

Huawei CloudEngine S5335-L-V2 Series Switches Brochure

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





Product Overview







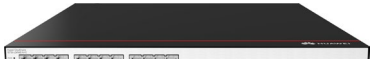



CloudEngine S5335-L-V2 series switches are ideal for scenarios such as access or aggregation switch on a campus network or Metropolitan Area Network. Built on next-generation, high-performance hardware and software platform, CloudEngine S5335-L-V2 switches stand out with features such as intelligent stack (iStack), flexible Ethernet networking, and diversified security control. They support multiple Layer 3 routing protocols and provide high performance and service processing capabilities.



Models and Appearances



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

Models and appearances of the CloudEngine S5335-L-V2 series

Models and Appearances	Description
 <p>CloudEngine S5335-L8T4S-A-V2</p>	<ul style="list-style-type: none"> • 8 x 10/100/1000Base-T ports, 4 x GE SFP ports • AC power supply • Forwarding performance: 18 Mpps • Switching capacity: 260 Gbps
 <p>CloudEngine S5335-L8T4X-QA-V2</p>	<ul style="list-style-type: none"> • 8 x 10/100/1000Base-T ports, 4 x 10 GE SFP+ ports • AC power supply • Forwarding performance: 72 Mpps • Switching capacity: 260 Gbps
 <p>CloudEngine S5335-L8P4X-QA-V2</p>	<ul style="list-style-type: none"> • 8 x 10/100/1000Base-T ports, 4 x 10 GE SFP+ ports • AC power supply • PoE+ • Forwarding performance: 72 Mpps • Switching capacity: 260 Gbps
 <p>CloudEngine S5335-L10T4X-A-V2</p>	<ul style="list-style-type: none"> • 10 x 10/100/1000Base-T ports, 4 x 10 GE SFP+ ports • AC power supply • Forwarding performance: 75 Mpps • Switching capacity: 260 Gbps

Models and Appearances	Description
 <p>CloudEngine S5335-L8P2T4X-A-V2</p>	<ul style="list-style-type: none"> • 8 x 10/100/1000Base-T ports(PoE+), 2 x 10/100/1000Base-T ports, 4 x 10 GE SFP+ ports • AC power supply • Forwarding performance: 75 Mpps • Switching capacity: 260 Gbps
 <p>CloudEngine S5335-L10T4X-D-V2</p>	<ul style="list-style-type: none"> • 10 x 10/100/1000Base-T ports, 4 x 10 GE SFP+ ports • DC power supply • Forwarding performance: 75 Mpps • Switching capacity: 260 Gbps
 <p>CloudEngine S5335-L16T4X-A-V2</p>	<ul style="list-style-type: none"> • 16 x 10/100/1000Base-T ports, 4 x 10GE SFP+ ports • AC power supply • Forwarding performance: 84 Mpps • Switching capacity: 260 Gbps
 <p>CloudEngine S5335-L24T4XE-A-V2</p>	<ul style="list-style-type: none"> • 24 x 10/100/1000Base-T ports, 4 x 10 GE SFP+ ports, 2 stack ports • AC power supply • Forwarding performance: 132 Mpps • Switching capacity: 260 Gbps
 <ul style="list-style-type: none"> • CloudEngine S5335-L24T4XE-A-V2(front access) 	<ul style="list-style-type: none"> • 24 x 10/100/1000Base-T ports, 4 x 10 GE SFP+ ports, 2 stack ports • front access • AC power supply • Forwarding performance: 132 Mpps • Switching capacity: 260 Gbps
 <p>CloudEngine S5335-L24T4XE-D-V2</p>	<ul style="list-style-type: none"> • 24 x 10/100/1000Base-T ports, 4 x 10GE SFP+ ports, 2 stack ports • DC power supply • Forwarding performance: 132 Mpps • Switching capacity: 260 Gbps
 <p>CloudEngine S5335-L24P4XE-A-V2</p>	<ul style="list-style-type: none"> • 24 x 10/100/1000Base-T ports, 4 x 10GE SFP+ ports, 2 stack ports • AC power supply • PoE+ • Forwarding performance: 132 Mpps • Switching capacity: 260 Gbps
 <p>CloudEngine S5335-L24T4X-QA-V2</p>	<ul style="list-style-type: none"> • 24 x 10/100/1000Base-T ports, 4 x 10GE SFP+ ports • AC power supply • Forwarding performance: 96 Mpps • Switching capacity: 260 Gbps
 <p>CloudEngine S5335-L24ST4XE-A-V2</p>	<ul style="list-style-type: none"> • 24 x GE SFP ports, 8 of which are dual-purpose 10/100/1000 or SFP, 4 x 10GE SFP+ ports, 2 x 12GE stack ports • AC power supply • Forwarding performance: 132 Mpps • Switching capacity: 260 Gbps
	<ul style="list-style-type: none"> • 24 x GE SFP ports, 8 of which are dual-purpose 10/100/1000 or SFP, 4 x 10GE SFP+ ports, 2 x 12GE stack ports

Models and Appearances	Description
CloudEngine S5335-L24ST4XE-D-V2	<ul style="list-style-type: none"> • DC power supply • Forwarding performance: 132 Mpps • Switching capacity: 260 Gbps
 CloudEngine S5335-L48T4XE-A-V2	<ul style="list-style-type: none"> • 48 x 10/100/1000Base-T ports, 4 x 10 GE SFP+ ports, 2 stack ports • AC power supply • Forwarding performance: 144 Mpps • Switching capacity: 260 Gbps
 CloudEngine S5335-L48S4X-A-V2	<ul style="list-style-type: none"> • 48 x GE SFP ports, 4 x 10GE SFP+ ports • AC power supply • Forwarding performance: 132 Mpps • Switching capacity: 260 Gbps

Models and Appearances	Description
 CloudEngine S5535-L24ST4XE-A-V2	<ul style="list-style-type: none"> • 24 x GE SFP ports, 8 of which are dual-purpose 10/100/1000 or SFP, 4 x 10GE SFP+ ports, 2 x 12GE stack ports • AC power supply • Forwarding performance: 132 Mpps • Switching capacity: 260 Gbps
 CloudEngine S5535-L16LP2UM2X-QA-V2	<ul style="list-style-type: none"> • 16 x 10/100/1000Base-T ports(PoE+), 2 x 100M/1/2.5/5/10G Base-X ports(PoE++), 2 x 10GE SFP+ ports • AC power supply • Forwarding performance: 84 Mpps • Switching capacity: 260 Gbps

Features and Highlights

Flexible Ethernet Networking

- In addition to supporting traditional Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), and Multiple Spanning Tree Protocol (MSTP), CloudEngine S5335-L-V2 is also designed with the industry's latest Ethernet Ring Protection Switching (ERPS) technology. 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-L-V2 supports Smart Link, which implements backup of uplinks. One CloudEngine S5335-L-V2 switch can connect to multiple aggregation switches through multiple links, significantly improving reliability of access devices.

Diversified Security Control

- CloudEngine S5335-L-V2 supports 802.1X authentication, MAC address authentication, and hybrid authentication on a per port basis, and implements dynamic policy delivery (VLAN, QoS, and ACL) to users.
- CloudEngine S5335-L-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-L-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-L-V2 supports strict ARP learning. This feature prevents ARP spoofing attackers from exhausting ARP entries so that users can connect to the Internet normally.

Easy Operation and Maintenance

- CloudEngine S5335-L-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 Easy Operation solution facilitates device deployment, upgrade, service provisioning, and other management and maintenance operations, and also greatly reduces O&M costs. CloudEngine S5335-L-V2 can be managed and maintained using Simple Network Management Protocol (SNMP) V1, V2, and V3, Command Line Interface (CLI), web-based network management system, or Secure Shell (SSH) V2.0. Additionally, it supports remote network monitoring (RMON), multiple log hosts, port traffic statistics collection, and network quality analysis, paving the way for network optimization and reconstruction.
- CloudEngine S5335-L-V2 supports MUX VLAN, which involves a principal VLAN and multiple subordinate VLANs. Subordinate VLANs are classified into group VLANs and separate VLANs. Ports in the principal VLAN can communicate with ports in subordinate VLANs. Ports in a subordinate group VLAN can communicate with each other, whereas ports in a subordinate separate VLAN cannot communicate with each other. CloudEngine S5335-L-V2 also supports VLAN-Based Spanning Tree (VBST) protocol.

Note: Only those switches with USB ports can USB-based deployment.

iStack

- CloudEngine S5335-L-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-L-V2 support stacking through electrical ports.
- Some CloudEngine S5335-L-V2 supports two 12GE dedicated stack ports, which release uplink ports and do not need to be configured.

PoE Function

- 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-L-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-L-V2 supports the intelligent upgrade feature. Specifically, CloudEngine S5335-L-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

- CloudEngine S5335-L-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-L-V2 switch through Python scripts to quickly innovate functions and implement intelligent O&M.

Product Specifications

Item	CloudEngine S5335-L10T4X-A-V2	CloudEngine S5335-L8P2T4X-A-V2	CloudEngine S5335-L10T4X-D-V2	CloudEngine S5335-L16T4X-A-V2
Fixed port	10 x 10/100/1000Base-T ports , 4 x 10GE SFP+ ports	8 x 10/100/1000Base-T ports(PoE+), 2 x 10/100/1000Base-T ports, 4 x 10 GE SFP+ ports	10 x 10/100/1000Base-T ports , 4 x 10GE SFP+ ports	16 x 10/100/1000Base-T ports, 4 x 10GE SFP+ ports
Dimensions (H x W x D)	43.6 mm x 250 mm x 180 mm	43.6 mm x 320 mm x 210 mm	43.6 mm x 320 mm x 210 mm	43.6 mm x 442 mm x 220 mm
Chassis height	1 U	1 U	1 U	1 U
Chassis weight (including packaging)	2.22 kg	3.06 kg	2.74 kg	3.34 kg
Power supply type	Built-in AC power	Built-in AC power	Built-in DC power	Built-in AC power
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz	100 V AC to 240 V AC, 50/60 Hz	-48V DC~-60V DC	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 290 V AC, 45 Hz to 65 Hz	90 V AC to 290 V AC, 45 Hz to 65 Hz	-38.4V DC~-72V DC	90 V AC to 290 V AC, 45 Hz to 65 Hz
Maximum power consumption	29.49 W	<ul style="list-style-type: none"> 32.33 W (without PD) 169.35 W (with PD, PD power consumption of 125 W) 	29.66 W	33.23 W
Noise	<ul style="list-style-type: none"> Under normal temperature (sound power): 44.5dB (A) Under high temperature (sound power): 53dB (A) Under normal temperature (sound pressure): 32.5dB (A) 	<ul style="list-style-type: none"> Under normal temperature (sound power): 47dB (A) Under high temperature (sound power): 57.3dB (A) Under normal temperature (sound pressure): 35dB (A) 	<ul style="list-style-type: none"> Under normal temperature (sound power): 47dB (A) Under high temperature (sound power): 57.3dB (A) Under normal temperature (sound pressure): 35dB (A) 	<ul style="list-style-type: none"> Under normal temperature (sound power): 47dB (A) Under high temperature (sound power): 51dB (A) Under normal temperature (sound pressure): 35dB (A)
Long-term operating temperature	<ul style="list-style-type: none"> 0-1800 m altitude: -5°C to +50°C 1800-5000 m altitude: The operating temperature reduces by 1°C every time the altitude 	<ul style="list-style-type: none"> 0-1800 m altitude: -5°C to +50°C 1800-5000 m altitude: The operating temperature reduces by 1°C every time the altitude increases by 	<ul style="list-style-type: none"> 0-1800 m altitude: -5°C to +50°C 1800-5000 m altitude: The operating temperature reduces by 1°C every time the altitude increases by 	<ul style="list-style-type: none"> 0-1800 m altitude: -5°C to +45°C 1800-5000 m altitude: The operating temperature reduces by 1°C every time the altitude increases by

Item	CloudEngine S5335-L10T4X-A-V2	CloudEngine S5335-L8P2T4X-A-V2	CloudEngine S5335-L10T4X-D-V2	CloudEngine S5335-L16T4X-A-V2
	increases by 220 m.	220 m.	220 m.	220 m.
Storage temperature	-40°C to +70°C	-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)	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	±7 kV in common mode
Surge protection specification (power port)	<ul style="list-style-type: none"> Differential mode: ± 6 kV Common mode: ± 6 kV 	<ul style="list-style-type: none"> Differential mode: ± 6 kV Common mode: ± 6 kV 	<ul style="list-style-type: none"> Differential mode: ± 2 kV Common mode: ± 4 kV 	<ul style="list-style-type: none"> Differential mode: ± 6 kV Common mode: ± 6 kV
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	Air-cooled heat dissipation and intelligent speed adjustment
Physical security	One Kensington lock slot, can be used to lock the device to mounting bracket			

Item	CloudEngine S5335-L24T4XE-A-V2	CloudEngine S5335-L24T4XE-D-V2	CloudEngine S5335-L24P4XE-A-V2	CloudEngine S5335-L48T4XE-A-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, 4 x GE SFP ports, 2 stack ports	24 x 10/100/1000Base-T ports (PoE+), 4 x 10 GE SFP+ ports, 2 stack ports	48 x 10/100/1000Base-T ports, 4 x 10 GE SFP+ ports, 2 stack ports
Dimensions (H x W x D)	43.6 mm x 442 mm x 220 mm	43.6 mm x 442 mm x 220 mm	43.6 mm x 442 mm x 220 mm	43.6 mm x 442 mm x 220 mm
Chassis height	1 U	1 U	1 U	1 U
Chassis weight (including packaging)	3.46 kg	3.44 kg	3.81 kg	3.62 kg
Power supply type	Built-in AC power	Built-in DC power	Built-in AC power	Built-in AC power
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz	-48V DC~-60V DC	100 V AC to 240 V AC, 50/60 Hz	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 290 V AC, 45 Hz to 65 Hz	-38.4V DC~-72V DC	90 V AC to 290 V AC, 45 Hz to 65 Hz	90 V AC to 290 V AC, 45 Hz to 65 Hz
Maximum power consumption	37.03 W	36.33 W	<ul style="list-style-type: none"> 55.40 W (without PD) 500.33 W(with PD,PD Power consumption of :400W) 	49.48 W
Noise	<ul style="list-style-type: none"> Under normal 	<ul style="list-style-type: none"> Under normal 	<ul style="list-style-type: none"> Under normal 	<ul style="list-style-type: none"> Under normal

Item	CloudEngine S5335-L24T4XE-A-V2	CloudEngine S5335-L24T4XE-D-V2	CloudEngine S5335-L24P4XE-A-V2	CloudEngine S5335-L48T4XE-A-V2
	temperature (sound power): 47dB (A) <ul style="list-style-type: none"> Under high temperature (sound power): 51dB (A) Under normal temperature (sound pressure): 35dB (A) 	temperature (sound power): 47dB (A) <ul style="list-style-type: none"> Under high temperature (sound power): 51dB (A) Under normal temperature (sound pressure): 35dB (A) 	temperature (sound power): 49.3dB (A) <ul style="list-style-type: none"> Under high temperature (sound power): 63dB (A) Under normal temperature (sound pressure): 37.3dB (A) 	temperature (sound power): 46.6dB (A) <ul style="list-style-type: none"> Under high temperature (sound power): 54.3dB (A) Under normal temperature (sound pressure): 34.6dB (A)
Long-term operating temperature	<ul style="list-style-type: none"> 0-1800 m altitude: -5°C to +50°C 1800-5000 m altitude: The operating temperature reduces by 1°C every time the altitude increases by 220 m. 	<ul style="list-style-type: none"> 0-1800 m altitude: -5°C to +50°C 1800-5000 m altitude: The operating temperature reduces by 1°C every time the altitude increases by 220 m. 	<ul style="list-style-type: none"> 0-1800 m altitude: -5°C to +50°C 1800-5000 m altitude: The operating temperature reduces by 1°C every time the altitude increases by 220 m. 	<ul style="list-style-type: none"> 0-1800 m altitude: -5°C to +50°C 1800-5000 m altitude: The operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C	-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)	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	±7 kV in common mode
Surge protection specification (power port)	<ul style="list-style-type: none"> Differential mode: ± 6 kV Common mode: ± 6 kV 	<ul style="list-style-type: none"> Differential mode: ± 2 kV Common mode: ±4 kV 	<ul style="list-style-type: none"> Differential mode: ± 6 kV Common mode: ± 6 kV 	<ul style="list-style-type: none"> Differential mode: ± 6 kV Common mode: ±6 kV
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	Air-cooled heat dissipation and intelligent speed adjustment
Physical security	One Kensington lock slot, can be used to lock the device to mounting bracket			

Item	CloudEngine S5335-L8T4S-A-V2	CloudEngine S5335-L8T4X-QA-V2	CloudEngine S5335-L8P4X-QA-V2
Fixed port	8 x 10/100/1000Base-T ports , 4 x GE SFP ports	8 x 10/100/1000Base-T ports, 4 x 10 GE SFP+ ports	8 x 10/100/1000Base-T ports(PoE+), 4 x 10GE SFP+ ports
Dimensions (H x W x D)	43.6 mm x 250 mm x 180 mm	43.6 mm x 320 mm x 210 mm	43.6 mm x 320 mm x 210 mm
Chassis height	1 U	1 U	1 U
Chassis weight	2.22 kg	2.21 kg	3.06 kg

Item	CloudEngine S5335-L8T4S-A-V2	CloudEngine S5335-L8T4X-QA-V2	CloudEngine S5335-L8P4X-QA-V2
(including packaging)			
Power supply type	Built-in AC power	Built-in AC power	Built-in DC power
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz	100 V AC to 240 V AC, 50/60 Hz	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 290 V AC, 45 Hz to 65 Hz	90 V AC to 290 V AC, 45 Hz to 65 Hz	90 V AC to 290 V AC, 45 Hz to 65 Hz
Maximum power consumption	21.52 W	16.97 W	<ul style="list-style-type: none"> • 22.21 W (without PD) • 152.55 W (with PD, PD power consumption of 125 W)
Noise	<ul style="list-style-type: none"> • Under normal temperature (sound power): 44.5dB (A) • Under high temperature (sound power): 53dB (A) • Under normal temperature (sound pressure): 32.5dB (A) 	No fan, silent	No fan, silent
Long-term operating temperature	<ul style="list-style-type: none"> • 0-1800 m altitude: -5°C to +45°C • 1800-5000 m altitude: The operating temperature reduces by 1°C every time the altitude increases by 220 m. 	<ul style="list-style-type: none"> • 0-1800 m altitude: -5°C to +45°C • 1800-5000 m altitude: The operating temperature reduces by 1°C every time the altitude increases by 220 m. 	<ul style="list-style-type: none"> • 0-1800 m altitude: -5°C to +45°C • 1800-5000 m altitude: The operating temperature reduces by 1°C every time the altitude increases by 220 m.
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"> • Differential mode: ± 6 kV • Common mode: ± 6 kV 	<ul style="list-style-type: none"> • Differential mode: ± 6 kV • Common mode: ± 6 kV 	<ul style="list-style-type: none"> • Differential mode: ± 6 kV • Common mode: ± 6 kV
Heat dissipation	Air-cooled heat dissipation and intelligent speed adjustment	Natural heat dissipation	Natural heat dissipation

Item	CloudEngine S5335-L24ST4XE-A-V2	CloudEngine S5335-L24ST4XE-D-V2	CloudEngine S5335-L24T4X-QA-V2	CloudEngine S5335-L48S4X-A-V2
Fixed port	24 x GE SFP ports, 8 of which are dual-purpose 10/100/1000 or SFP, 4 x 10GE SFP+ ports, 2 x 12GE stack ports	24 x GE SFP ports, 8 of which are dual-purpose 10/100/1000 or SFP, 4 x 10GE SFP+ ports, 2 x 12GE stack ports	24 x 10/100/1000Base-T ports, 4 x 10 GE SFP+ ports	48 x GE SFP ports, 4 x 10GE SFP+ ports
Dimensions (H x	43.6 mm x 442 mm x	43.6 mm x 442 mm x	43.6 mm x 442 mm x	43.6 mm x 442 mm x

Item	CloudEngine S5335-L24ST4XE-A-V2	CloudEngine S5335-L24ST4XE-D-V2	CloudEngine S5335-L24T4X-QA-V2	CloudEngine S5335-L48S4X-A-V2
W x D)	220 mm	220 mm	220 mm	220 mm
Chassis height	1 U	1 U	1 U	1 U
Chassis weight (including packaging)	3.55 kg	3.73 kg	3.48 kg	3.89 kg
Power supply type	Built-in AC power	Built-in DC power	Built-in AC power	Built-in AC power
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz	-48V DC~-60V DC	100 V AC to 240 V AC, 50/60 Hz	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 290 V AC, 45 Hz to 65 Hz	-38.4V DC~-72V DC	90 V AC to 290 V AC, 45 Hz to 65 Hz	90 V AC to 290 V AC, 45 Hz to 65 Hz
Maximum power consumption	41.7 W	38.4 W	29.96 W	84.1 W
Noise	<ul style="list-style-type: none"> Under normal temperature (sound power): 38.1dB (A) Under high temperature (sound power): 58.6dB (A) Under normal temperature (sound pressure): 26.1dB (A) 	<ul style="list-style-type: none"> Under normal temperature (sound power): 38.1dB (A) Under high temperature (sound power): 58.6dB (A) Under normal temperature (sound pressure): 26.1dB (A) 	No fan, silent	<ul style="list-style-type: none"> Under normal temperature (sound power): 47dB (A) Under high temperature (sound power): 51dB (A) Under normal temperature (sound pressure): 35dB (A)
Long-term operating temperature	<ul style="list-style-type: none"> 0-1800 m altitude: -5°C to +45°C 1800-5000 m altitude: The operating temperature reduces by 1°C every time the altitude increases by 220 m. 	<ul style="list-style-type: none"> 0-1800 m altitude: -5°C to +45°C 1800-5000 m altitude: The operating temperature reduces by 1°C every time the altitude increases by 220 m. 	<ul style="list-style-type: none"> 0-1800 m altitude: -5°C to +45°C 1800-5000 m altitude: The operating temperature reduces by 1°C every time the altitude increases by 220 m. 	<ul style="list-style-type: none"> 0-1800 m altitude: -5°C to +45°C 1800-5000 m altitude: The operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C	-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)	5% to 95% (non-condensing)
Surge protection specification (service port)	±1 kV in common mode	±1 kV in common mode	±7 kV in common mode	-
Surge protection specification (power port)	<ul style="list-style-type: none"> Differential mode: ± 6 kV Common mode: ± 6 kV 	<ul style="list-style-type: none"> Differential mode: ± 2 Kv Common mode: ±4 kV 	<ul style="list-style-type: none"> Differential mode: ± 6 kV Common mode: ± 6 kV 	<ul style="list-style-type: none"> Differential mode: ± 6 kV Common mode: ± 6 kV
Heat dissipation	Air-cooled heat dissipation and intelligent speed adjustment	Air-cooled heat dissipation and intelligent speed adjustment	Natural heat dissipation	Air-cooled heat dissipation and intelligent speed adjustment

Item	CloudEngine S5535-L24ST4XE-A-V2	CloudEngine S5535-L16LP2UM2X-QA-V2
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Item	CloudEngine S5535-L24ST4XE-A-V2	CloudEngine S5535-L16LP2UM2X-QA-V2
Fixed port	24 x GE SFP ports, 8 of which are dual-purpose 10/100/1000 or SFP, 4 x 10GE SFP+ ports, 2 x 12GE stack ports	16 x 10/100/1000Base-T ports(PoE+), 2 x 100M/1/2.5/5/10G Base-X ports(PoE++), 2 x 10GE SFP+ ports
Dimensions (H x W x D)	43.6 mm x 442 mm x 220 mm	54 mm x 250 mm x 220 mm
Chassis height	1 U	1.2 U
Chassis weight (including packaging)	3.55 kg	3.4 kg
Power supply type	Built-in AC power	Built-in AC power
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz	90 V AC to 290 V AC, 45 Hz to 65 Hz
Maximum power consumption	41.7 W	<ul style="list-style-type: none"> • 29.2 W (without PD) • 166.4 W (with PD, PD power consumption of 125 W)
Noise	<ul style="list-style-type: none"> • Under normal temperature (sound power): 38.1dB (A) • Under high temperature (sound power): 58.6dB (A) • Under normal temperature (sound pressure): 26.1dB (A) 	fanless, noise-free
Long-term operating temperature	<ul style="list-style-type: none"> • 0-1800 m altitude: -5°C to +50°C • 1800-5000 m altitude: The operating temperature reduces by 1°C every time the altitude increases by 220 m. 	<ul style="list-style-type: none"> • 0-1800 m altitude: -5°C to +45°C • 1800-5000 m altitude: The operating temperature reduces by 1°C every time the altitude increases by 220 m.
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	±6 kV in common mode
Surge protection specification (power port)	<ul style="list-style-type: none"> • Differential mode: ± 6 kV • Common mode: ± 6 kV 	<ul style="list-style-type: none"> • Differential mode: ± 6 kV • Common mode: ± 6 kV
Heat dissipation	Air-cooled heat dissipation and intelligent speed adjustment	Natural heat dissipation

Service Features

Item	Description
MAC address table	MAC address learning and aging
	32768 MAC entries (MAX)
	Static, dynamic, and blackhole MAC address entries
	Packet filtering based on source MAC addresses
	Interface-based MAC learning limiting

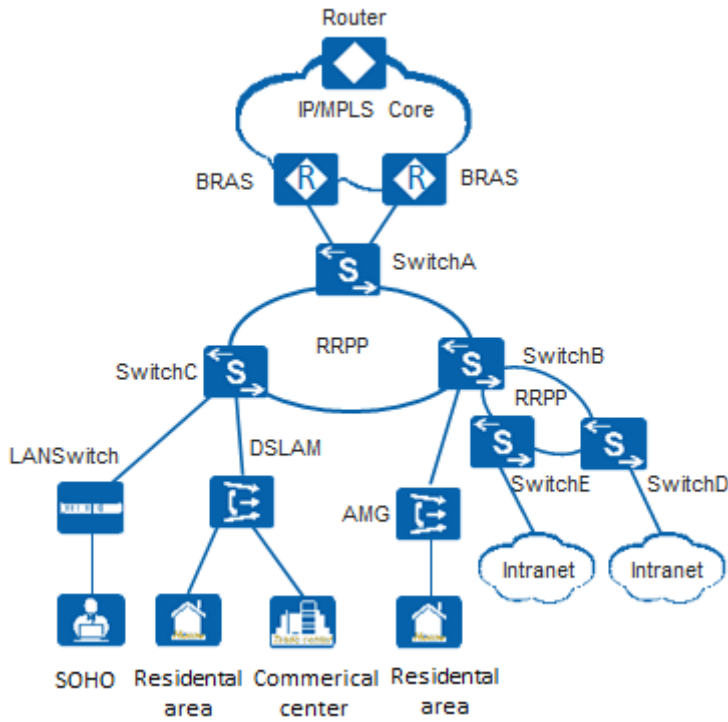
Item	Description
VLAN features	4094 VLANs
	Voice VLAN
	MUX VLAN
	VLAN assignment based on MAC addresses, protocols, IP subnets, policies, and interfaces
Ethernet loop protection	Smart Link tree topology and Smart Link multi-instance, providing millisecond-level protection switchover
	ERPS (G.8032)
	STP (IEEE 802.1d), RSTP (IEEE 802.1w), and MSTP (IEEE 802.1s)
	BPDU protection, root protection, and loop protection
	BPDU tunnel
Multicast	PIM DM, PIM SM, PIM SSM
	IGMPv1/v2/v3 and IGMPv1/v2/v3 snooping
	Multicast load balancing among member ports of a trunk
	Interface-based multicast traffic statistics
IP routing	Static route, RIP, RIPng, OSPF, OSPFv3
	Up to 4096 FIBv4 entries (MAX)
	Up to 1024 FIBv6 entries (MAX)
IPv6 features	Up to 1024 ND entries (MAX)
	Path MTU (PMTU)
	IPv6 ping, IPv6 tracer, and IPv6 Telnet
Reliability	LACP
QoS/ACL	Rate limiting on packets sent and received by an interface
	Packet redirection
	Interface-based traffic policing and two-rate and three-color CAR
	Eight queues on each interface
	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 interfaces
Security	Hierarchical user management and password protection
	DoS attack defense, ARP attack defense, and ICMP attack defense
	Binding of the IP address, MAC address, interface number, and VLAN ID
	Port isolation, port security, and sticky MAC
	Blackhole MAC address entries

Item	Description
	Limit on the number of learned MAC addresses
	IEEE 802.1x authentication and limit on the number of users on an interface
	AAA authentication, RADIUS authentication, HWTACACS authentication, and NAC
	SSH V2.0
	Hypertext Transfer Protocol Secure (HTTPS)
	CPU defense
	Blacklist and whitelist
	DHCP client, DHCP relay, DHCP server, DHCP snooping
	DHCPv6 client, DHCPv6 relay
Management and maintenance	iStack
	Cloud management based on Netconf/Yang
	Virtual Cable Test (VCT)
	Remote configuration and maintenance using Telnet
	SNMPv1/v2c/v3
	RMON
	web-based NMS
	HTTPS
	LLDP/LLDP-MED
	System logs and multi-level alarms
	802.3az EEE
Interoperability	Supports VBST (Compatible with PVST/PVST+/RPVST)

Networking and Applications

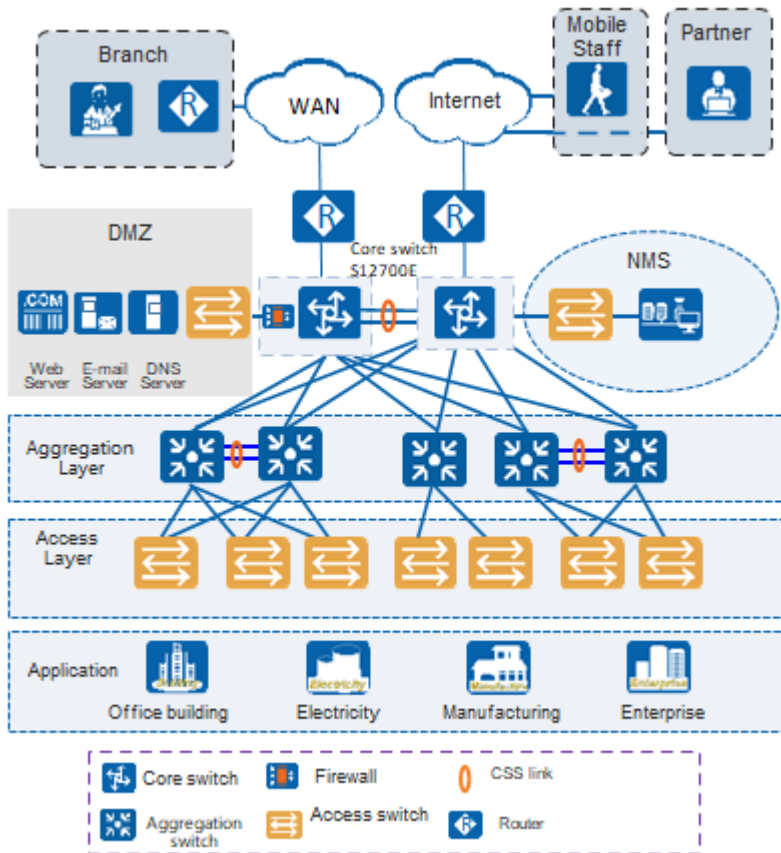
Application In ETTx/MAN

CloudEngine S5335-L-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-L-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-L-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-L-V2 series switches make them suitable for use as core switches in a small-scale enterprise network. Two or more S5335-L-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

Model	Product Description
CloudEngine S5335-L8T4S-A-V2	CloudEngine S5335-L8T4S-A-V2 (8*10/100/1000BASE-T ports, 4*GE SFP+ ports, built-in AC power)
CloudEngine S5335-L8T4X-QA-V2	CloudEngine S5335-L8T4X-QA-V2 (8*10/100/1000BASE-T ports, 4*10GE SFP ports, built-in AC power, Fanless)
CloudEngine S5335-L8P4X-QA-V2	CloudEngine S5335-L8P4X-QA-V2 (8*10/100/1000BASE-T ports, 4*10GE SFP+ ports, PoE+, 125 W PoE, built-in AC power, Fanless)
CloudEngine S5335-L10T4X-A-V2	CloudEngine S5335-L10T4X-TA-V2 (10*10/100/1000BASE-T ports, 4*10GE SFP+ ports, AC power)
CloudEngine S5335-L8P2T4X-A-V2	CloudEngine S5335-L8P2T4X-TA-V2 (8*10/100/1000BASE-T ports(PoE+), 2*10/100/1000BASE-T ports, 4*10GE SFP+ ports, AC power)
CloudEngine S5335-L10T4X-D-V2	CloudEngine S5335-L10T4X-TA-V2 (10*10/100/1000BASE-T ports, 4*10GE SFP+ ports, DC power)
CloudEngine S5335-L16T4X-A-V2	CloudEngine S5335-L16T4X-QA-V2 (16*10/100/1000BASE-T ports, 4*10GE SFP+ ports, AC power)
CloudEngine S5335-L24T4XE-A-V2	CloudEngine S5335-L24T4XE-A-V2 (24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, 2*stack ports, AC power)
CloudEngine S5335-L24T4XE-A-V2(front access)	S5335-L24T4XE-A-V2(24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, 2*12GE stack ports, built-in AC power, front access)
CloudEngine S5335-L24T4XE-D-V2	CloudEngine S5335-L24T4XE-D-V2 (24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, 2*stack ports, DC power)
CloudEngine S5335-L24P4XE-A-V2	CloudEngine S5335-L24P4XE-A-V2 (24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, 2*stack ports, PoE+, AC power)
CloudEngine S5335-L24T4X-QA-V2	S5335-L24T4X-QA-V2(24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, built-in AC power, Fanless)
CloudEngine S5335-L24ST4XE-A-V2	S5335-L24ST4XE-A-V2(24*GE SFP ports, 8 of which are dual-purpose 10/100/1000 or SFP, 4*10GE SFP+ ports, 2*12GE stack ports, built-in AC power, front access)
CloudEngine S5335-L24ST4XE-D-V2	S5335-L24ST4XE-D-V2(24*GE SFP ports, 8 of which are dual-purpose 10/100/1000 or SFP, 4*10GE SFP+ ports, 2*12GE stack ports, built-in DC power, front access)
CloudEngine S5335-L48T4XE-A-V2	CloudEngine S5335-L48T4XE-A-V2 (48*10/100/1000BASE-T ports, 4*10GE SFP+ ports, 2*stack ports, AC power)
CloudEngine S5335-L48S4X-A-V2	S5335-L48S4X-A-V2(48*GE SFP ports, 4*10GE SFP+ ports, built-in AC power, front access)
S53L-M-Lic	S53XX-L Series Basic SW,Per Device


Model	Product Description
CloudEngine S5535-L24ST4XE-A-V2	CloudEngine S5535-L24ST4XE-A-V2(24*GE SFP ports, 8 of which are dual-purpose 10/100/1000 or SFP, 4*10GE SFP+ ports, 2*12GE stack ports)
CloudEngine S5535-	CloudEngine S5535-L16LP2UM2X-QA-V2(16*10/100/1000BASE-T ports(POE+),

Model	Product Description
L16LP2UM2X-QA-V2	2*100M/1G/2.5G/5G/10G Ethernet ports(POE++), 2*10GE SFP+ ports, AC power)
S55L-M-Lic	S55XX-L Series Basic SW,Per Device

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