

AP6610DN-AGN-US Outdoor Wireless LAN Access Point Quick Start Guide

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Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description
 CAUTION	Indicates a potentially hazardous situation, which if not avoided, could result in equipment damage, data loss, performance degradation, or unexpected results.
 NOTE	Provides additional information to emphasize or supplement important points of the main text.

Change History

Changes between document issues are cumulative. Therefore, the latest document issue contains all the changes in previous issues.

Change in Issue 01 (2012-09-30)

Initial commercial release.

AP6610DN-AGN-US

Quick Start Guide



Before performing Installation, confirm that the installation accessories and tools are available.

Installation accessories:

Installation tools:



Technical Support

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Packing List

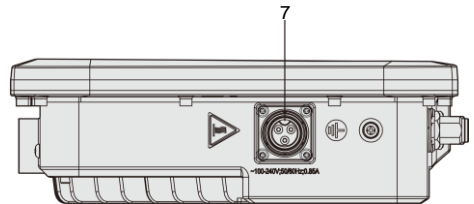
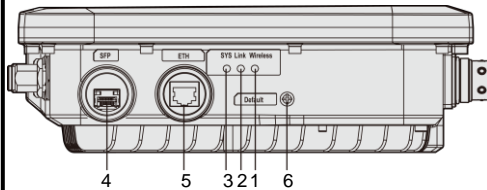
Unpack the equipment. Ensure that all items listed in the package list are included in the shipment. If any item is missing, contact the supplier.

No.	Item	Quantity	Unit
1	AP device	1	PCS
2	Installation suite	1	PCS
3	Network port connector	1	PCS
4	M4X12 hexagon socket head cap screw	4	PCS
5	Expansion bolt	2	PCS
6	Hoop	2	PCS

No.	Item	Quantity	Unit
7	Fiber wrench (Optional)	1	PCS
8	Quick Start Guide (including the printed packing list)	1	PCS
9	Toxic or Hazardous Substance & Elements Declaration	1	PCS
10	Warranty card	1	PCS
11	Certificate of Conformance	1	PCS

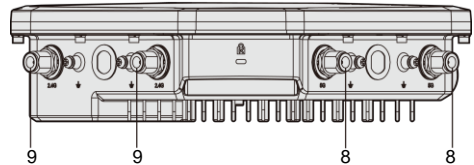
Device Overview

Product functions



Ports and indicators

No.	Item	Description
1	Wireless	Wireless status indicator.
2	Link	Link status indicator.
3	SYS	SYS status indicator.
4	SFP port	Connected to fiber. An optical module is required.
5	ETH port	Used for Ethernet connections.
6	Default	Press and hold down the Reset button for 3 seconds to restore the factory settings and restart the AP.

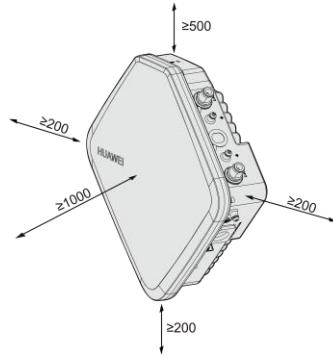
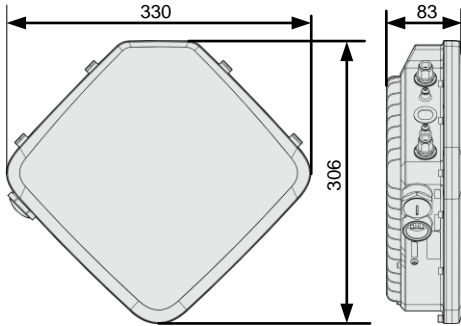


No.	Item	Description
7	AC power port	Connected to an AC power module.
8	5G antenna port	Connected to the feeder
9	2.4G antenna port	Connected to the feeder

Installing an AP

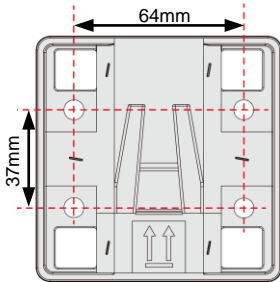
- Select an appropriate installation position and leave space above and around the device for cooling air circulation.
- Outdoors Aps are used for hotspot coverage and often installed against walls or poles. The pole diameter is 48 mm to 114 mm.

AP6610DN-AGN-US dimensions (unit: mm) without a backplane Recommended AP6610DN-AGN-US installation space (unit: mm).

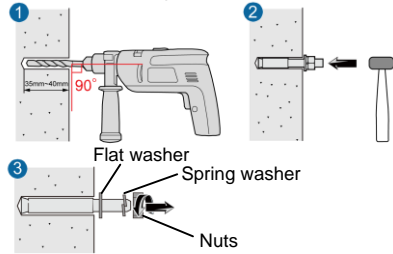


• Installing the AP6610DN-AGN-US against a Wall:

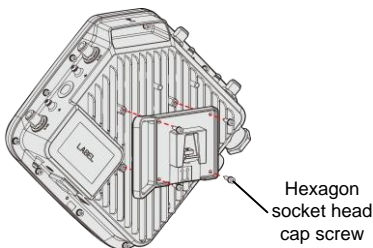
1. Fix the wall-mounting bracket to the wall, adjust the installation position, and use the marker, level, and measuring tape to mark the drilling positions where expansion bolts are installed.



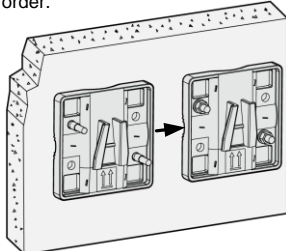
2. Use #8 drill bit to drill 35 mm to 40 mm deep holes in the drilling positions and install expansion bolts. Screw the nut into the expansion tube, hammer the expansion bolt into a hole until the flat washer is flattened against the wall, and remove the nuts, spring washer, and flat washer in order.



3. Use four M4*12 hexagon socket head cap screws to fasten the wall-mounting bracket to the AP.



4. Pinch the wall-mounting bracket on the expansion bolts, and fasten the flat washer, spring washer, and nuts in order.



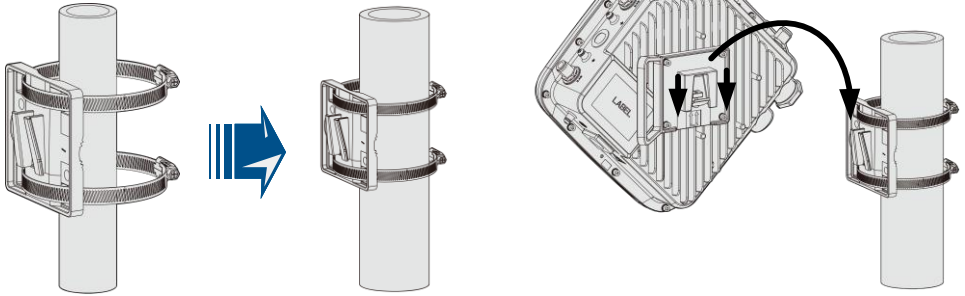
5. Slide the AP into the wall-mounting bracket to complete installation.



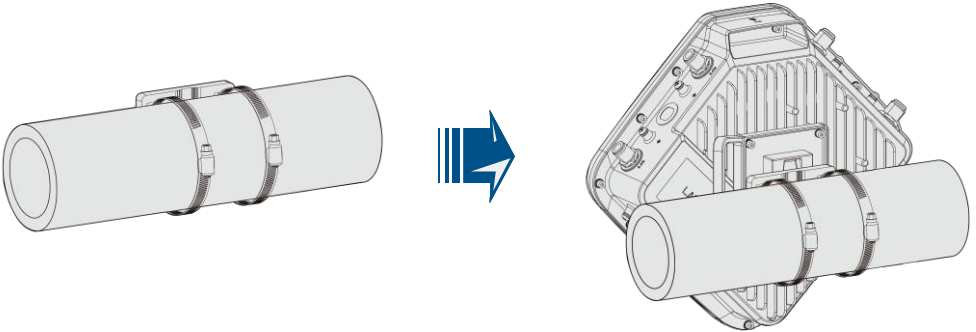
Installing an AP

• Installing the AP6610DN-AGN-US against a vertical pole:

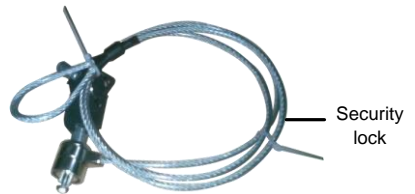
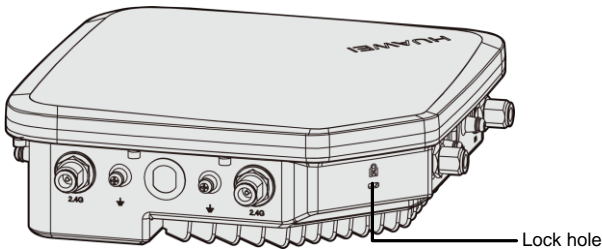
1. Determine the AP installation position, slide the hoop through the hole of the wall-mounting bracket and attach it to the pole, and use the screwdriver to secure screws on the hoop.
2. Slide the AP that has the connector fastened into the wall-mounting bracket.



- The procedure for installing the AP6610DN-AGN-US against a horizontal pole is similar to the procedure for installing the AP6610DN-AGN-US against a vertical pole.



• Installing the Security Lock

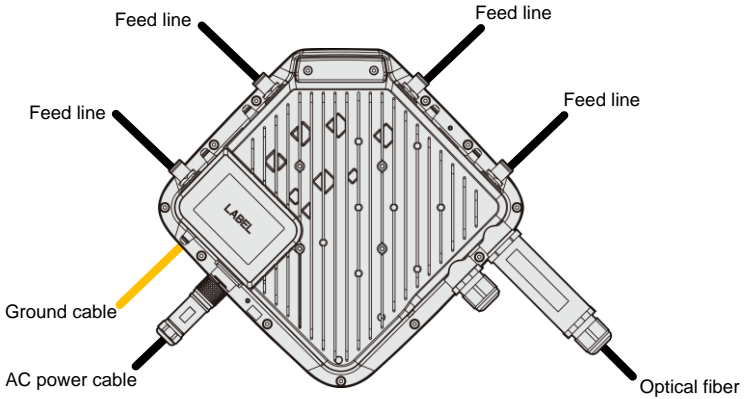


NOTE

To prevent unauthorized personnel from moving the AP, lock the AP. The preceding figure shows the security lock. The carrier should purchase the security lock and determine the position for installing the security lock.

Installing Cables

• AP6610DN-AGN-US external cable arrangement drawing

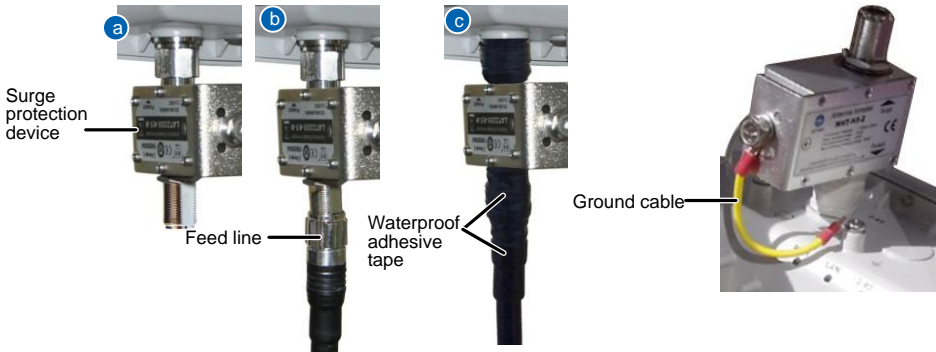


• Connecting the feed line

1. The outdoor AP's antenna ports already have 5 KA surge protection capability. Generally, no surge protection devices need to be installed; therefore, the antenna cables are directly connected to the AP's antenna ports.



2. If higher surge protection capability is required, the customer can purchase a surge protection device. When installing the surge protection device, ensure that it is connected to a ground cable.



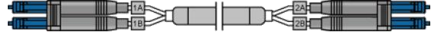
NOTE

- When no antenna is installed on the 5G antenna interface, cover the interface with a dustproof cap and wrap the dustproof cap with insulating tape and waterproof tape.
- Wrap the feed line using one-layer PVC black insulation tape, three-layer waterproof adhesive tape, and then three-layer PVC black insulation tape.
- Stretch the waterproof adhesive tape evenly and ensure that the upper layer of the tap overlaps 1/2 of the lower layer. Each layer should be attached tightly.
- Wrap the three-layer waterproof adhesive tape from bottom to up, from up to bottom, and from bottom to up in order.

Installing Cables

Connecting optical fibers

1. The right figure shows the appearance of the optical fiber:



2. The optical fiber connection of AP6610DN-AGN-US is similar to that of WA653SN. Here, WA653SN is used as an example. Connect the optical fiber to the AP and ensure that the waterproof connector is fastened.



NOTE

Install an optical module as shown in step a before connecting the fiber.



CAUTION

The thread must be secured properly; otherwise, optical fibers may be damaged. When removing optical fibers, remove the waterproof PG connector, and then remove the optical fiber connected to the AP. When removing the waterproof PG connector, use the ejector lever to clutch the optical fiber tube. This prevents the optical fiber tube from rotating with the waterproof PG connector and protects optical fibers.

Connecting AC power cables

1. Make an AC power cable onsite, cut the cable of proper length. Make a cable according to figure 1. L/N/PE pin arrangement must be correct.
2. When connecting the AC power cable to the AP, align the socket to the red point of the connector, and insert the waterproof connector. When a crack sound is heard, the AC power cable is installed properly. When removing the AC power cable, press the component with the red point. You do not need loosen the screw.



Figure 1

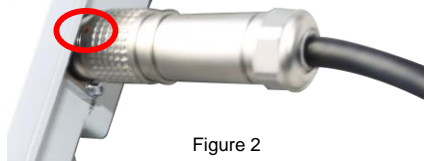


Figure 2

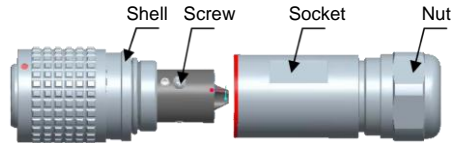
Making AC Power Cables Onsite

a Preparation

1. The required tools are as follows: open-end wrench (22mmX24mm), open-end wrench (22mmX24mm), Phillips screwdriver (0#X50mm), diagonal pliers, and utility knife.

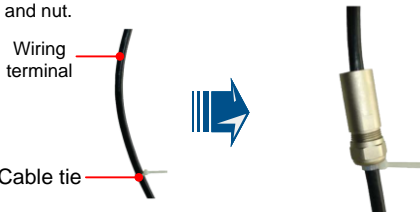


2. The following table shows the connector components.

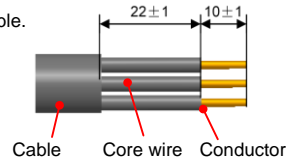


b Connection

1. Use cable ties to fasten the cable, remove the socket and nut together, and then lead the cable through the socket and nut.



2. Strip the cable.



CAUTION

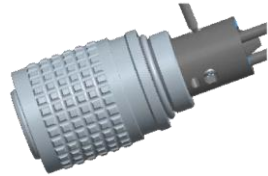
Be careful when stripping the cable, please don't damage the Core wire and the Conductor.

Installing Cables

3. Install the core wires in the correct holes.



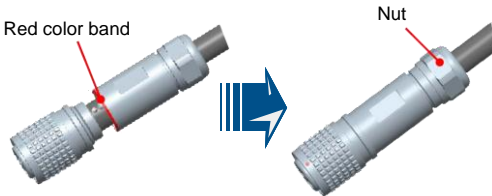
4. Tighten the screws in the three holes using a Phillips screwdriver.



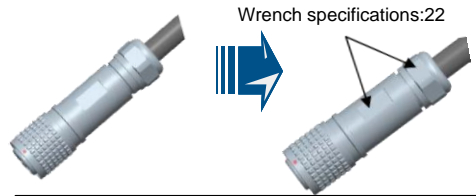
CAUTION

After the screws are tightened, check that the cable is securely installed by evenly pulling the cable with a 10 kg force.

5. Tighten the Socket and Shell using hand until you can't see the red color band.



6. Pre-tighten the nut and socket, and then further tighten the nut using a wrench with a torque of more than 1.2N·m.



CAUTION

Before tightened the socket and shell, the cable can't be tightened by the nut.

CAUTION

Please be careful not to damage the surface coating of parts when tightening the nut and socket.

c Verification

Use a multimeter to test the reliability of the cable components.



CAUTION

- Connector jacks can't be short-circuited.
- Connections between the metal shell and the connector jacks can't be short-circuited.
- Cable core wires are connected properly to the corresponding connector jacks.

d Protection

The device is placed outdoors, wrap up the connector using three layers of PVC insulation tapes to prevent it from being damaged, as shown in the following figure.



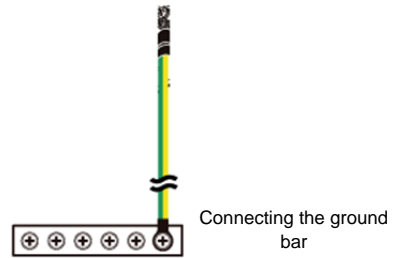
NOTE

- Each radio connector must be wrapped by three layers of waterproof tape and three layers of insulating tape.
- Wrap the tape from bottom to top, from top to bottom, and then from bottom to top. Cut the tape after wrapping three layers of tape on the connector.
- Wrap each layer of tape tightly and ensure that each layer covers more than 50% of the layer below it.
- Before wrapping the waterproof tape, stretch the tape evenly until the tape turns 1/2 as wide as before.
- After wrapping the tape, bundle cable ties at both ends of the insulating tape to prevent aging of the tape.

Installing Cables

• Connecting the ground cable

Cut the cable of proper length, and select 6-M4 OT terminal for the AP and 6-M6 OT terminal for the ground bar.



CAUTION

Requirements for laying out ground cables:

1. All ground cables must be connected to a ground bar.
2. The ground cable cannot be led in aerially, but buried in the earth or arranged indoor.
3. Both ends of the external conductor of the coaxial cable and those of the insulation of the shielded cable should have good electric contact with the metal shell of the equipment they connect to.
4. Ground cables must be separated from signal cables to reduce interference between them.
5. Do not add any switch or fuse on the ground cable.
6. Do not use another device for an electrical connection with the ground cable.
7. All metal components in the shell must be securely connected to the ground cable.

• Pressing the Reset Button

The Reset button on an outdoor AP is protected by a waterproof screw. Before pressing the Reset button, remove the waterproof screw.

CAUTION

Keep the screw properly and install it again after pressing the Reset button.

Power-on

SYS



Link



Wireless

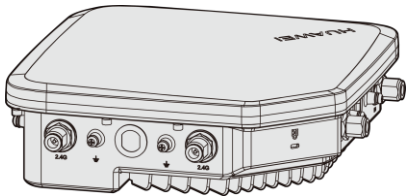


NOTE

Power on the AP6610DN-AGN-US and check the indicator status to determine the system running status.

Information Type	SYS	Link	Wireless	Description
Startup status	Steady green	NA	NA	The device is being started.
	Blinking green	NA	NA	The system is working properly.
	Steady red	NA	NA	The system fails to load the DRAM or system software.
Running and connection	Blinking once every 2s	Off	Off	The system is working properly. However, the Ethernet is not connected. Radios are disabled and no user is connected to the AP.
			Blinking green	The system is working properly, but the Ethernet is not connected. The AP has wireless users connected to the 2.4 GHz band and is transmitting data. The indicator blinks more quickly when more packets are being transmitted.
			Blinking yellow	The system is working properly, but the Ethernet is not connected. The AP has wireless users connected to the 5 GHz band and is transmitting data. The indicator blinks more quickly when more packets are being transmitted.
			Blinking green and yellow alternately	The system is working properly, but the Ethernet is not connected. The AP has wireless users connected to the 2.4 GHz and 5 GHz bands and is transmitting data.
	Blinking once every 2s	Steady or Blinking green	Off	The system is working properly, the Ethernet is connected, and radios are disabled. The indicator blinks more quickly when more data is being transmitted.
			Blinking green	The system is working properly, and the Ethernet is connected. The AP has wireless users connected to the 2.4 GHz band and is transmitting data. The indicator blinks more quickly when more packets are being transmitted.
			Blinking yellow	The system is working properly, and the Ethernet is connected. The AP has wireless users connected to the 5 GHz band and is transmitting data. The indicator blinks more quickly when more packets are being transmitted.
			Blinking green and yellow alternately	The AP has wireless users connected to the 2.4 GHz and 5 GHz bands and is transmitting data. The indicator blinks more quickly when more packets are being transmitted.

Technical Specifications



Item	Description
Weight	2.65Kg
Dimensions (W x D x H)	255mmx255mmx83mm
AC power supply	100 V to 240 V
Operating temperature	- 40°C to +60°C
Storage temperature	- 40°C to +70°C
Relative humidity	0% to 100%
Pressure	70 kPa to 106 kPa
Altitude	- 60 m to 4000 m When the altitude is between 1800 m and 4000 m, the operating temperature decreases by 1°C each time the altitude increases by 220 m.

Logging In to the Router

After an AP is powered on, you can log in to the AP using the following methods.

1. Logging In to the AP Using Telnet

This section describes how to log in to the AP using Telnet. After logging in to the AP, you can configure the AP using commands.

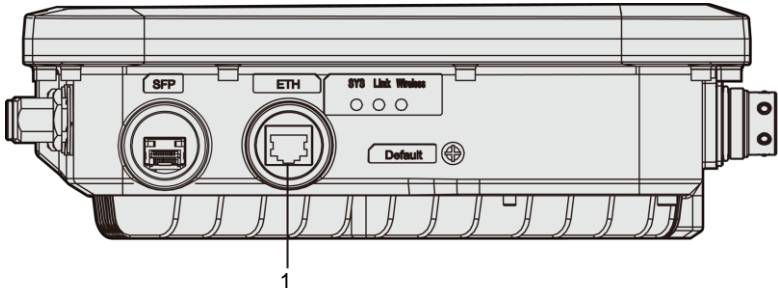
1. Logging In to the AP Using Telnet

This section describes how to log in to the AP using Telnet. After logging in to the AP, you can configure the AP using commands.

Procedure

Step 1 Connect a PC to the uplink port of the AP with a network cable. Figure 1-1 shows the location of the AP's uplink port.

Figure 1-1 Location of the AP's uplink port



No.	Port
1	ETH

Step 2 Configure a static IP address for the PC. The IP address must be on the network segment 192.168.0.1/24 (The IP address should not be same as the AP's default IP address 192.168.0.1.) and the subnet mask is 255.255.255.0.

After the configuration is complete, run the ping 192.168.0.1 command on the PC to check whether the PC can be pinged. If the ping operation succeeds, the connection is set up successfully. If the ping operation fails, The connection fails to be set up. Check whether the network cable works properly.

Step 3 Access the command line window on the PC. For example, if the PC runs Windows XP, choose Start > Run and enter cmd in the displayed dialog box.

Step 4 Run the telnet 192.168.0.1 command to log in to the AP.

Step 5 Enter the default user name and password admin. If the user view is displayed, you have logged in successfully.

When you log in for the first time, the following page is displayed:

Username: admin

Password:

Enterprise AP:

----End

NOTE

Run the exit command to exit from the Telnet window. When the system fails to exit from the Telnet window:

- If you logged in to the AP from an AC or a switch, press **Ctrl+T** to return to the AC or switch view. This operation does not affect the AP operation.
- If you logged in to the AP from a PC, directly close the Telnet window. This operation does not affect the AP operation.

Declaration on Hazardous Substances in Electronic Information Products

Part	Hazardous Substances					
	Pb	Hg	Cd	Cr6+	PBB	PBDE
Mechanical part	○	○	○	○	○	○
Board/circuit module	○	○	○	○	○	○
Signal cable	○	○	○	○	○	○
Cable connector	○	○	○	○	○	○
Power adapter	○	○	○	○	○	○
Auxiliary equipment	○	○	○	○	○	○

O: Indicates that the concentration of the hazardous substance contained in all the homogeneous materials of this part is below the limit requirement of the SJ/T 11363-2006 standard.

X: Indicates that the Concentration of the hazardous substance contained in all the homogeneous materials of this part is above the limit requirement.

QUALIFICATION CARD





Warranty Card

Thank you for choosing HUAWEI Technologies Co., Ltd-a leading telecom solution provider. To get better services, please read this warranty card carefully, fill in the required information and preserve this card in good condition.

Your Name	
Address/Postal Code	
Telephone	
Product Type	
Product Serial Number	
Purchase Date	
Invoice Number	
Dealer Name	
Dealer's Address/Telephone	

Preserve well. No reissue

Dealer's Seal: Limited Warranty

Subject to the exclusions contained below, Huawei Technologies CO., Ltd. (hereinafter referred to as Huawei) warrants its access terminals ("Products") to be free from defects in materials and workmanship under normal consumer usage for one year from the date of purchase of the product ("Warranty period"). During the warranty period, a Huawei authorized service partner shall remedy defects in materials and workmanship free of charge.

Special Notice:

1. The warranty card shall be applicable only after being stamped by the dealer.
2. The warranty card must be preserved in good condition and free of any scratch or alteration.
3. To claim such service for defects that are not included in The following exclusion terms, the warranty card and the invoice that records the product serial number shall be presented to a Huawei authorized service partner.

Exclusions:

In any of the following cases, the warranty card becomes unenforceable or inapplicable without prior notice:

1. The defects are caused by improper handling in transportation and assembly.
2. The defects are caused by the fact that the product is dismantled or altered by anyone that is not from a Huawei authorized service partner.
3. The defects are caused by the fact that the product is used in a harsh environment that is not suitable for the operation of the product.
4. The defects are caused by any force majeure including but not limited to fire, earthquake, lightning and tsunamis.
5. The defects are caused by the fact that the product is used or handled improperly, roughly or not as instructed in the applicable User Guide.
6. The normal wear and tear, including but not limited to the normal wear and tear of the shell and the power module, shall not be covered by the limited warranty.
7. The warranty card is altered or illegible, or the product serial number recorded on the warranty card is inconsistent with the actual one imprinted or labeled on the product.

In any case that is not covered by this limited warranty or should the warranty expire, Huawei shall charge for the service(s) claimed for the products if the product is still remediable.

Huawei preserves the right for interpretation of this limited warranty.



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