



Huawei CloudEngine 6881 Switch Datasheet

Huawei CloudEngine 6881 series switches have advanced hardware architecture with 40GE/100GE uplink ports and high-density 10GE access ports.

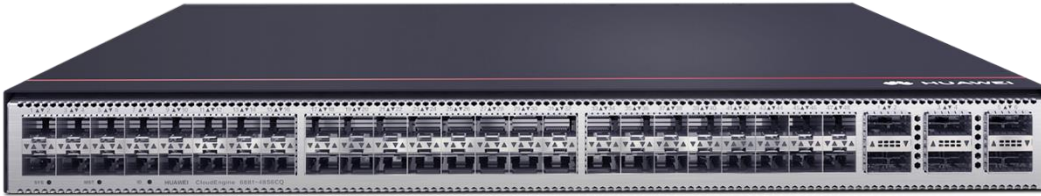


CloudEngine 6881 series can be used to build a scalable data center network platform in the cloud computing era, or work as core or aggregation switches on campus networks.

Product Overview

Product Appearance

CloudEngine 6881 series switches provide 48 x 10GE SFP+ ports , 6 x 100GE QSFP28 ports.



Product Characteristics

High-Density 10GE Access

- CloudEngine 6881 series provide up to 48 x 10GE ports, allowing for high-density 10GE server access and smooth evolution.
- CloudEngine 6881 series provide up to 6 x 100GE QSFP28 ports. Each QSFP28 port can also be used as one 40GE QSFP+ port, providing flexibility in networking. The uplink 40GE/100GE ports can be connected to CloudEngine 16800 or CloudEngine 12800 series switches to build a non-blocking network platform.

Highly Reliable, Long-Distance Stacking

16-member stack system

- A stack system of 16 member switches has a maximum of 768 x 10GE access ports that provide high-density server access in a data center.
- Multiple switches in a stack system are virtualized into one logical device, making it possible to build a scalable and easy-to-manage data center network platform.
- A stack system separates the control plane from the data plane. This eliminates the risk of single points of failure and greatly improves system reliability.

Long-distance stacking

- CloudEngine 6881 series can use service ports as stack ports. A stack system can be established with switches in the same rack or different racks, and even over long distances.
- Service and stack bandwidths can be allocated based on the network scale to ensure that network resources are used more efficiently.

Inter-device Link Aggregation, High Efficiency and Reliability

- CloudEngine 6881 series support multichassis link aggregation group (M-LAG), which enables links of multiple switches to aggregate into one to implement device-level link backup.
- Switches in an M-LAG system 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.

Virtualized Hardware Gateway, Enabling Quick Deployment

- CloudEngine 6881 series can connect to a cloud platform through open APIs, facilitating the unified management of virtual and physical networks.
- CloudEngine 6881 series can work with the industry's mainstream virtualization platforms. The virtualization function protects investments by ensuring services can be deployed quickly without requiring network changes.

- The hardware gateway deployment enables fast service deployment without changing the customer network, providing investment protection.
- CloudEngine 6881 series support Border Gateway Protocol - Ethernet VPN (BGP-EVPN), which can run as the VXLAN control plane to simplify VXLAN configuration within and between data centers.

Standard Interfaces, Enabling Openness and Interoperability

- CloudEngine 6881 series support NETCONF and can work with Huawei Agile Controller.
- CloudEngine 6881 series support Ansible-based automatic configuration and open-source module release, expanding network functions and simplifying device management and maintenance.
- CloudEngine 6881 series can be integrated into mainstream SDN and cloud computing platforms flexibly and quickly.

ZTP, Implementing Automatic O&M

- CloudEngine 6881 series support Zero Touch Provisioning (ZTP). ZTP enables the CloudEngine 6881 series to automatically obtain and load version files from a USB flash drive or file server, freeing network engineers from onsite configuration and deployment. ZTP reduces labor costs and improves device deployment efficiency.
- ZTP provides built-in scripts through open APIs. Data center personnel can use a programming language they are familiar with, such as Python, to centrally configure network devices.
- ZTP decouples the configuration time of new devices from the device quantity and area distribution, which improves service provisioning efficiency.

FabricInsight-based Intelligent O&M

- Huawei's Packet Conservation Algorithm for Internet (iPCA) technology implements accurate per-hop packet loss, delay, and jitter detection for real service flows, locating network faults in real time.
- CloudEngine 6881 series proactively perform path detection over the entire network, periodically checking sample flows to determine the connectivity of all paths on the network and locates fault points, providing real-time network health information.
- CloudEngine 6881 series support visualization of all flows and congestion, improving service experience.

Flexible Airflow Design, Improving Energy Efficiency

Flexible front-to-back/back-to-front airflow design

- CloudEngine 6881 series use a strict front-to-back/back-to-front airflow design that isolates cold air channels from hot air channels. This design improves heat dissipation efficiency and meets design requirements of data center equipment rooms.
- Air can flow from front to back or back to front depending on the fans and power modules that are used.
- Redundant power modules and fans can be configured to ensure service continuity.

Innovative energy-saving technologies

- CloudEngine 6881 series have innovative energy-saving chips and can measure system power consumption in real time. The fan speed can be adjusted dynamically based on system consumption. These energy-saving technologies reduce O&M costs and contribute to a greener data center.

Clear Indicators, Simplifying Maintenance

Clear indicators

- Port indicators clearly show the port status and port rate. The 100GE port indicators can show the states of all ports derived from the 100GE ports.
- State and stack indicators on both the front and rear panels enable users to maintain the switch from either side.
- CloudEngine 6881 series support remote positioning. Remote positioning indicators enable users to easily identify the switches they want to maintain in an equipment room full of devices.

Simple maintenance

- The management port, fans, and power modules are on the front panel, which facilitates device maintenance.
- Data ports are located at the rear, facing servers. This simplifies cabling.

Product Specifications

Functions and Features

| Item | CloudEngine 6881-48S6CQ ¹ |
|------------------------|--|
| Device virtualization | iStack ² |
| | M-LAG |
| Network virtualization | VXLAN |
| | BGP-EVPN |
| | QinQ access VXLAN |
| SDN | Agile Controller |
| Programmability | OPS programming |
| | OpenFlow |
| | Ansible-based automatic configuration and open-source module release |
| Traffic analysis | NetStream |
| VLAN | Adding access, trunk, and hybrid interfaces to VLANs |
| | Default VLAN |
| | QinQ |
| MAC address | Dynamic learning and aging of MAC address entries |
| | Static, dynamic, and blackhole MAC address entries |
| | Packet filtering based on source MAC addresses |
| | MAC address limiting based on ports and VLANs |
| IP routing | IPv4 routing protocols, such as RIP, OSPF, IS-IS, and BGP |
| | IPv6 routing protocols, such as RIPng, OSPFv3, IS-ISv6, and BGP4+ |
| | IP packet fragmentation and reassembly |
| IPv6 | IPv6 Neighbor Discovery (ND) |
| | Path MTU Discovery (PMTU) |
| | TCP6, IPv6 ping, IPv6 tracer, IPv6 socket, UDP6, and Raw IP6 |
| Multicast | Multicast routing protocols such as IGMP, PIM-SM, and MBGP |
| | IGMP snooping |
| | IGMP proxy |
| | Fast leaving of multicast member interfaces |
| | Multicast traffic suppression |
| | Multicast VLAN |
| Reliability | Fine-grained microsegmentation isolation |
| | Link Aggregation Control Protocol (LACP) |

| Item | CloudEngine 6881-48S6CQ ¹ |
|-------------------------------|--|
| | STP, RSTP, VBST, and MSTP |
| | BPDU Guard |
| | Smart Link and multi-instance |
| | Device Link Detection Protocol (DLDP) |
| | Hardware-based Bidirectional Forwarding Detection (BFD) |
| | VRRP, VRRP load balancing, and BFD for VRRP |
| | BFD for BGP/IS-IS/OSPF/Static route |
| | BFD for VXLAN |
| NSH | IETF-defined NSH |
| QoS | Traffic classification based on Layer 2, Layer 3, Layer 4, and priority information |
| | ACL, CAR, re-marking, and scheduling |
| | Queue scheduling modes such as PQ, DWRR and PQ+DWRR |
| | Congestion avoidance mechanisms, including WRED and tail drop |
| | Traffic shaping |
| O&M | iPCA (Packet Conservation Algorithm for Internet)) |
| | Network-wide path detection |
| | Telemetry |
| | ERSPAN+ |
| | Statistics on the buffer microburst status |
| | VXLAN OAM: VXLAN ping and VXLAN tracet |
| Configuration and maintenance | Console, Telnet, and SSH terminals |
| | Network management protocols, such as SNMPv1/v2/v3 |
| | File upload and download through FTP and TFTP |
| | BootROM upgrade and remote upgrade |
| | Hot patches |
| | User operation logs |
| | Zero Touch Provisioning (ZTP) |
| Security and management | Command line authority control based on user levels, preventing unauthorized users from using commands |
| | Defense against DoS address attacks, ARP storms, and ICMP attacks |
| | Port isolation, port security, and sticky MAC |
| | Binding of the IP address, MAC address, port number, and VLAN ID |
| | Authentication methods, including AAA, RADIUS, and HWTACACS |
| | Remote Network Monitoring (RMON) |

1.This content is applicable only to regions outside mainland China. Huawei reserves the right to interpret this content

2.For details about the configuration, please see: http://support.huawei.com/online/tools/web/virtual/en/dc/stack_index.html?dcb

Performance and Scalability

| Item | CloudEngine 6881-48S6CQ |
|--|-------------------------|
| Maximum number of MAC address entries | 256K |
| Maximum number of Forwarding routes (FIB IPv4/ IPv6) | 256K/80K |
| ARP table size | 256K |
| Maximum number of VRF | 4096 |
| IPv6 ND (Neighbor Discovery) table size | 80K |
| Maximum Number of multicast routes (Multicast FIB IPv4/IPv6) | 32K/NA |
| Maximum VRRP groups | 1024 |
| Maximum number of ECMP paths | 128 |
| Maximum ACL number | 15K |
| Maximum Number of broadcast domains | 8000 |
| Maximum number of BDIF | 8000 |
| Maximum number of tunnel endpoints (VTEP) | 2K |
| Maximum number of lag group | 1024 |
| Maximum number of links in a lag group | 128 |
| Maximum number of MSTP instance | 64 |

Note: This specification may vary between different scenarios. Please contact Huawei for details.

Hardware Specifications

| Item | CloudEngine 6881-48S6CQ | |
|-----------------------|---|---------------------------|
| Physical Features | Dimensions (W × D ×H ,mm) | 442*420*43.6 |
| | Weight (excluding optical modules, power modules, and fan assemblies/ including AC power modules and fan assemblies, excluding optical modules, kg) | 5.7/7.8 |
| | Switching capacity (Tbit/s) | 2.16 |
| | Forwarding performance (Mpps) | 940 |
| 10GE SFP+ ports | 48 | |
| 40/100GE QSFP28 ports | 6 | |
| Management interface | Out-of-band management port | 1*GE management interface |
| | Console port | 1*RJ45 interface |
| | USB port | 1 |
| CPU | Main frequency (HZ) | 1.4G |
| | Number of cores | 4 |

| Item | | CloudEngine 6881-48S6CQ |
|----------------------------|-------------------------------------|--|
| Storage | RAM | 4GB |
| | NOR Flash | 64MB |
| | NAND Flash | 4GB |
| System | System buffer | 42MB |
| Power Supply System | Power modules | 600 W AC |
| | Rated voltage range(V) | 100 V to 240 V AC |
| | Maximum voltage range(V) | 90~290 AC |
| | Maximum input current | 100 V to 240 V 8 A |
| | Typical power | 214W (100% traffic load, copper cable, normal temperature, dual power modules) 256W (100% traffic load, short-distance optical modules, normal temperature, dual power modules) |
| | Maximum power | 380W |
| | Frequency (AC ,HZ) | 50/60 |
| Heat Dissipation | Heat dissipation mode | Air cooling |
| | Number of fans | 4 |
| | Heat dissipation airflow | Front-to-back or back-to-front airflow |
| | Maximum heat consumption (BTU/hr) | 1297 |
| Environment specifications | Long-term operating temperature(°C) | 0°C to 40°C (0-1800m) The temperature decreases by 1°C each time the altitude increases by 220 m. |
| | Storage temperature(°C) | -40°C to +70°C |
| | Relative humidity | 5% to 95% |
| | Operating altitude(m) | Up to 5000 |
| | Sound power at 27°C (dBA) | Front-to-back airflow: < 67 Back-to-front airflow: < 66 |
| | Sound power at 40°C (dBA) | Front-to-back airflow: < 84 Back-to-front airflow: < 83 |
| | Sound pressure at 27°C (dBA) | Front-to-back airflow: 53 in average (maximum: 58) Back-to-front airflow: 52 in average (maximum: 57) |
| | Surge protection | AC power supply protection: 6 kV in common mode and 6 kV in differential mode |
| Reliability | MTBF (year) | 45.90 |
| | MTTR (hour) | 2 |

| Item | | CloudEngine 6881-48S6CQ |
|------|--------------|-------------------------|
| | Availability | 0.9999952257 |

Note: For detailed information of CloudEngine 6800 Platform hardware information, visit <https://support.huawei.com/enterprise/en/doc/EDOC1000019246?idPath=7919710%7C21782165%7C21782239%7C22318540%7C7597815>

Safety and Regulatory Compliance

The following table lists the safety and regulatory compliance of CE 6800 series switches.

| Certification Category | Description |
|-------------------------------------|--|
| Safety | <ul style="list-style-type: none"> • EN 60950-1 • EN 60825-1 • EN 60825-2 • UL 60950-1 • CSA-C22.2 No. 60950-1 • IEC 60950-1 • AS/NZS 60950-1 • GB4943 |
| Electromagnetic Compatibility (EMC) | <ul style="list-style-type: none"> • EN 300386 • EN 55032: CLASS A • EN 55024 • IEC/EN 61000-3-2 • IEC/EN 61000-3-3 • FCC 47CFR Part15 CLASS A • ICES-003: CLASS A • CISPR 32: CLASS A • CISPR 24 • AS/NZS CISPR32 • VCCI- CISPR32: CLASS A • GB9254 CLASS A |
| Environment | <ul style="list-style-type: none"> • 2011/65/EU EN 50581 • 2012/19/EU EN 50419 • (EC) No.1907/2006 • GB/T 26572 • ETSI EN 300 019-1-1 • ETSI EN 300 019-1-2 • ETSI EN 300 019-1-3 • ETSI EN 300 753 GR63 |

Note

EMC: electromagnetic compatibility

CISPR: International Special Committee on Radio Interference

EN: European Standard

ETSI: European Telecommunications Standards Institute

CFR: Code of Federal Regulations

FCC: Federal Communication Commission

IEC: International Electrotechnical Commission

AS/NZS: Australian/New Zealand Standard

VCCI: Voluntary Control Council for Interference

UL: Underwriters Laboratories

CSA: Canadian Standards Association

Supported MIBs

For details about the MIB information, visit

<http://support.huawei.com/hedex/hdx.do?docid=EDOC1100020548&lang=en&idPath=7919710%7C21782165%7C21782239%7C22318540%7C7597815>

Optical transceivers and Cables

| Part | Product |
|--------------------------------|---|
| GE-SFP Optical Transceivers | |
| SFP-1000BaseT | Electrical Transceiver, SFP, GE, Electrical Interface Module (100m, RJ45) |
| eSFP-GE-SX-MM850 | Optical Transceiver, eSFP, GE, Multi-mode Module (850nm, 0.55km, LC) |
| SFP-GE-LX-SM1310 | Optical Transceiver, eSFP, GE, Single-mode Module (1310nm, 10km,LC) |
| S-SFP-GE-LH40-SM1310 | Optical Transceiver, eSFP, GE, Single-mode Module(1310nm,40km,LC) |
| S-SFP-GE-LH80-SM1550 | Optical Transceiver, eSFP, GE, Single-mode Module(1550nm,80km,LC) |
| BIDI-SFP Optical Transceivers | |
| SFP-GE-LX-SM1490-BIDI | Optical Transceiver, eSFP, GE, BIDI Single-mode Module (TX1490/RX1310, 10km,LC) |
| SFP-GE-LX-SM1310-BIDI | Optical Transceiver, eSFP, GE, BIDI Single-mode Module (TX1310/RX1490, 10km, LC) |
| SFP-10G-ER-SM1330-BIDI | Optical Transceiver,SFP+,10G,BIDI Single-mode Module(TX 1330nm/RX 1270nm,40km,LC) |
| SFP-10G-ER-SM1270-BIDI | Optical Transceiver,SFP+,10G,BIDI Single-mode Module(TX 1270nm/RX 1330nm,40km,LC) |
| SFP-10G-BXU1 | 10GBase,BIDI Optical Transceiver,SFP+,10G,Single-mode Module(TX1270nm/RX1330nm,10km,LC) |
| SFP-10G-BXD1 | 10GBase,BIDI Optical Transceiver,SFP+,10G,Single-mode Module(TX1330nm/RX1270nm,10km,LC) |
| 10GE-SFP+ Optical Transceivers | |
| SFP-10G-USR | 10GBase-USR Optical Transceiver,SFP+,10G,Multi-mode Module (850nm, 0.1km, LC) |
| OMXD30000 | Optical Transceiver,SFP+,10G,Multi-mode Module(850nm,0.3km,LC) |
| SFP-10G-LR | Optical Transceiver,SFP+,10G,Single-mode Module(1310nm,10km,LC) |
| OSX040N01 | Optical Transceiver,SFP+,10G,Single-mode Module(1550nm,40km,LC) |
| SFP-10G-ZR | 10GBase-ZR Optical Transceiver, SFP+, 10G, Single-mode Module (1550nm, 80km, LC) |

| Part | Product |
|-----------------------------------|---|
| SFP-10G-ZDWT-L | Optical Transceiver, SFP+, 10G, Single-mode Module (DWDM, 1560.61-1529.16nm, 60km, LC) |
| SFP-10G-iLR | Optical Transceiver, SFP+, 9.8G, Single-mode Module (1310nm, 1.4km, LC) |
| 40GE-QSFP+ Optical Transceivers | |
| QSFP-40G-SR-BD | 40GBase-BD Optical Transceiver, QSFP+, 40G, Multi-mode (850nm, 0.1km, LC) |
| QSFP-40G-iSR4 | 40GBase-iSR4 Optical Transceiver, QSFP+, 40G, Multi-mode (850nm, 0.15km, MPO) (Connect to four SFP+ Optical Transceiver) |
| QSFP-40G-eSR4 | 40GBase-eSR4 Optical Transceiver, QSFP+, 40G, Multi-mode (850nm, 0.3km, MPO) (Connect to four SFP+ Optical Transceiver) |
| QSFP-40G-eSM4 | 40GBase-eSM4 Optical Transceiver, QSFP+, 40G, Single-mode Module (1310nm, 10km, MPO) (Connect to four SFP+ Optical Transceiver) |
| QSFP-40G-LR4 | 40GBase-LR4 Optical Transceiver, QSFP+, 40GE, Single-mode Module (1310nm, 10km, LC) |
| QSFP-40G-LR4-Lite | QSFP-40G-LR4-Lite, 40GBase-LR4 Lite Optical Transceiver, QSFP+, 40G, Single-mode Module (1310nm, 2km, LC) |
| QSFP-40G-ER4 | 40GBase-ER4 Optical Transceiver, QSFP+, 40G, Single-mode Module (1310nm, 40km, LC) |
| QSFP-40G-SDLC-PAM | 40GBase-SDLC Optical Transceiver, QSFP+, 40G, Multi-mode (850nm, PAM4, 0.1km, LC) |
| QSFP-40G-eSDLC-PAM | 40GBase-eSDLC Optical Transceiver, QSFP+, 40G, Multi-mode (850nm, PAM4, 0.3km, LC) |
| 100GE-QSFP28 Optical Transceivers | |
| QSFP-100G-SWDM4 | 100GBase-SWDM4 Optical Transceiver, QSFP+, 100GE, Multi-mode Module (850, 0.075km-OM3, 0.1km-OM4, LC) |
| QSFP28-100G-SR4 | 100GBase-SR4 Optical Transceiver, QSFP28, 100G, Multi-mode (850nm, 0.1km, MPO) |
| QSFP28-100G-SR4-NT | 100GBase-SR4 Optical Transceiver, QSFP28, 100G, Multi-mode (850nm, 0.1km, MPO, NT), 20-60C |
| QSFP28-100G-LR4 | 100GBase-LR4 Optical Transceiver, QSFP28, 100G, Single-mode module (1310nm, 10km, LC) |
| QSFP28-100G-PSM4 | 100GBase-PSM4 Optical Transceiver, QSFP28, 100G, Single-mode module (1310nm, 0.5km, MPO) |
| QSFP-100G-CWDM4 | 100GBase-CWDM4 Optical Transceiver, QSFP28, 100G, Single-mode module (1310nm, 2km, LC) |
| QSFP-100G-CWDM4-NT | 100GBase-CWDM4 Optical Transceiver, QSFP28, 100G, Single-mode module (1310nm, 2km, LC, NT), 20-65C |
| QSFP-100G-eCWDM4 | 100GBase-eCWDM4 Optical Transceiver, QSFP28, 100G, Single-mode module (1310nm, 10km, LC) |
| QSFP-100G-ER4-Lite | 100GBase-ER4-Lite Optical Transceiver, QSFP28, 100G, Single-mode module (1310nm, 30km (FEC OFF), 40km (FEC ON), LC) |
| AOC High-Speed Cables | |
| SFP-10G-AOC-5M | Active Optical Cable, SFP+, 10G, (850nm, 5m, AOC) |

| Part | Product |
|-------------------|--|
| SFP-10G-AOC-7M | Active Optical Cable , SFP+, 10G, (850nm, 7m, AOC) |
| SFP-10G-AOC-10M | AOC Optical Transceiver, SFP+, 850nm, 1G~10G, 10m |
| SFP-10G-AOC-3M | Optical transceiver, SFP+, 1G~10.5G, (850nm, 3m, AOC) |
| SFP-25G-AOC-3M | Active Optical Cable ,SFP28,25G,(850nm,3m,AOC) |
| SFP-25G-AOC-5M | Active Optical Cable ,SFP28,25G,(850nm,5m,AOC) |
| SFP-25G-AOC-7M | Active Optical Cable ,SFP28,25G,(850nm,7m,AOC) |
| SFP-25G-AOC-10M | Active Optical Cable ,SFP28,25G,(850nm,10m,AOC) |
| SFP-25G-AOC-5M-A | Active Optical Cable ,SFP28,25G,(850nm,5m,AOC,Aqua) |
| SFP-25G-AOC-7M-A | Active Optical Cable ,SFP28,25G,(850nm,7m,AOC,Aqua) |
| SFP-25G-AOC-10M-A | Active Optical Cable ,SFP28,25G,(850nm,10m,AOC,Aqua) |
| SFP-25G-AOC-20M-A | Active Optical Cable ,SFP28,25G,(850nm,20m,AOC,Aqua) |
| QSFP-H40G-AOC10M | Optical transceiver, QSFP+, 40G, (850nm, 10m, AOC) |
| QSFP-100G-AOC-10M | Active Optical Cable,QSFP28,100G,(850nm,10m,AOC) |
| QSFP-100G-AOC-30M | Active Optical Cable,QSFP28,100G,(850nm,30m,AOC) |
| Copper Cable | |
| SFP-10G-CU1M | SFP+, 10G, High Speed Direct-attach Cables, 1m, SFP+20M, CC2P0.254B(S), SFP+20M, Used indoor |
| SFP-10G-CU3M | SFP+, 10G, High Speed Direct-attach Cables, 3m, SFP+20M, CC2P0.254B(S), SFP+20M, Used indoor |
| SFP-10G-CU5M | SFP, 10G, High Speed Cable, 5m, SFP+20M, CC2P0.254B(S), SFP+20M, LSF RZH For Indoor |
| SFP-10G-AC7M | SFP, 10G, Active High Speed Cable, 7m, SFP+20M, CC2P0.254B(S), SFP+20M, LSFRZH For Indoor |
| SFP-10G-AC10M | SFP+, 10G, Active High Speed Cables, 10m, SFP+20M, CC2P0.32B(S), SFP+20M, Used indoor |
| SFP-25G-CU1M | SFP28,25G,High Speed Direct-attach Cables,1m,(SFP28), CC8P0.254B(S),SFP28 |
| QSFP-40G-CU1M | QSFP+,40G,High Speed Direct-attach Cables,1m,QSFP+38M, CC8P0.254B(S),QSFP+38M,Used indoor |
| QSFP-40G-CU3M | QSFP+,40G,High Speed Direct-attach Cables,3m,QSFP+38M,CC8P0.32B(S),QSFP+38M,Used indoor |
| QSFP-40G-CU5M | QSFP+,40G,High Speed Direct-attach Cables,5m,QSFP+38M,CC8P0.40B(S),QSFP+38M,Used indoor |
| QSFP28-100G-CU1M | QSFP28,100G,High Speed Direct-attach Cables,1m,(QSFP28),CC8P0.254B(S),QSFP28,Used indoor |

Ordering Information

| Mainframe | |
|-----------------|---|
| CE6881-48S6CQ | CE6881-48S6CQ switch (48*10G SFP+, 6*100G QSFP28, without fan and power modules) |
| CE6881-48S6CQ-B | CE6881-48S6CQ-B switch (48*10G SFP+, 6*100G QSFP28, 2*AC power modules, 4*fan modules, port-side intake) |
| CE6881-48S6CQ-F | CE6881-48S6CQ-F switch (48*10G SFP+, 6*100G QSFP28, 2*AC power modules, 4*fan modules, port-side exhaust) |

Fan Tray

| Model | Description | Applicable Product |
|------------|------------------------------------|--------------------|
| FAN-031A-F | Fan box (F,FAN panel side intake) | CE6881-48S6CQ |
| FAN-031A-B | Fan box (B,FAN panel side exhaust) | CE6881-48S6CQ |

Power

| Model | Description | Applicable Product |
|--------------|---|--------------------|
| PAC600S12-CF | 600W AC Power Module(Front to Back,Power panel side intake) | CE6881- 48S6CQ |
| PAC600S12-CB | 600W AC Power Module(Back to Front, Power panel side exhaust) | CE6881- 48S6CQ |

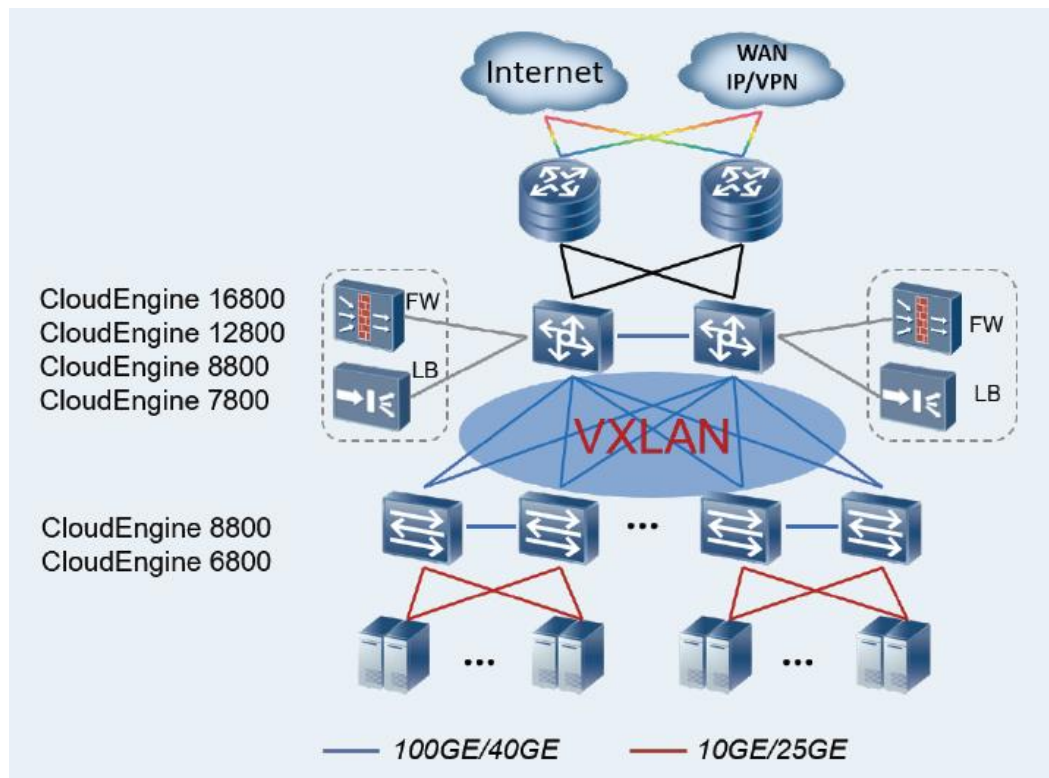
| Software | |
|-------------------|---|
| N1-CE68LIC-CFMM | N1-CloudFabric Management SW License for CloudEngine 6800(N1-CE68LIC-CFMM software is applicable to Non-SDN scenario, includes basic software functions and VXLAN) |
| N1-CE68CFMM-SnS1Y | N1-CE68CFMM-SnS1Y,N1-CloudFabric Management SW License for CloudEngine 6800 |
| N1-CE68LIC-CFFD | N1-CloudFabric Foundation SW License for CloudEngine 6800 (N1-CE68LIC-CFFD software is applicable to single DC scenarios, includes basic software functions, VXLAN, and Telemetry,Agile Controller-DCN management of each fixed device,Fabricinsight Intelligent network analysis basic function) |
| N1-CE68CFFD-SnS1Y | N1-CloudFabric Foundation SW License for CloudEngine 6800-SnS-1 Year (The annual fee for the CloudFabric N1 package) |
| N1-CE68LIC-CFAD | N1-CloudFabric Advanced SW License for CloudEngine 6800 (N1-CE68LIC-CFAD software is applicable to multiple DC scenarios, includes all the functions of the N1-CE68LIC-CFFD software package and NSH function) |
| N1-CE68CFAD-SnS1Y | N1-CloudFabric Advanced SW License for CloudEngine -SnS -1 Year (The annual fee for the CloudFabric N1 package) |

Networking and Application

Data Center Applications

On a typical data center network, CloudEngine 6881 switches work as TOR switches and connect to CloudEngine16800, CloudEngine 12800, CloudEngine 8800, or CloudEngine 7800 core switches using 40GE/100GE ports, building an end-to-end

100GE full-mesh network. The core and TOR switches use fabric technologies such as VXLAN to build a non-blocking large Layer 2 network, which allows for large-scale VM migration and flexible service deployment.



Note: VXLAN can also be used on campus networks to support flexible service deployment in different service areas.

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