Huawei CloudEngine 16800-X Data Center Switch Datasheet

Huawei CloudEngine 16800-X is the industry's first data center (DC) core switch designed for the era of optimal computing power.

Product Overview

CloudEngine 16800-X series switches are Huawei's first DC core switches built for diversified computing power. The switches build on an all-new hardware capability system and deliver the industry's lowest inter-card forwarding latency of about 3.5 µs. They adopt the lossless Ethernet technology to enable DC storage networks to be built over Ethernet, thereby unifying technologies and O&M for computing and storage networks.

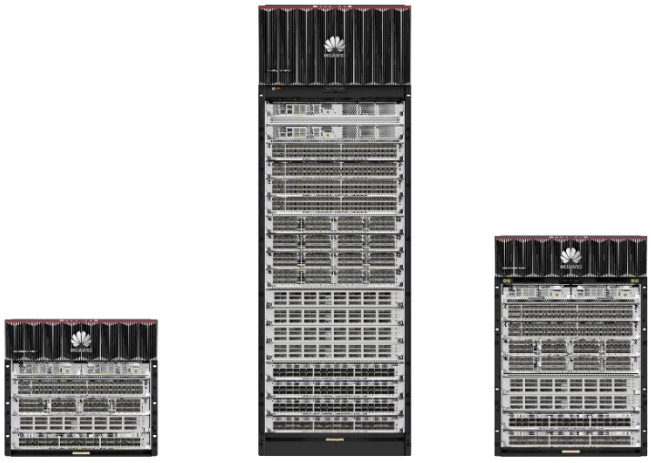
Running on Huawei's next-generation YunShan operating system, CloudEngine 16800-X series switches deliver stable, reliable, and high-performance Layer 2 and Layer 3 switching services, and provide customers with an intelligent, simple, secure, and open DC cloud network platform.

CloudEngine 16800-X series switches use an advanced hardware architecture design. They provide flexible 10GE/25GE/40GE/100GE/200GE/400GE ports and support smooth evolution to 800GE.

In addition to offering a diverse range of DC features, CloudEngine 16800-X series switches provide industrial-grade reliability by adopting an industry-leading backplane-free Clos orthogonal architecture and a strict front-to-back airflow design. As next-generation core switches, they significantly reduce power consumption by capitalizing on multiple innovative energy-saving technologies.

Product Models and Appearances

CloudEngine 16800-X series switches fall into the following models.



CloudEngine 16800-X4 CloudEngine 16800-X16 CloudEngine 16800-X8

Product Features

VXLAN works with EVPN to enable service deployment within and across DCs.

- CloudEngine 16800-X series switches allow BGP-EVPN to be used as the VXLAN control plane to simplify VXLAN deployment.
- BGP-EVPN triggers automatic VXLAN tunnel establishment between virtual tunnel endpoints (VTEPs), eliminating the need to configure full-mesh tunnels. BGP-EVPN also reduces flooding of unknown traffic by advertising MAC address tables on the control plane. DCs can use BGP-EVPN to establish large Layer 2 networks.
- As a standard protocol, BGP-EVPN enables CloudEngine 16800-X series switches to interconnect with devices from other vendors, ensuring long-term network evolution.
- CloudEngine 16800-X series switches support distributed network deployment and support various VXLAN access modes, including accessing VXLAN through QinQ sub-interfaces. This enables flexible customization of heterogeneous networks.
- EVPN and VXLAN can be used to set up Layer 2 interconnections between DCs, enabling active-active VXLAN deployment across DCs and conserving DCI bandwidth.

Automatic and simplified deployment of VXLAN dual-stack network services

- CloudEngine 16800-X series switches support hybrid overlay networking of IPv4 and IPv6 to meet the requirements of two IPv6 evolution modes.
- CloudEngine 16800-X series switches can carry IPv6 overlay services, that is IPv6 first for the network — an underlay IPv6 network is built and the IPv4 services of tenants are gradually reconstructed.
- CloudEngine 16800-X series switches support IPv6 VXLAN over IPv4 — IPv6 evolution of tenant services and network device reuse. That is, smooth evolution to IPv6 is performed based on the existing IPv4 network.

Inter-Device Link Aggregation, Ensuring High Efficiency and Reliability

- CloudEngine 16800-X series switches support Multichassis Link Aggregation Group (M-LAG) to implement link aggregation among multiple devices, improving link reliability from the card level to the device level.
- Switches in an M-LAG all work in active state to share traffic and back up each other, enhancing system reliability.
- Switches in an M-LAG system can be upgraded independently. During the upgrade, other switches in the system take over traffic forwarding to ensure uninterrupted services.
- M-LAG supports dual-homing to Ethernet, VXLAN, and IP networks, allowing for flexible networking.

Standard Interfaces, Enabling Open Interconnection

- CloudEngine 16800-X series switches support NETCONF and can interconnect with iMaster NCE-Fabric.
- CloudEngine 16800-X series switches support Ansible — an automatic management and O&M tool — to implement unified provisioning of physical and virtual networks.
- CloudEngine 16800-X series switches are integrated with mainstream cloud platforms (including commercial and open-source cloud platforms) and third-party controllers, enabling flexible service customization and automatic management.

Zero Touch Provisioning, Enabling Automatic O&M

- CloudEngine 16800-X series switches support Zero Touch Provisioning (ZTP). ZTP enables the switches to automatically obtain and load version files from a file server, freeing network engineers from onsite configuration and deployment. ZTP reduces labor costs and improves device deployment efficiency.
- ZTP supports embedded script languages and provides them for users through open APIs. DC users can use a familiar programming language (such as Python) to centrally configure network devices.

- ZTP decouples the configuration time of new devices from device quantity and geographical distribution, shortening the service provisioning time and improving the service provisioning efficiency.

Simplified DCN Deployment via Collaboration with iMaster NCE-Fabric

- CloudEngine 16800-X series switches can interconnect with iMaster NCE-Fabric through standard protocols such as NETCONF and SNMP to adapt to networks and implement automatic network management. This helps to provide more efficient and intelligent operation methods, simplifying network management, and reducing the OPEX.

Intelligent O&M Through Collaboration with iMaster NCE-FabricInsight

- CloudEngine 16800-X series switches support telemetry technology to collect device data in real time and send the collected data to iMaster NCE-FabricInsight — the DCN analysis component of Huawei iMaster NCE. Leveraging the intelligent fault identification algorithm, iMaster NCE-FabricInsight can analyze network data, accurately display the real-time network status, locate faults and identify their root causes in a timely and effective manner, and detect network problems that can affect user experience, precisely guaranteeing user experience.
- CloudEngine 16800-X series switches can insert IFIT extension headers into packets, visualize paths, and analyze interface-level packet loss, traffic, and latency to implement high-precision service-level packet loss measurement and facilitate fault demarcation.
- CloudEngine 16800-X series switches support Packet Event. When a device discards packets due to reasons such as abnormal forwarding, specified packet discarding rules, a full buffer, or ACL rule deny actions, or when the latency of packets exceeds a specified threshold, the device reports related flow entries to the iMaster NCE-FabricInsight collector.

Intelligent Lossless Network, Meeting High Performance Requirements of RoCEv2 Applications

- CloudEngine 16800-X series switches support the iLossless algorithm to eliminate packet loss on the conventional Ethernet. This helps to build a lossless, low-latency, and high-throughput network environment for RoCEv2 traffic, meeting high performance requirements of RoCEv2 applications.
- CloudEngine 16800-X series switches support PFC deadlock prevention. They can identify service flows that may cause PFC deadlocks and change queue priorities of these flows to prevent PFC deadlocks.
- CloudEngine 16800-X series switches support Artificial Intelligence Explicit Congestion Notification (AI ECN). This future-oriented function can intelligently adjust the ECN thresholds of lossless queues based on the live-network traffic model to ensure low latency and high throughput with zero packet loss, maximizing the performance of lossless services.
- CloudEngine 16800-X series switches support Explicit Congestion Notification (ECN) Overlay. ECN Overlay applies ECN to a VXLAN network, enabling the traffic receiver to detect congestion on the overlay network in a timely manner and instruct the traffic sender to reduce its packet sending rate to relieve network congestion.

Large Network Throughput, Fully Unleashing Computing Power in AI Scenarios

- CloudEngine 16800-X series switches support enhanced NSLB, achieving up to 98% network throughput on the entire network in AI scenarios and improving AI training efficiency.

High-Performance, Non-Blocking Switching Architecture

- CloudEngine 16800-X series switches have a high-performance, non-blocking switching architecture that is characterized by its orthogonal switch fabric design, Clos orthogonal architecture, cell switching, and Virtual Output Queuing (VoQ).
- **Backplane-free orthogonal switch fabric design:** LPUs and SFUs of the CloudEngine 16800-X use an orthogonal design in which service traffic between LPUs is directly sent to the SFUs through orthogonal connectors. This design greatly improves system bandwidth and evolution capabilities, and can smoothly expand the system capacity to several thousands of Tbps.

- **Clos orthogonal architecture:** The three-stage Clos architecture of CloudEngine 16800-X series switches enables flexible expansion of switch fabric capacity. All types of cards (10GE, 25GE, 40GE, 100GE, and 400GE) of the switches support cell switching and dynamic traffic steering, and implement load balancing among multiple switch fabrics, preventing the switching matrix from being blocked and coping with changes in traffic models in DCs.
- VoQ: CloudEngine 16800-X series switches support VoQ queues for fine-grained Quality of Service (QoS) on the switch fabrics. With the VoQ mechanism and inbound interface buffer, CloudEngine 16800-X series switches create independent VoQ queues on inbound interfaces to perform E2E flow control on traffic destined for different outbound interfaces. This ensures unified service scheduling and sequenced forwarding and implements non-blocking switching.

Highly Reliable Industrial-Grade Hardware Architecture

- CloudEngine 16800-X series switches provide industrial-grade ultra-high reliability. They can run stably as core switches for a long period, ensuring service continuity.
- Hot standby of four hardware components: MPUs work in 1+1 hot standby mode. SFUs work in N+M hot standby mode. Power modules support dual inputs, work in N+1 or N+N hot standby mode, and have their own heat dissipation system. Fan modules work in N+1 hot standby mode, ensuring efficient heat dissipation.
- Redundancy of three buses: The monitoring, management, and data buses all work in 1+1 redundancy mode, ensuring reliable transmission of various signals in the system. Strict front-to-back airflow design
- The patented front-to-back airflow design strictly isolates cold air channels from hot air channels, meeting heat dissipation requirements in DC equipment rooms.
- Fan modules support intelligent area-based speed adjustment and on-demand heat dissipation, saving energy and reducing noise.

Efficient and Intelligent Power Supply System

- The switch uses highly efficient digital power modules with a power efficiency of up to 96%.
- The system measures power consumption in real time and intelligently puts power modules into sleep mode to save power when system power demands are low.
- The switch adjusts power consumption of major components based on changes in service traffic volume, saving energy dynamically.

Licensing

Huawei CloudEngine 16800-X series switches support the CloudFabric IDN One Software (N1) business model, which bundles iMaster NCE-Fabric, iMaster NCE-FabricInsight, and CloudEngine switches in a range of typical scenarios. This approach simplifies transactions, provides customers with more functions and value, and protects customers' software investment through Software License Portability.

Feature	N1 Software Package (Mandatory)			N1 Add-On Package (Optional)										
	Found-ation	Advan-ced	Prem-ium	TCP Acceleration	Distributed Storage	Centralized Storage	HPC	AI Scenario	Security	Multi-Cloud and Multi-DC	xFlow Feature Flow Analysis	xFlow Intelligent Full-Flow Analysis	Financial-Grade High Reliability	Digital Map
Basic functions (including IPv6 and VXLAN)	●	●	●											
Telemetry	●	●	●											
PTP	●	●	●											
Multicast NAT		●	●											
M-LAG virtual peer-link[1]	●	●	●											
MACsec									●					
AI ECN 2.0					●	●	●							
TCP optimization				●	●		●	●						
NSLB							●	●						
Enhanced network scale load balancing (NSLB)								●						
Plug-and-play and second-level switchover						●								
NoF+ proactive congestion prevention (70 km)						●								
MoFRR													●	
In-network computing (INC)							●							
Adaptive routing							●							
Automation functions	●	●	●											
Basic intent functions			●											
Runbook function		●	●											
Multi-cloud and multi-DC automation scenario package										●				
Basic digital map functions														●
Basic network analysis functions	●	●	●											
Network health evaluation		●	●											
Network flow analysis (100 VMs)			●								●			
Intelligent full-flow analysis (per 20 Gbps)												●		
IFIT service assurance		●	●											
Multi-cloud and multi-DC analysis scenario package										●				
Mapping relationship	Select one from the three packages. The Advanced package contains the Foundation package, and the Premium package containsthe Advanced package.			Used together with the Foundation, Advanced, or Premium package.										

Product Specifications

Item	CloudEngine 16800-X4	CloudEngine 16800-X8	CloudEngine 16800-X16
Switching capacity (Tbps)	179/387	357/774	714/1548
Packet forwarding rate (Mpps)	26,100	52,200	104,400
Number of service slots	4	8	16
SFU slot	8(Scalable to 9 for future expansion)		
Air duct type	Standard front-to-rear airflow		
Device virtualization	M-LAG		
Interface	Jumbo frames		
Network virtualization	VXLAN routing and VXLAN bridging		
	BGP-EVPN		
SDN	iMaster NCE-Fabric		
Network convergence	PFC and AI ECN		
	RDMA and RoCE (RoCE v1 and RoCE v2)		
Programmability	OpenFlow		
	OPS programming		
Traffic analysis	NetStream		
VLAN	Access, trunk, and hybrid ports		
	Default VLAN		
MAC address table	Automatic MAC address learning and aging		
	Static, dynamic, and blackhole MAC address entries		
	Source MAC address filtering		
	MAC address learning limiting based on ports and VLANs		
IP routing	IPv4 dynamic routing protocols such as RIP, OSPF, IS-IS, and BGP		
	IPv6 dynamic routing protocols such as RIPng, OSPFv3, IS-ISv6, and BGP4+		
IPv6	VXLAN over IPv6		
	IPv6 VXLAN over IPv4		
	IPv6 neighbor discovery (ND)		
	Path MTU discovery (PMTU)		
	TCP6, IPv6 ping, IPv6 tracert, IPv6 socket, UDP6, and raw IPv6		
Multicast	Multicast routing protocols such as IGMP, PIM-SM, and MSDP		

Item	CloudEngine 16800-X4 CloudEngine 16800-X8 CloudEngine 16800-X16
	IGMP snooping and IGMP proxy
	IPv6 Layer 3 multicast and configuration of both Layer 2 and Layer 3 multicast services
	Fast leave of multicast member interfaces
	Multicast traffic suppression
Reliability	LACP
	STP, RSTP, VBST, and MSTP
	BPDU protection
	Smart link and multi-instance
	Hardware-based Bidirectional Forwarding Detection (BFD), with a minimum packet sending interval of 3.3 ms
	VRRP, VRRP load sharing, and BFD for VRRP
	BFD for BGP, IS-IS, OSPF, and static routing
	BFD for VXLAN
	Traffic classification based on Layer 2 headers, Layer 3 headers, and Layer 4 protocol priorities
QoS	ACL, CAR, re-marking, and scheduling
	Queue scheduling modes such as PQ, DRR, and PQ+DRR
	Congestion avoidance mechanisms such as WRED and tail drop
	Traffic shaping
	1588v2
Intelligent O&M	Network-wide path detection
	Telemetry
	Enhanced ERSPAN
	In-situ Flow Information Telemetry (IFIT)
	Packet Event: packet loss visualization and ultra-long latency visualization
	VXLAN OAM: VXLAN ping and VXLAN tracert
Intelligent lossless network	PFC deadlock prevention
	AI ECN
	ECN Overlay
	Enhanced NSLB
Configuration and maintenance	Terminal login through the console port, Telnet, and SSH

Item	CloudEngine 16800-X4	CloudEngine 16800-X8	CloudEngine 16800-X16
	Network management protocols, such as SNMPv1/v2/v3		
	File upload and download through FTP and TFTP		
	Boot Read-Only Memory (BootROM) upgrade and remote online upgrade		
	Hot patches		
	User operation logs		
	Configuration rollback		
	ZTP		
Security and management	MACsec		
	Command line authority control based on user levels, preventing unauthorized users from using commands		
	Defense against DoS, ARP, and ICMP attacks		
	Port isolation, port security, and sticky MAC		
	Binding of the IP address, MAC address, port ID, and VLAN ID		
	Authentication methods, including AAA, LDAP, RADIUS, and HWTACACS		
	RMON		
Dimensions (H x W x D)	438 mm (9.8U) x 483 mm x 985 mm	703 mm (15.8U) x 483 mm x 985 mm	1436 mm (32.3U) x 483 mm x 1144 mm
Weight in full configuration	94.1 kg	129.8 kg	273.8 kg
Environment requirements	Operating temperature: 0°C to 40°C (0 m to 1800 m) Storage temperature: –40°C to +70°C Relative humidity: 5% RH to 95% RH (noncondensing)		
Operating voltage	AC: 176 V to 290 V, 45 Hz to 65 Hz High-voltage DC (HVDC): 188 V to 288 V/260 V to 400 V		
Maximum power supply capability of the system	18,000 W	30,000 W	60,000 W

Performance and Scalability

Item	Value
Maximum number of MAC address entries	640K
Maximum number of routes (FIB IPv4/IPv6)	1.5M/750K
ARP size	128K
Maximum number of VRFs	4096
IPv6 ND table size	128K
Maximum number of VRRP groups	1024
Maximum number of ECMP paths	128
Maximum number of VXLAN bridge domains	16K
Maximum number of BDIF interfaces	16K
Maximum number of virtual tunnel endpoints (VTEPs)	16K
Maximum number of LAGs	1024
Maximum number of links in a LAG	256
Maximum number of MSTIs	1000
Maximum number of VLANs where VBST can be configured	640K

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

Safety and Regulatory Compliance

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

Certification Category	Description
Safety	EN 62368-1 IEC 62368-1 UL 62368-1 CSA-C22.2 No.62368-1 AS/NZS 62368-1 GB4943
Electromagnetic Compatibility (EMC)	EN 300386 EN 55032 EN 55035 IEC/EN 61000-3-2 IEC/EN 61000-3-3 AS/NZS CISPR32 FCC 47CFR Part15 ICES-003 CISPR 32 CISPR 24 VCCI- CISPR32 CISPR35 GB9254
Environment	EN 50581 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

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

Ordering Information

Device Mode	Description
Chassis	
CE16800-X4-AH	CE16800-X4 AC/HVDC assembly chassis
CE16800-X4-DC	CE16800-X4 DC assembly chassis
CE16800-X8-AH	CE16800-X8 AC/HVDC assembly chassis
CE16800-X8-DC	CE16800-X8 DC assembly chassis
CE16800-X16-AH	CE16800-X16 AC/HVDC assembly chassis
CE16800-X16-DC	CE16800-X16 DC assembly chassis
Main processing unit	
CEX-MPUD-H	CE16800-X Main Processing Unit D (half-width)
CEX-MPUD-F	CE16800-X Main Processing Unit D (full-width)
CEX-MPUE-H	CE16800-X Main Processing Unit E (half-width)
CEX-MPUE-F	CE16800-X Main Processing Unit E (full-width)
Switch fabric unit (G-L series)	
CEX-SFU04G-L	CE16800-X4 Switch Fabric Unit G-L
CEX-SFU08G-L	CE16800-X8 Switch Fabric Unit G-L
CEX-SFU16G-L	CE16800-X16 Switch Fabric Unit G-L
Switch fabric unit (G-H series)	
CEX-SFU04G-H	CE16800-X4 Switch Fabric Unit G-H
CEX-SFU08G-H	CE16800-X8 Switch Fabric Unit G-H
CEX-SFU16G-H	CE16800-X16 Switch Fabric Unit G-H
Interface card (-J series)	
CEX-L36CQJ	36-port 100GE interface card (XL-J, QSFP28)
CEX-L24CQJ[1]	24-port 100GE interface card (XL-J,QSFP28)(CM)
CEX-L36LQJ	36-port 40GE interface card (XL-J, QSFP+)
CEX-L48YSJ[2]	48-port 25GE interface card (XL-J, SFP28) (CM)
CEX-L48YSAJ	48-port 25GE and 4-port 100GE interface card (XL-J, SFP28, QSFP28)
Interface card (-J2 series)	

[1] By default, the CEX-L24CQJ line card has 18 x 100GE ports, which can be expanded to 24 x 100GE ports by purchaing the RTU (CE168-RTU-6CQ).

[2] By default, the CEX-L48YSJ has 48 x 10GE ports. 24 x 10G ports can be upgraded to 24 x 25G ports via the RTU (CE168-RTU-U24S).

Device Mode	Description
CEX-L36DQ2CQJ2	36-port 400GE and 2-port 100GE interface card (XL-J2, QSFP-DD, QSFP28)
CEX-L48CQJ2	48-port 100GE interface card (XL-J2, QSFP28)
CEX-L72YS6CQJ2[3]	72-port 25GE and 6-port 100GE interface card (XL-J2, SFP28, QSFP28)
Fan module (Hongyan 2.0)	
FAN-240SA-B	Fan Tray Assembly,FAN-240SA-B,Fan Tray Assembly
FAN-480SA-B	Fan Tray Assembly,FAN-480SA-B,Fan Tray Assembly
FAN-960SA-B	Fan Tray Assembly,FAN-960SA-B,Fan Tray Assembly
Fan module (Hongyan 5.0)	
FAN-240SD-B	Fan Tray Assembly,FAN-240SD-B,Fan Tray Assembly
FAN-480SE-B	Fan Tray Assembly,FAN-480SE-B,Fan Tray Assembly
FAN-960SE-B	Fan Tray Assembly,FAN-960SE-B,Fan Tray Assembly
Power module	
PAH-3000WA	3000W Dual Inputs AC&HVDC Power Module
PDC-2200WC	PM2200W DC Power Supply
Hardware RTU	
CE168-RTU-6CQ	6*100G Port Right-to-Use for CloudEngine 16800
CE168-RTU-U24S	24*10G Upgrade to 24*25G Right-to-Use for CloudEngine 16800

[3] To be launched in 2024 Q3.

[3] All ports are available at the same time.

[3] All 25GE ports are compatible with 1GE/10GE

Software model	Software Description
N1-CE168LIC-CFFD	N1-CloudFabric Foundation SW License for CloudEngine 16800
N1-CE168CFFD-SnS1Y	N1-CloudFabric Foundation SW License for CloudEngine 16800 -SnS-Year
N1-CE168LIC-CFAD	N1-CloudFabric Advanced SW License for CloudEngine 16800
N1-CE168CFAD- SnS1Y	N1-CloudFabric Advanced SW License for CloudEngine 16800-SnS-Year
N1-CE168LIC-CFPM	N1-CloudFabric Premium SW License for CloudEngine 16800
N1-CE168CFPM- SnS1Y	N1-CloudFabric Premium SW License for CloudEngine 16800-SnS-Year
N1-CE168LIC-AFRD-2	N1-CloudEngine 16800 AI Fabric RDMA Application Acceleration Function 2
N1-CE168AFRD2- SnS1Y	N1-CloudEngine 16800 AI Fabric RDMA Application Acceleration Function 2-SnS-Year
N1-CE168LIC-AI	N1-CE16800 value-added package for the AI scenarios
N1-CE168AI-SnS1Y	N1-CloudEngine 16800 Value-added Package for the AI Scenarios-SnS-1 Year
N1-CE168LIC-NOF+	N1-CloudEngine 16800 AI Fabric Value-added Package for the NOF+ Storage Scenarios
N1-CE168NOF+-SnS1Y	N1-CloudEngine 16800 AI Fabric Value-added Package for the NOF+ Storage Scenarios-SnS-Year
N1-CE168LIC-SEC	N1-CloudEngine 16800 Security Function
N1-CE168SEC-SnS1Y	N1-CloudEngine 16800 Security Function-SnS-Year
N1-CE-F-LIC-MDCA	N1-CloudEngine Data Center Switch Multi-cloud Multi-DC Value-added Package - Fixed
N1-CEFMDCA-SnS1Y	N1-CloudEngine DC Switch Multi-cloud Multi-DC Value-added Package, Per Fixed device-SnS-Year
N1-CE-M-LIC-DM	N1-CloudEngine Digital Map Function-Modular
N1-CEMDM-SnS1Y	N1-CloudEngine Digital Map Function, Per Modular device-SnS-Year
N1-CE-LIC-AFP100VM	N1-CloudEngine Specified Flow Analysis Value-added Package Per 100 VM
N1-CEAFP100VM-SnS1Y	N1-CloudEngine Specified Flow Analysis Value-added Package Per 100 VM-SnS-Year
N1-CE168UPG-F-A	N1-CloudEngine 16800 Upgrade SW License:Foundation to Advanced
N1-CE168UGFA- SnS1Y	N1-CloudEngine 16800 Upgrade SW License:Foundation to Advanced-SnS-Year
N1-CE168UPG-A-P	N1-CloudEngine 16800 Upgrade SW License:Advanced to Premium
N1-CE168UGAP- SnS1Y	N1-CloudEngine 16800 Upgrade SW License:Advanced to Premium-SnS-Year

Networking and Applications

On typical data center networks, CloudEngine 16800-X, CloudEngine 16800, or CloudEngine 9800 series switches work as core switches, whereas CloudEngine 9800, CloudEngine 8800, or CloudEngine 6800 series switches connect to the core switches through 40GE, 100GE, or 200GE ports to build an end-to-end and fully-connected 100GE/200GE/400GE network. The switches use VXLAN and other fabric protocols to establish a non-blocking large Layer 2 network, which allows 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.

More Information

For more information about Huawei products, visit https://e.huawei.com/en/ or contact Huawei's local sales office.

Alternatively, you can contact us through one of the following methods:

- Global service hotline: https://e.huawei.com/en/about/service-hotline
- Enterprise technical support website: https://support.huawei.com/enterprise/en/index.html
- Service email address for enterprise users: support_e@huawei.com

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