



HUAWEI SoftCo 5500 VoIP Integrated Exchange
V100R002C05

Quick Installation Guide

HUAWEI SoftCo 5500 IP语音综合交换机
V100R002C05

快速安装指南

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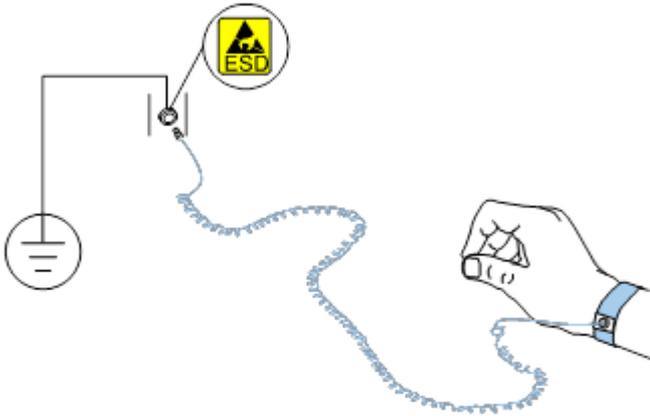


Safety Information 安全注意事项

⚠ CAUTION

Before touching the device, or holding the boards, wear the antistatic gloves or the antistatic wrist strap to prevent the electrostatic discharge of the human body from damaging the sensitive components. Ensure that the other end of the antistatic wrist strap is well grounded.

在接触设备、手拿单板之前，为防止人体静电损坏敏感元器件，必须佩戴防静电手套或防静电手腕。防静电手腕的另一端必须良好接地。

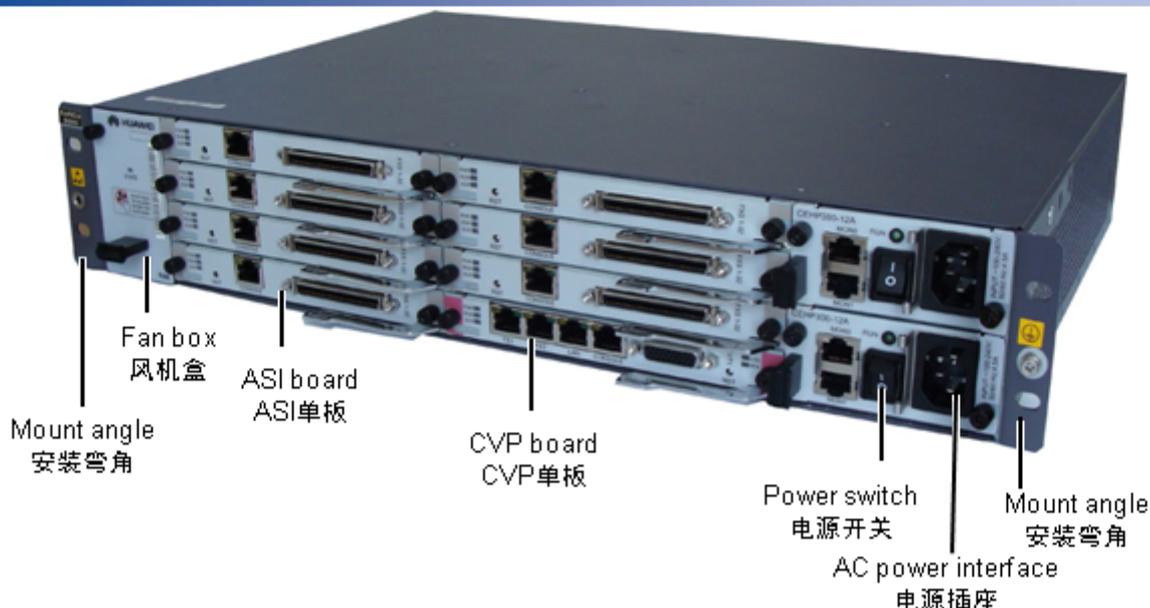


⚠ DANGER

Do not install or remove a power cable with power on. Transient contact between the core of the power cable and the conductor might generate electric arc or spark, which can cause fire or damage to the human body. Before installing or removing the power cable, turn off the power. If this device has more than one power input, disconnect all power inputs to power off this device.

严禁带电安装、拆除电源线。电源线在接触导体的瞬间，会产生电火花或电弧，可导致火灾或人身伤害。在安装或拆除电源线之前，必须关闭电源。如果设备有多路电源输入，设备断电时必须断开所有电源输入。

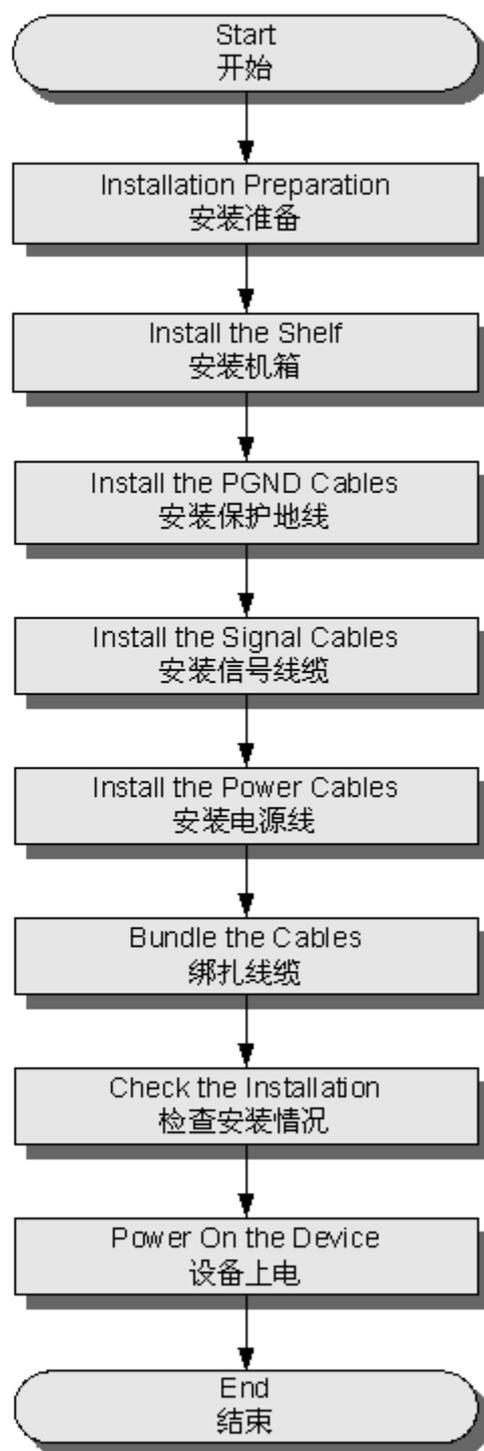
Device Appearance 设备外观结构



Installation Procedure 安装流程

The installation procedure of the SoftCo5500 is as follows:

SoftCo5500的安装流程如下：



1 Installation Preparation

安装准备

The tools for installation are not delivered along with the device. Please provide for yourself.

安装工具不随设备发货，请自行准备。

<p>Cross screwdriver 十字螺丝刀</p> 	<p>Diagonal pliers 斜口钳</p> 	<p>Mount bar 安装条</p> 
<p>Horizontal ruler 水平尺</p> 	<p>Glove 手套</p> 	<p>Antistatic glove 防静电手套</p> 
<p>Antistatic wrist strap 防静电手腕</p> 	<p>RJ-45 connector clamping tool 水晶头压线钳</p> 	<p>Cable tester 测线器</p> 
<p>Cable stripper 剥线钳</p> 	<p>Cable tie 线扣</p> 	<p>Multimeter 万用表</p> 

2 Installing the Shelf 安装机箱

The SoftCo5500 is 2U (1U=44.45mm) high and can be installed in a 19-inch cabinet that complies with the standard of the International Electrotechnical Commission (IEC). This guide takes the N68-22 cabinet of Huawei as an example to illustrate the process of installing the SoftCo5500 shelf in the cabinet.

SoftCo5500机箱高2U (1U=44.45mm)，可安装在符合IEC（International Electrotechnical Commission）标准的19英寸机柜中。本指南以华为公司的N68-22机柜为例说明SoftCo5500安装在机柜中的过程。

a Installing Slide Rails 安装滑道

NOTE

Advice that at least space of 1U exists between the SoftCo5500 and other devices to guarantee the device dissipation.

建议SoftCo5500和其他设备之间至少有1U空隙，以保证设备良好散热。

Fix slide rails on the left and right sides of the cabinet with M4 screws. The following takes the installation on the left side as an example. The lower edge of the slide rail and the narrow brim of the cabinet mount bar must be aligned.

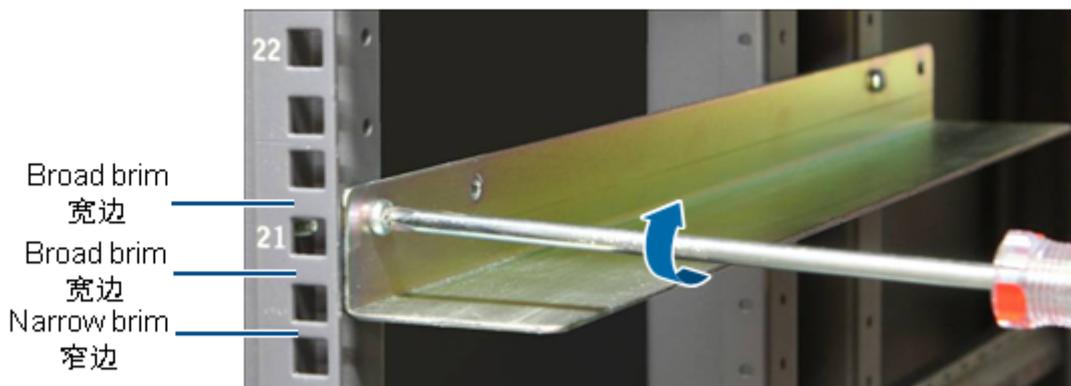
在机柜左右两侧用M4螺钉固定滑道。滑道下边沿需与机柜方孔条上的窄边对齐。



Slide rail
滑道



M4 screw
M4螺钉



2 Installing the Shelf 安装机箱

b Installing Captive Nuts 安装浮动螺母

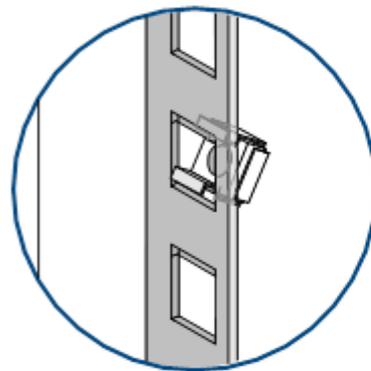
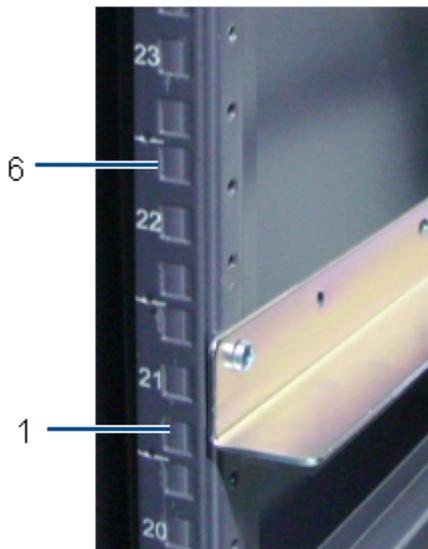
Install the captive nuts on both sides of the cabinet mount bar.

在机柜左右两侧的方孔条上安装浮动螺母。

- 1 Decide the installation positions are the first and sixth square holes counted upwards from the lower edge of the slide rail.
- 2 Install one foot of the captive nut into the square hole from the inside of the cabinet. Secure it on the lower boarder of the square hole.

确定浮动螺母的安装位置，即滑道下边沿往上第1和6个方孔。

将浮动螺母的一脚从机柜内侧往机柜外装入方孔，卡住方孔下边框。



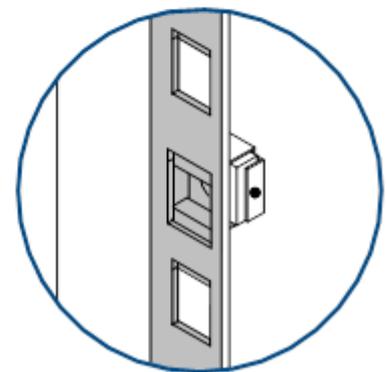
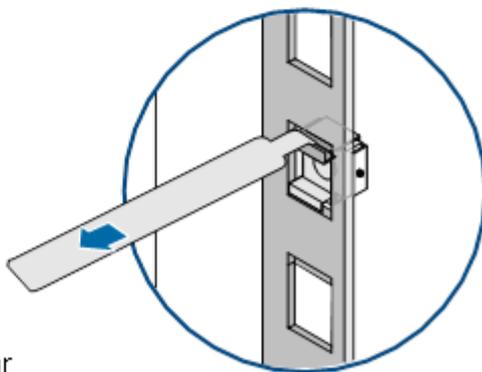
Captive nut
浮动螺母

- 3 Pull the other foot of the captive nut with the mount bar until it is clipped on the upper boarder of the square hole.

用安装条勾住浮动螺母另一脚，往前拉，直到卡住方孔上边框为止。



Mount bar
安装条



2 Installing the Shelf 安装机箱

C Adjust the Mount Angle (Optional) 调整安装弯角的位置 (可选)

Before installing cables in the cabinet, you should set aside extra space, so that you can close the cabinet door after the installation. To obtain the extra space, you can adjust the mount angles. The procedure for adjusting the mount angles is as follows:

如果机柜中线缆安装空间不够，则安装后可能导致机柜门关不上。此时您可以通过调整安装弯角的位置来增大机柜中线缆的安装空间，调整步骤如下：



Before adjustment
安装弯角调整前



After adjustment
安装弯角调整后

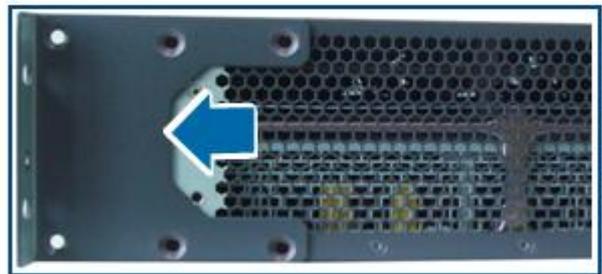
- 1 Counterclockwise unscrew the four screws on the mount angle at one side to remove them.

逆时针拧松一侧安装弯角上的4颗螺钉。



- 2 Move the mount angle to the left and adjust its position.

向左移动安装弯角，调整好安装弯角的安装位置。



- 3 Tight the screws clockwise.
- 顺时针拧紧螺钉。



- 4 Perform the previous three steps to adjust the mount angle on the other side.

执行步骤1~3完成另一侧安装弯角位置的调整。



2 Installing the Shelf 安装机箱

d Fixing the SoftCo5500 into the Cabinet 在机柜中固定SoftCo5500

- 1 Carry the SoftCo5500 and put it on the slide rails. Then push it into the cabinet.
将SoftCo5500抬放到滑道上，往里推入机柜。



- 2 Fasten four M6 screws on both sides of the chassis to fix the SoftCo5500 into the cabinet.
用4颗M6螺钉将SoftCo5500固定在机柜上。



M6 screw

M6螺钉

3 Installing the PGND Cables 安装保护地线

NOTE

Before the operation, make sure that the grounding resistance should be less than 5 ohms. The grounding resistance can be measured by earth resistance tester. If use AC power, you can not install the PGND cable.

操作前，请确保接地电阻小于 5Ω 。接地电阻可使用地阻测量仪测量。如果使用交流电源，可以不用安装保护地线。



Protection Grounding (PGND) cable

保护地线



- 1 Loosen the grounding screw.
拆卸接地螺钉。



- 3 Fasten the grounding screw clockwise.
顺时针拧紧接地螺钉。



- 2 Aim one end of the PGND cable at the grounding hole.
将地线一端对准接地孔。



- 4 Connect the other end of the PGND cable to the grounding terminal on the cabinet.

连接地线另一端到机柜上的接地端子。



4 Installing the Signal Cables 安装信号线缆

NOTE

The types and numbers of cables to be installed on site depend on the contract and the networking. The wiring diagram and operation procedures below are for reference only.

现场需要安装的线缆的种类和数量，视具体合同和组网情况而定，这里给出不同线缆的连接方法。

Connecting Network Cable 安装网线

Connect one end of the straight through network cable to the FE1 port or FE2 port on the CVP board and connect the other end to the downlink network port of the Ethernet switch. FE1 port and FE2 port have the same function. The FE1 port and FE2 port can be connected to two Ethernet switches for backup. (If the SoftCo5500 is interconnected with the router or OLT, use the crossover network cable.)

连接直通网线的一端至FE1端口或FE2端口，连接直通网线的另一端至以太网交换机下行网口。FE1端口与FE2端口同时连接到以太网交换机，则起到备份作用。若与路由器或OLT(Optical Line Terminal)对接，请使用交叉网线。



Straight through network cable
直通网线

4 Installing the Signal Cables 安装信号线缆

b Connecting High-Density User Cables 安装高密度用户电缆

NOTE

Check whether the connector pins of the DB68 interface are deformed before inserting FXS. If the pins are deformed, resume the pins and insert FXS horizontally. If the cable is unsuitable for the RJ-11 interface at the delivery, make an RJ-11 interface on site according to the actual situation.

注意插入FXS接口前先检查接头插针是否有变形，如有变形则校直后平行插入。发货时，线缆不配RJ-11接口，请根据现场实际情况自行制作RJ-11接口。

Connect the DB68 interface of the high-density user cable to the FXS interface. Connect the other end of the cable to POTS phone. Clockwise fasten the captive screws.

连接高密度用户电缆的DB68B接口到FXS接口，连接电缆RJ-11接口到POTS话机。顺时针拧紧松不脱螺钉。



High-density user cable
高密度用户电缆

c Connecting Digital Trunk Cables 安装数字中继电缆

NOTE

Check whether the connector pins of the DB26 interface are deformed before inserting E1/T1. If the pins are deformed, resume the pins and insert DB26 horizontally.

注意插入E1/T1接口前先检查接头插针是否有变形，如有变形则校直后平行插入。

Connect DB26 interface of the digital trunk cable to E1/T1 interface, and connect the SMB interface to the digital trunk cable introduced to the installation site. Clockwise fasten the captive screws.

连接数字中继电缆的DB26接口到E1/T1接口，连接电缆SMB接口到现场的数字中继引入线。顺时针拧紧松不脱螺钉。



Digital trunk cable
数字中继电缆

5 Installing the Power Cables 安装电源线

NOTE

Installing the AC power cable or DC power cable according to the actual situation.
请根据实际情况，安装AC或DC电源线。

a Installing the AC Power Cable 安装交流电源线

NOTE

Before the operation, disconnect the AC power supply, and turn the power switch of the device to OFF.
操作前，断开交流供电电源，并将设备电源开关拨到OFF位置。



AC Power cable
交流电源线

- 1 Insert the connector to the AC power cable.
将电源线的一端（母头）插入电源接口。



- 2 Insert the other connector of the power cable into the AC power socket.
将电源线的插头一端插到交流电源插座上。

b Installing the DC Power Cable 安装直流电源线

NOTE

Before the operation, disconnect the DC power supply, and turn the power switch of the device to OFF.
操作前，断开直流供电电源，并将设备电源开关拨到OFF位置。



DC Power module
直流电源模块



DC Power cable
电源线

5 Installing the Power Cables 安装电源线

- 1 Insert the connector to the AC power cable. Clockwise fasten the captive screws.
将电源线的一端（母头）插入电源接口。
顺时针拧紧松不脱螺钉。
- 2 Insert the other connector of the power cable into the DC power socket
将电源线的插头一端插到直流电源插座上。



6 Bundling Cables 绑扎线缆

Bundling requirements:
请按以下要求绑扎线缆：

- 1 Ensure that the cables are connected reliably.
确保线缆连接牢固、插头无松动现象。
- 2 The signal cables and power cables are bound separately. The intervals between power cables and signal cables must be larger than 30 mm.
信号线应与电源线分开绑扎。电源线与信号线的间距要大于30mm。
- 3 The cables are arranged straightly and smoothly, and stay loose at the turning points. Redundant length is reserved for every cable.
走线应平直、顺滑，线缆在转弯处应放松，不得拉紧。各线缆应按要求留出余量。
- 4 User one cable tie every 200 mm. The cable strap is clearly cut, the cable ties point to the same direction, there is no exposed thorn, and there is no repeated binding.
每隔200mm绑扎1个线扣，扎带接头应剪齐，线扣朝向一致，无尖刺外露，扎带绑扎无重叠现象。
- 5 The signal cables are clearly labeled at the two ends, and the labels point to the same direction. It is recommended to stick a label to a place 20 mm away from the connector.
各信号线两端标志应清晰（贴标签），标签朝向一致。建议标签粘贴在距连接器20mm处。

7 Checking the Installation 检查安装情况

a Checking the Shelf 检查机箱

- 1 Ensure that all the boards are installed properly, all screws are well fastened and flat washer, and spring washer are used for every screw in correct order.
所有单板全部插紧。所有螺钉全部拧紧，每个螺钉均使用平垫、弹垫，其顺序不能垫反。
- 2 Ensure that filler panels are installed for all empty slots on the rear panel of the shelf.
机箱后面板的空槽位均已安装假面板。
- 3 Ensure that the device and the rack are well grounded. If the rack is not grounded, the information must be recorded in the engineering memo.
确保设备接地，机架接地良好。若机架没有接地，需纳入工程备忘录中。

b Checking the Equipment Room 检查机房环境

- 1 Ensure that the top, bottom, and surrounding area of the shelf are free from cable strap, cable residues and desiccant bag.
机箱顶部、底部、周围，不应有扎带、线头、干燥剂袋等遗留物。
- 2 Remove the left items from the equipment room and arrange the necessary items in the equipment room neatly.
应将剩余的物品清除出机房，放置于机房内的物品应摆放整齐。

8 Powering On the Device 设备上电

If the input voltage is AC, the rated input voltage of the SoftCo5500 is 110V/220V AC; the actual input voltage ranges from 100V to 240 V; the frequency of the power is 50Hz/60 Hz.

If the input voltage is DC, the rated input voltage of the SoftCo5500 is 48V; the actual input voltage ranges from -38.4 V to -60 V.

如果采用交流电源供电：额定输入电压为110V/220V AC，实际输入电源的电压范围可以是100V~240V AC，频率为50Hz/60Hz。

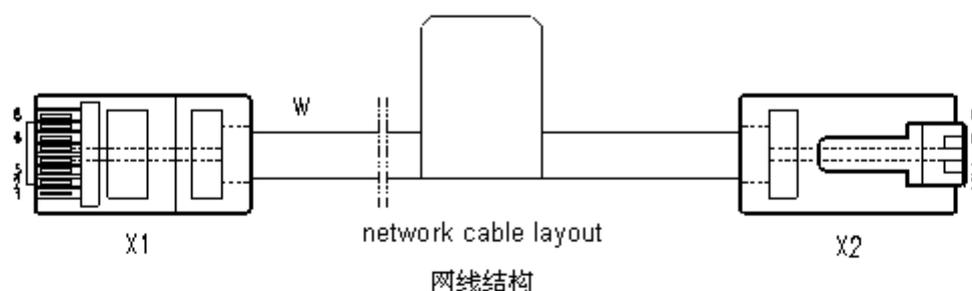
如果采用直流电源供电：额定输入电压为-48V DC，实际输入电压范围可以是-38.4V~-60V DC。

a Checking before Power-on 上电前检查

Before the power switch of the shelf is turned on, measure the input voltage using a multimeter.
在确保机箱电源开关未打开的情况下，用万用表测量一下电源的输入电压是否正确。

b Power-on Procedure 上电操作

- 1 Turn the power switch on the rear of the SoftCo5500 shelf to ON.
将SoftCo5500机箱面板的电源开关拨到ON位置。
- 2 When the SoftCo5500 is powered on, it takes five minutes to start the SoftCo5500. After the SoftCo5500 is started, the RUN indicator light is on.
设备通电后约需要5分钟时间启动，正常启动后电源RUN指示灯亮。



The straight through network cable is used for the communication and connection between the terminal device and the upper-level network. The following table describes the internal cable connection relations.

直通网线用于终端设备和上级网络之间通讯连接。其内部接线关系如下表。

X1 Pin Foot X1针脚	Color 接线颜色	X2 Pin Foot X2针脚
1	White (orange)白(橙)	1
2	Orange橙	2
3	White (green)白(绿)	3
4	Blue蓝	4
5	White (blue)白(蓝)	5
6	Green绿	6
7	White (brown)白(棕)	7
8	Brown棕	8

The crossover network cable is used for the direct communication between two terminal devices. The following table describes the internal cable connection relations.

交叉网线用于两个终端设备之间直接通讯。其内部接线关系如下表。

X1 Pin Foot X1针脚	Color 接线颜色	X2 Pin Foot X2针脚
1	White (orange)白(橙)	3
2	Orange橙	6
3	White (green)白(绿)	1
4	Blue蓝	4
5	White (blue)白(蓝)	5
6	Green绿	2
7	White (brown)白(棕)	7
8	Brown棕	8

Appendix 附录

b Sequence of High-Density User Cables 高密度用户电缆线序

DB68B Pin Foot DB68B针脚	Group Color 组线颜色	Color 线对颜色	Port No 端口
36	Blue蓝	Blue蓝	1
35		White白	
38		Orange橙	2
37		White白	
40		Green绿	3
39		White白	
42		Brown棕	4
41		White白	
44		Grey灰	5
43		White白	
46		Blue蓝	6
45		Red红	
48		Orange橙	7
47		Red红	
50		Green绿	8
49		Red红	
2		Brown棕	9
1		Red红	
4		Grey灰	10
3		Red红	
6		Blue蓝	11
5		Black黑	
8		Orange橙	12
7		Black黑	
10	Green绿	13	
9	Black黑		
12	Brown棕	14	
11	Black黑		
14	Grey灰	15	
13	Black黑		
16	Blue蓝	16	
15	Yellow黄		

DB68B Pin Foot DB68B针脚	Group Color 组线颜色	Color 线对颜色	Port No 端口
54	Orange橙	Blue蓝	17
53		White白	
56		Orange橙	18
55		White白	
58		Green绿	19
57		White白	
60		Brown棕	20
59		White白	
62		Grey灰	21
61		White白	
64		Blue蓝	22
63		Red红	
66		Orange橙	23
65		Red红	
68		Green绿	24
67		Red红	
20		Brown棕	25
19		Red红	
22		Grey灰	26
21		Red红	
24		Blue蓝	27
23		Black黑	
26		Orange橙	28
25		Black黑	
28		Green绿	29
27		Black黑	
30		Brown棕	30
29		Black黑	
32		Grey灰	31
31		Black黑	
34		Blue蓝	32
33		Yellow黄	

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