

# Huawei CloudEngine S5755-H Series High-Quality Gigabit Switches Brochure




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





## Product Overview

CloudEngine S5755-H series High-Quality Gigabit 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. CloudEngine S5755-H can provide a maximum of 48 GE ports and maximum 60W PoE++ output for every port, which is a good choice for WLAN APs to connect to a switch in the high-quality campus networks.

## Models and Appearances

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

Models and Appearances	Description
 CloudEngine S5755-H24T4Y2CZ	<ul style="list-style-type: none"> <li>24 × 10/100/1000 Base-T Ethernet ports, 4 × 1/10/25GE SFP28, 2 × 40/100GE QSFP28 ports**</li> <li>One extended slot</li> <li>1+1 power backup</li> <li>Forwarding performance: 465 Mpps</li> <li>Switching capacity*: 648 Gbps/2.4 Tbps</li> </ul>
 CloudEngine S5755-H24P4Y2CZ	<ul style="list-style-type: none"> <li>24 × 10/100/1000 Base-T Ethernet ports, 4 × 1/10/25GE SFP28, 2 × 40/100GE QSFP28 ports**</li> <li>One extended slot</li> <li>PoE+</li> <li>N+1 power backup</li> <li>Forwarding performance: 465 Mpps</li> <li>Switching capacity*: 648 Gbps/2.4 Tbps</li> </ul>
 CloudEngine S5755-H24U4Y2CZ	<ul style="list-style-type: none"> <li>24 × 10/100/1000 Base-T Ethernet ports, 4 × 1/10/25GE SFP28, 2 × 40/100GE QSFP28 ports**</li> <li>One extended slot</li> <li>PoE++</li> <li>N+1 power backup</li> </ul>

Models and Appearances	Description
	<ul style="list-style-type: none"> <li>Forwarding performance: 465 Mpps</li> <li>Switching capacity*: 648 Gbps/2.4 Tbps</li> </ul>
 CloudEngine S5755-H48T4Y2CZ	<ul style="list-style-type: none"> <li>48 x 10/100/1000 Base-T Ethernet ports, 4 x 1/10/25GE SFP28, 2 x 40/100GE QSFP28 ports**</li> <li>One extended slot</li> <li>1+1 power backup</li> <li>Forwarding performance: 465 Mpps</li> <li>Switching capacity*: 696 Gbps/2.4 Tbps</li> </ul>
 CloudEngine S5755-H48T4Y2CZ-B	<ul style="list-style-type: none"> <li>48 x 10/100/1000 Base-T Ethernet ports, 4 x 1/10/25GE SFP28, 2 x 40/100GE QSFP28 ports**</li> <li>Air flows in from the rear panel and exhausts from the front side</li> <li>1+1 power backup</li> <li>Forwarding performance: 465 Mpps</li> <li>Switching capacity*: 696 Gbps/2.4 Tbps</li> </ul>
 CloudEngine S5755-H48P4Y2CZ	<ul style="list-style-type: none"> <li>48 x 10/100/1000 Base-T Ethernet ports, 4 x 1/10/25GE SFP28, 2 x 40/100GE QSFP28 ports**</li> <li>One extended slot</li> <li>PoE+</li> <li>N+1 power backup</li> <li>Forwarding performance: 465 Mpps</li> <li>Switching capacity*: 696 Gbps/2.4 Tbps</li> </ul>
 CloudEngine S5755-H48U4Y2CZ	<ul style="list-style-type: none"> <li>48 x 10/100/1000 Base-T Ethernet ports, 4 x 1/10/25GE SFP28, 2 x 40/100GE QSFP28 ports**</li> <li>One extended slot</li> <li>PoE++</li> <li>N+1 power backup</li> <li>Forwarding performance: 465 Mpps</li> <li>Switching capacity*: 696 Gbps/2.4 Tbps</li> </ul>

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.

\*\*Uplink 40GE ports can be split into 4 x 10GE ports, and uplink 100GE ports can be split into 4 x 25GE ports.

## Features and Highlights

### Enabling Networks to Be More Agile for Services

- CloudEngine S5755-H has a built-in high-speed and flexible processor chip. The chip's flexible packet processing and traffic control capabilities can meet current and future service requirements, helping build a highly scalable network.
- In addition to capabilities of traditional switches, the CloudEngine S5755-H provides open interfaces and supports user-defined forwarding behavior. Enterprises can use the open interfaces to develop new protocols and functions independently or jointly with equipment vendors to build campus networks meeting their own needs.
- CloudEngine S5755-H series switches, on which enterprises can define their own forwarding models, forwarding behavior, and lookup algorithms. Microcode programmability makes it possible to provide new services within six months, without the need of replacing the hardware. In contrast, traditional ASIC chips use a fixed forwarding architecture and follow a fixed forwarding process. For this reason, new services cannot be provisioned until new hardware is developed to support the services one to three years later.

## Delivering Abundant Services More Agilely

- The CloudEngine S5755-H provides the integrated WLAN AC(native AC) function that can manage 1,024 APs, reducing the costs of purchasing additional WLAN AC hardware and breaking the forwarding performance bottleneck of an external WLAN AC. With this switch series, customers can stay ahead in the high-speed wireless era.
- With the unified user management function, the CloudEngine S5755-H authenticates both wired and wireless users, ensuring a consistent user experience no matter whether they are connected to the network through wired or wireless access devices. The unified user management function supports various authentication methods, including 802.1x, Portal, MAC address, and is capable of managing users based on user groups, domains, and time ranges. These functions visualize user and service management and boost the transformation from device-centric management to user experience-centric management.
- The CloudEngine S5755-H provides excellent quality of service(QoS) capabilities and supports queue scheduling and congestion control algorithms. Additionally, it adopts innovative priority queuing and multi-level scheduling mechanisms to implement fine-grained scheduling of data flows, meeting service quality requirements of different user terminals and services.

Note: The CloudEngine S5755-H can manage 16 APs by default . You can purchase licenses for more AP management on demand.

## Providing Fine Granular Network Management More Agilely

- The CloudEngine S5755-H uses the Packet Conservation Algorithm for Internet(IPCA) technology that changes the traditional method of using simulated traffic for fault location. IPCA technology can monitor network quality for any service flow anywhere and anytime, without extra costs. It can detect temporary service interruptions in a very short time and can identify faulty ports accurately. This cutting-edge fault detection technology turns "extensive management" to "fine granular management."

## Flexible Ethernet Networking

- In addition to traditional Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), and Multiple Spanning Tree Protocol (MSTP), the CloudEngine S5755-H supports the latest Ethernet Ring Protection Switching (ERPS) standard. This protocol is reliable, easy to maintain, and implements fast protection switching within 50 ms. ERPS is defined in ITU-T G.8032. It implements millisecond-level protection switching based on traditional Ethernet MAC and bridging functions.
- The CloudEngine S5755-H 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 supports 802.1x authentication, MAC address authentication, , and hybrid authentication, and can dynamically delivery user policies such as VLANs, QoS policies, and access control lists (ACL). It also supports user management based on user groups.
- The CloudEngine S5755-H provides a series of mechanisms to defend against DoS 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 change of the DHCP CHADDR value.
- The CloudEngine S5755-H sets up and maintains a DHCP snooping binding table, and discards the packets that do not match the table entries. You can specify DHCP snooping trusted and untrusted ports to ensure that users connect only to the authorized DHCP server.
- The CloudEngine S5755-H supports strict ARP learning, which prevents ARP spoofing attackers from exhausting ARP entries.
- The CloudEngine S5755-H supports Media Access Control Security (MACsec) with all downlink ports and uplink ports . It provides identity authentication, data encryption, integrity check, and replay protection to protect Ethernet frames and prevent attack packets.

## Mature IPv6 Features

- The CloudEngine S5755-H is developed based on the mature, stable platform and supports IPv4/IPv6 dual stacks, IPv6 routing protocols (RIPng, OSPFv3, BGP4+, and IS-IS for IPv6). With these IPv6 features, the CloudEngine S5755-H can be deployed on a pure IPv4 network, a pure IPv6 network, or a shared IPv4/IPv6 network, helping achieve IPv4-to-IPv6 transition.

## Intelligent Stack (iStack)

- The CloudEngine S5755-H supports the iStack function that combines multiple switches into a logical switch. Member switches in a stack implement redundancy backup to improve device reliability and use inter-device link aggregation to improve link reliability. iStack provides high network scalability. You can increase a stack's ports, bandwidth, and processing capacity by simply adding member switches. iStack also simplifies device configuration and management. After a stack is set up, up to nine physical switches can be virtualized into one logical device. You can log in to any member switch in the stack to manage all the member switches in the stack.

*Note: All ports of the S5755-H series switches can be dedicated as stack ports or service ports as required.*

## 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

- VXLAN is used to construct a Unified Virtual Fabric(UVF). As such, multiple service networks or tenant networks can be deployed on the same physical network, and service and tenant networks are isolated from each other. This capability truly achieves 'one network for multiple purposes'. The resulting benefits include enabling data transmission of different services or customers, reducing the network construction costs, and improving network resource utilization.
- The CloudEngine S5755-H series switches are VXLAN-capable and allow centralized and distributed VXLAN gateway deployment modes. These switches also support the BGP EVPN protocol for dynamically establishing VXLAN tunnels and can be configured using NETCONF/YANG.

## Intelligent O&M

- The CloudEngine S5755-H provides telemetry technology to collect device data in real time and send the data to Huawei campus network analyzer CampusInsight. The CampusInsight analyzes network data based on the intelligent fault identification algorithm, accurately displays the real-time network status, effectively demarcates and locates faults in a timely manner, and identifies network problems that affect user experience, accurately guaranteeing user experience.

## PoE Function

- **Perpetual PoE:** When a PoE switch is warm rebooting (Don't turn PSE switch power off), for example, reboot upon the software upgrade, the power supply to PDs is not interrupted. This capability ensures that PDs are not powered off during the switch warm reboot.
- **Fast PoE:** PoE switches can supply power to PDs within seconds after they are powered on. This is different from common switches that generally take 1 to 3 minutes to start to supply power to PDs. When a PoE switch reboots due to a power failure, the PoE switch continues to supply power to the PDs immediately after being powered on without waiting until it finishes reboot. This greatly shortens the power failure time of PDs.

## 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.

## Big Data Security Collaboration

- The CloudEngine S5755-H switches use NetStream to collect campus network data and then report such data to the Huawei HiSec Insight. The purposes of doing so are to detect network security threats, display the security posture across the entire network, and enable automated or manual response to security threats. The HiSec Insight delivers the security policies to

the iMaster NCE-Campus. The iMaster NCE-Campus then delivers such policies to switches that will handle security events accordingly. All these 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

CloudEngine S5755-H supports both the traditional feature-based licensing mode and the latest Huawei IDN One Software (N1 mode for short) licensing mode. The N1 mode is ideal for deploying Huawei CloudCampus Solution in the on-premises scenario, as it greatly enhances the customer experiences in purchasing and upgrading software services with simplicity.

### Software Package Features in N1 Mode

Switch Functions	N1 Basic Software	N1 Foundation Software Package	N1 Advanced Software Package
<b>Basic network functions:</b> Layer 2 functions, IPv4, IPv6, and others Note: For details, see the Service Features	√	√	√
<b>Basic network automation based on the iMaster NCE-Campus:</b> <ul style="list-style-type: none"> <li>• Basic automation: Plug-and-play, SSID, and AP group management</li> <li>• Basic monitoring: Application visualization</li> <li>• NE management: Image and topology management and discovery</li> <li>• User access authentication</li> </ul>	×	√	√
<b>Advanced network automation and intelligent O&amp;M:</b> VXLAN, free mobility, and CampusInsight basic functions	×	×	√

# Product Specifications

Item	CloudEngine S5755-H24T4Y2CZ	CloudEngine S5755-H24P4Y2CZ	CloudEngine S5755-H24U4Y2CZ
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Item	CloudEngine S5755-H24T4Y2CZ	CloudEngine S5755-H24P4Y2CZ	CloudEngine S5755-H24U4Y2CZ
Fixed port	24x10/100/1000Base-T ports, 4 x 25GE SFP28, 2 x 100GE QSFP28 ports	24x10/100/1000Base-T ports, 4 x 25GE SFP28, 2 x 100GE QSFP28 ports, PoE+	24x10/100/1000Base-T ports, 4 x 25GE SFP28, 2 x 100GE QSFP28 ports, PoE++
Extended slot	Support 8*10GE SFP+ ports or 4*25GE SFP28 ports (only ports 1 to 4 support 25GE)		
Dimensions (H x W x D)	43.6 mm x 442 mm x 420 mm	43.6 mm x 442 mm x 420 mm	43.6 mm x 442 mm x 420 mm
Chassis height	1U	1U	1U
Chassis weight (full configuration weight)	7.65kg	8.01kg	8.05kg
Power supply type	<ul style="list-style-type: none"> <li>180 W AC (pluggable)</li> <li>240 W DC (pluggable)</li> <li>600 W AC (pluggable)</li> <li>1200 W DC (pluggable)</li> </ul>	<ul style="list-style-type: none"> <li>600 W PoE AC (pluggable)</li> <li>1000 W PoE AC (pluggable)</li> <li>1000 W PoE DC (pluggable)</li> </ul>	<ul style="list-style-type: none"> <li>600 W PoE AC (pluggable)</li> <li>1000 W PoE AC (pluggable)</li> <li>1000 W PoE DC (pluggable)</li> </ul>
Rated voltage range	<ul style="list-style-type: none"> <li>AC input : 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> <li>DC input : -48 VDC to -60 V DC</li> </ul>	<ul style="list-style-type: none"> <li>AC input : 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> <li>DC input : -48 VDC to -60 V DC</li> </ul>	<ul style="list-style-type: none"> <li>AC input : 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> <li>DC input : -48 VDC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption(input)	<ul style="list-style-type: none"> <li>100% traffic under the ATIS standard, dual power supplies:</li> <li>84 W (all ports used)</li> <li>73 W (2 x 100GE ports not used)</li> </ul>	<ul style="list-style-type: none"> <li>100% traffic under the ATIS standard, dual power supplies, and without PoE:</li> <li>100 W (all ports used)</li> <li>88 W (2 x 100GE ports not used)</li> <li>Full PoE load, three 1000 W power modules: 976 W (PoE: 840 W)</li> </ul>	<ul style="list-style-type: none"> <li>100% traffic under the ATIS standard, dual power supplies, and without PoE:</li> <li>101 W (all ports used)</li> <li>89 W (2 x 100GE ports not used)</li> <li>Full PoE load, three 1000 W power modules: 1871 W (PoE: 1728 W)</li> </ul>
Operating temperature	<ul style="list-style-type: none"> <li>0-1800 m altitude: -5°C to 45°C</li> <li>1800-5000 m altitude: The operating temperature reduces by 1°C every time the altitude increases by 220 m.</li> </ul>	<ul style="list-style-type: none"> <li>0-1800 m altitude: -5°C to 45°C</li> <li>1800-5000 m altitude: The operating temperature reduces by 1°C every time the altitude increases by 220 m.</li> </ul>	<ul style="list-style-type: none"> <li>0-1800 m altitude: -5°C to 45°C</li> <li>1800-5000 m altitude: The operating temperature reduces by 1°C every time the altitude increases by 220 m.</li> </ul>

Item	CloudEngine S5755-H24T4Y2CZ	CloudEngine S5755-H24P4Y2CZ	CloudEngine S5755-H24U4Y2CZ
Storage temperature	-40°C~70°C	-40°C~70°C	-40°C~70°C
Relative humidity	5% to 95% (non-condensing)	5% to 95% (non-condensing)	5% to 95% (non-condensing)
Surge protection specification (power port)	<ul style="list-style-type: none"> <li>AC power port: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>DC power port: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>	<ul style="list-style-type: none"> <li>AC power port: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>DC power port: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>	<ul style="list-style-type: none"> <li>AC power port: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>DC power port: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Heat dissipation	Air cooling heat dissipation, intelligent speed adjustment, and pluggable fans	Air cooling heat dissipation, intelligent speed adjustment, and pluggable fans	Air cooling heat dissipation, intelligent speed adjustment, and pluggable fans

Item	CloudEngine S5755-H48T4Y2CZ	CloudEngine S5755-H48P4Y2CZ	CloudEngine S5755-H48U4Y2CZ
Fixed port	48x10/100/1000Base-T ports, 4 x 25GE SFP28, 2 x 100GE QSFP28 ports	48x10/100/1000Base-T ports, 4 x 25GE SFP28, 2 x 100GE QSFP28 ports, PoE+	48x10/100/1000Base-T ports, 4 x 25GE SFP28 + 2 x 100GE QSFP28 ports, PoE++
Extended slot	One extended slot		
Dimensions (H x W x D)	43.6 mm x 442 mm x 420 mm	43.6 mm x 442 mm x 420 mm	43.6 mm x 442 mm x 420 mm
Chassis height	1U	1U	1U
Chassis weight (full configuration weight)	7.83kg	8.22kg	8.22kg
Power supply type	<ul style="list-style-type: none"> <li>180 W AC (pluggable)</li> <li>240 W DC (pluggable)</li> <li>600 W AC (pluggable)</li> <li>1200 W DC (pluggable)</li> </ul>	<ul style="list-style-type: none"> <li>600 W PoE AC (pluggable)</li> <li>1000 W PoE AC (pluggable)</li> <li>1000 W PoE DC (pluggable)</li> </ul>	<ul style="list-style-type: none"> <li>600 W PoE AC (pluggable)</li> <li>1000 W PoE AC (pluggable)</li> <li>1000 W PoE DC (pluggable)</li> </ul>
Rated voltage range	<ul style="list-style-type: none"> <li>AC input : 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> <li>DC input : -48 VDC to -60 V DC</li> </ul>	<ul style="list-style-type: none"> <li>AC input : 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> <li>DC input : -48 VDC to -60 V DC</li> </ul>	<ul style="list-style-type: none"> <li>AC input : 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> <li>DC input : -48 VDC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power	100% traffic under the ATIS	<ul style="list-style-type: none"> <li>100% traffic under the</li> </ul>	<ul style="list-style-type: none"> <li>100% traffic under the</li> </ul>



Item	CloudEngine S5755-H48T4Y2CZ	CloudEngine S5755-H48P4Y2CZ	CloudEngine S5755-H48U4Y2CZ
consumption(input)	standard, dual power supplies: <ul style="list-style-type: none"> <li>99 W (all ports used)</li> <li>88 W (2 x 100GE ports not used)</li> </ul>	ATIS standard, dual power supplies, and without PoE: <ul style="list-style-type: none"> <li>112 W (all ports used)</li> <li>100 W (2 x 100GE ports not used)</li> <li>Full PoE load, three 1000 W power modules: 1829 W (PoE: 1680 W)</li> </ul>	ATIS standard, dual power supplies, and without PoE: <ul style="list-style-type: none"> <li>113 W (all ports used)</li> <li>100 W (2 x 100GE ports not used)</li> <li>Full PoE load, three 1000 W power modules: 3030 W (PoE: 2870 W)</li> </ul>
Operating temperature	<ul style="list-style-type: none"> <li>0-1800 m altitude: -5°C to 45°C</li> <li>1800-5000 m altitude: The operating temperature reduces by 1°C every time the altitude increases by 220 m.</li> </ul>	<ul style="list-style-type: none"> <li>0-1800 m altitude: -5°C to 45°C</li> <li>1800-5000 m altitude: The operating temperature reduces by 1°C every time the altitude increases by 220 m.</li> </ul>	<ul style="list-style-type: none"> <li>0-1800 m altitude: -5°C to 45°C</li> <li>1800-5000 m altitude: The operating temperature reduces by 1°C every time the altitude increases by 220 m.</li> </ul>
Storage temperature	-40°C~70°C	-40°C~70°C	-40°C~70°C
Relative humidity	5% to 95% (non-condensing)	5% to 95% (non-condensing)	5% to 95% (non-condensing)
Surge protection specification (power port)	<ul style="list-style-type: none"> <li>AC power port: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>DC power port: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>	<ul style="list-style-type: none"> <li>AC power port: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>DC power port: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>	<ul style="list-style-type: none"> <li>AC power port: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>DC power port: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Airflow	<ul style="list-style-type: none"> <li>Air flows in from the left, right, and front sides, and exhausts from the rear panel</li> <li>S5755-H48U4Y2CZ-B : Air flows in from the rear panel and exhausts from the front side.</li> </ul>	Air flows in from the left, right, and front sides, and exhausts from the rear panel	Air flows in from the left, right, and front sides, and exhausts from the rear panel
Heat dissipation	Air cooling heat dissipation, intelligent speed adjustment, and pluggable fans	Air cooling heat dissipation, intelligent speed adjustment, and pluggable fans	Air cooling heat dissipation, intelligent speed adjustment, and pluggable fans

Item	CloudEngine S5755-H48T4Y2CZ-B		
Fixed port	48x10/100/1000Base-T ports, 4 x 25GE SFP28, 2 x 100GE QSFP28 ports		
Extended slot	NA		
Dimensions (H x W x D)	43.6 mm x 442 mm x 420 mm		



Item	CloudEngine S5755-H48T4Y2CZ-B		
Chassis height	1U		
Chassis weight (full configuration weight)	7.83kg		
Power supply type	<ul style="list-style-type: none"> <li>180 W AC (pluggable)</li> <li>240 W DC (pluggable)</li> </ul>		
Rated voltage range	<ul style="list-style-type: none"> <li>AC input : 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> <li>DC input : -48 VDC to -60 V DC</li> </ul>		
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>		
Maximum power consumption(input)	100% traffic under the ATIS standard, dual power supplies: <ul style="list-style-type: none"> <li>99 W (all ports used)</li> <li>88 W (2 x 100GE ports not used)</li> </ul>		
Operating temperature	<ul style="list-style-type: none"> <li>0-1800 m altitude: -5°C to 45°C</li> <li>1800-5000 m altitude: The operating temperature reduces by 1°C every time the altitude increases by 220 m.</li> </ul>		
Storage temperature	-40°C~70°C		
Relative humidity	5% to 95% (non-condensing)		
Surge protection specification (power port)	<ul style="list-style-type: none"> <li>AC power port: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>DC power port: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>		
Airflow	<ul style="list-style-type: none"> <li>Air flows in from the left, right, and front sides, and exhausts from the rear panel</li> <li>S5755-H48U4Y2CZ-B : Air flows in from the rear panel and exhausts from</li> </ul>		

Item	CloudEngine S5755-H48T4Y2CZ-B		
	the front side.		
Heat dissipation	Air cooling heat dissipation, intelligent speed adjustment, and pluggable fans		

## Service Features

Except for special instructions, the following features are supported by CloudEngine S5755-H with N1 basic software.

Category	Service Features
User management	Unified user management
	802.1X authentication, MAC authentication, Portal authentication
	Traffic- and duration-based accounting
	User authorization based on user groups, domains, and time ranges
MAC	Automatic MAC address learning and aging
	256K MAC entries (MAX)
	Static, dynamic, and blackhole MAC address entries
	Source MAC address filtering
	MAC address learning limiting based on ports and VLANs
VLAN	4K VLANs simultaneously
	Access mode, Trunk mode and Hybrid mode
	Default VLAN
	Private VLAN
	QinQ and enhanced selective QinQ
	VLAN Stacking
	Dynamic VLAN assignment based on MAC addresses
ARP	ARP Snooping
IP routing	Static Route, Routing Policy, Policy-Based Routing
	ECMP, URPF
	IPv4 dynamic routing protocols such as RIP v1/v2, OSPF v1/v2, IS-IS, and BGP
	IPv6 dynamic routing protocols such as RIPng, OSPFv3, ISISv6, and BGP4+
	Up to 192K FIBv4 entries (MAX)
	Up to 96K FIBv6 entries (MAX)
Segment Routing	SRv6 BE (L3 EVPN)
	BGP EVPN
	SRv6 configuration through NETCONF

Category	Service Features
Multicast	IGMPv1/v2/v3 and IGMP v1/v2/v3 Snooping
	PIM-DM, PIM-SM, and PIM-SSM
	Fast-leave mechanism
	Multicast traffic control
	Multicast querier
	Multicast protocol packet suppression
	Multicast VLAN, Multicast Static MAC
MPLS	MPLS-LDP
	MPLS-L3VPN
	MPLS Qos
	MPLS TE
VPN	MPLS BGP VPN, VPWS, VPLS, GRE
VXLAN	Centralized gateway
	Distributed gateway
	BGP-EVPN
	Configures VXLANs through NETCONF
	VXLAN-Routing, VXLAN-Bridge, VXLAN-Tunnel, VXLAN-Access
QoS	Traffic classification based on Layer 2 headers, Layer 3 protocols, Layer 4 protocols, and 802.1p priority
	Actions such as ACL, Committed Access Rate (CAR), re-marking, and scheduling
	Queuing algorithms, such as PQ, DRR, and PQ+DRR
	Congestion avoidance mechanisms such as WRED and tail drop
	Traffic shaping
	8 queues on each interface
	Network Slicing (VLAN/VxLAN/SRv6)
Native-IP IFIT	Marks the real service packets to obtain real-time count of dropped packets and packet loss ratio
	The statistical period can be modified
	Two-way frame delay measurement
Ethernet loop protection	STP (IEEE 802.1d), RSTP (IEEE 802.1w), and MSTP (IEEE 802.1s).
	VLAN-based Spanning Tree (VBST)
	BPDU protection, root protection, and loop protection
	G.8032 Ethernet Ring Protection Switching (ERPS)
Reliability	M-LAG
	Service interface-based stacking

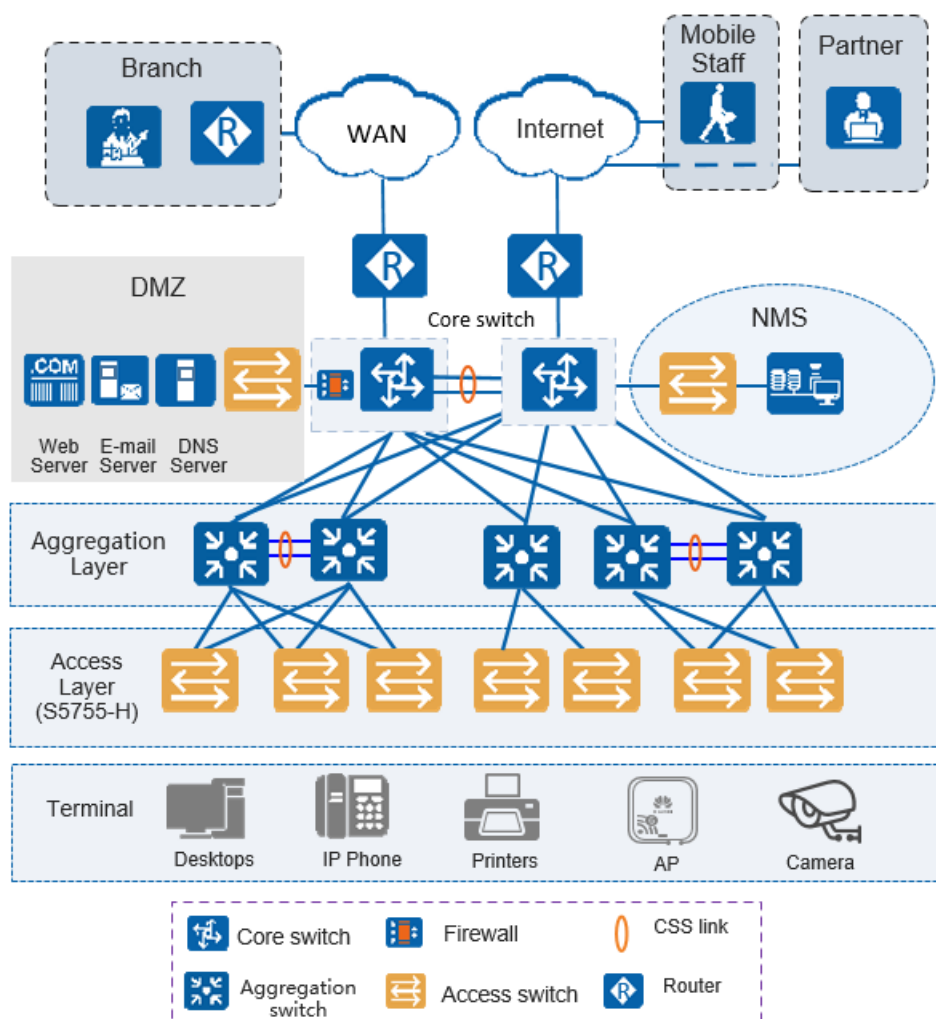
Category	Service Features
	Maximum number of stacked devices
	Stack bandwidth (Bidirectional)
	Link Aggregation Control Protocol (LACP)
	Virtual Router Redundancy Protocol (VRRP) and Bidirectional Forwarding Detection (BFD) for VRRP
	BFD for BGP/IS-IS/OSPF/static routes
	Eth-OAM 802.1ag(CFM)
	Smartlink
	LLDP, LLDP-MED
System management	Console terminal service
	Telnet/IPv6 Telnet terminal service
	SSH v1.5
	SSH v2.0
	SNMP v1/v2c/v3
	FTP, TFTP, SFTP
	BootROM upgrade and remote in-service upgrade
	Hot patch
	User operation logs
	Open Programmability System (OPS)
	Streaming Telemetry
	Registration Center Deployment
	WebMaster
	Terminal identification, Application identification
Security and management	NAC
	Port-security
	RADIUS and HWTACACS authentication for login users
	Management by Command Line Interface(CLI)
	Command line authority control based on user levels, preventing unauthorized users from using command configurations
	Defense against DoS attacks, Transmission Control Protocol (TCP) SYN Flood attacks, User Datagram Protocol (UDP) Flood attacks, broadcast storms, and heavy traffic attacks
	IPv6 RA Guard
	CPU hardware queues to implement hierarchical scheduling and protection for protocol packets on the control plane
	Remote Network Monitoring (RMON)
	Secure boot

Category	Service Features
	Macsec(IEEE 802.1ae)
	Deception
	Port mirroring
	Dynamic ARP Inspection
	IP Source Guard
Interface Management	IEEE 802.3bz
Wireless management (integrated WLAN AC): Basic WLAN services	Hot backup for devices with integrated WLAN AC functionality in cluster mode
	2.4G & 5G load balancing
	5G-prior access
Wireless management (integrated WLAN AC): AP management	Total number of managed APs: 1K
	An IPv4 network between an AP and a WLAN AC
	AP blacklist
	AP whitelist
	Sets the AP access control mode
	AP configuration and management
	AP LLDP topology awareness
Wireless management (integrated WLAN AC): Wireless user management	User roaming within a WLAN AC
	AP-based user location
	802.1X authentication
	MAC address authentication
	Portal authentication
Wireless management (integrated WLAN AC): CAPWAP	Direct data forwarding on L2/L3 networks
	Tunnel-based data forwarding on L2/L3 networks
	CAPWAP tunnel encryption
Wireless management (integrated WLAN AC): RF management	802.11a/b/g/n
	802.11ac wave1/wave2
	802.11ax
	Sets RF interference monitoring and avoidance
	Detects co-channel interference, adjacent interference, and interference from other devices and STAs
	Automatically selects channels and power when APs go online
	Dynamic power and channel optimization
Wireless management (integrated WLAN AC): 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

# Networking and Applications

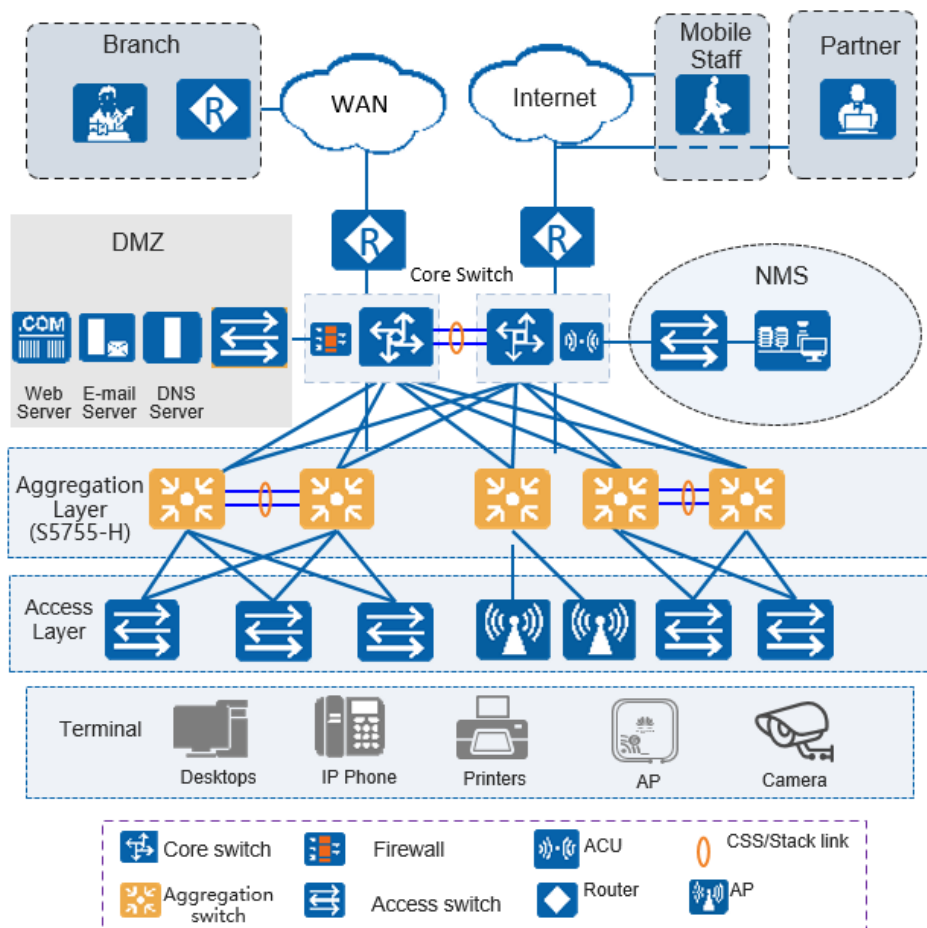
## Large-Scale Enterprise Campus Network

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



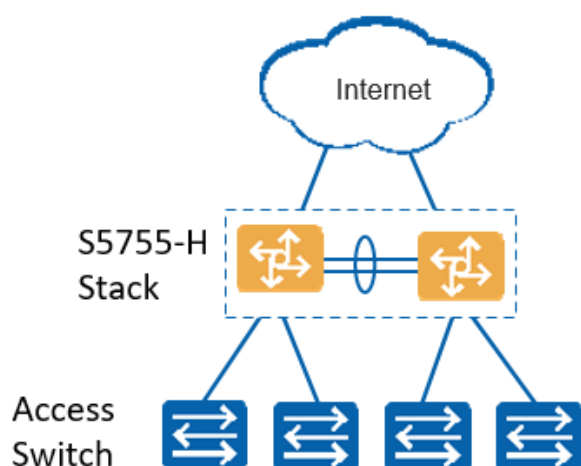
## Small- or Medium-scale Enterprise Campus Network

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



## Small-scale Enterprise Campus Network

With powerful aggregation and routing capabilities of CloudEngine S5755-H series switches make them suitable for use as core switches in a small-scale enterprise network. Two or more S5755-H switches use iStack technology to ensure high reliability. They provide a variety of access control policies to achieve centralized management and simplify configuration.



## Ordering Information

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




Model	Product Description
CloudEngine S5755-H24T4Y2CZ	S5755-H24T4Y2CZ (24*10/100/1000BASE-T ports, 4*25G SFP28 ports, 2*100G QSFP28 ports, 1*expansion slot, without power module)
CloudEngine S5755-H24P4Y2CZ	S5755-H24P4Y2CZ (24*10/100/1000BASE-T ports, 4*25G SFP28 ports, 2*100G QSFP28 ports, 1*expansion slot, PoE+, without power module)
CloudEngine S5755-H24U4Y2CZ	S5755-H24U4Y2CZ (24*10/100/1000BASE-T ports, 4*25G SFP28 ports, 2*100G QSFP28 ports, 1*expansion slot, PoE++, without power module)
CloudEngine S5755-H48T4Y2CZ	S5755-H48T4Y2CZ (48*10/100/1000BASE-T ports, 4*25G SFP28 ports, 2*100G QSFP28 ports, 1*expansion slot, without power module)
CloudEngine S5755-H48P4Y2CZ	S5755-H48P4Y2CZ (48*10/100/1000BASE-T ports, 4*25G SFP28 ports, 2*100G QSFP28 ports, 1*expansion slot, PoE+, without power module)
CloudEngine S5755-H48U4Y2CZ	S5755-H48U4Y2CZ (48*10/100/1000BASE-T ports, 4*25G SFP28 ports, 2*100G QSFP28 ports, 1*expansion slot, PoE++, without power module)
CloudEngine S5755-H48T4Y2CZ-B	S5755-H48T4Y2CZ-B (48*10/100/1000BASE-T ports, 4*25GE SFP28 ports, 2*100GE QSFP28 ports, without power module, port-side exhaust)
PAC180S12-CN	180 W AC&240 V DC Power Module
PDC240S12-CN	240W DC Power Module
PAC600S12-PB	600 W AC Power Module
PDC1K2S12-CE	1200 W DC PoE Power Module
PAC600S56-EB	600W PoE AC&240 V DC Power Module
PAC1000S56-EB	1000 W PoE AC&240 V DC Power Module
PDC1000S56-EB	1000 W PoE 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)
L-VxLAN-S57	S57 Series, VxLAN License, Per Device
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

## 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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