Huawei CloudEngine S5755-S Series Twins Switches Datasheet

Introduction

Huawei CloudEngine S5755-S-HT series twins switches are next-generation, high-reliability switching platforms. The series delivers system-level reliability through an innovative architecture featuring dual-CPU independent management, a dual-engine forwarding design, and dual AC/DC redundant power supplies.

A standout feature of this series is its ability to build a highly reliable M-LAG network using a single switch. The switch integrates an intelligent switchover module that allows single-uplink access terminals to join the M-LAG system. When the switch's master engine fails, the intelligent switchover module swiftly redirects traffic to the slave engine, ensuring reliable traffic forwarding

These capabilities make Huawei CloudEngine S5755-S-HT series twins switches ideal for mission-critical environments with stringent reliability requirements, such as production and manufacturing, smart healthcare, and financial services. They provide a robust and intelligent network foundation to accelerate enterprise digital transformation.

Product Overview

Product Model and Appearance

Model and Appearance	Description
CloudEngine S5755-S48T4X4Y-HT 	48*10/100/1000BASE-T Twin-engine ports, 4*10GE SFP+ ports, 4*25GE SFP28 ports 1+1 power backup Forwarding performance: 280 Mpps Switching capacity: 376 Gbps/740 Gbps*
CloudEngine S5755-S48P4X4Y-HT 	48*10/100/1000BASE-T Twin-engine ports(PoE+), 4*10GE SFP+ ports, 4*25GE SFP28 ports PoE+ 1+1 power backup Forwarding performance: 280 Mpps Switching capacity: 376 Gbps/740 Gbps*

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

Fan Models

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

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

Fan Module	Technical Specifications	Applied Switch Model
 FAN-023A-B	• Dimensions (H x W x D): 40 mm x 40 mm x 100.3 mm • Weight: 0.1 kg • Maximum power consumption: 7.2 W • Maximum fan speed: 18500±10% revolutions per minute (RPM) • Maximum airflow: 23 cubic feet per minute (CFM) • Airflow direction: Air exhausted from the panel side of the fan tray	• CloudEngine S5755-S-HT48P4X4Y-HT • CloudEngine S5755-S-HT48T4X4Y-HT

Power Supply

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

Technical specifications of the power supplies applicable to the CloudEngine S5755-S-HT 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: 0.67 kg (1.48 lb) • Rated input voltage range: – 100 V AC to 240 V AC, 50/60 Hz – 240 V DC • Maximum input voltage range: – 90 V AC to 290 V AC, 45 Hz to 66 Hz – 190 V DC to 290 V DC • Maximum input current: 3 A • Rated output current: 15 A • Rated output voltage: 12 V • Rated output power: 180 W • Hot swap: Supported	CloudEngine S5755-S-HT48T4X4Y-HT
 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: 0.61 kg (1.34 lb) • Rated input voltage range: – +48 V DC – -48 V DC to -60 V DC • Maximum input voltage range: – +40 V DC to +57 V DC – -38.4 V DC to -72 V DC • Maximum input current: 8A • Rated output voltage: 20 V • Rated output current [A]:	CloudEngine S5755-S-HT48T4X4Y-HT

Power Module	Technical Specifications	Applied Switch Model
	– –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	
 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: 1 kg (2.20 lb) • Rated input voltage range: – 100 V AC to 240 V AC, 50/60 Hz – 240 V DC • Maximum input voltage range: – 90 V AC to 290 V AC, 45 Hz to 66 Hz – 190 V DC to 290 V DC • Maximum input current: – 100 V AC to 240 V AC: 8 A – 240 V DC: 4 A • Rated output current: 50 A • Rated output voltage: 12 V • Rated output power: 600 W • Hot swap: Supported	CloudEngine S5755-S-HT48T4X4Y-HT
 PAC1000S56-EB	• Dimensions (H x W x D): 40 mm x 66 mm x 215 mm • Weight: 1.1 kg (2.43 lb) • Rated input voltage range: – 100 V AC to 130 V AC, 50/60 Hz – 200 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 130 V AC: 12 A – 200 V AC to 240 V AC: 8 A – 240 V DC: 8 A • Rated output voltage [V]: 53.5 V or 55.5 V • Rated output current [A]: – 18.69A @53.5V 18.02A @55.5V • Rated output power [W]: – 100 V AC to 130 V AC input: - Total power: 900 W – 200 V AC to 240 V AC and 240 V DC input:	CloudEngine S5755-S-HT48P4X4Y-HT

Power Module	Technical Specifications	Applied Switch Model
	- Total power: 1000 W • Hot swap: Supported	
 PDC1000S56-EB	• Dimensions (H x W x D): 40 mm x 66 mm x 215 mm (1.57 in. x 2.6 in. x 8.46 in.) • Weight: 1 kg (2.20 lb) • Rated input voltage [V]: -48 V DC to -60 V DC • Input voltage range [V]: -38.4 V DC to -72 V DC • Maximum input current [A]: 30 A • Rated output voltage [V]: 53.5 V or 55.5 V • Rated output current [A]: – 53.5 V: 18.69 A – 55.5 V: 18.02 A • Rated output power [W]: 1000 W • Hot swap: Supported	CloudEngine S5755-S-HT48P4X4Y-HT

The CloudEngine S5755-S-HT non-PoE switch supports single or dual power modules. In dual power mode, it provides 1+1 redundant power supply and load balancing.

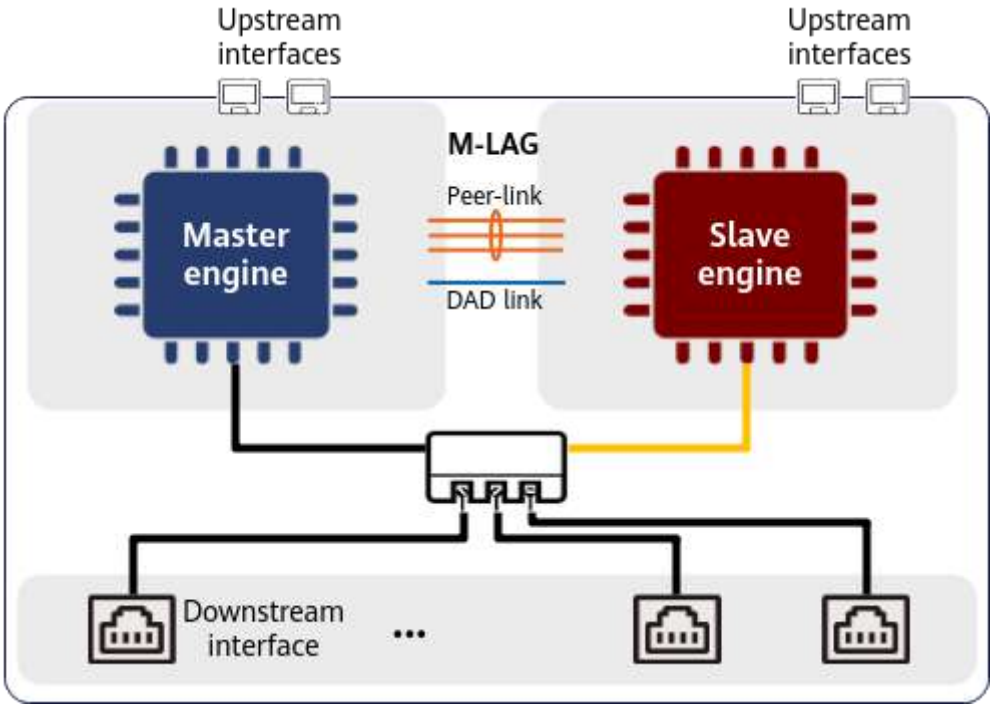
The following table lists its power supply configurations.

Power supply configurations of CloudEngine S5755-S48P4X4Y-HT

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V)	-	780 W	• 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 26
1000 W AC (110 V)	-	690 W	• 802.3af (15.4 W per port): 44 • 802.3at (30 W per port): 23
1000 W DC	-	780 W	• 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 26
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1680 W	• 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 48
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	1500 W	• 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 48

Product Features and Highlights

Delivering High Reliability with Twin-Engine Design



- The twin-engine switch features two engines, each with independent management, control, and forwarding planes, and offers the following capabilities:
  - Each engine has independent upstream interfaces, including two 25GE SFP28 optical interfaces (25GE1/0/1 and 25GE1/0/2 on the front panel) and two 10GE SFP+ optical interfaces (10GE1/0/1 and 10GE1/0/2 on the rear panel). The interfaces marked with M are master engine interfaces, and those marked with S are slave engine interfaces. The roles of the master and slave engines do not change.
  - The two engines share forty-eight 10/100/1000BASE-T Ethernet electrical interfaces, which function as downstream interfaces (also called twin-engine interfaces). The twin-engine interfaces can be configured separately for the two engines.
  - By default, the system works in master engine mode. Specifically, traffic sent and received by terminals connected to the twin-engine switch is forwarded through the master engine. If the master engine fails (for example, it restarts), services are automatically switched to the slave engine, implementing highly reliable forwarding
  - The master and slave engines have independent management network interfaces and console interfaces. You need to log in to and configure the engines separately. When the NMS manages a twin-engine switch, it manages both the master and slave engines of the switch. The downstream interfaces of the engines are separately displayed and managed on the NMS.
  - The two engines set up an M-LAG using four 25GE optical interfaces (25GE1/0/3 to 25GE1/0/6) to ensure high reliability. These interfaces are physically invisible and do not need to have optical modules installed. Three of them are peer-link member interfaces, and the other one is a dual-active detection (DAD) link interface. The M-LAG configuration has been preset in the factory configuration file of the device.

Delivering Rich Services with Greater Agility

- The CloudEngine S5755-S-HT 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-S-HT 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.

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-S-HT 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-S-HT series also supports Smart Link and Virtual Router Redundancy Protocol (VRRP), which implement backup of uplinks. One CloudEngine S5755-S-HT switch can connect to multiple aggregation switches through multiple links, significantly improving reliability of access devices.

Various Security Control Methods

- The CloudEngine S5755-S-HT 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-S-HT 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-S-HT 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-S-HT series supports Address Resolution Protocol (ARP) entry learning, which protects against ARP spoofing attacks and ensures reliable Internet access for authorized users.
- The CloudEngine S5755-S-HT 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-S-HT 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-S-HT series can be deployed on pure IPv4 networks, pure IPv6 networks, or shared IPv4/IPv6 networks, facilitating the transition from IPv4 to IPv6.

VXLAN Features

- The CloudEngine S5755-S-HT 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-S-HT 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-S-HT 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.

Smart Upgrade

- Based on the Huawei Online Upgrade Platform (HOUP), the CloudEngine S5755-S-HT 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.

Cloud Management

- Through the Huawei cloud management platform, the CloudEngine S5755-S-HT series can be configured, monitored, and inspected in the cloud. This reduces the need for on-premises deployment and maintenance manpower, thereby lowering network Operating Expenditure (OPEX).

Link-Layer Security

- The CloudEngine S5755-S-HT series supports MACsec on all ports, providing protection for transmitted Ethernet frames through identity authentication, data encryption, integrity check, and replay protection. These capabilities reduce the risks of information leakage and malicious network attacks, meeting the stringent information security requirements of government, financial, and other industry customers.

OPS

- The CloudEngine S5755-S-HT series features an Open Programmability System (OPS) based on Python. IT administrators can use Python scripts to customize O&M functions on the switch, enabling rapid function innovation and intelligent O&M.

Licensing

The CloudEngine S5755-S-HT 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 Licensing Mode

Switch Function	N1 Basic Software	N1 Foundation Software Package	N1 Advanced Software Package
Basic network functions: Layer 2 functions, IPv4, IPv6, and other basic functions	√	√	√
Basic network automation based on the controller: Basic automation: Plug-and-play Basic monitoring: Application visualization NE management: Device onboarding, topology management, and topology 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 and iMaster NCE-CampusInsight's basic functions	×	×	√

Product Specifications

Functions and Features

Category	Service Feature
MAC address table	Automatic MAC address learning, synchronization, and aging

	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，mDNS
	DHCPv4 client, DHCPv4 relay, and DHCPv4 snooping
	DHCPv6 client, DHCPv6 relay, and DHCPv6 snooping
	URPF
	6to4 Tunnel、6over4 Tunnel、4over6 Tunnel、6PE
	IPv4/v6 ping, tracert, and telnet
IP routing	Static route, routing policy, and policy-based routing

	RIPv1/v2, RIPng, OSPFv2, OSPFv3, IS-IS, ISISv6, BGP, and BGP4+
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-Routing, VXLAN-Bridge, VXLAN-Tunnel, and VXLAN-Access
Reliability	LACP
	M-LAG
	VRRP
	BFD
	LLDP
User access and authentication	Multiple authentication methods, including AAA, RADIUS, and HWTACACS
	Unauthorized access prevention
	Scanning-based identification, flow information identification, and fingerprint identification.
	NAC Authentication in an M-LAG Scenario
	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
	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 supported on all ports
	CPU protection and attack defense
	Blacklist and whitelist mechanisms
	Host Intrusion Prevention System (HIPS) and Federal Information Processing Standard (FIPS)
	Source Address Validation Improvement (SAVI)
Network management and monitoring	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
	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)
Interoperability	VBST (compatible with PVST/PVST+/RPVST)

Hardware Specifications

Item	CloudEngine S5755-S48T4X4Y-HT	CloudEngine S5755-S48P4X4Y-HT
Fixed port	48*10/100/1000BASE-T Twin-engine ports, 4*10GE SFP+ ports, 4*25GE SFP28 ports	48*10/100/1000BASE-T Twin-engine ports(PoE+), 4*10GE SFP+ ports, 4*25GE SFP28 ports
Chassis dimensions (H x W	43.6 mm × 442.0 mm × 420.0 mm	43.6 mm × 442.0 mm × 420.0 mm

Item	CloudEngine S5755-S48T4X4Y-HT	CloudEngine S5755-S48P4X4Y-HT
x D)		
Chassis height [U]	1 U	1 U
Chassis material	Metal	Metal
Weight without packaging [kg(lb)]	6.436 kg (14.19 lb)	6.624 kg (14.6 lb)
Weight with packaging [kg(lb)]	8.512 kg (18.77 lb)	8.7 kg(lb)
Typical power consumption [W]	30% traffic under the ATIS standard, dual power modules: • 126 W (all ports used, two 180 W AC power modules) • 114 W (all ports used, two 240 W DC power modules)	30% traffic under the ATIS standard, dual power modules: • 142 W (all ports used)
Typical heat dissipation [BTU/hour]	30% traffic under the ATIS standard, dual power modules: • 429.92 (all ports used, two 180 W AC power modules) • 388.98 (all ports used, two 240 W DC power modules)	30% traffic under the ATIS standard, dual power modules: • 484.52 (all ports used)
Maximum power consumption [W]	100% traffic under the ATIS standard, dual power modules: • 128 W (all ports used, two 180 W AC power modules) • 117 W (all ports used, two 240 W DC power modules)	100% traffic under the ATIS standard, dual power modules, and without PoE: • 145 W (all ports used) • Full PoE load, two 1000 W power modules: 2058 W (PoE: 1680 W)
Maximum heat dissipation [BTU/hour]	100% traffic under the ATIS standard, dual power modules: • 436.75 (all ports used, two 180 W AC power modules) • 399.22 (all ports used, two 240 W DC power modules)	100% traffic under the ATIS standard, dual power modules, and without PoE: • 494.75 (all ports used) • Full PoE load, two 1000 W power modules: 7022.10
Static power consumption [W]	98 W	115 W
MTBF [years]	53.22 years	42.97 years
Availability	> 0.99999	> 0.99999
temperature (acoustic power) [dB(A)]	57.30 dBA	30% PoE load: 58.60 dBA
Noise at normal temperature (acoustic pressure) [dB(A)]	40.62 dBA	30% PoE load: 41.92 dBA
Number of power slots	2	2
Number of fans modules	4	4
Redundant power supply	1+1 Pluggable AC and DC power modules can be used together on the same device.	1+1 Pluggable AC and DC power modules can be used together in the same switch.

Item	CloudEngine S5755-S48T4X4Y-HT	CloudEngine S5755-S48P4X4Y-HT
Long-term operating temperature [°C(°F)]	–5°C to +45°C (23°F to 113°F) at an altitude of 0 to 1800 m (0 to 5905.44 ft.)	–5°C to +45°C (23°F to 113°F) at an altitude of 0 to 1800 m (0 to 5905.44 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)
Storage temperature [°C(°F)]	–40°C to +70°C (–40°F to +158°F)	–40°C to +70°C (–40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH, non-condensing	5% RH to 95% RH, non-condensing
Long-term operating altitude [m(ft.)]	0–5000 m (0–16404 ft.)	0–5000 m (0–16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)	0-5000 m (0-16404 ft.)
Power supply mode	Pluggable power supply	Pluggable power supply
Rated input voltage [V]	• AC input: 100 V AC to 130 V AC, 200 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 130 V AC, 200 V AC to 240 V AC; 50/60 Hz • High-voltage DC input: 240 V DC (PAC600S56-EB; PAC1000S56-EB (02314APU)) • High-voltage DC input: 125 V DC to 240 V DC (PAC1000S56-EB (02314APU-001)) • 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 65 Hz • High-voltage DC input: 190 V DC to 290 V DC (PAC600S56-EB; PAC1000S56-EB (02314APU)) • High-voltage DC input: 100 V DC to 290 V DC (PAC1000S56-EB (02314APU-001)) • DC input: –38.4 V DC to –72 V DC; +40 V DC to +57 V DC
Memory	4 GB	4 GB
Flash memory	Physical space: 1 GB	Physical space: 1 GB
Console port	RJ45	RJ45
Eth Management port	RJ45	RJ45
USB	Supported	Supported
RTC	Supported	Supported
Power supply surge protection [kV]	• Configured with AC power modules: ±6 kV in differential mode and ±6 kV in common mode • Configured with DC power modules: ±2 kV in differential mode and ±4 kV in common mode	• Configured with AC power modules: ±6 kV in differential mode and ±6 kV in common mode • Configured with DC power modules: ±2 kV in differential mode and ±4 kV in common mode
Ingress protection level (dustproof/waterproof)	IP20	IP20
Types of fans	Built-in	Built-in

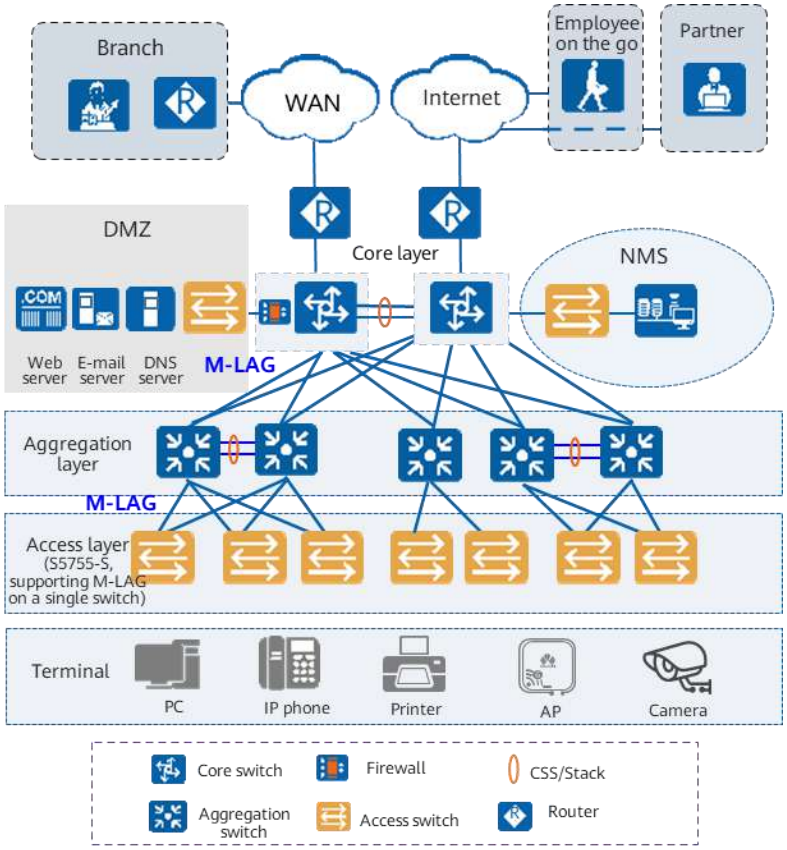
Item	CloudEngine S5755-S48T4X4Y-HT	CloudEngine S5755-S48P4X4Y-HT
Heat dissipation mode	Air cooling for heat dissipation, intelligent fan speed adjustment	Air cooling for heat dissipation, intelligent fan speed adjustment
Airflow direction	Air intake from front, left, and right and air exhaust from rear	Air intake from front, left, and right and air exhaust from rear
PoE	Not supported	Supported
Certification	EMC certification Safety certification Manufacturing certification	EMC certification Safety certification Manufacturing certification

Performance Specification

Entries	S5755-S-HT series switches
Number of dynamic MAC address entries	330000
Number of static MAC address entries	4096
Maximum number of VLANs	4094
Number of VLANIF interfaces	1024
IPv4 routing entries	256000
IPv6 routing entries	128000
Number of ARP entries	16000
Number of ND entries	16000
ACL scale entries	5.5K@160b or 2.5K@320b (inbound direction) + 1K@320b (outbound direction) (K=1024)
IPv4/IPv6 multicast L2 entries	2K
IPv4/IPv6 multicast L3 entries	2K
Device buffer (byte)	9MB
Jumbo frames	9600

Networking and Applications

CloudEngine S5755-S-HT twins switches are designed for network environments that require high reliability. They offer forty-eight 10/100/1000BASE-T downlink Ethernet ports for connecting endpoints such as printers, PCs, and cameras. They also provide four 25GE uplink ports on the front panel and four 10GE uplink ports on the rear panel. When the switch's master engine fails, traffic can be rapidly switched to the slave engine through ports, ensuring high network reliability.



Safety and Regulatory Compliance

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

Certification Category	Description
Safety	IEC 62368-1
	EN 62368-1
	UL 62368-1
	CSA C22.2 No 62368-1
Electromagnetic Compatibility (EMC)	CISPR32
	CISPR35
	EN 55032
	EN 55035
	ETSI EN 300 386
	CFR 47 FCC Part 15
	ICES 003
	AS/NZS CISPR32
	VCCI
	IEC61000-4-2
Environment	RoHS

	REACH
	WEEE
Laser safety	IEC60825-1
	IEC60825-2
	EN60825-1
	EN60825-2

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-S-HT-HT.

MIBs supported by the CloudEngine S5755-S-HT 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

Category	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 • 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

Category	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 • 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

Category	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 S5755-S-HT complies with.

Standard compliance list of the CloudEngine S5755-S-HT series

Standard Organization	Standard or Protocol
EMC	• EN61000-3-2 • EN61000-3-3
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 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

Standard Organization	Standard or Protocol
	• 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)
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 802.3ab 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 • IEEE 802.1v - VLAN Classification by Protocol and Port • IEEE 802.3BY Media Access Control, Physical Layers, and Management for 25 Gb/s Operation
ITU	• ITU SG13 Y.17ethoam • ITU SG13 QoS control Ethernet-Based IP Access
ISO	• ISO 10589 IS-IS Routing Protocol

Standard Organization	Standard or 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

Model	Product Description
CloudEngine S5755-S48T4X4Y-HT	S5755-S48T4X4Y-HT(48*10/100/1000BASE-T Twin-engine ports, 4*10GE SFP+ ports, 4*25GE SFP28 ports, without power module)
CloudEngine S5755-S48P4X4Y-HT	S5755-S48P4X4Y-HT(48*10/100/1000BASE-T Twin-engine ports(PoE+), 4*10GE SFP+ ports, 4*25GE SFP28 ports, without power module)
PAC180S12-CN	180 W AC & 240 V DC power module
PDC240S12-CN	240 W DC power module
PAC600S12-PB	600 W AC power module
PAC1000S56-EB	1000 W PoE AC & 240 V DC power module
PDC1000S56-EB	1000 W PoE DC power module
FAN-023A-B	Fan module
N1-S57S-M-Lic	S57XX-S basic software, per device
N1-S57S-M-SnS1Y	S57XX-S basic software, SnS, per device, 1 year
N1-S57S-F-Lic	N1-CloudCampus, Foundation package, S57XX-S, per device
N1-S57S-F-SnS1Y	N1-CloudCampus, Foundation package, S57XX-S SnS, per device, 1 year
N1-S57S-A-Licv	N1-CloudCampus, Advanced package, S57XX-S, per device
N1-S57S-A-SnS1Y	N1-CloudCampus, Advanced package, S57XX-S, SnS, per device, 1 year
N1-S57S-FToA-Lic	N1-Upgrade-Foundation to Advanced, S57XX-S, per device
N1-S57S-FToA-SnS1Y	N1-Upgrade-Foundation to Advanced, S57XX-S, SnS, per device, 1 year
N1-S57S-A-NVXLAN-Lic	N1-CloudCampus,Advanced non-vxlan,S57XX-S Series,Per Device
N1-S57S-A-NVXLAN-SnS1Y	N1-CloudCampus,Advanced non-vxlan,S57XX-S Series,SnS,Per Device,1 Year
N1-S57S-F2A-NVXLAN-Lic	N1-Upgrade-Foundation to Advanced non-vxlan,S57XX-S,Per Device
N1-S57S-F2A-NVXLAN-SnS1Y	N1-Upgrade-Foundation to Advanced non-vxlan,S57XX-S,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 email to the customer service mailbox: support_e@huawei.com

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