



# Huawei CloudEngine S5335-S-V2 Series Switches Brochure

Huawei CloudEngine S5335-S-V2 series are standard gigabit Ethernet switches that provide all GE downlink ports, 10GE uplink ports, and dedicated stacking ports.





## Product Overview




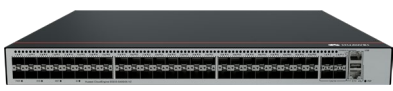
CloudEngine S5335-S-V2 series switches are developed based on next-generation high-performing hardware and software platform. CloudEngine S5335-S-V2 switches support simplified operations and maintenance (O&M), and flexible Ethernet networking. It also provides enhanced Layer 3 features and mature IPv6 features. CloudEngine S5335-S-V2 switches can be used in various scenarios. For example, it can be used as an access or aggregation switch on a campus network or as an access switch for Metropolitan Area Network.

## Models and Appearances

The following models are available in the CloudEngine S5335-S-V2 series.

### Models and appearances of the CloudEngine S5335-S-V2 series

Models and Appearances	Description
 CloudEngine S5335-S24T4XE-V2	<ul style="list-style-type: none"> <li>• 24 x 10/100/1000Base-T ports, 4 x 10 GE SFP+ ports, 2 stack ports</li> <li>• 1+1 power supply backup</li> <li>• Forwarding performance:132 Mpps</li> <li>• Switching capacity: 260 Gbps</li> </ul>
 CloudEngine S5335-S24P4XE-V2	<ul style="list-style-type: none"> <li>• 24 x 10/100/1000Base-T ports, 4 x 10 GE SFP+ ports, 2 stack ports</li> <li>• 3 power supplies, N+1 power supply backup</li> <li>• PoE+</li> <li>• Forwarding performance: 132 Mpps</li> <li>• Switching capacity: 260 Gbps</li> </ul>
 CloudEngine S5335-S24U4XE-V2	<ul style="list-style-type: none"> <li>• 24 x 10/100/1000Base-T ports, 4 x 10 GE SFP+ ports, 2 stack ports</li> <li>• 3 power supplies, N+1 power supply backup</li> <li>• PoE++(90W)</li> <li>• Forwarding performance: 132 Mpps</li> <li>• Switching capacity: 260 Gbps</li> </ul>
 CloudEngine S5335-S48T4XE-V2	<ul style="list-style-type: none"> <li>• 48 x 10/100/1000Base-T ports, 4 x 10 GE SFP+ ports, 2 stack ports</li> <li>• 1+1 power supply backup</li> <li>• Forwarding performance: 144 Mpps</li> </ul>

Models and Appearances	Description
 <p>CloudEngine S5335-S48P4XE-V2</p>	<ul style="list-style-type: none"> <li>Switching capacity: 260 Gbps</li> <li>48 x 10/100/1000Base-T ports, 4 x 10 GE SFP+ ports, 2 stack ports</li> <li>3 power supplies, N+1 power supply backup</li> <li>PoE+</li> <li>Forwarding performance: 144 Mpps</li> <li>Switching capacity: 260 Gbps</li> </ul>
 <p>CloudEngine S5335-S48U4XE-V2</p>	<ul style="list-style-type: none"> <li>48 x 10/100/1000Base-T ports, 4 x 10 GE SFP+ ports, 2 stack ports</li> <li>3 power supplies, N+1 power supply backup</li> <li>PoE++(90W)</li> <li>Forwarding performance: 144 Mpps</li> <li>Switching capacity: 260 Gbps</li> </ul>
 <p>CloudEngine S5335-S24ST4XE-V2</p>	<ul style="list-style-type: none"> <li>24*GE SFP ports, 8 of which are dual-purpose 10/100/1000 or SFP, 4*10GE SFP+ ports, 2*12GE stack ports</li> <li>1+1 power supply backup. The power supply without fans and the power supply with fans cannot be used together.</li> <li>Forwarding performance: 132 Mpps</li> <li>Switching capacity: 260 Gbps</li> </ul>
 <p>CloudEngine S5335-S48S4X-V2</p>	<ul style="list-style-type: none"> <li>48*GE SFP ports, 4*10GE SFP+ ports</li> <li>1+1 power supply backup. The power supply without fans and the power supply with fans cannot be used together.</li> <li>Forwarding performance: 132 Mpps</li> <li>Switching capacity: 260 Gbps</li> </ul>

## Features and Highlights

### Powerful Service Processing Capability

- CloudEngine S5335-S-V2 supports a broad set of Layer 2/Layer 3 multicast protocols, such as PIM SM, PIM DM, PIM SSM, and IGMP snooping. This capability is ideal for high-definition video backhaul and video conferencing access.
- CloudEngine S5335-S-V2 provides multiple Layer 3 features including OSPF, IS-IS, BGP, and VRRP, meeting enterprises' access and aggregation service needs and enabling a variety of voice, video, and data applications.

### Multiple Security Control Mechanisms

- CloudEngine S5335-S-V2 supports MAC address authentication, 802.1X authentication, and implements dynamic delivery of policies (VLAN, QoS, and ACL) to users.
- CloudEngine S5335-S-V2 provides a series of mechanisms to defend against DoS attacks and user-targeted attacks. DoS attacks are targeted at switches and include SYN flood, Land, Smurf, and ICMP flood attacks. User-targeted attacks include bogus DHCP server attacks, IP/MAC address spoofing, DHCP request flood, and changing of the DHCP CHADDR value.
- CloudEngine S5335-S-V2 sets up and maintains a DHCP snooping binding table, and discards the packets that do not match the table entries. The DHCP snooping trusted port feature ensures that users connect only to the authorized DHCP server.
- CloudEngine S5335-S-V2 supports strict ARP learning, which protects a network against ARP spoofing attacks to ensure that users can connect to the Internet normally.

## Multiple Reliability Mechanisms

- CloudEngine S5335-S-V2 is equipped with two pluggable power modules that work in 1+1 redundancy backup mode. Mixed installation of AC and DC power modules is supported, allowing for flexible configuration of AC or DC power modules according to service requirements.
- In addition to supporting traditional Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), and Multiple Spanning Tree Protocol (MSTP), CloudEngine S5335-S-V2 is also designed with the industry's latest Ethernet Ring Protection Switching (ERPS) technology. This protocol is reliable, easy to maintain, and implements fast protection switching within 50 ms. ERPS is defined in ITU-T G.8032, and it implements millisecond-level protection switching based on traditional Ethernet MAC and bridging functions.
- CloudEngine S5335-S-V2 supports Smart Link, which implements backup of uplinks. One CloudEngine S5335-S-V2 switch can connect to multiple aggregation switches through multiple links, significantly improving reliability of access devices.

## Easy Network deployment

- CloudEngine S5335-S-V2 supports Huawei Easy Operation, a solution that provides zero-touch deployment, replacement of faulty devices without additional configuration, USB-based deployment, batch device configuration, and batch remote upgrade. The capabilities facilitate device deployment, upgrade, service provisioning, and other management and maintenance operations, and also greatly reduce O&M costs. CloudEngine S5335-S-V2 can be managed using SNMP v1/v2c/v3, CLI, web-based network management system, or SSH v2.0. Additionally, it supports RMON, multiple log hosts, port traffic statistics collection, and network quality analysis, which facilitate network optimization and reconstruction.

## Intelligent Stack (iStack)

- CloudEngine S5335-S-V2 supports intelligent stack (iStack). This technology combines multiple switches into a logical switch. Member switches in a stack implement redundancy backup to improve device reliability and use inter-device link aggregation to improve link reliability.
- iStack provides high network scalability. You can increase ports, bandwidth, and processing capacity of a stack by simply adding member switches to the stack.
- iStack also simplifies device configuration and management. After a stack is set up, multiple physical switches are virtualized into one logical device. You can log in to any member switch in the stack to manage all the member switches in the stack. CloudEngine S5335-S-V2 support stacking through electrical ports.
- Some CloudEngine S5335-S-V2 supports two 12GE dedicated stack ports, which release uplink ports and do not need to be configured.

## PoE Function

CloudEngine S5335-S-V2 PoE models can support PoE++(up to 90W power supply), Meeting high-power power supply requirements for Wi-Fi 6 APs, IP cameras, and Video phones.

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

## Intelligent O&M

- CloudEngine S5335-S-V2 provides telemetry technology to collect device data in real time and send the data to Huawei campus network analyzer CampusInsight. The CampusInsight analyzes network data based on the intelligent fault identification algorithm, accurately displays the real-time network status, effectively demarcates and locates faults in a timely manner, and identifies network problems that affect user experience, accurately guaranteeing user experience.

## Intelligent Upgrade

- CloudEngine S5335-S-V2 supports the intelligent upgrade feature. Specifically, CloudEngine S5335-S-V2 obtains the version upgrade path and downloads the newest version for upgrade from the Huawei Online Upgrade Platform (HOUP). The entire upgrade process is highly automated and achieves one-click upgrade. In addition, preloading the version is supported, which greatly shortens the upgrade time and service interruption time.

- The intelligent upgrade feature greatly simplifies device upgrade operations and makes it possible for the customer to upgrade the version independently. This greatly reduces the customer's maintenance costs. In addition, the upgrade policies on the HOUP platform standardize the upgrade operations, which greatly reduces the risk of upgrade failures.

## Cloud Management

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

## OPS(Open Programmability System)

- CloudEngine S5335-S-V2 supports Open Programmability System (OPS), an open programmable system based on the Python language. IT administrators can program the O&M functions of a CloudEngine S5335-S-V2 switch through Python scripts to quickly innovate functions and implement intelligent O&M.

## Product Specifications

Item	CloudEngine S5335-S24T4XE-V2	CloudEngine S5335-S24P4XE-V2	CloudEngine S5335-S24U4XE-V2
Fixed port	24 x 10/100/1000Base-T ports, 4 x 10 GE SFP+ ports, 2 stack ports	24 x 10/100/1000Base-T ports(PoE+), 4 x 10 GE SFP+ ports, 2 stack ports	24 x 10/100/1000Base-T ports(PoE++), 4 x 10 GE SFP+ ports, 2 stack ports
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	1 U	1 U	1 U
Chassis weight (including packaging)	7.48 kg	7.74 kg	7.82 kg
Power supply type	<ul style="list-style-type: none"> <li>● 180 W AC</li> <li>● 1200 W DC</li> </ul>	<ul style="list-style-type: none"> <li>● 600 W AC PoE</li> <li>● 1000 W AC PoE</li> <li>● 1000 W DC PoE</li> </ul>	<ul style="list-style-type: none"> <li>● 600 W AC PoE</li> <li>● 1000 W AC PoE</li> <li>● 1000 W DC PoE</li> </ul>
Rated voltage range	<ul style="list-style-type: none"> <li>● AC input(180W AC): 100 V AC to 240 V AC, 50/60 Hz</li> <li>● High-Voltage DC input(180W AC): 240 V DC</li> <li>● DC input(1200W DC): -48 V DC to -60 V DC</li> </ul>	<ul style="list-style-type: none"> <li>● AC input (600/1000 W AC PoE): 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz</li> <li>● High-Voltage DC input(600/1000W AC PoE): 240 V DC</li> <li>● DC input (1000 W DC PoE): -48 VDC to -60 V DC</li> </ul>	<ul style="list-style-type: none"> <li>● AC input (600/1000 W AC PoE): 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz</li> <li>● High-Voltage DC input(600/1000W AC PoE): 240 V DC</li> <li>● DC input (1000 W DC PoE): -48 VDC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>● AC input (180 W AC ): 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>● High-voltage DC input(180W AC) : 190 V DC to 290 V DC (meeting 240 V high-voltage DC certification)</li> <li>● DC input(1200 W DC): -38.4 V DC to -72 V DC</li> </ul>	<ul style="list-style-type: none"> <li>● AC input (600/1000 W AC PoE): 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>● High-voltage DC input (600/1000 W AC PoE): 190 V DC to 290 V DC (meeting 240 V high-voltage DC certification)</li> <li>● DC input (1000 W DC PoE): -38.4 V DC to -72V DC</li> </ul>	<ul style="list-style-type: none"> <li>● AC input (600/1000 W AC PoE): 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>● High-voltage DC input (600/1000 W AC PoE): 190 V DC to 290 V DC (meeting 240 V high-voltage DC certification)</li> <li>● DC input (1000 W DC PoE): -38.4 V DC to -72V DC</li> </ul>

Item	CloudEngine S5335-S24T4XE-V2	CloudEngine S5335-S24P4XE-V2	CloudEngine S5335-S24U4XE-V2
Maximum power consumption	88.95 W	<ul style="list-style-type: none"> <li>87.51 W (without PD)</li> <li>1023.22 W (with PD, PD power consumption of 840 W)</li> </ul>	<ul style="list-style-type: none"> <li>97.45 W (without PD)</li> <li>2438.86 W (with PD, PD power consumption of 2268 W)</li> </ul>
Noise	<ul style="list-style-type: none"> <li>Under normal temperature (sound power): 47dB (A)</li> <li>Under high temperature (sound power): 51dB (A)</li> <li>Under normal temperature (sound pressure): 35dB (A)</li> </ul>	<ul style="list-style-type: none"> <li>Under normal temperature (sound power): 48.8dB (A)</li> <li>Under high temperature (sound power): 60.9dB (A)</li> <li>Under normal temperature (sound pressure): 36.8dB (A)</li> </ul>	<ul style="list-style-type: none"> <li>Under normal temperature (sound power): 50dB (A)</li> <li>Under high temperature (sound power): 54.9dB (A)</li> <li>Under normal temperature (sound pressure): 38dB (A)</li> </ul>
Long-term operating temperature	<ul style="list-style-type: none"> <li>0-1800 m altitude: 0°C to +50°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: 0°C to +50°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: 0°C to +50°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 to +70°C	-40°C to +70°C	-40°C to +70°C
Relative humidity	5% to 95% (non-condensing)	5% to 95% (non-condensing)	5% to 95% (non-condensing)
Surge protection specification (service port)	±7 kV in common mode	±7 kV in common mode	±7 kV in common mode
Surge protection specification (power port)	<ul style="list-style-type: none"> <li>AC power port: ±5.5 kV in differential mode, ±6 kV in common mode</li> <li>DC power port: ±2 kV in differential mode, ±4 kV in common mode</li> </ul>	<ul style="list-style-type: none"> <li>AC power port: ±6 kV in differential mode, ±6 kV in common mode</li> <li>DC power port: ±2 kV in differential mode, ±4 kV in common mode</li> </ul>	<ul style="list-style-type: none"> <li>AC power port: ±6 kV in differential mode, ±6 kV in common mode</li> <li>DC power port: ±2 kV in differential mode, ±4 kV in common mode</li> </ul>
Heat dissipation	Air-cooled heat dissipation and intelligent speed adjustment	Air-cooled heat dissipation and intelligent speed adjustment	Air-cooled heat dissipation and intelligent speed adjustment

Item	CloudEngine S5335-S48T4XE-V2	CloudEngine S5335-S48P4XE-V2	CloudEngine S5335-S48U4XE-V2
Fixed port	48 x 10/100/1000Base-T ports, 4 x 10 GE SFP+ ports, 2 stack ports	48 x 10/100/1000Base-T ports(PoE+), 4 x 10 GE SFP+ ports, 2 stack ports	48 x 10/100/1000Base-T ports(PoE++), 4 x 10 GE SFP+ ports, 2 stack ports
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	1 U	1 U	1 U
Chassis weight (including packaging)	7.74 kg	8 kg	8.02 kg
Power supply type	<ul style="list-style-type: none"> <li>180 W AC</li> <li>1200 W DC</li> </ul>	<ul style="list-style-type: none"> <li>600 W AC PoE</li> <li>1000 W AC PoE</li> <li>1000 W DC PoE</li> </ul>	<ul style="list-style-type: none"> <li>600 W AC PoE</li> <li>1000 W AC PoE</li> <li>1000 W DC PoE</li> </ul>

Item	CloudEngine S5335-S48T4XE-V2	CloudEngine S5335-S48P4XE-V2	CloudEngine S5335-S48U4XE-V2
Rated voltage range	<ul style="list-style-type: none"> <li>AC input(180W AC): 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input(180W AC): 240 V DC</li> <li>DC input(1200W DC): -48 V DC to -60 V DC</li> </ul>	<ul style="list-style-type: none"> <li>AC input (600/1000 W AC PoE): 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input(600/1000W AC PoE): 240 V DC</li> <li>DC input (1000 W DC PoE): -48 VDC to -60 V DC</li> </ul>	<ul style="list-style-type: none"> <li>AC input (600/1000 W AC PoE): 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input(600/1000W AC PoE): 240 V DC</li> <li>DC input (1000 W DC PoE): -48 VDC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input (180 W AC ): 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-voltage DC input(180W AC): 190 V DC to 290 V DC (meeting 240 V high-voltage DC certification)</li> <li>DC input(1200 W DC): -38.4 V DC to -72 V DC</li> </ul>	<ul style="list-style-type: none"> <li>AC input (600/1000 W AC PoE): 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-voltage DC input (600/1000 W AC PoE): 190 V DC to 290 V DC (meeting 240 V high-voltage DC certification)</li> <li>DC input (1000 W DC PoE): -38.4 V DC to -72V DC</li> </ul>	<ul style="list-style-type: none"> <li>AC input (600/1000 W AC PoE): 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-voltage DC input (600/1000 W AC PoE): 190 V DC to 290 V DC (meeting 240 V high-voltage DC certification)</li> <li>DC input (1000 W DC PoE): -38.4 V DC to -72V DC</li> </ul>
Maximum power consumption	102.01 W	<ul style="list-style-type: none"> <li>114.65 W (without PD)</li> <li>1940.19 W (with PD, PD power consumption of 1680 W)</li> </ul>	<ul style="list-style-type: none"> <li>105.5 W (without PD)</li> <li>3170.75 W (with PD, PD power consumption of 2880 W)</li> </ul>
Noise	<ul style="list-style-type: none"> <li>Under normal temperature (sound power): 41.9dB (A)</li> <li>Under high temperature (sound power): 58.6dB (A)</li> <li>Under normal temperature (sound pressure): 29.9dB (A)</li> </ul>	<ul style="list-style-type: none"> <li>Under normal temperature (sound power): 50dB (A)</li> <li>Under high temperature (sound power): 54.9dB (A)</li> <li>Under normal temperature (sound pressure): 38dB (A)</li> </ul>	<ul style="list-style-type: none"> <li>Under normal temperature (sound power): 50dB (A)</li> <li>Under high temperature (sound power): 54.9dB (A)</li> <li>Under normal temperature (sound pressure): 38dB (A)</li> </ul>
Long-term operating temperature	<ul style="list-style-type: none"> <li>0-1800 m altitude: -5°C to +50°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 +50°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 +50°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 to +70°C	-40°C to +70°C	-40°C to +70°C
Relative humidity	5% to 95% (non-condensing)	5% to 95% (non-condensing)	5% to 95% (non-condensing)
Surge protection specification (service port)	±7 kV in common mode	±6 kV in common mode	±7 kV in common mode
Surge protection specification (power port)	<ul style="list-style-type: none"> <li>AC power port: ±5.5 kV in differential mode, ±6 kV in common mode</li> <li>DC power port: ±2 kV in differential mode, ±4 kV in common mode</li> </ul>	<ul style="list-style-type: none"> <li>AC power port: ±6 kV in differential mode, ±6 kV in common mode</li> <li>DC power port: ±2 kV in differential mode, ±4 kV in common mode</li> </ul>	<ul style="list-style-type: none"> <li>AC power port: ±6 kV in differential mode, ±6 kV in common mode</li> <li>DC power port: ±2 kV in differential mode, ±4 kV in common mode</li> </ul>

Item	CloudEngine S5335-S48T4XE-V2	CloudEngine S5335-S48P4XE-V2	CloudEngine S5335-S48U4XE-V2
Heat dissipation	Air-cooled heat dissipation and intelligent speed adjustment	Air-cooled heat dissipation and intelligent speed adjustment	Air-cooled heat dissipation and intelligent speed adjustment

Item	CloudEngine S5335-S24ST4XE-V2	CloudEngine S5335-S48S4X-V2
Fixed port	24*GE SFP ports, 8 of which are dual-purpose 10/100/1000 or SFP, 4*10GE SFP+ ports, 2*12GE stack ports	48*GE SFP ports, 4*10GE SFP+ ports
Dimensions (H x W x D)	43.6 mm x 442 mm x 420 mm	43.6 mm x 442 mm x 420 mm
Chassis height	1 U	1 U
Chassis weight (including packaging)	4.9 kg	4.65 kg
Power supply type	<ul style="list-style-type: none"> <li>80 W AC</li> <li>180 W AC</li> <li>1200 W DC</li> </ul>	<ul style="list-style-type: none"> <li>80 W AC</li> <li>180 W AC</li> <li>1200 W DC</li> </ul>
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> <li>DC input: -48 V DC to -60 V DC</li> </ul>	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> <li>DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input (180 W AC ): 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-voltage DC input(180W AC): 190 V DC to 290 V DC (meeting 240 V high-voltage DC certification)</li> <li>DC input(1200 W DC): -38.4 V DC to -72 V DC</li> </ul>	<ul style="list-style-type: none"> <li>AC input (180 W AC ): 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-voltage DC input(180W AC): 190 V DC to 290 V DC (meeting 240 V high-voltage DC certification)</li> <li>DC input(1200 W DC): -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption	85.78 W	127.55 W
Noise	<ul style="list-style-type: none"> <li>Under normal temperature (sound power): 41.9dB (A)</li> <li>Under high temperature (sound power): 58.6dB (A)</li> <li>Under normal temperature (sound pressure): 29.9dB (A)</li> </ul>	<ul style="list-style-type: none"> <li>Under normal temperature (sound power): 50dB (A)</li> <li>Under high temperature (sound power): 54.9dB (A)</li> <li>Under normal temperature (sound pressure): 38dB (A)</li> </ul>
Long-term operating temperature	<ul style="list-style-type: none"> <li>0-1800 m altitude: -5°C to +50°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 +50°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 to +70°C	-40°C to +70°C
Relative humidity	5% to 95% (non-condensing)	5% to 95% (non-condensing)
Surge protection specification (service port)	±1 kV in common mode	-
Surge protection specification (power port)	<ul style="list-style-type: none"> <li>AC power port: ±6 kV in differential mode, ±6 kV in common mode</li> <li>DC power port: ±2 kV in differential</li> </ul>	<ul style="list-style-type: none"> <li>AC power port: ±6 kV in differential mode, ±6 kV in common mode</li> <li>DC power port: ±2 kV in differential</li> </ul>

Item	CloudEngine S5335-S24ST4XE-V2	CloudEngine S5335-S48S4X-V2
	mode, $\pm 4$ kV in common mode	mode, $\pm 4$ kV in common mode
Heat dissipation	Air-cooled heat dissipation and intelligent speed adjustment	Air-cooled heat dissipation and intelligent speed adjustment

## Service Features

Item	Description
MAC address table	IEEE 802.1d compliance
	32768 MAC entries(MAX)
	MAC address learning and aging
	Static, dynamic, and blackhole MAC address entries
	Packet filtering based on source MAC addresses
VLAN	4094 VLANs
	Voice VLAN
	MUX VLAN
	VLAN assignment based on MAC addresses, protocols, IP subnets, policies, and ports
Reliability	Smart Link tree topology and Smart Link multi-instance, providing millisecond-level protection switchover
	STP (IEEE 802.1d), RSTP (IEEE 802.1w), and MSTP (IEEE 802.1s)
	ERPS (G.8032)
	BPDU protection, root protection, and loop protection
IP routing	Static route, RIPv1/v2, RIPng, OSPF, OSPFv3, ECMP, IS-IS, IS-ISv6, BGP, BGP4+, VRRP, and VRRP6
	Up to 8192 FIBv4 entries
	Up to 3072 FIBv6 entries
IPv6 features	Up to 3072 ND entries
	Path MTU (PMTU)
	IPv6 ping, IPv6 tracert, and IPv6 Telnet
Multicast	PIM DM, PIM SM, PIM SSM
	IGMP v1/v2/v3, IGMP v1/v2/v3 snooping and IGMP fast leave
	Multicast load balancing among member ports of a trunk
	Port-based multicast traffic statistics
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

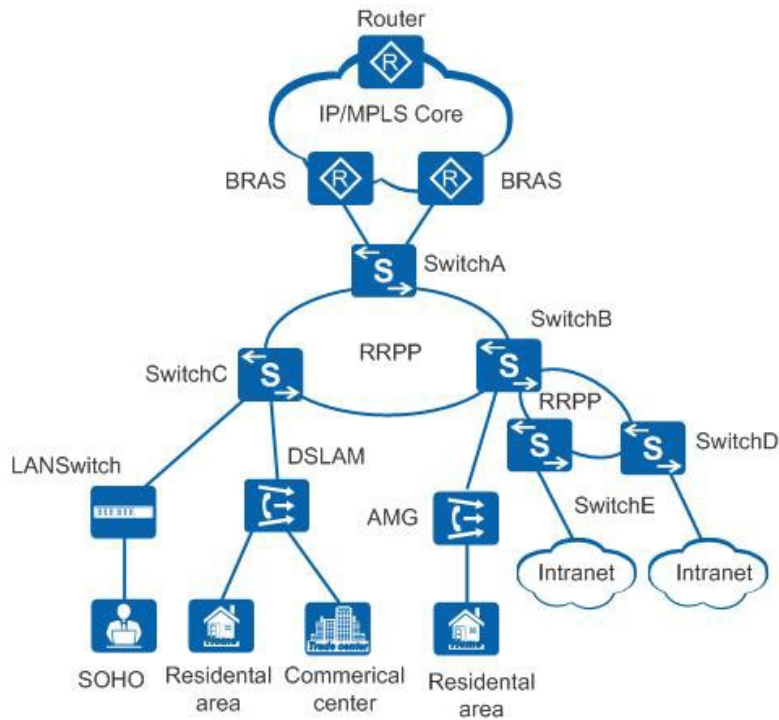


Item	Description
	DRR, SP and DRR+SP queue scheduling algorithms
	Re-marking of the 802.1p priority and DSCP priority
	Packet filtering at Layer 2 to Layer 4, filtering out invalid frames based on the source MAC address, destination MAC address, source IP address, destination IP address, TCP/UDP port number, protocol type, and VLAN ID
	Rate limiting in each queue and traffic shaping on ports
Security	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
	Blackhole MAC address entries
	Limit on the number of learned MAC addresses
	IEEE 802.1x authentication and limit on the number of users on a port
	AAA authentication, RADIUS authentication, HWTACACS authentication, and NAC
	SSH v2.0
	HTTPS
	CPU defense
	Blacklist and whitelist
	IEEE 802.1x authentication, MAC address authentication
	DHCPv4 client/relay/server/snooping
	DHCPv6 client/relay
	Attack source tracing and punishment for IPv6 packets such as ND, DHCPv6
Management and maintenance	iStack
	Cloud management based on Netconf/Yang
	Virtual cable test
	SNMP v1/v2c/v3
	RMON
	Web-based NMS
	System logs and alarms of different levels
	802.3az EEE
Interoperability	Supports VBST (Compatible with PVST/PVST+/RPVST)

# Networking and Applications

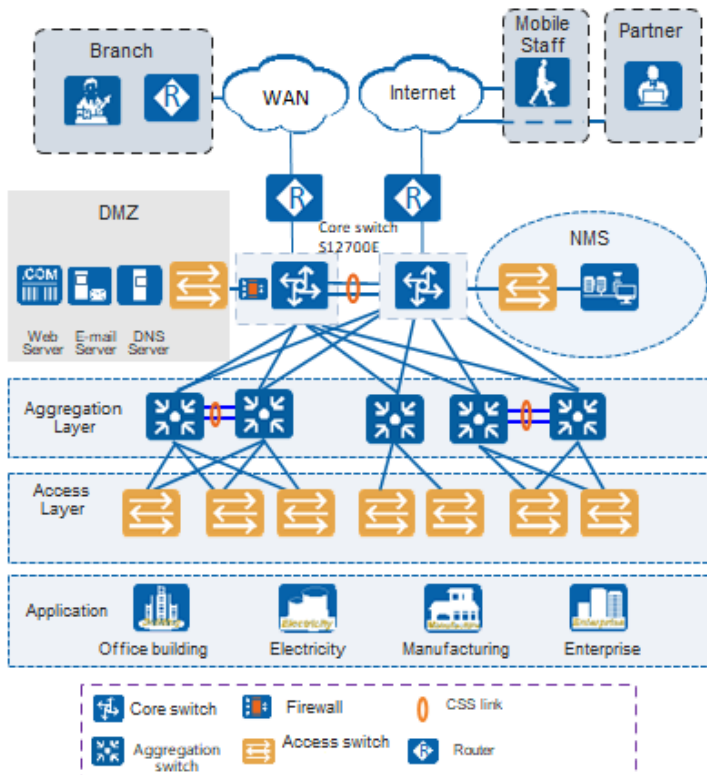
## Application In ETTx/MAN

CloudEngine S5335-S-V2 series switches can be deployed at the access layer of ETTx/MAN(Metropolitan Area Network) to build a high-performance, multi-service, and highly reliable ISP MAN network.



## Large-Scale Enterprise Campus Network

CloudEngine S5335-S-V2 series switches can be deployed at the access layer of a campus network to build a high-performance and highly reliable enterprise network.



## Small- or Medium-scale Enterprise Campus Network

CloudEngine S5335-S-V2 series switches can be deployed at the aggregation layer of a campus network to build a high-performance, multi-service, and highly reliable enterprise network.

With powerful aggregation and routing capabilities of CloudEngine S5335-S-V2 series switches make them suitable for use as core switches in a small-scale enterprise network. Two or more S5335-S-V2 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 S5335-S-V2 series switches.


Model	Product Description
CloudEngine S5335-S24T4XE-V2	CloudEngine S5335-S24T4XE-V2 (24 x 10/100/1000Base-T ports, 4 x 10 GE SFP+ ports, 2 stack ports, without power module)
CloudEngine S5335-S24P4XE-V2	CloudEngine S5335-S24P4XE-V2 (24 x 10/100/1000Base-T ports, 4 x 10 GE SFP+ ports, 2 stack ports, PoE+, without power module)
CloudEngine S5335-S24U4XE-V2	CloudEngine S5335-S24U4XE-V2 (24 x 10/100/1000Base-T ports, 4 x 10 GE SFP+ ports, 2 stack ports, PoE++, without power module)
CloudEngine S5335-S48T4XE-V2	CloudEngine S5335-S48T4XE (48 x 10/100/1000Base-T ports, 4 x 10 GE SFP+ ports, 2 stack ports, without power module)
CloudEngine S5335-S48P4XE-V2	CloudEngine S5335-S48P4XE-V2 (48 x 10/100/1000Base-T ports, 4 x 10 GE SFP+ ports, 2 stack ports, PoE+, without power module)
CloudEngine S5335-S48U4XE-V2	CloudEngine S5335-S48U4XE-V2 (48 x 10/100/1000Base-T ports, 4 x 10 GE SFP+ ports, 2 stack ports, PoE++, without power module)
CloudEngine S5335-S24ST4XE-V2	CloudEngine S5335-S24ST4XE-V2 (24*GE SFP ports, 8 of which are dual-purpose 10/100/1000 or SFP, 4*10GE SFP+ ports, 2*12GE stack ports, without power module)
CloudEngine S5335-S48S4X-V2	CloudEngine S5335-S48S4X-V2 (48*GE SFP ports, 4*10GE SFP+ ports, without power module)
PAC80S12-CN	80 W AC power module
PAC180S12-CN	180 W AC power module, used in Non-PoE models
PDC1K2S12-CE	1200 W DC power module, used in Non-PoE models
PAC600S56-EB	600 W AC&240 V DC Power Module (66mm Width Case, Back to Front, Power panel side exhaust), used in PoE models
PAC1000S56-EB	1000 W AC&240 V DC Power Module (66 mm Width Case, Back to Front, Power panel side exhaust), used in PoE models
PDC1000S56-EB	1000 W PoE DC Power Module (66 mm Width case, Back to Front, Power panel side exhaust), used in PoE models
S53S-M-Lic	S53XX-S Series Basic SW,Per Device

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