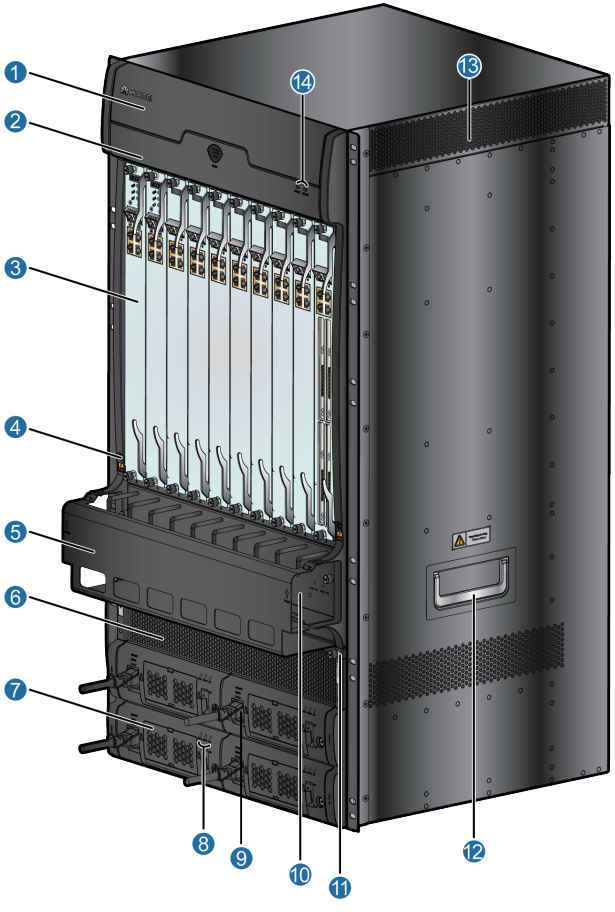
1 Product Overview

The HUAWEI VP9660 Multipoint Control Unit (VP9660 for short) is a media exchange platform that Huawei developed for government, taxation, power, and finance industries as well as medium and large-sized enterprises. The product is a new generation of high-capacity Multipoint Control Units (MCUs) with support for dynamic port allocation, smooth expansion, and 4K@30 fps universal transcoding. It provides users with better conferencing experience. This guide describes how to install the VP9660.

1.1 Appearance



1. Front panel of the air outlet trough
2. Upper fan assembly
3. Boards
4. ESD holes
5. Cable trough panel
6. Air intake trough
7. Power modules
8. Power module indicators
9. AC power module socket
10. Lower fan assembly
11. Dust filter
12. Chassis handle
13. Air outlet
14. Fan assembly indicators

Physical Parameters

Category	Item	Description
Physical specifications	Dimensions	• Height: 34.89 in • Width: 17.17 in • Depth: 16.54 in
	Weight	< 100 kg (220.46 lb)
Operating environment	Ambient temperature	0°C to 45°C
	Relative humidity	5%RH to 90%RH (Non-condensing)
	Atmospheric pressure	63 kPa to 106 kPa
Electrical specifications	Voltage	• 100 V to 240 V AC • –48 V to –60 V DC
	Power consumption	< 3000 W

Board Slots

0	1	2	3	4	5	6	7	8	9
HCCB	HCCB	Media+	Media+	Media+	Media+	Media+	Media+	Media+	Media+/RSE-M

- Two types of boards, that is, main control board and service board, can be loaded onto a VP9660. The HCCB board is the main control board. The Media+, and RSE-M boards are service boards. The HCCB and Media+ boards are mandatory. At least one HCCB and one Media+ boards must be configured.
- The Media+ board transcodes audio and video streams, the RSE-M board provides conference recording, live broadcast, and video on demand (VoD).
- The RSE-M board can be installed in any service slot, while slot 9 is recommended.

a. HCCB/Media+/RSE-M Board

NOTE

- Unlike the HCCB board, the media+ board does not provide an ACT indicator.
- The RSE-M board's front panel is the same as the HCCB board's except for the board name.



1 FE port 2 GE1 port 3 Optical ports: SFP1 (upper) and SFP0 (lower) 4 ACT indicator
5 RUN indicator 6 ALM indicator 7 RST button 8 GE0 port 9 RS-232 serial port

2 Precautions

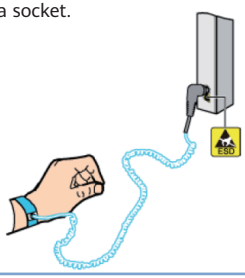
DANGER

- Do not connect or disconnect the power cable when the power is on. If the power cable touches a conductive material, it may create an electric arc or spark, causing personal injury or fire accident.
- Before connecting or disconnecting the power cable, turn off the power.
- To prevent electric shock, do not wear the electrostatic discharge (ESD) wrist strap when powering on.

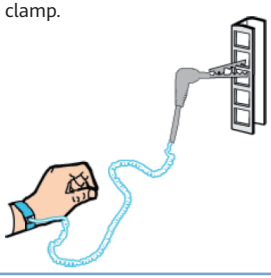
CAUTION

- Before touching the device or holding a board, wear ESD gloves or an ESD wrist strap to prevent static electricity from damaging sensitive components. The other end of the ESD wrist strap must be well grounded.
- Before installing the device into a cabinet, ensure that the cabinet is properly grounded.

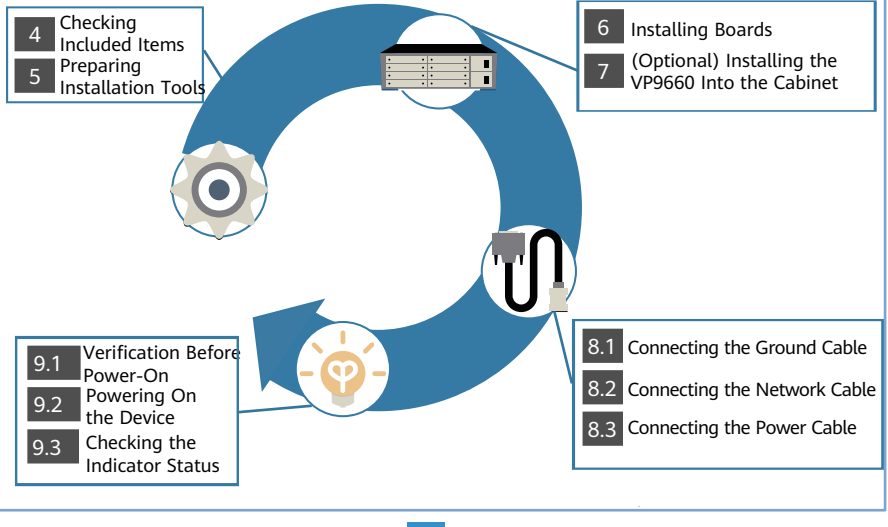
Wear an ESD wrist strap whose grounding end is a socket.



Wear an ESD wrist strap whose grounding end is a clamp.



3 Installation Procedure



4 Checking Included Items

 VP9660	 AC power cable	 Straight-through cable
 Electronic power cable (The yellow green cable is used as the ground cable.)	 Serial cable (Connects to the RS-232 serial port for serial port commands and internal debugging.)	 OT bare crimp terminal
 Heat shrink tubing	 Installation Guide	 Warranty card

Note: The included items are only examples, please refer to the actual delivery.

5 Preparing Installation Tools

 **ESD gloves** Prevents ESD damage when you insert, remove, or hold a mainboard or precision instrument.	 **Diagonal pliers** Cuts electrical insulators and cable ties.	 **(Optional) Floating nut installation bar** Installs floating nuts.
 **Multimeter** Measures the resistance, voltage, and conductivity.	 **(ESD) wrist strap** Protects against static discharge when you are touching or operating precision instrument.	 **Phillips screwdriver** Tightens screws when installing boards and connecting ground cables.

6 Installing Boards

Each slot in the VP9660 chassis is provided with a filler panel. To insert boards into slots, loosen the screws counterclockwise on the filler panels, remove the filler panels, and insert the boards from left to right. The following uses the board in slot 0 as an example to describe how to install a board.

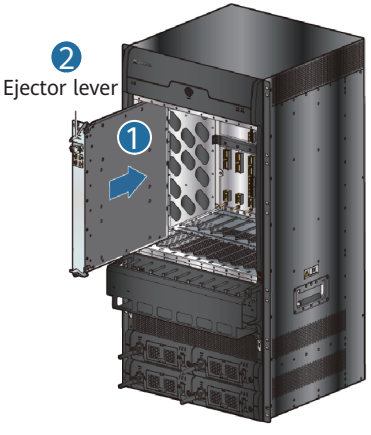
CAUTION

- Before installing boards into the VP9660 chassis, set all the switches on the power modules to OFF.
- Slots 0 and 1 are used to accommodate HCCB boards. If there is only one HCCB board, insert it into slot 0; otherwise, the VP9660 cannot be started.
- Mount a filler panel on each empty slot in the chassis. Doing so improves the electro magnetic compatibility and cooling of the VP9660 and protects the system air channels.

Installation Rules

Insert all the Media+ boards into the slots from the left to the right. You do not need to differentiate whether a Media+ board is a signaling board or media board.

0	1	2	3	4	5	6	7	8	9
		Board insertion sequence							
HCCB	HCCB	Media+	Media+	Media+	Media+	Media+	Media+	Media+	Media+

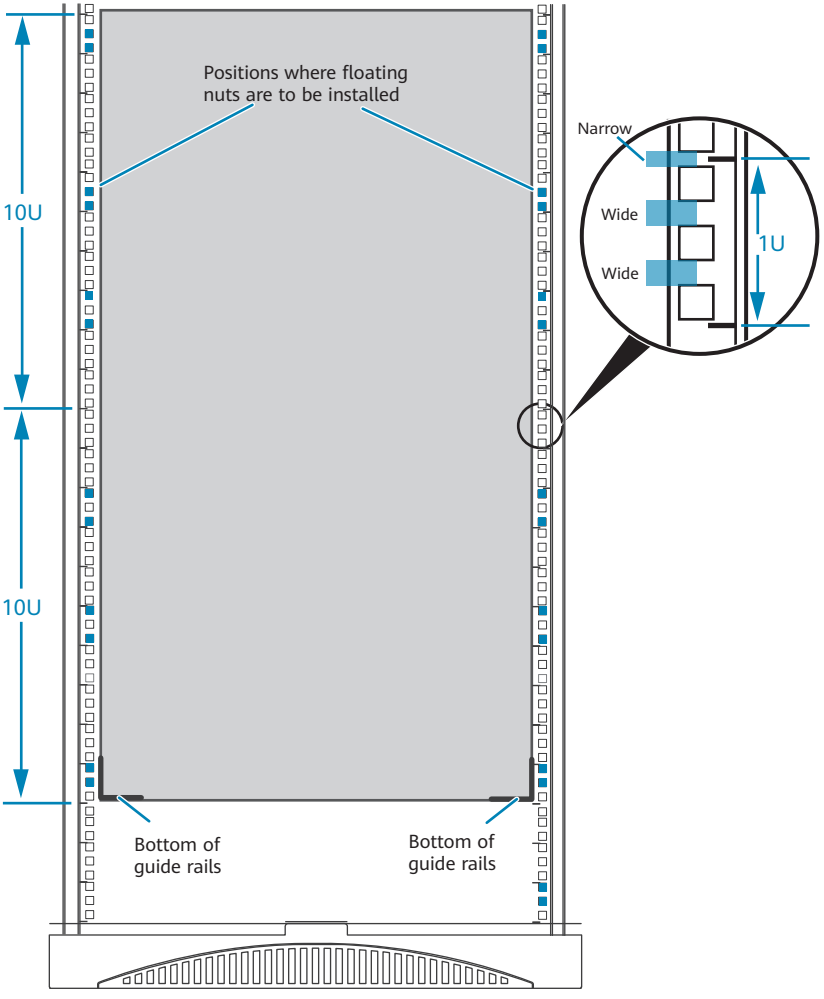


1. Hold the ejector levers on the two sides of the board and pull them outward. Insert the board along the slot guide rails until the locating pins on the ejector levers contact the pin locating holes on the frame.
2. Press the ejector levers inward until the ejector levers are locked in place.
3. Tighten the screws clockwise to secure the board.

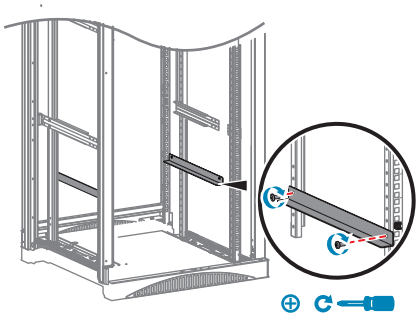
7 (Optional) Installing the VP9660 Into the Cabinet

The VP9660 is 20U (890 mm or 35.04 in.) high. You can install the VP9660 in a standard 19 inch International Electrotechnical Commission (IEC) rack. The following describes how to install the VP9660 to an L-shaped guide rail.

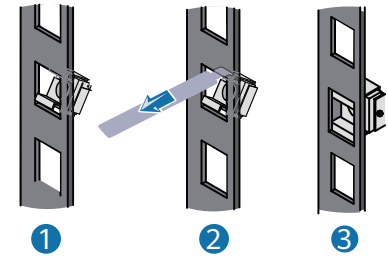
a. Determine the positions where the guide rails and floating nuts are to be installed.



b. Install the guide rails.



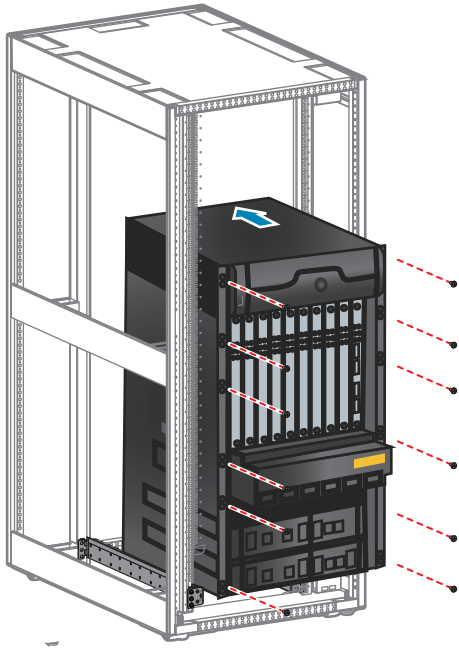
c. Install the floating nuts.



d. Install the VP9660 into the cabinet.

NOTICE

Because the VP9660 is heavy, arrange at least two persons to lift it.



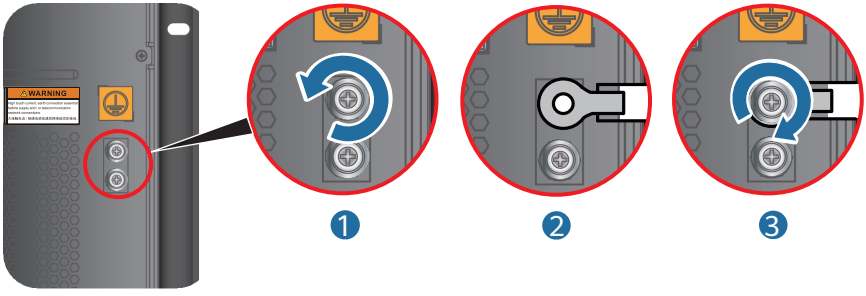
8 Connecting Cables

8.1 Connecting the Ground Cable

At the lower right corner of the VP9660 chassis' rear panel, you will find two M6 ground screws. Choose either of the screws to connect the ground cable.

NOTE

Connect the other end of the ground cable to the ground bar. If there is no ground bar, connect to the ground hole in the cabinet.



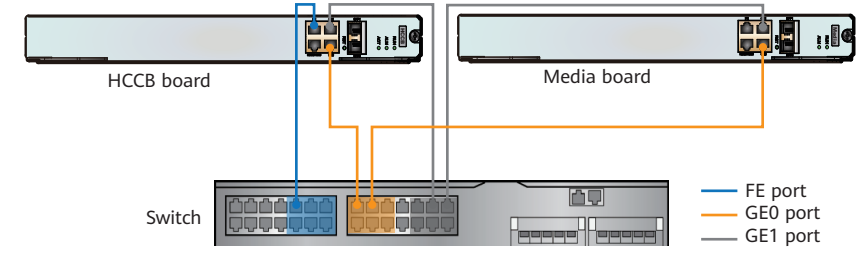
8.2 Connecting the Network Cable

CAUTION

The VP9660 is not compatible with hubs, 10 Mbit/s switches, or 100 Mbit/s switches.

- On-premises network: The MCU does not distinguish between the management, signaling, or media plane, that is, you do not need to partition the network.
- When configuring connection to the NMS, connect the FE network port of the main control board to a gigabit switch.
- Connect every board's GE0 and GE1 network ports to the gigabit switch. If you do not have high requirements on reliability, only connect the GE0 network port to the switch.
- GE0 port IP addresses of all boards must be in the same network segment. GE1 port IP addresses of all boards must be also in the same network segment.

The following takes the HCCB and the Media board as an example to describe how to connect network cables.



8.3 Connecting the Power Cable

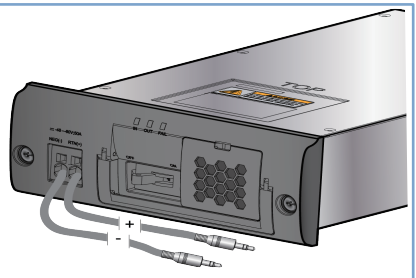
The VP9660 supports both AC and DC power supplies. It comes with four AC or DC power modules for all of which should be connected.

CAUTION

- Before plugging in power cables, ensure that the ground cable is properly connected to the VP9660.
- Before connecting or disconnecting power cables, set the power switch on the VP9660 to OFF to prevent injuries.
- Do not install both AC and DC power modules in the VP9660.

Connecting a Power Cable to a DC Power Module

Wiring Terminal Socket	Cable Name	Cable Color	Cable Connector
RTN (+)	Battery ground (BGND) cable	Black	Cord end terminal
NEG (–)	–48 V DC power cable	Blue	



Connecting a Power Cable to an AC Power Module

Connect one end of the AC power cable that comes with the VP9650 to the power port on the power module, and connect the other end to the three-phase socket of the AC power grid.

CAUTION

To protect the power cable connector, secure it using the clip, as shown in the right figure.



9 Power On

9.1 Checking the Device and Cables

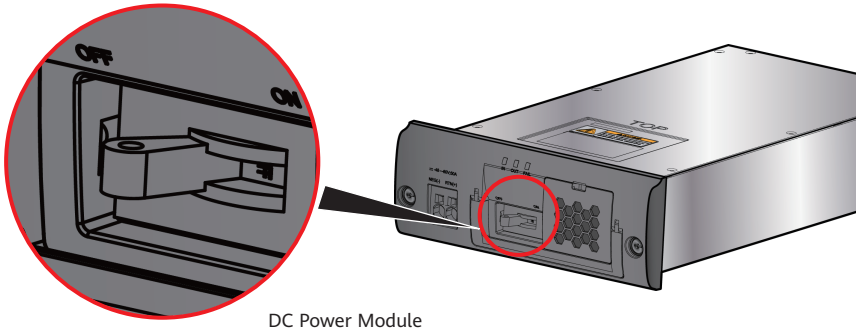
Item to Check	Requirement
Device	If the VP9660 resides in a cabinet, ensure that all bolts are mounted securely and at least 50 mm space is left around the device for cooling.
	The ESD wrist strap must be inserted into the ESD hole on the VP9660.
	The power module is switched off.
	All empty slots have filler panels installed.
Cable connections	All cables, including the power cable and ground cable, are connected to the VP9660 securely and properly.
	Cable ties do not overlap and the cuts are neat without burrs.
	The power cable or ground cable is at least 30 mm away from the signal cable outside the cabinet.

9.2 Switching On the Power Modules

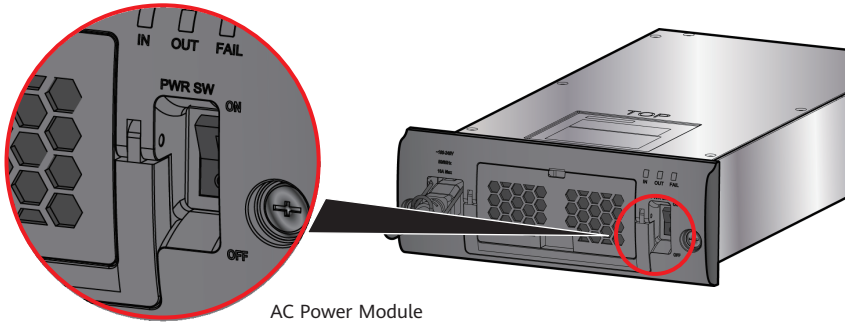
Turn the power switch to the ON position on all the four power modules.

CAUTION

Do not install both AC and DC power modules in the VP9660.



DC Power Module



AC Power Module

9.3 Checking the Indicator Status

If the VP9660 is running properly, its indicators should perform as described in the following table. If any exception occurs, contact Huawei technical support engineers.

Module	Indicator	Status
Power	RUN	Steady green
	ALM	Off
	FAULT	Off
Fan	STATUS	Steady green
HCCA board RSE-M board Media+ board	ACT (The media+ board does not have this indicator.)	Steady green
	ALM	Off
	RUN	Slowly blinking (about 0.5 Hz, once every 2 seconds)
	GE/FE network port	Steady green

10 Configuring IP addresses

10.1 Default IP addresses of boards

Default IP addresses of the GE0 port of the VP9660 main control board are 192.168.2.1 (slot 0) and 192.168.2.2 (slot 1). Default IP addresses of the GE0 port of the service board are 192.168.2.3 to 192.168.2.10 in slots 2 to 9.

10.2 Modifying the IP address of the GE0 port of the active HCCB board

NOTE

- Please remember the reconfigured IP address of the GE0 port of the active HCCB board, that is, the management layer IP address of the MCU. You need to use this IP address to log in to the built-in web page later.
- Do not modify the IP address to 172.16.0.0 to 172.16.15.255. IP addresses in this network segment are used for intercommunication among internal modules of the MCU.

For example, when the active HCCB board is deployed in slot 0, operations are as follows:

1. Use a network cable to connect the PC directly to the GE0 port of the active HCCB board of the VP9660, and configure the IP address of the PC in the same network segment as the VP9660, such as 192.168.2.100.
2. Open the browser on the PC, visit the web management page by entering the default IP address of the GE0 port of the active HCCB board in the address bar, such as https://192.168.2.1:8443, and press Enter.
   Log in to the web management page with the default username and password: admin and Change_Me.

   NOTE

   - If a security certificate warning pops up on the website, click Continue to this website (not recommended).
   - At the first login, please change the password as indicated on the pop-up page Change password.
3. Choose System > Network and click the Network Port tab.
   Set Board slot to 0, configure the network parameter for the GE0 port, keep the default values for other parameters, and click Save.
   After saving, the network connection between the PC and the VP9660 is disconnected automatically.
4. Disconnect the network cable between the PC and the active HCCB board of the VP9660, and reconnect the active HCCB board to the switch according to section 8.2 "Connecting to the network cable".

10.3 Modifying IP addresses of other ports

NOTE

To avoid a network fault, ensure that IP addresses of ports GE0 and GE1 are in different network segments. Ensure that ports GE0 of all boards are in the same network segment, and ports GE1 of all boards are in the same network segment.

1. Connect the PC to the same network as that of the GE0 port of the active HCCB board. Visit the web management page by using the browser with the modified IP address, and press Enter.
2. Choose System > Network and click the Network Port tab.
   Successively select different Board slot, configure the IP address for the port of the board in each slot as planned, and click Save.

10.4 (Optional) Configuring the floating IP address for the FE port of the main control board

If an HCCB board is deployed in both slots 0 and 1, configure the same floating IP address for FE ports of the two HCCB boards and manage the VP9660 by using the network management system based on this floating IP address.

1. Open the browser on the PC, visit the web management page by entering the IP address of the GE0 port of the active HCCB board in the address bar, and press Enter.
2. Choose System > Network and click the Float Ip tab.
   Select Enable Float IP, configure the floating IP address for the main control board as planned, and click Save.

> **NOTE**
>
> To avoid a network fault, ensure that the floating IP address is in a different network segment from those of IP addresses of ports GE0 and GE1 of all boards.

11 Obtaining Documentation and Technical Support

11.1 Obtaining Documentation

- If the RSE-M board is installed, configure the RSE-M board by following the instructions in the HUAWEI RSE6500 Quick Configuration Guide delivered together with the RSE-M board.
- Depending on the solution you deploy and networking, you can log in to http://support.huawei.com/enterprise to search for "CloudEC" or "CloudVC", to download the solution document package of a corresponding version for further deployment and debugging.
- To obtain more documentation, visit http://support.huawei.com/enterprise, search for VP9660, and view or download product documentation. You can also contact service engineers to obtain documents for details.

11.2 Obtaining Technical Support

- If your VP9660 is directly bought from Huawei, visit http://support.huawei.com/enterprise and find the service hotline in your region.
- If your VP9660 is bought from an agent, contact the agent.
- You can also scan the QR code to access the intelligent Q&A system, which enables you to ask questions and get answers.

iKnow

HUAWEI
合格证
Qualification Card

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