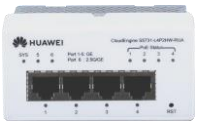
# CloudEngine S5731-L Series Remote Unit Switches Brochure

Huawei CloudEngine S5731-L series remote unit switches provide all-GE downlink ports and GE optical uplink ports.

## Product Overview

CloudEngine S5731-L series remote units of campus switch are all-gigabit Ethernet switch based on the innovative architecture, provide all-gigabit data access capabilities;Based on the simplified architecture, functions as a remote unit and works with the central switch to implement simplified network deployment;innovative optical/electrical PoE is supported;the central switches provide more than 1000 m PoE power for remote unit; the switches can be widely used in enterprise offices, education, hotels, and healthcare, helping enterprises build green and low-carbon buildings.

## Models and Appearances

| Models and Appearances | Description |
|---|---|
|  <br>CloudEngine S5731-L4P2HW-RUA | • 4 x 10/100/1000Base-T ports (PoE++), 1 x GE + 1 x 1/2.5GE SFP ports(hybrid optical-electrical)<br>• Power adapter or Optical-electrical hybrid cable power supply<br>• PoE++<br>• Forwarding performance: 11.25 Mpps<br>• Switching capacity: 52 Gbps<br>*Note:GE6 port supports 2.5GE* |
|  <br>CloudEngine S5731-L4T2S-RUA | • 4 x 10/100/1000Base-T ports, 1 x 1/2.5GE SFP port, 1 x GE port with an SC connector<br>• Power adapter power supply<br>• Forwarding performance: 11.25 Mpps<br>• Switching capacity: 52 Gbps<br>*Note:GE6 port supports 2.5GE* |
|  <br>CloudEngine S5731-L4P2S-RUA | • 4 x 10/100/1000Base-T ports (PoE++), 1 x 1/2.5GE SFP port, 1 x GE port with an SC connector,<br>• Power adapter power supply<br>• PoE++<br>• Forwarding performance: 11.25 Mpps<br>• Switching capacity: 52 Gbps<br>*Note:GE6 port supports 2.5GE* |

| Models and Appearances | Description |
| --- | --- |
|  <br>CloudEngine S5731-L4T2ST-RUA | • 4 x 10/100/1000Base-T ports, 1 x 1/2.5GE SFP port, 1 x 10/100/1000BASE-T port<br>• Power adapter power supply<br>• Forwarding performance: 11.25 Mpps<br>• Switching capacity: 52 Gbps<br>*Note:GE6 port supports 2.5GE* |
|  <br>CloudEngine S5731-L4P2ST-RUA | • 4x 10/100/1000Base-T ports (PoE++),1 x 1/2.5GE SFP port, 1 x 10/100/1000BASE-T port<br>• Power adapter power supply<br>• PoE++<br>• Forwarding performance: 11.25 Mpps<br>• Switching capacity: 52 Gbps<br>*Note:GE6 port supports 2.5GE* |
|  <br>CloudEngine S5731-L4P2HT-RUA | • 4 x 10/100/1000Base-T ports (PoE++), 1 x 1/2.5GE SFP port(hybrid optical-electrical), 1 x 10/100/1000BASE-T port<br>• Power adapter, PoE or Optical-electrical hybrid cable power supply<br>• PoE++<br>• Forwarding performance: 11.25 Mpps<br>• Switching capacity: 52 Gbps<br>*Note:GE6 port supports 2.5GE* |
|  <br>CloudEngine S5731-L8T2ST-RUA | • 8x 10/100/1000Base-T ports, 1 x 1/2.5GE SFP port, 1*10/100/1000BASE-T port<br>• Power adapter power supply<br>• Forwarding performance: 17.25 Mpps<br>• Switching capacity: 52 Gbps<br>*Note:GE10 port supports 2.5GE* |
|  <br>CloudEngine S5731-L8P2ST-RUA | • 8x 10/100/1000Base-T ports (PoE+), 1 x 1/2.5GE SFP port, 1 x 10/100/1000BASE-T port<br>• Power adapter power supply<br>• PoE+<br>• Forwarding performance: 17.25 Mpps<br>• Switching capacity: 52 Gbps<br>*Note:GE10 port supports 2.5GE* |
|  <br>CloudEngine S5731-L8P2HT-RUA | • 8x 10/100/1000Base-T ports (PoE+), 1 x 1/2.5GE SFP port(hybrid optical-electrical), 1 x 10/100/1000BASE-T port<br>• Power adapter, PoE or Optical-electrical hybrid cable power supply<br>• PoE+<br>• Forwarding performance: 17.25 Mpps<br>• Switching capacity: 52 Gbps<br>*Note:GE10 port supports 2.5GE* |
|  <br>CloudEngine S5731-L8LP2ST-RUA | • 8x 10/100/1000Base-T ports (PoE+), 1 x 1/2.5GE SFP port, 1 x 10/100/1000BASE-T port<br>• Power adapter power supply<br>• PoE+ (45W) |

| Models and Appearances | Description |
| --- | --- |
| | • Forwarding performance: 17.25 Mpps<br>• Switching capacity: 52 Gbps<br>*Note:GE10 port supports 2.5GE* |
|  <br>CloudEngine S5731-L16P2SR-RUA | • 16x 10/100/1000Base-T ports (PoE+), 1 x GE + 1 x 1/2.5GE SFP port<br>• Power adapter power supply<br>• PoE+<br>• Forwarding performance: 29.25Mpps<br>• Switching capacity: 52 Gbps<br>*Note:GE17 port supports 2.5GE* |

Note: CloudEngine S5731-L4P2HT-RUA and CloudEngine S5731-L8P2HT-RUA do not configure a power adapter by default,If it's necessary,150 W adapter is optional.

# Features and Highlights

## Simplified Architecture

Based on Huawei's unique simplified architecture, the traditional three-layer architecture of access, aggregation, and core is simplified into a two-layer architecture of access and core, greatly reducing network deployment and management complexity.

- Based on the simplified architecture, the access switches splits into the central switches and the remote units. The remote units function as the port expansion module of the central switch to flexibly expand the port capacity of the central switch. One device is a network.
- The remote units are connected to the central switch through optical cables or optical-electrical hybrid cables, which does not require planning, configuration, management, and plug-and-play.When a device is expanded or faulty, replace the device with a new one, simplifying network planning, deployment, and routine O&M.

Note: The CloudEngine S12700E/S12700/S7700/S6700/S5700 series switches can be upgraded to V200R21C10 or a later version and can work with remote modules to implement simplified networking.

## Fast Access

- The remote units provide the full line-speed forwarding capability. All ports support non-blocking data packet forwarding, providing users with high-speed access experience and meeting the requirements of high-bandwidth services such as HD video conferencing, online video, and large file download.

## Ultra-low Power Consumption

- All models of remote units use energy-saving chips and no fans to achieve ultra-low power consumption. The average maximum power consumption of a single port is less than 1 W, saving 30% compared with traditional switches.

## Flexible Deployment

- Flexible installation: Supports flexible installation modes, such as wall embedding, DIN-rail-mounted, wall-mounted, and desktop-mounted, meeting all-scenario installation requirements.
- Flexible power supply: The supports local power supply based on power adapters and remote PoE power supply based on optical/electrical hybrid cables, making device site selection more flexible.

## Innovative Optoelectronic PoE

Huawei pioneered the optical-electrical PoE technology and continuously innovated to drive the transformation of transmission media on campus networks. It introduced optical-electrical hybrid cables to provide ultra-long-distance, high-power PoE power supply and provide ultra-high bandwidth access capabilities.

- Remote power supply: Based on the optical-electrical PoE technology , central switch can provide remote power supply for CloudEngine S5731-L remote units and AirEngine Wi-Fi 6 APs. Providing ultra-long-distance hybrid cable power supply about 220 m@90 W PoE++, 330 m@60 W PoE++, 650 m@30 W PoE+, and 1200 m@15 W PoE.
- Ultra-high bandwidth: Optical-electrical hybrid cables can provide ultra-fast access capabilities of 1/2.5/10 Gbit/s for CloudEngine S5731-L remote units and AirEngine Wi-Fi 6 APs. In the future, optical modules can be replaced to achieve smooth bandwidth upgrade. One-time cabling can meet network evolution requirements in the next 10-15 years.
- 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.

Note: The CloudEngine S8700 and CloudEngine S5731-H optical-electrical hybrid models work with remote modules by optical-electrical hybrid cable.

### Various PoE Features

The remote units of PoE module support PoE++ and provides data access and power supply for terminals such as Wi-Fi 6 APs, IP cameras, and IP phones.Some remote modules can provide power supply based on optical-electrical hybrid cable. In this way, the power supply is centralized and the network is disconnected from the power supply.

### Intelligent O&M

Central switche collects status data of itself and remote units and sends the data to CampusInsight in real time based on Telemetry. CampusInsight analyzes the network data using the intelligent fault identification algorithm to accurately display the real-time network status. In addition, it can effectively demarcate faults and locate fault causes in a timely manner, identify network problems that affect user experience, and accurately ensure user experience.

### Intelligent Upgrade

- Remote units can be upgraded intelligently by using the central switch. First, the central switch obtains the version upgrade path from the HOUP and downloads the new version for upgrade. The upgrade process is highly automated, achieving one-click upgrade.In addition, pre-loading versions are supported, which greatly shortens the upgrade time and service interruption time.After the remote module goes online, the central switch automatically matches the software version of the remote units and upgrades the software version as required.
- Intelligent upgrade greatly simplifies device upgrade operations, makes it possible for customers to upgrade versions independently, and greatly reduces maintenance costs.In addition, the upgrade policy of the HOUP platform is used to regulate the upgrade path, which greatly reduces the upgrade failure risk.

### Cloud Management

The remote units function as the port expansion module of the central switch and is managed by the central switch in a unified manner.In addition, Huawei cloud management platform can use the central switch to implement visualized management for all connected remote units, including cloud configuration, monitoring, and inspection. This reduces onsite deployment and O&M manpower and reduces network OPEX.

## Product Specifications

| Item | CloudEngine S5731-L4T2S-RUA | CloudEngine S5731-L4P2S-RUA | CloudEngine S5731-L4T2ST-RUA |
|---|---|---|---|
| Uplink port | 1 x 1/2.5GE SFP port, 1 x GE port with an SC connector | 1 x 1/2.5GE SFP port, 1 x GE port with an SC connector | 1 x 1/2.5GE SFP port, 1 x 10/100/1000BASE-T port, |
| Downlink port | 4 x 10/100/1000BASE-T ports | 4 x 10/100/1000BASE-T ports, PoE++, | 4 x 10/100/1000Base-T ports |
| Dimensions (H x W x D) | 27 mm x 185 mm x 115 mm | 38 mm x 185 mm x 38 mm | 27 mm x 185 mm x 115 mm |
| Chassis weight | 0.6 kg | 0.6 kg | 0.6 kg |

| Item | CloudEngine S5731-L4T2S-RUA | CloudEngine S5731-L4P2S-RUA | CloudEngine S5731-L4T2ST-RUA |
|---|---|---|---|
| Installation methods | Desk or Wall mounting | Desk or Wall mounting | Desk or Wall mounting |
| Power supply type | Power adapter | Power adapter | Power adapter |
| Rated voltage range | 12V | 56V | 12V |
| Maximum power consumption | 5.06 W | • 7 W (without PD)<br>• 88 W (with PD, PD power consumption of 77 W) | 5.06 W |
| operating temperature | -5°C to +45°C | -5°C to +45°C | -5°C to +45°C |
| 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) | ±6 kV in common mode | ±6 kV in common mode | ±6 kV in common mode |
| Surge protection specification (power port) | ±6 kV in common mode | ±6 kV in common mode | ±6 kV in common mode |
| Heat dissipation | No fans,Natural heat dissipation | No fans,Natural heat dissipation | No fans,Natural heat dissipation |

| Item | CloudEngine S5731-L4P2ST-RUA | CloudEngine S5731-L8T2ST-RUA | CloudEngine S5731-L8P2ST-RUA |
|---|---|---|---|
| Uplink port | 1 x 1/2.5GE SFP port, 1 x 10/100/1000BASE-T port | 1 x 1/2.5GE SFP port, 1 x 10/100/1000BASE-T port | 1 x 1/2.5GE SFP port, 1 x 10/100/1000BASE-T port |
| Downlink port | 4 x 10/100/1000BASE-T ports, PoE++, | 8 x 10/100/1000Base-T ports | 8*10/100/1000BASE-T ports, PoE+ |
| Dimensions (H x W x D) | 38 mm x 185 mm x 115 mm | 27 mm x 210 mm x 130 mm | 38 mm x 210 mm x 130 mm |
| Chassis weight | 0.6 kg | 0.6 kg | 0.6 kg |
| Installation methods | Desk or Wall mounting | Desk or Wall mounting | Desk or Wall mounting |
| Power supply type | Power adapter | Power adapter | Power adapter |
| Rated voltage range | 56V | 12V | 56V |
| Maximum power consumption | • 7 W (without PD)<br>• 88 W (with PD, PD power consumption of 77 W) | 7.86 W | • 10 W (without PD)<br>• 146 W (with PD, PD power consumption of 131 W) |
| operating temperature | -5°C to +45°C | -5°C to +45°C | -5°C to +45°C |
| 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 | ±6 kV in common mode | ±6 kV in common mode | ±6 kV in common mode |

| Item | CloudEngine S5731-L4P2ST-RUA | CloudEngine S5731-L8T2ST-RUA | CloudEngine S5731-L8P2ST-RUA |
|---|---|---|---|
| (service port) | | | |
| Surge protection specification (power port) | ±6 kV in common mode | ±6 kV in common mode | ±6 kV in common mode |
| Heat dissipation | No fans,Natural heat dissipation | No fans,Natural heat dissipation | No fans,Natural heat dissipation |

| Item | CloudEngine S5731-L4P2HW-RUA | CloudEngine S5731-L4P2HT-RUA | CloudEngine S5731-L8P2HT-RUA |
|---|---|---|---|
| Uplink port | 1 x GE SFP + 1 x 1/2.5GE ports(hybrid optical-electrical) | 1 x 1/2.5GE SFP port(hybrid optical-electrical), 1 x 10/100/1000BASE-T port | 1 x 1/2.5GE SFP port(hybrid optical-electrical), 1 x 10/100/1000BASE-T port |
| Downlink port | 4 x 10/100/1000Base-T ports,PoE++ | 4 x 10/100/1000Base-T ports,PoE++ | 8 x 10/100/1000Base-T ports,PoE+ |
| Dimensions (H x W x D) | 45 mm x 90 mm x 75 mm | 38 mm x 185 mm x 115 mm | 38 mm x 210 mm x 130 mm |
| Chassis weight | 0.6 kg | 0.6 kg | 0.6 kg |
| Installation methods | wall embedding or DIN-rail mounting | Desk or Wall mounting | Desk or Wall mounting |
| Power supply type | Power adapter or Optical-electrical PoE power supply | Power adapter, PoE or Optical-electrical PoE power supply | Power adapter PoE or Optical-electrical PoE power supply |
| Rated voltage range | 56V | 56V | 56V |
| Maximum power consumption | • 7 W (without PD)<br>• 88.5 W (with PD, PD power consumption of 77 W) | • 7 W (without PD)<br>• 88 W (with PD, PD power consumption of 77 W) | • 9.6 W (without PD)<br>• 146 W (with PD, PD power consumption of 131 W) |
| operating temperature | -5°C to +40°C | -5°C to +45°C | -5°C to +45°C |
| 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) | ±6 kV in common mode | ±6 kV in common mode | ±6 kV in common mode |
| Surge protection specification (power port) | ±6 kV in common mode | ±6 kV in common mode | ±6 kV in common mode |
| Heat dissipation | No fans,Natural heat dissipation | No fans,Natural heat dissipation | No fans,Natural heat dissipation |

| Item | CloudEngine S5731-L8LP2ST-RUA | CloudEngine S5731-L16P2SR-RUA | |
|---|---|---|---|
| Uplink port | 1 x 1/2.5GE SFP port, 1 x | 1 x GE SFP +1 x 1/2.5GE SFP | |

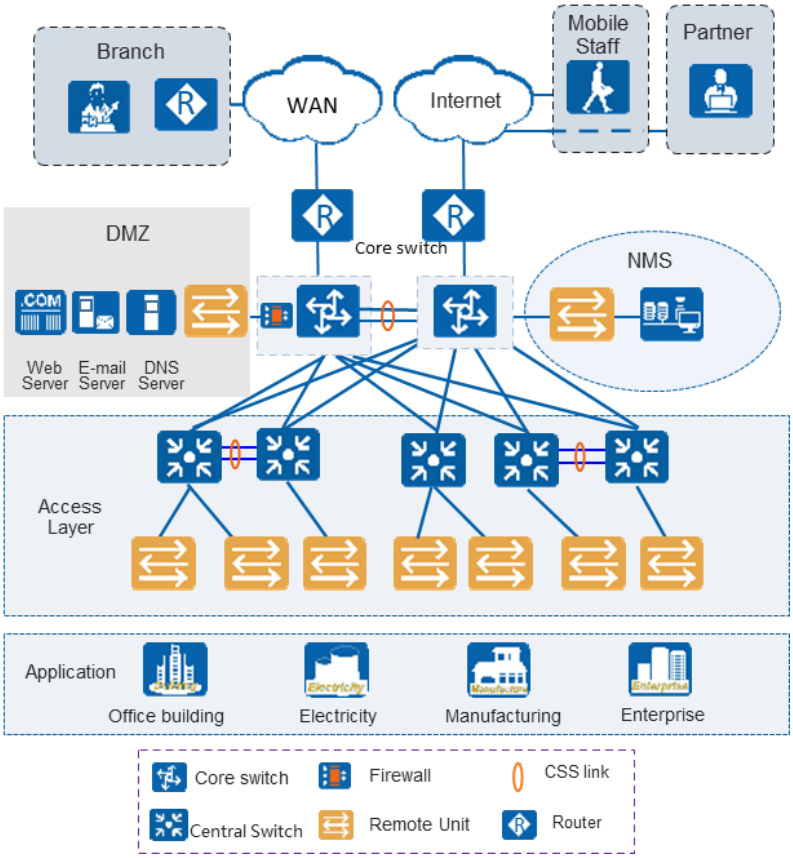
| Item | CloudEngine S5731-L8LP2ST-RUA | CloudEngine S5731-L16P2SR-RUA | |
|---|---|---|---|
| | 10/100/1000BASE-T port | ports | |
| Downlink port | 8*10/100/1000BASE-T ports, PoE+ | 16 x 10/100/1000Base-T ports,PoE+ | |
| Dimensions (H x W x D) | 38 mm x 210 mm x 130 mm | 43.6 mm x 420 mm x 260mm | |
| Chassis weight | 1.36 kg | 3.65 kg | |
| Installation methods | Desk or Wall mounting | Rack mounting,Desk mounting,Wall mounting | |
| Power supply type | Power adapter | Built-in AC | |
| Rated voltage range | Power adapter input: 100–240 V AC; 50/60 Hz<br>Power adapter output: 56 V DC | AC input: 90 V AC to 300 V AC; 47 Hz to 63 Hz | |
| Maximum power consumption | • 9W (without PD)<br>• 59.6 W (with PD, PD power consumption of 45 W) | • 16.7 W (without PD)<br>• 160.45 W (with PD, PD power consumption of 125 W) | |
| operating temperature | -5°C to +45°C | -5C to +45°C | |
| 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) | ±6 kV in common mode | ±6 kV in common mode | |
| Surge protection specification (power port) | Differential mode: ±6 kV; common mode: ±6 kV | Differential mode: ±6 kV; common mode: ±6 kV | |
| Heat dissipation | No fans,Natural heat dissipation | No fans,Natural heat dissipation | |

Note: The Optical-electrical PoE power supply of CloudEngine S5731-L4P2HT-RUA and CloudEngine S5731-L8P2HT-RUA is limited currently and can be increased to 83 W and 80 W by running commands.

# Networking and Applications

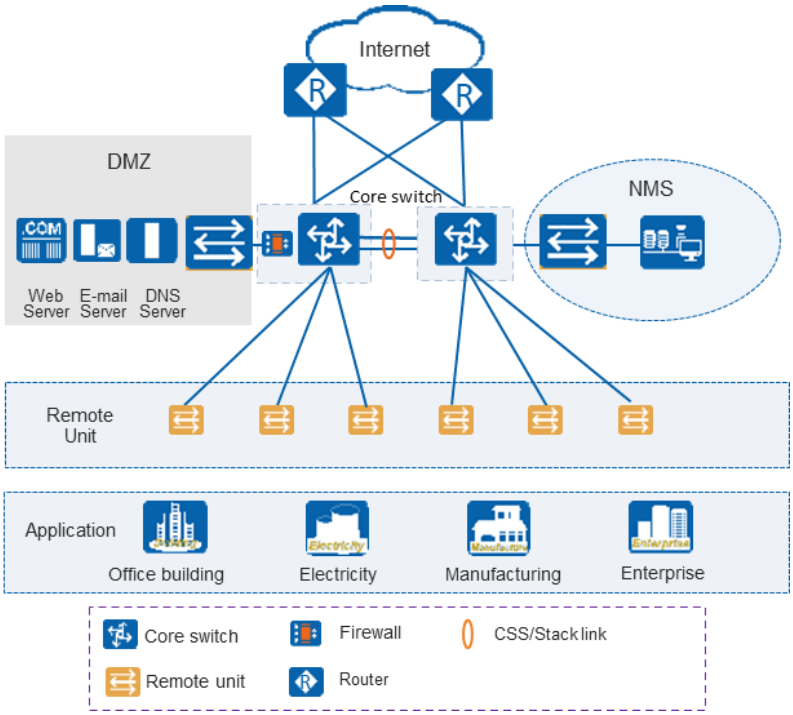
## Large-Scale Enterprise Campus Network

CloudEngine S12700E or S7700 switches are used as the core of the campus network. Independent firewalls are used to implement platform security in the DMZ. Central switches and remote units as access switches to provide wired or wireless access services for campus terminals. These switches can be widely used in government and enterprise offices,commercial buildings, energy and electricity, manufacturing and other industries




## Small- or Medium-scale Enterprise Campus Network

CloudEngine S6730 or S5730 series switches are used as the core of small- and medium-sized campus networks. Independent firewalls are used to implement platform security in the DMZ zone. The central switch uses remote modules to flexibly expand ports. The remote modules provide PoE capabilities on demand for IP phones. The camera provides data access and power supply.



# Ordering Information

| Model | Product Description |
|---|---|
| CloudEngine S5731-L4P2HW-RUA | CloudEngine S5731-L4P2HW-RUA (4*10/100/1000BASE-T ports, PoE++, 2*GE hybrid optical-electrical SFP ports, AC power, power adapter) |
| CloudEngine S5731-L4T2S-RUA | CloudEngine S5731-L4T2S-RUA (4*10/100/1000BASE-T ports, 1*GE SFP port, 1*GE port with an SC connector, TX1310 nm/RX1490 nm, AC power, power adapter) |
| CloudEngine S5731-L4P2S-RUA | CloudEngine S5731-L4P2S-RUA (4*10/100/1000BASE-T ports, PoE++, 1*GE SFP port, 1*GE port with an SC connector, TX1310 nm/RX1490 nm, AC power, power adapter) |
| CloudEngine S5731-L4T2ST-RUA | CloudEngine S5731-L4T2ST-RUA (4*10/100/1000BASE-T ports, 1*GE SFP port, 1*10/100/1000BASE-T port, AC power, power adapter) |
| CloudEngine S5731-L4P2ST-RUA | CloudEngine S5731-L4P2ST-RUA (4*10/100/1000BASE-T ports, PoE++, 1*GE SFP port, 1*10/100/1000BASE-T port, AC power, power adapter) |
| CloudEngine S5731-L4P2HT-RUA | CloudEngine S5731-L4P2HT-RUA (4*10/100/1000BASE-T ports, PoE++, 1*GE hybrid optical-electrical SFP port, 1*10/100/1000BASE-T port, PoE input) |
| CloudEngine S5731-L8T2ST-RUA | CloudEngine S5731-L8T2ST-RUA (8*10/100/1000BASE-T ports, 1*GE SFP port, 1*10/100/1000BASE-T port, AC power, power adapter) |
| CloudEngine S5731-L8P2ST-RUA | CloudEngine S5731-L8P2ST-RUA (8*10/100/1000BASE-T ports, PoE+, 1*GE SFP port, 1*10/100/1000BASE-T port, AC power, power adapter) |
| CloudEngine S5731-L8P2HT-RUA | CloudEngine S5731-L8P2HT-RUA (8*10/100/1000BASE-T ports, PoE+, 1*GE hybrid optical-electrical SFP port, 1*10/100/1000BASE-T port, PoE input) |
| CloudEngine S5731-L8LP2ST-RUA | CloudEngine S5731-L8LP2ST-RUA (8*10/100/1000BASE-T ports, PoE+, 1*GE SFP port, 1*10/100/1000BASE-T port, AC power, power adapter) |
| CloudEngine S5731-L16P2SR-RUA | S5731-L16P2SR-RUA (16*10/100/1000BASE-T ports, 2*GE SFP ports, PoE+, AC power) |
| 12W Power adapter | Power adapter for non-PoE models |
| 90W PoE Power adapter 1 | PoE Power adapter with Euroblock connector for S5731-L4P2HW-RUA |
| 90W PoE Power adapter 2 | PoE power adapter for S5731-L4P2S-RUA & S5731-L4P2ST-RUA |
| 150W PoE Power adapter | PoE power adapter for S5731-L4P2HT-RUA & 8-port PoE models |

# 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

**Huawei Technologies Co., Ltd.**

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

Website:e.huawei.com