



Huawei CloudEngine 12800 Switch Ordering Guide



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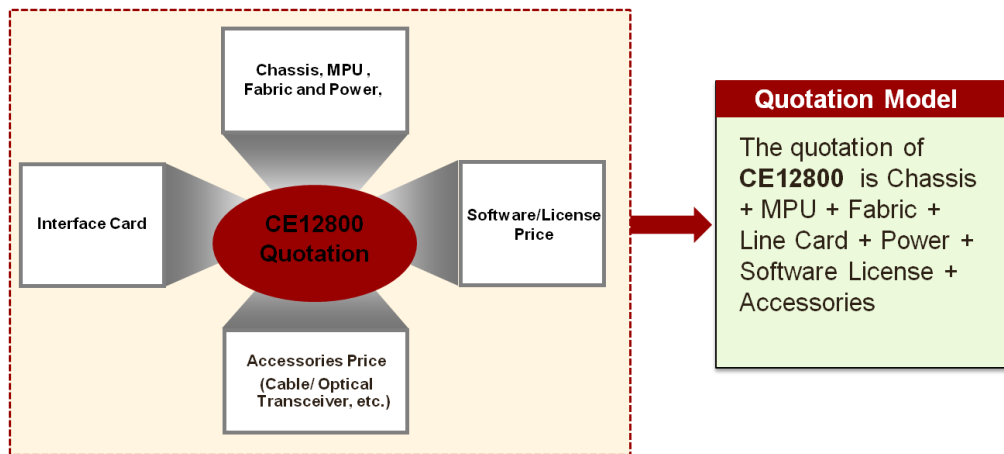
1 CloudEngine 12800 Product Overview

Huawei CloudEngine 12800 series switches (CE12800) are next-generation core switches designed for data center networks and high-end campus networks, providing large capacity and high performance. The CE12800 switches can function as core or aggregation nodes on data center networks and campus networks and provide GE, 10GE, 40GE, and 100GE ports. Currently, the CE12800 switches have six models: CE12816, CE12812, CE12808, CE12804, CE12808S, and CE12804S.

- CE12804S: supports 4 LPUs, 2 MPUs, 2 SFUs, and a maximum of 4 AC power modules in 2+2 backup mode.
- CE12808S: supports 8 LPUs, 2 MPUs, 4 SFUs, and a maximum of 8 AC power modules in 4+4 backup mode.
- CE12804: supports 4 LPUs, 2 MPUs, 6 SFUs, and a maximum of 4 AC power modules in 2+2 backup mode.
- CE12808: supports 8 LPUs, 2 MPUs, 6 SFUs, and a maximum of 8 AC power modules in 4+4 backup mode.
- CE12812: supports 12 LPUs, 2 MPUs, 6 SFUs, and a maximum of 12 AC power modules in 6+6 backup mode.
- CE12816: supports 16 LPUs, 2 MPUs, 6 SFUs, and a maximum of 20 AC power modules in 10+10 backup mode.

The four CE12800 models use the same software and hardware platform. MPUs, CMUs, LPUs, power modules, and fan modules can be used on all CE12800 series switches.

2 Configuration Guide



The CE12800 configuration procedure is as follows:

1. Select the CE12800 model.
2. Select the device type (bundle or host). If the host is selected, select the MPU and SFU.
3. Select a cabinet.
4. Configure interface cards.
5. Select the power redundancy mode and power cable types.



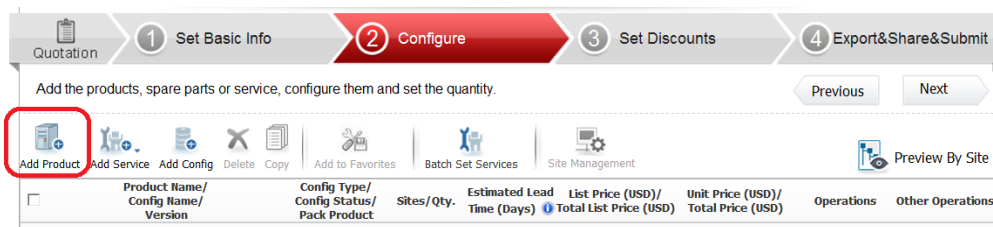
6. Select the license.
7. Select optical modules, optical fibers, optical cable assemblies, and high-speed cables.
8. Export the quotation.

The following describes the configuration of each step.

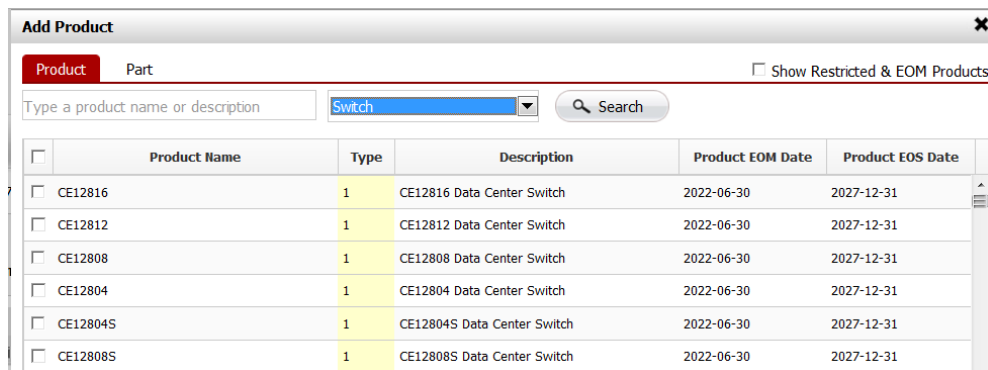
2.1 Selecting the CE12800 Model

Select the chassis model based on the number of LPUs required in each chassis. A CE12804S chassis provides 4 service slots, a CE12808S chassis provides 8 service slots, a CE12804 chassis provides 4 service slots, a CE12808 chassis provides 8 service slots, a CE12812 chassis provides 12 service slots, and a CE12816 chassis provides 16 service slots.

Step 1 On the SCT home page, select **My Quotations**. Create a quotation, set basic information and save it, and click **Next**.

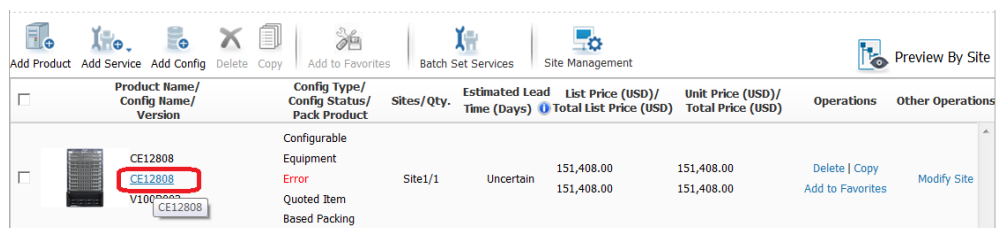


Step 2 Click **Add Product**. In the check box that is displayed, select the desired model.



2.2 Performing Basic Configuration

Step 1 Click the configuration name of the model.





Step 2 On the **Product Parameter** tab page, perform basic configuration.

Step 3 Select the software version. V100R003 is recommended because the main cards on the device are in V100R003.

Step 4 Select the device type (bundle or host). Each CE12800 model supports four bundle types: CE128XX-B00, CE128XX-B01, CE128XX-B09, and CE128XX-B02. Each CE12800S model supports three bundle types: CE128XXS-B0, CE128XXS-B, and CE128XXS-B2.

➤ CE12800:

Bundle Name	Product	Difference	Usage Scenario
CE128XX-B00	CE12804-B00 CE12808-B00 CE12812-B00 CE12816-B00	SFU type: SFUA Number of SFUs: 3	Applies to scenarios that require line-rate GE line cards but do not require high-density line-rate 10GE line cards.
CE128XX-B01	CE12804-B01 CE12808-B01 CE12812-B01 CE12816-B01	SFU type: SFUA Number of SFUs: 5	Applies to scenarios that require line-rate 480G line cards.
CE128XX-B09	CE12804-B09 CE12808-B09 CE12812-B09 CE12816-B09	SFU type: SFUB Number of SFUs: 3	Applies to scenarios that require non-line-rate 480G line cards.



Bundle Name	Product	Difference	Usage Scenario
CE128XX-B02	CE12804-B02 CE12808-B02 CE12812-B02 CE12816-B02	SFU type: SFUB Number of SFUs: 5	Applies to scenarios that require basic-rate 480G line cards.

➤ CE12800S:

Bundle Name	Product	Difference	Usage Scenario
CE128XXS-B0	CE12804S-B0 CE12808S-B0	SFU type: SFUB-S Number of SFUs: CE12804S:1 CE12808S:2	Applies to scenarios that require line-rate GE line cards but do not require high-density line-rate 10GE line cards.
CE128XXS-B1	CE12804S-B1 CE12808S-B1	SFU type: SFUB-S Number of SFUs: CE12804S:2 CE12808S:4	Applies to scenarios that require line-rate 480G line cards.
CE128XXS-B2	CE12804S-B2 CE12808S-B2	SFU type: SFUC-S Number of SFUs: CE12804S:2 CE12808S:3	Applies to scenarios that require non-line-rate 800G line cards.

Step 5 If the host is selected, select the MPU and SFU.

1. **Select the CE12800 MPU.** Two MPUs in 1+1 hot standby mode are recommended. **Skip this step when configuring the bundle.**
2. **Select the CE12800 SFU.** You can configure a maximum of six SFUs. Each CE12800 model provides three types of SFUs. Each CE12800S model provides two types of SFUs. Different types of SFUs cannot be installed on the same device. **Skip this step when configuring the bundle.**

SFU Type	CE12804	CE12808	CE12812	CE12816	CE12804S/C E12808S
SFUA	CE-SFU04A	CE-SFU08A	CE-SFU12A	CE-SFU16A	
SFUB	CE-SFU04B	CE-SFU08B	CE-SFU12B	CE-SFU16B	CE-SFUB-S
SFUC	CE-SFU04C	CE-SFU08C	CE-SFU12C	CE-SFU16C	CE-SFUC-S



Step 6 Determine whether to use the CE12800 cabinet.

- No: Check whether the purchased cabinet meets requirements of the CE12800 switch.
- Yes: The CE12800 cabinet has no built-in PDU. Select single-phase or three-phase PDUs depending on the power distribution system in the customer equipment room.

2.3 Configuring Interface Cards

Step 1 Select the interface card type as required. Currently, the CE12800 switches support GE, 10GE, 40GE, 100GE interface cards, and service processing unit.

Step 2 Select the required interface cards according to the number of required ports.

Step 3 Enter the number of required interface cards.

▼ ===Interface Card===		
▼ ===1000BASE-T Interface Card===		
(Typical)48-Port 10/100/1000BASE-T Interface Card(EA,RJ45)	?	0
48-Port 10/100/1000BASE-T Interface Card(ED,RJ45)	?	0
▼ ===1000BASE-X Interface Card ===		
(Typical)48-Port 100/1000BASE-X Interface Card(EA,SFP)	?	0
48-Port 100/1000BASE-X Interface Card(ED,SFP)	?	0
▼ ===10GBASE-T Interface Card===		
48-port 100M/1000M/10G Base-T Interface Card(EC,RJ45)	?	0
▼ ===10GBASE-X Interface Card===		
12-Port 10GBASE-X Interface Card(ED,SFP+)	?	0
(Typical)24-Port 10GBASE-X Interface Card(EC,SFP+)	?	0
24-Port 10GBASE-X Interface Card(ED,SFP+)	?	0
(Typical)48-Port 10GBASE-X Interface Card(EC,SFP+)	?	0
48-Port 10GBASE-X Interface Card(ED,SFP+)	?	0
48-Port 10GBASE-X Interface Card(EF,SFP+)	?	0
▼ ===40GBASE-X Interface Card===		
6-Port 40G Interface Card(EC,QSFP+)	?	0
12-Port 40G Interface Card(EF,QSFP+)	?	0
(Typical)24-Port 40G Interface Card(EC,QSFP+)	?	0
(Typical)24-Port 40G Interface Card(EC1,QSFP+)	?	0
36-Port-40G Interface Card(EG,QSFP+)	?	0
▼ ===100GBASE-X Interface Card===		
4-Port 100G Interface Card(EF,CFP)	?	0
8-Port-100G Interface Card(EC,CXP)	?	0
(Typical)12-Port-100GE Interface Card(EG,CFP2)	?	0
▼ ===Service Processing Unit===		
CE12800 NGFW Module A, with HW General Security Platform Software	?	0
CE12800 IPS Process Card A	?	0



NOTE

EC/EC1 series interface cards are recommended in the project because the EC/EC1 series interface cards are mainly delivered.

Restrictions on firewall/IPS card and license sales:

Product	Security-Sensitive Feature	Sales Scope				
		France, Its Dependent Territories, and Fully Sanctioned Countries	Partially Sanctioned Countries (Nine Countries)	Non-Trade Embargoed or Controlled Countries (Security-Sensitive Countries Excluding France's Dependent Territories)	Non-Trade Embargoed or Controlled Countries (Non-Security-Sensitive Countries Excluding China)	China
Carriers	Excluding functions and codes: Behavior audit, content audit, content filtering, anti-DDoS packet capturing License control: SSL traffic decryption Remote URL query Reputation feedback	Sales prohibited	Sales prohibited: URL license Sales permitted: non-security-sensitive features	Sales prohibited: URL license Sales permitted: non-security-sensitive features	Sales under control: URL license Sales permitted: non-security-sensitive features	Sales under control: URL license Sales permitted: non-security-sensitive features
Industry networks	License control: SSL traffic decryption Remote URL query Reputation feedback Anti-DDoS packet capturing	Sales prohibited	Sales prohibited: • Confidential services of government agencies • National and social security surveillance systems • Governmental public information service projects Sales prohibited: Security-sensitive features Sales permitted: non-security-sensitive features	Sales prohibited: • Confidential services of government agencies • National and social security surveillance systems • Security-sensitive feature license Sales permitted (non-security-sensitive features): • Governmental public information service projects • Business and enterprise security projects	Sales prohibited: • Confidential services of government agencies • National and social security surveillance systems • Security-sensitive feature license Sales permitted: • Security-sensitive feature license • Governmental public information service projects • Business and enterprise security projects	Sales permitted

2.4 Selecting the Power Redundancy Mode and Power Cable Types

Step 1 Select the power redundancy mode.

The CE12800 switches provide 2700 W AC, 2200 W DC power modules and 3000W AC&HVDC Power Module that support N+N and N+1 backup modes. The CE12804, CE12808, CE12812, and CE12816 support 4, 8, 12, and 20 power modules respectively. The CE12804S, CE12808S support 4 and 8 power modules respectively.

The power redundancy modes include:

- N+1 mode if only one power supply system is available.
- N+N mode if double power supply systems are available.

===Power===	
Input the quantity of the system power	2 4
Select the type of Power redundancy mode	N+N N+N
Select the type of C19 power cable(Please check th...	C19 PDU C19 PDU
Select the type of C19 PDU power cable	Australia Australia



To support N+N power redundancy mode:

If the bundle is used, four more power modules need to be configured in addition to power modules existing in the bundle. If the host is used, four power modules need to be configured.

Step 2 Select power cable types. Currently, the CE series switches provide two types of power cables: PDU power cables and standard-compliant power cables. The two types of power cables apply to different cabinet sockets. Select proper power cables based on the cabinet socket type.

- Figure 2-1 shows the sockets used for PDU power cables.

Figure 2-1 Sockets for PDU power cables



- Figure 2-2 shows a PDU power cable.

Figure 2-2 PDU power cable



2.5 Selecting the CE12800 License

If functions, including TRILL, MPLS, IPv6, VS, EVN, and FCF are required, configure the corresponding licenses. To save costs, select the license bundle. If configure service processing unit, need to configure license according to customer requirements.

▼ ===Software===			
Select need License or not	None	Yes	▼
Select need CE128-LIC-BUN03 or not	?	No	▼
Select need CE128-LIC-BUN01 or not	?	No	▼
Select need TRILL function or not	?	No	▼
Select need MPLS function or not	No	No	▼
Select need IPv6 function or not	No	No	▼
Select need Virtual System function or not	No	No	▼
Select need EVN function or not	?	No	▼
CE12800 FCF 48 Ports license	?	0	▼
Select need FCOE FCF function or not	?	No	▼
Quantity of Virtual Firewall	0	0	
Quantity of SSL VPN Concurrent Users	0	0	
IPS Update Service Subscribe duration(Year(s))	0	0	
URL Filtering Update Service Subscribe duration(Y...	0	0	
Anti-Virus Update Service Subscribe duration(Year...	0	0	
IPS-AV-URL Function Group Subscribe duration(Ye...	0	0	
IPS Update Service Subscribe(IPS Module) duratio...	0	0	
Anti-Virus Update Service Subscribe (IPS Module)...	0	0	



2.6 Selecting Optical Modules, Optical Fibers, Optical Cable Assemblies, and High-Speed Cables

Step 1 Select the type and number of optical modules based on the configured card type.

- FE modules include the 2 km multimode optical module, single-mode optical modules of 15 km and 40 km, and 15 km single-mode bidirectional optical module.
- GE modules include the 100 m copper transceiver, 500 m multimode optical module, single-mode optical modules of 10 km, 40 km, 80 km, and 100 km, and two pairs of bidirectional optical modules (10 km and 40 km).
- 10GE optical modules include the multimode SFP+ optical modules of 100 m, 220 m, and 300 m, and single-mode SFP+ optical modules of 1.4km, 10 km, 40 km, and 80 km. 10GE optical interfaces on the CE12800 can work as GE optical interfaces.
- 40GE optical modules include the 150 m and 300 m multimode optical module, 1.4 km, 10 km, 40 km QSFP+ optical module, and 10 km, 40 km CFP optical module.
- 100GE optical modules include CFP, CXP, and CFP2 optical modules of 100 m, 10 km, and 40 km.
- CWDM optical modules include the 80 km 2.5G CWDM optical module and 70 km 10G CWDM optical module.

Step 2 Select optical fibers and optical cable assemblies.

Patch Cord			
Need 10G Multimode Module OM3 Optical fiber or not	Yes	Yes	
Select the OM3 Client Interface of Patch Cord(the loca...	None	LC/PC	
Select the Length of Patch Cord in meters(the local int...	10m	10m	
Select the Client Interface of Patch Cord(the local inte...	None	LC/PC	
Select the Length of Patch Cord in meters(the local int...	10m	10m	
Select the type of 40G MM cable assemblies client inte...	None	None	
Select the type of 40G SM cable assemblies client inte...	None	None	
Select the type of 100G cable assemblies client interfa...	None	None	

Step 3 Use high-speed cables or AOC high-speed cable if the transmission distance is short.

➤ High-speed cables:

- 10GE high-speed cables can provide transmission distances of 1 m, 3 m, 5 m, 7 m, and 10 m.
- 40GE high-speed cables include two types. One type is used to connect two 40GE interfaces. The other type is used to connect one 40GE interface and four 10GE interfaces. The two types of cables provide transmission distances of 1 m, 3 m, and 5 m. There are a total of six types of high-speed cables.

•  **NOTE**

When configuring high-speed cables, you do not need to configure optical modules.

The following figures show some high-speed cables.



10GBASE-CR SFP+ direct copper cable



40GBASE-CR4 QSFP direct copper cable



QSFP to 4*10G SFP+ copper cable

➤ AOC high-speed cable

10G SFP+ AOC high-speed cable:

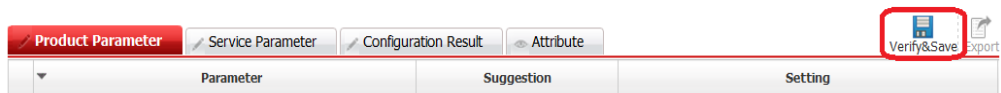


40G QSFP+ AOC high-speed cable:



2.7 Exporting the Quotation

Step 1 After the preceding configurations are complete, click **Verify&Save**.



Step 2 Verify the configurations, and click **My Quotations**. On the **My Quotations** page, click **Export**. The quotation is exported. For details about how to perform operations on the SCT, see the help on the SCT website.



<input type="checkbox"/>	Quotation	Customer/ Country	Price/ Estimated Lead Time (Days)	From	Operations	Other Operations	All Da
<input type="checkbox"/>	Normal BOQ		151,824.00 (USD FOB C		Copy Delete		
<input type="checkbox"/>	test	Armenia	hina)	SCT	Share Export		201-
	0000Hc00139102201408140002		Uncertain		Submit Offline Quote		