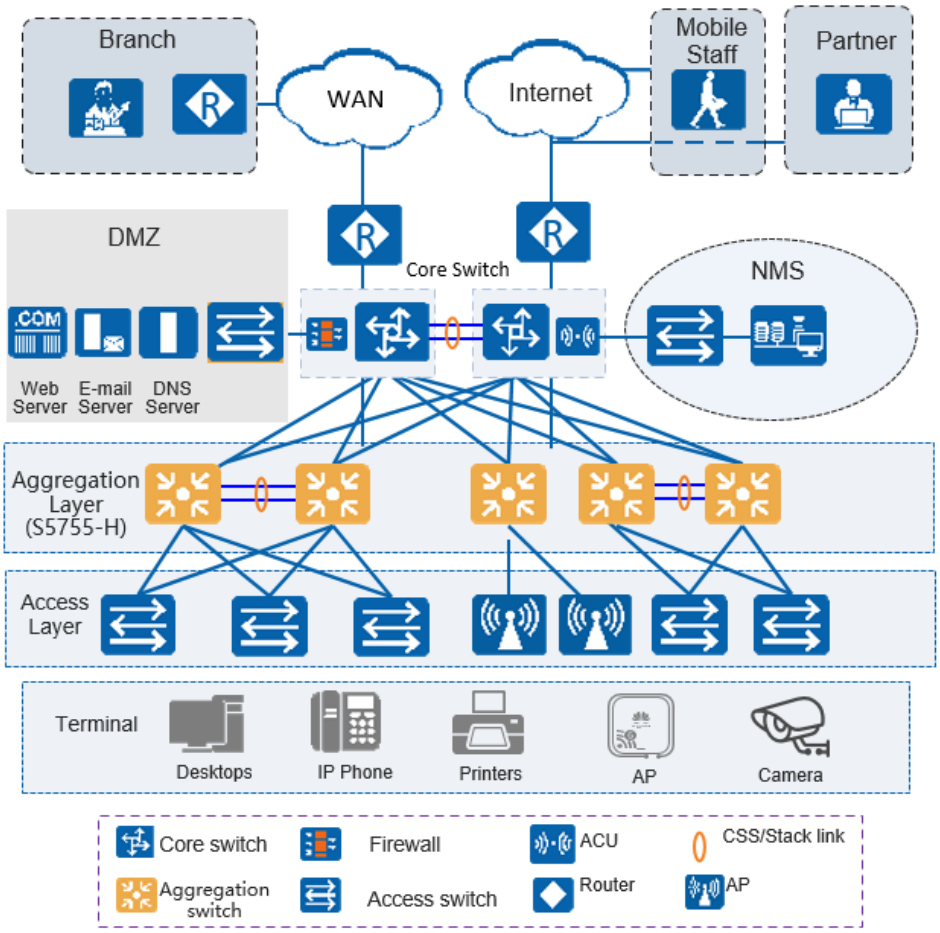
Large-Scale Enterprise Campus Network

The CloudEngine S5755-H series can be deployed at the access layer of a large campus to build a high-performance and highly reliable enterprise network.



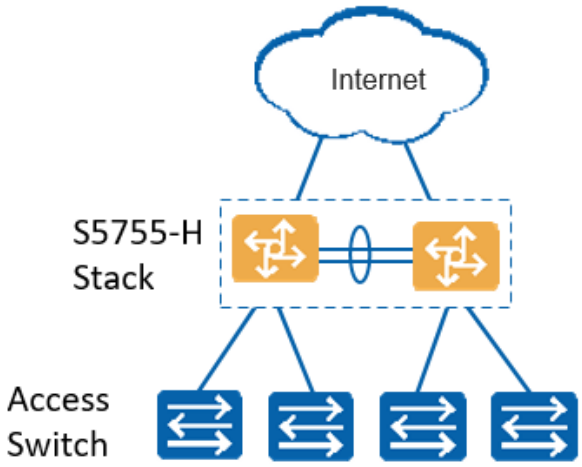
Midsize Enterprise Campus Scenario

The CloudEngine S5755-H series can be deployed at the aggregation layer of a midsize campus to build a high-performance, service-rich, and highly reliable enterprise network.



Small-scale Enterprise Campus Network

CloudEngine S5755-H series switches deliver powerful aggregation and routing capabilities, making them ideal as core switches for small enterprise networks. Two or more S5755-H switches can form an iStack system to ensure high reliability. They also provide a variety of access control policies to enable centralized management and simplify configuration.



Safety and Regulatory Compliance

The following table lists the safety and regulatory compliance of the CloudEngine S5755-H.

Safety and regulatory compliance of the CloudEngine S5755-H 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 • 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 • 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

The following table lists the MIBs supported by the CloudEngine S5755-H.

MIBs supported by the CloudEngine S5755-H 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 • MPLS-FTN-STD-MIB • MPLS-L3VPN-STD-MIB • MPLS-LDP-GENERIC-STD-MIB • MPLS-LDP-STD-MIB • MPLS-LSR-STD-MIB • MPLS-TE-STD-MIB • NOTIFICATION-LOG-MIB • NQA-MIB • OSPF-TRAP-MIB • P-BRIDGE-MIB • Q-BRIDGE-MIB • RFC1213-MIB • RIPv2-MIB • RMON2-MIB • RMON-MIB • SAVI-MIB • SNMP-FRAMEWORK-MIB • SNMP-MPD-MIB • SNMP-NOTIFICATION-MIB • SNMP-TARGET-MIB • SNMP-USER-BASED-SM-MIB • SNMPv2-MIB • TCP-MIB • UDP-MIB
Huawei-proprietary MIB	• HUAWEI-AAA-MIB

Category	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-DC-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-ELMI-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-GTSM-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

Category	MIB
	• HUAWEI-LLDP-MIB • HUAWEI-MAC-AUTHEN-MIB • HUAWEI-MEMORY-MIB • HUAWEI-MFF-MIB • HUAWEI-MFLP-MIB • HUAWEI-MSTP-MIB • HUAWEI-BGP-VPN-MIB • HUAWEI-CCC-MIB • HUAWEI-MULTICAST-MIB • HUAWEI-NAP-MIB • HUAWEI-NTPV3-MIB • HUAWEI-PERFORMANCE-MIB • HUAWEI-PORT-MIB • HUAWEI-PORTAL-MIB • HUAWEI-QINQ-MIB • HUAWEI-RIPv2-EXT-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-XQOS-MIB

Standard Compliance

The following table lists the standards that the CloudEngine S5732-H complies with.

Standard compliance list of the CloudEngine S5755-H 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)

Standard Organization	Standard or Protocol
	• 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 2328 OSPF Version 2 • RFC 2453 RIP Version 2 • 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 2740 OSPF for IPv6 (OSPFv3) • 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/Relay • RFC 3376 Internet Group Management Protocol, Version 3 (IGMPv3) • RFC 3513 IP Version 6 Addressing Architecture • RFC 3579 RADIUS Support For EAP • RFC 4271 A Border Gateway Protocol 4 (BGP-4) • RFC 4760 Multiprotocol Extensions for BGP-4 • draft-grant-tacacs-02 TACACS+ • RFC 6241 Network Configuration Protocol (NETCONF) • RFC 6020 YANG - A Data Modeling Language for the Network Configuration Protocol (NETCONF) • RFC4291 IP Version 6 Addressing Architecture • RFC3484 Default Address Selection for Internet Protocol version 6 (IPv6) • RFC4862 IPv6 Stateless Address Auto configuration • RFC4541 Considerations for Internet Group Management Protocol (IGMP) and Multicast Listener Discovery (MLD) Snooping Switches
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

Standard Organization	Standard or Protocol
	• IEEE 802.2 Logical Link Control • IEEE Std 802.3 CSMA/CD • IEEE Std 802.3ab 1000BASE-T specification • IEEE Std 802.3ab RJ45 con Auto-MDIX • 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 802.1ag 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 802.3az Automatic power adjustment on Ethernet interfaces
ITU	• ITU SG13 Y.17ethoam • ITU SG13 QoS control Ethernet-Based IP Access
ISO	• ISO 10589 IS-IS Routing Protocol
MEF	• MEF 2 Requirements and Framework for Ethernet Service Protection • MEF 9 Abstract Test Suite for Ethernet Services at the UNI • MEF 10.2 Ethernet Services Attributes Phase 2 • MEF 11 UNI Requirements and Framework • MEF 13 UNI Type 1 Implementation Agreement • 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 XMODEM/YMODEM Protocol Reference

Ordering Information

The following table lists ordering information of the CloudEngine S5755-H series switches.

Model	Product Description
CloudEngine S5755-H24J8T4Y2CZ	S5755-H24J8T4Y2CZ (24*2.5G SFP, 8*10/100/1000BASE-Tports, 4*25GE SFP28, 2*100GE QSFP28, expansion card slot, without power module)
CloudEngine S5755-H48J4Y2CZ	S5755-H48J4Y2CZ (48*2.5G SFP, 4*25GE SFP28, 2*100GE QSFP28, expansion card slot, without power module)
PAC180S12-CN	180 W AC&240 V DC Power Module
PDC240S12-CN	240W DC Power Module
PAC600S12-PB	600 W AC Power Module

Model	Product Description
PDC400S12-CB	400W DC Power Module
FAN-031A-B	Fan module
HSIC-X08S000	Interface card with 8*10GE SFP+ ports or 4*25GE SFP28 ports (only ports 1 to 4 support 25GE)
HSIC-Y08S000	Interface card with 8*25GE SFP28 ports
N1-S57H-M-Lic	S57XX-H Series Basic SW,Per Device
N1-S57H-M-SnS1Y	S57XX-H Series Basic SW,SnS,Per Device,1Year
N1-S57H-F-Lic	N1-CloudCampus, Foundation, S57XX-H Series,Per Device
N1-S57H-F-SnS1Y	N1-CloudCampus, Foundation, S57XX-H Series,SnS,Per Device,1Year
N1-S57H-A-Lic	N1-CloudCampus, Advanced, S57XX-H Series,Per Device
N1-S57H-A-SnS1Y	N1-CloudCampus, Advanced, S57XX-H Series,SnS,Per Device,1Year
N1-S57H-FToA-Lic	N1-Upgrade-Foundation to Advanced, S57XX-H, Per Device
N1-S57H-FToA-SnS1Y	N1-Upgrade-Foundation to Advanced, S57XX-H, SnS,Per Device,1Year
N1-S57H-A-NVXLAN-Lic	N1-CloudCampus, Advanced non-vxlan, S57XX-H Series,Per Device
N1-S57H-A-NVXLAN-SnS1Y	N1-CloudCampus, Advanced non-vxlan, S57XX-H Series,SnS,Per Device,1 Year
N1-S57H-F2A-NVXLAN-Lic	N1-Upgrade-Foundation to Advanced non-vxlan, S57XX-H, Per Device
N1-S57H-F2A-NVXLAN-SnS1Y	N1-Upgrade-Foundation to Advanced non-vxlan, S57XX-H, SnS,Per Device,1 Year

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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Huawei Technologies Co., Ltd.

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

Website:e.huawei.com