NE20E-S8 Configuration Help

1. **New site or Expansion**

   This parameter is used for the NE20E-S to choose to purchase a new chassis or the old chassis only expand LPU or upgrade software. If you want to purchase a new NE20E-S , select "New site".If the software upgrade of the different version or the old chassis only expand LPU, select "Expansion".

2. **Please select the version**

   V800R008 supports the following: Hardware: Replacement of old hard pipe cards with the 2-Port 10GBase LAN/WAN-SFP+ Physical Interface Card H and 8-Port 100/1000Base-X-SFP Physical Interface Card H Software: BRAS licenses, including the NE20E-S Series PPPoE/IPoE Function License, NE20E-S Series Subscribers Quantity(1k Subscribers) License, NE20E-S Series L2TP Function License. Please confirm the corresponding iManager version is correct when you select the version: V800R005:the corresponding iManager U2000 version is V100R009C00 or later; V800R006:the corresponding iManager U2000 version is V200R014C50 or later; V800R007: the corresponding iManager U2000 version is V200R015C50 or later; eSight version is V300R003C10 or later; V800R008: the corresponding iManager U2000 version is V200R016C50 or later; eSight version is V300R006C00 or later; V800R009: the corresponding iManager U2000 version is V200R017C50 or later; V800R010: the corresponding iManager U2000 version is V200R018C50 or later. V800R011: the corresponding iManager U2000 version is V200R018C60 or later.

3. **Please select the version that after upgrading**

   V800R008 supports the following: Hardware: Replacement of old hard pipe cards with the 2-Port 10GBase LAN/WAN-SFP+ Physical Interface Card H and 8-Port 100/1000Base-X-SFP Physical Interface Card H Software: BRAS licenses, including the NE20E-S Series PPPoE/IPoE Function License, NE20E-S Series Subscribers Quantity(1k Subscribers) License, NE20E-S Series L2TP Function License. Please confirm the corresponding iManager version is correct when you select the version: V800R005:the corresponding iManager U2000 version is V100R009C00 or later; V800R006:the corresponding iManager U2000 version is V200R014C50 or later; V800R007: the corresponding iManager U2000 version is V200R015C50 or later; eSight version is V300R003C10 or later; V800R008: the corresponding iManager U2000 version is V200R016C50 or later; eSight version is V300R006C00 or later; V800R009: the corresponding iManager U2000 version is V200R017C50 or later; V800R010: the corresponding iManager U2000 version is V200R018C50 or later. V800R011: the corresponding iManager U2000 version is V200R018C60 or later.

4. **Need the PPPoE/IPoE function or not(just for filtering card and license)**

   This parameter is used to filter PPPoE/IPoE function card and license:
   If Yes is selected, the license(per chassis) parameters that support PPPoE/IPoE will be displayed, and the board that don't support PPPoE/IPoE will be filtered out and hidden.
   If No is selected, the license parameters that support PPPoE/IPoE will be filtered out and hidded.

5. **Need Basic Software CD or not**

   The basic software has been loaded on the equipment,and can be downloaded from http://support.huawei.com.The CD is not delivered by default. If the CD is required by customer,please choose 'YES'.

6. **===R01S300A Assembly===**

   - 6.1 **Please select the capacitance of Rechargeable battery**

   50Ah Rechargeable battery can supply power for 2-4 hours,92Ah for 4-8 hours.

   - 6.2 **Please select the manufacturer of Rechargeable battery**

   1.EnerSys is advised in high temperature area such as Middle East,Shuangdeng is advised for other countries.
   2.Only Coslight and Shuangdeng can be chosen in following countries:China,Southeast,North Korea,Sudan,Iran,Cuban,Libya,Burma and so on.

   - 6.3 **Please select the quantity of Heater**

   1.Heater is not necessary when temperature is higher than -15 degrees centigrade.
   2.1pcs Heater is advised when temperature is between -15 and -20 degrees.3.2pcs Heaters are advised when temperature is lower than -20 degrees.

7. **===Basic Configuration===**

   - 7.1 **Please select the Portfolio Quotation of Basic Configuration**

   1. The basic configuration includes Chassis, 2*MPUE1, 2*Power, Power cord/PGND cable, without NSP, Software Charge or Document.
   2. The DC basic configuration includes DC Power cord (3m) and PGND cable (3m). The AC basic configuration includes PGND cable (3m).

   - 7.2 **Please select the type of NSP**

   NSP-120-E:provide NSP ability of 120G,support wide temperature range -40~-65.
   NSP-A:provide NSP ability of 120G,don't support wide temperature range,support value-added service(IPSEC/NAT/VxLan/value-added service).

NSP-B:provide NSP ability of 240G,don't support wide temperature range,support value-added service(IPSEC/NAT/VxLan/value-added service).
NSP-C:provide NSP ability of 480G,don't support wide temperature range,support value-added service(IPSEC/NAT/VxLan/value-added).

Network Service Processor (NSP-50)

Network Service Processor (NSP-50-E, Apply for - 40~ 65degree scene)

Network Service Processor (NSP-120-E)

Network Service Processor (NSP-120)

Network Service Processor(NSP-A)

Network Service Processor(NSP-B)

- 7.3 **Please select the quantity of NSP**

Double NSPs are suggested for 1+1(Turbo) backup or 1:1 backup.

- 7.4 **Need DC PDU or not**

1.Including DC PDU and PGND cable, without power cable(the length of power cable is calculated automatically);2.The PDU of S2/S4/S8 could support 2 chassises. The PDU of S16 could support 4 chassises. The quantity of power cable which connect the PDU to PDF(Power Distribution Frame) is calculated with total chassises by default.

- 7.5 **Need update to MPUE1 or not**

Need config MPUE1 to support PPPoE/IPoE function

- 7.6 **Please select the type of NSP after upgrading**

Need config NSP-A/NSP-B/NSP-C to support PPPoE/IPoE function.
NSP-50:provide NSP ability of 50G,don't support wide temperature range.
NSP-120:provide NSP ability of 120G,don't support wide temperature range.
NSP-120-E:provide NSP ability of 120G,support wide temperature range -40~-65.
NSP-A:provide NSP ability of 120G,don't support wide temperature range,support value-added service(IPSEC/NAT/VxLan/value-added service).
NSP-B:provide NSP ability of 240G,don't support wide temperature range,support value-added service(IPSEC/NAT/VxLan/value-added service).
NSP-C:provide NSP ability of 480G,don't support wide temperature range,support value-added service(IPSEC/NAT/VxLan/value-added service).

8. **Total ports of all card**

Each chassis can support 108 ports for NSP-50 at most, while 118 ports for NSP-120/NSP-A/NSP-B/NSP-C. Expansion, the max number of ports for each chassis needs to include the existing network.

9. **===High speed Card===**

- 9.1 **1-Port 40GBase-CFP Physical Interface Card(PIC)**

1.Need work with V8R7C10 or later software version.
2.Only NSP-120/NSP-A/NSP-B/NSP-C support this card.

If configure with NSP-120/NSP-A/NSP-B, Sub-slots of No.3-No.6 can support this card.

If configure with NSP-C, all slots can support this card.

3.Does not support outdoor application.

 1-Port 40GBase-CFP Physical Interface Card(PIC)

- 9.2 **4-Port 10GBase LAN-SFP+ Physical Interface Card(PIC)**

Need be fixed with NSP-120/NSP-120-E, and NSP-50/NSP-50-E don't support this card.

- 9.3 **4-Port 10GBase LAN/WAN-SFP+ Physical Interface Card**

1. Only NSP-120 /NSP-120-E/NSP-A/NSP-B/NSP-C support this card.

If configure with NSP-120 /NSP-120-E/NSP-A/NSP-B, Sub-slots of No.3-No.6 can support this card.

If configure with NSP-C, all slots can support this card.

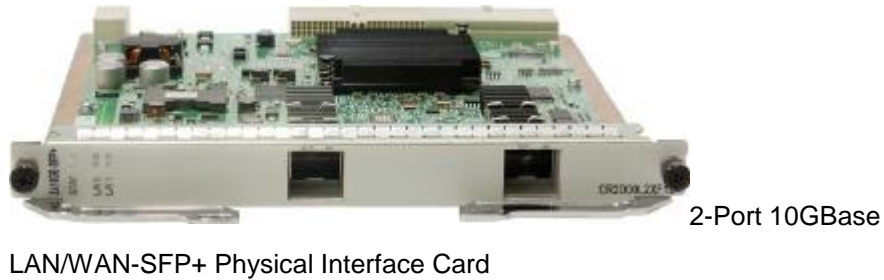2. This card support GE/10GE auto-sensing.

 4-Port 10GBase LAN/WAN-SFP+ Physical Interface Card

- 9.4 **4-Port 10GBase-SFP+MACsec Interface Card**

NSP-A/NSP-B support this card.If configured NSP-A/NSP-B, it can be configured 4 PCS at most(No.3-No.6).

- 9.5 **2-Port 10GBase LAN/WAN-SFP+ Physical Interface Card(PIC)**

This card support GE/10GE auto-sensing.

2-Port 10GBase LAN/WAN-SFP+ Physical Interface Card

- o 9.6 **2-Port 10GBase LAN/WAN-SFP+ Physical Interface Card H**

1. Need work with NSP-A/NSP-B
2. Mainly used in IP hard pipe scenario.

- o 9.7 **2-Port 10GBase LAN/WAN-SFP+ Physical Interface Card H**

Specifications: 1)Support IP hard pipe 2)Support interface type:10GE 3)Specifications list:

http://3ms.huawei.com/mm/docMaintain/mmMaintain.do?method=showMMDetail&f_id=CIP180525031314083 Configuration precautions: 1)Need work with NSP-A/NSP-B/NSP-C.

2-Port 10GBase LAN/WAN-SFP+ Physical Interface Card H

- o 9.8 **2-Port 10GBase LAN/WAN-SFP+ Physical Interface Card E(PIC-E)**

1.Only NSP-A/NSP-B/NSP-C support this card.
If configure with NSP-A/NSP-B, Sub-slots of No.3-No.6 can support this card.
If configure with NSP-C, all slots can support this card.
2.As this card with ETM chipset(enhanced Qos), it must insert in the slot which capacity bigger than 20G,or else the card would not registered.

- o 9.9 **1-Port 10GBase LAN/WAN-SFP+ + 8-Port 100/1000Base-X-SFP Physical Interface Card**

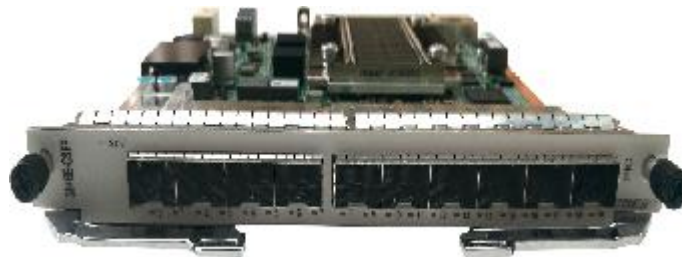This card support GE/10GE auto-sensing.

1-Port 10GBase LAN/WAN-SFP+ + 8-Port 100/1000Base-X-SFP Physical Interface Card

- 9.10 **20-Port 100/1000Base-X-CSFP/10-Port 100/1000Base-X-SFP Physical Interface Card(PIC)**

Specifications: 1)Support interface type:GE/FE 2)Specifications list: http://3ms.huawei.com/mm/docMaintain/mmMaintain.do?method=showMMDetail&f_id=CIP180525031314083 Configuration precautions: 1)Need configure with NSP-A/NSP-B/NSP-C, all slots can support this card. 2)20*GE CSFP card can be configured with both CSFP and SFP transceiver. Each CSFP transceiver can be work as 2 GE mode, while each SFP transceiver only work as 1 GE mode. 3)Don't support Electrical Transceiver.

20-Port 100/1000Base-X-CSFP/10-Port 100/1000Base-X-SFP Physical Interface Card(PIC)

- 9.11 **10-Port 100/1000Base-X-SFP Physical Interface Card**

10-Port 100/1000Base-X-SFP Physical Interface Card

- 9.12 **10-Port 100/1000Base-X-SFP Physical Interface Card H**

1. Need work with NSP-A/NSP-B
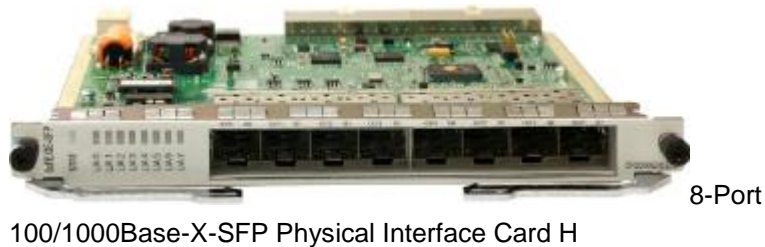2. Mainly used in IP hard pipe scenario.

- 9.13 **10-Port 100/1000Base-X-SFP Physical Interface Card E(PIC-E)**

1.NSP-A/NSP-B/NSP-C support this card. If configure with NSP-A/NSP-B/NSP-C, all the sub-slot can support this card.
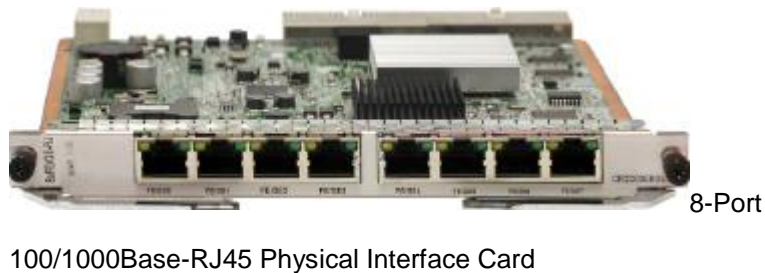2.As this card with ETM chipset(enhanced Qos), it must insert in the slot which capacity bigger than 10G, or else the card would not registered.

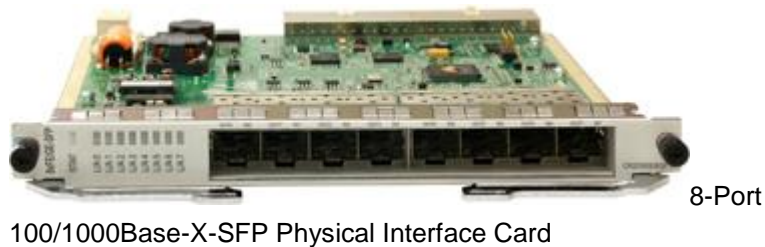- 9.14 **8-Port 100/1000Base-X-SFP Physical Interface Card H**

1. Need work with NSP-A/NSP-B/NSP-C
2. Mainly used in IP hard pipe scenario.

8-Port 100/1000Base-X-SFP Physical Interface Card H

- 9.15 **8-Port 100/1000Base-RJ45 Physical Interface Card(PIC)**

8-Port 100/1000Base-RJ45 Physical Interface Card

- 9.16 **8-Port 100/1000Base-X-SFP Physical Interface Card**

8-Port 100/1000Base-X-SFP Physical Interface Card

10. **===Low speed Card===**

- 10.1 **2-Port OC-3c/STM-1c (or 1-Port OC-12c/STM-4C) POS-SFP Physical Interface Card**

The model exchange between 155M and 622M control by command. The default mode is 155M. Need configure corresponding Optical Transceiver.

 2-Port OC-3c/STM-1c (or 1-Port OC-12c/STM-4C) POS-SFP Physical Interface Card

- 10.2 **1-Port Channelized STM-1c POS-SFP Physical Interface Card**

Need configure 155M SFP/eSFP Optical Transceiver.

 1-Port Channelized STM-1c POS-SFP Physical Interface Card

- 10.3 **4-Port Channelized STM-1c POS-SFP Physical Interface Card(PIC)**

Need configure 155M SFP/eSFP Optical Transceiver.

 4-Port Channelized STM-1c POS-SFP Physical Interface Card(PIC)

- 10.4 **4-Port OC-3c/STM-1c POS-SFP Flexible Interface Card(PIC)**

Need configure 155M SFP/eSFP Optical Transceiver.

4-Port OC-3c/STM-1c POS-SFP Physical Interface Card

- 10.5 **4 Channels GE/FE PoE Electrical Interface Board**

1. The calbes should be done on site.
2. NSP-A/NSP-B support this card. If configure with NSP-A/NSP-B/NSP-C, all of the Sub-slots can support this card.

- 10.6 **32-Port E1 Physical Interface Card(PIC,120ohm)**

Need configure E1 Cable

32-Port E1 Physical Interface Card(120ohm)

- 10.7 **32-Port E1 Physical Interface Card(PIC,75ohm)**

Need configure E1 Cable

32-Port E1 Physical Interface Card(75ohm)

- 10.8 **16-Port E1 Physical Interface Card(PIC,120ohm)**

Need configure E1 Cable

 16-Port E1 Physical

Interface Card(120ohm)

- 10.9 **16-Port E1 Physical Interface Card(PIC,75ohm)**

Need configure E1 Cable

 16-Port E1 Physical

Interface Card(75ohm)

- 10.10 **4-Channel FXS/FXO+2-Channel E&M+2-Channel RS232+2-Channel RS485 Board(MPA)**

1. NSP-120/NSP-120-E/NSP-A/NSP-B support this card.
2. Can not support outdoor.
3. Two RS-485/RS-422 interfaces, based on the actual type of the peer device prepare cables on site.
4. Two E&M interfaces, based on the actual type of the peer device prepare cables on site.
5. Two RS-232 interfaces need to use a maximum of two RS-232 serial port cable.
6. 4-channel FXS/FXS interface need to use a maximum of four standard phone lines.

- 10.11 **6 Channels E&M Interface Board**

1. The calbes should be done on site.
2. NSP-A/NSP-B/NSP-C support this card. If configure with NSP-A/NSP-B/NSP-C, all of the Sub-slots can support this card.

- 10.12 **8-Channel V.35/X.21/V.24 Board(SA8)**

1.NSP-120/120-E/A/B support this card.
2. Can not support outdoor.
3. The board supports 8-channel RS-232/X.21/V.24/V.35 interface.

- 10.13 **4 Channels C37.94 Optical Interface and 4 Channels CoDir64K Electric Interface Board(MP8A)**

1. NSP-120/120-E/A/B support this card.
2. Can not support outdoor.
3. You need to configure the SFP optical modules for Optical Interface and 120 ohm E1 cables for Electric Interface

11. **===Multiplexing & Demultiplexing Card===**

- 11.1 **8-Channel Multiplexing & Demultiplexing Card**

1.This card does not need to configure Optical Transceiver.2.The port connected with demultiplexing-port must configure CMDM Optical Transceiver.3.Multiplexing & Demultiplexing Card contains 1-channel Multiplexing and 8-channel Demultiplexing.Each channel need 2 PCS patch cords.

8-Channel Multiplexing & Demultiplexing Card

12. **===40G CFP Optical Transceiver===**

- 12.1 **High Speed Transceiver,CFP,850nm,4*10.3125Gb/s,mpo,MM,0.1km**

1.Need configure 40G MPO Patch Cord
2.Does not support outdoor application

- 12.2 **High Speed Transceiver,CFP,1271~1331nm CWDM-41.25Gb/s-LC-SM-10km**

Does not support outdoor application

- 12.3 **High Speed Transceiver,CFP,4*10Gb/s(1310 NM BAND),41.25Gb/s,straight LC,SMF,40km,OMA OPTICAL POWER,40GBASE-ER4**

Does not support outdoor application

- 12.4 **High Speed Transceiver,CFP,4*10Gb/s(1550 NM BAND),41.25Gb/s,-0dBm,4.5dBm,-22dBm,straight LC,SMF,80km**

Does not support outdoor application

13. **===10G/GE Auto-adaptation XFP SFP+ Optical Transceiver===**

   o 13.1 **XFP SFP+ Transceiver-SFP+-1310nm-10G/1G-Single-mode-LC-10km**

Only below boards surpporting 10GE/GE auto-sensing optical transceiver:
03031DJP 4-Port 10GBase LAN/WAN-SFP+ Physical Interface Card
03031DJQ 1-Port 10GBase LAN/WAN-SFP+ + 8-Port 100/1000Base-X-SFP Physical Interface Card
03030WGQ 2-Port 10GBase LAN/WAN-SFP+ Physical Interface Card

14. **===155M SFP/eSFP Optical Transceiver===**

   o 14.1 **Optical Transceiver,eSFP,1310nm,2.048Mb/s,LC,SM,2km**

Need configure with MP8A board.

15. **===Software(The Base Software is provided automatically)===**

   o 15.1 **Need software bundle(Basic software+PPPoE/IPoE) or not**

The software bundle includes Basic software, PPPoE, IPoE, L2TP, 1588v2, 32K BRAS function access subscribers.

   o 15.2 **Need Turbo Function License or not**

This license can upgrade 1:1 backup to 1+1(Turbo)

   o 15.3 **Need Flow Queue Enhanced License or not**

Each chassis has 32K by default,It can be raised to 256K by this license

   o 15.4 **Need PPPoE/IPoE Function or not**

Only MPUE1+NSP-A/B/C Ethernet board support PPPoE/IPoE function

   o 15.5 **Need L2TP Function or not**

Before enabling the L2TP function, configure the PPPoE/IPoE license to support the basic BRAS functions. The L2TP license is mandatory for the LNS and LTS functions. The L2TP license is not required for the LAC function. LNS, LTS, LAC are all required to configure user license.

   o 15.6 **Need DAA Function or not**

Before enabling the DAA function, configure the PPPoE/IPoE license to support the basic BRAS functions. The DAA license is mandatory for the DAA functions. The DAA license is required to configure user license.

- ○ 15.7 **Please input the quantity of the BRAS function access subscribers(K)**

Need work together with the PPPoE/IPoE function license. A maximum of 32 licenses can be configured for an NE20E-S

- ○ 15.8 **MACsec Port Function License(per 10GE)**

1.This license is used for 4-Port 10GBase-SFP+MACsec Interface Card.
2.Each 10G port could configure 1PCS.

16. **===Patch Cord===**

- ○ 16.1 **Please select the Client Interface Option of Patch Cord**

Default LC,10m.If need other specification,Please change it at "Bill of Configuration".

- ○ 16.2 **Please input the quality of demultiplexing port of this equipment**

1.This parameter is used for calculating the quantity of patch cords of demultiplexing-port.Multiplexing & Demultiplexing Card contains 1-channel Multiplexing and 8-channel Demultiplexing.Each channel need 2 PCS patch cords.
2.The port connected with demultiplexing-port must configure CMDM Optical Transceiver.

- ○ 16.3 **Please select the length of 40G MPO Patch Cord**

40G MPO optical module use this fiber

17. **===Trunk Cable===**

- ○ 17.1 **Please select synchronous signal type**

The device can supply Clock signal("2M primary clock")or 1588v2 signal("1PPS+TOD signal" or "DCLS signal").If need Clock signal,please configure E1 cable.If need 1588v2 signal,made network cable on site.Any question ,please refer to Configuration Manual or contact developer.

- ○ 17.2 **Need to configure the synchronous signal input cable or not**

Need to configure this cable, while need to input "2M Primary Clock".

- ○ 17.3 **Need to configure the synchronous signal output cable or not**

Need to configure this cable, while need to output "2M Primary Clock".

- 17.4 **===RS232/FXS/FXO/E&M port cable===**

  - 17.4.1 **Please input the quantity of RS232**

MPA board supports RS232/RS485/RS422 interface, MPA board supports a maximum of two RS232 cable, two RS485/RS422.

  - 17.4.2 **Please input the quantity of FXS/FXO**

MPA board supports four FXS/FXO interface,MPA board supports a maximum of need 4 standard phone lines.

  - 17.4.3 **Need E&M Interface or not**

1.MPA board supports 2-channel E&M interface,MPA board supports a maximum of 2 pieces of E&M cable.
2.6 Channels E&M Interface Board supports 6-channel E&M interface,MPA board supports a maximum of 6 pieces of E&M cable.

  - 17.4.4 **Need lightning arrester or not**

Arrester must be configured when unshield cable is used in outdoor.

- 17.5 **===SA8 board cable===**

  - 17.5.1 **Please input the quantity of X.21-DTE**

SA8 board supports 8-channel X.21 interface,SA8 board must be equipped with an 8 records at most X.21 DTE cable

  - 17.5.2 **Please input the quantity of X.21-DCE**

SA8 board supports 8-channel X.21 interface,SA8 board must be equipped with an 8 records at most X.21 DCE cable

  - 17.5.3 **Please input the quantity of V.24-DTE**

SA8 board supports 8-channel V.24 interface,SA8 board must be equipped with an 8 records at most V.24 DTE cable

  - 17.5.4 **Please input the quantity of V.24-DCE**

SA8 board supports 8-channel V.24 interface,SA8 board must be equipped with an 8 records at most V.24 DCE cable

  - 17.5.5 **Please input the quantity of V.35-DTE**

SA8 board supports 8-channel V.35 interface,SA8 board must be equipped with an 8 records at most V.35 DTE cable

- 17.5.6 **Please input the quantity of V.35-DCE**

SA8 board supports 8-channel V.35 interface,SA8 board must be equipped with an 8 records at most V.35 DCE cable

- 17.6 **Please input the quantity of MP8A board cable**

MP8A board support SFP and RJ-45 interface,4 PCS fibre-Optical and 4PCS 120ohm 1*E1 cable can be configured at most for each MP8A.

18. **===Power Cable===**

- 18.1 **Need separate configure DC power cable or not**

1.No need configure by default. The basic configuration includes a 3m power cable. Need configure separately only when the length of power cable is not enough.2.Usually, the device needs configure separate power cable only when it needs connect to the PDF directly.

- 18.2 **Please input the length of each device DC power cable (m)**

By default, Huawei provides blue cables (-48V) and black cables (GND), and cables of the other colors need to be remarked for purchase, and determine whether to purchase locally according to the actual situation.

- 18.3 **Select the type of AC power cable**

Select the type of AC power cable carefully

- 18.4 **Select the type of C13 power cable**

1.PDU:Power Distribution Unit, the special main jack for the rack.
2.If the main jack in the rack is C13SF(as shown in figure), please select ""C13 PDU"" in the option ""Select the type of C13 power cable"", otherwise select ""ordinarily C13"".
3.A matching AC power cable is provided only when the AC power module is configured (or the device has the AC power module).

C13 PDU SF

Power Socket

PDU Cable C13-C14

- 18.5 **Select the type of C13 AC power cable**

Select the right type of AC power cable according to actual situation, if you can not confirm which one to choose, please refer to the power cable pictures and configuration instructions in the HELP document.

BS546

C13Argentina

C13Australia

C13Brazil

C13Britain

C13China

Denmark C13-C13

C13Europe

South Africa

C13India

C13Italy

C13Japan

Korea C13-C13

C13North America

C13Switzerland

C13UKS(angled)

- 18.6 **Select the type of C13 PDU power cable**

1.The recommended value is the power cable type allowed in the specific country. Do
not change this value unless a specific power cable type is required.
2.If you don't know how to choose, please refer to the file , which is in Configuration
help and the catalog is Appendix A Power Cable.
3.A matching AC power cable is provided only when the AC power module is
configured (or the device has the AC power module).