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01 | Safety Precautions

General Requirements

- Before you install and use the device, read these safety precautions carefully and observe them during operation.
- Keep the device dry during storage, transportation, and operation.
- Ensure that the device does not collide with other objects during storage, transportation, and operation.
- Do not attempt to dismantle the device by yourself. In case of any fault, contact the designated maintenance center for repair.
- Without prior written consent, no organization or individual is permitted to make any change to the structure or safety design of the device. Huawei Technologies Co., Ltd. is not liable to any consequences or legal issues due to such changes.
- While using the device, observe all applicable laws, directives, and regulations, and respect the legal rights of others.

Environmental Requirements

- Place the device in a well-ventilated place. Do not dispose the device to direct sunlight.
- Keep the device clean and free of dust.
- Place the device on a stable platform.
- Do not place any object on top of the device. The weight of the object may deform or damage the device, or the device may become too hot.
- Maintain a distance of at least 10 cm between the device and the closest object for heat dissipation.
- Do not place the device on or near any inflammable material, such as something made of rubber.
- Keep the device far away from any heat source or fire, such as a candle or an electric heater.
- Keep the device far away from any household appliance with strong magnetic field or electromagnetic field, such as a microwave oven, a refrigerator, or a satellite dish antennas.

Cleaning Requirements

- Before cleaning the device, power off the device and disconnect it from the power supply.
- Use a soft cloth to clean the device.
- Keep the power plug clean and dry. Using a dirty or wet power plug may lead to electric shock or other accidents.

Operating Requirements

- Do not let a child operate the device without guidance.
- Do not let a child play with the device or any accessory. Swallowing the accessories may be fatal.
- Use only the accessories provided or authorized by the manufacturer.
- The power supply of the device must meet the requirements of the input voltage of the device.
- Before plugging or unplugging any cable, shut down the device and disconnect it from the power supply.
- While plugging or unplugging any cable, make sure that your hands are completely dry.
- Do not step on, pull, or over-bend any cable. This can damage the cable and lead to malfunction of the device.
- Do not use an old or a damaged cable.
- During lightning storms, do not use the device and disconnect it from the power supply.
- If the device is not used for a long time, disconnect it from the power supply and unplug the power plug.
- When smoke, abnormal noise, or unpleasant smell is emitted from the device, stop using the device, disconnect it from the power supply and unplug the power plug immediately. Contact the designated maintenance center for repair.
- Ensure that no objects (such as metal shavings) are entering the device through the heat dissipation intakes.
- Do not scratch or abrade the surface of the device. This may affect the operation of the device. The paint scraps shed may cause skin allergy.
- The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons.

EU Regulatory Conformance

- Huawei Technologies Co., Ltd., hereby, declares that the product complies with the essential requirements and other relevant provisions of Directive 1999/5/EC.

CE0682 

- The product is compliant with the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) Regulation (Regulation 1907/2006/EC).
- The declaration of conformity can be found at www.huaweidevice.com/certification.
- Observe the national and local regulations in the area where the product is to be used. This product may be restricted for use in some or all countries of European Union.

02 | Before you begin

Check the following items in the product package. If you find anything missing or damaged, contact the service provider.

WiMAX CPE	1	Dedicated Power Adapter	1	Ethernet Cable	1
Quick Start	1	Qualification Card	1		

03 | Getting to Know Your CPE

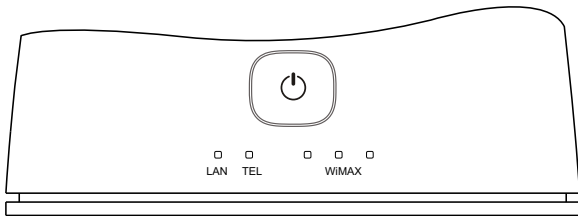


The supported functions and actual appearance of the CPE may vary with the product you purchase. The following pictures are provided for illustration purpose only.

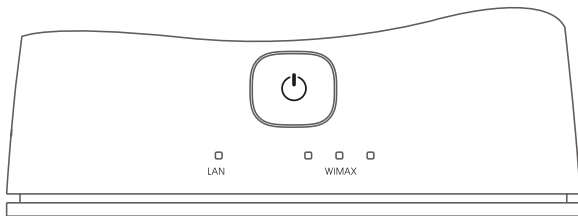


Front Panel

BM632/BM622/BM652



BM631a



The following table lists the meanings of the indicators and buttons on the front panel.

Indicator	Status	Meaning
WiMAX	On	The indicators indicate the signal strength of the WiMAX network. When all the indicators are on, it indicates that the signal strength is at the highest level.
	Blink	The CPE is being upgraded when they blink sequentially. The software is damaged when they blink randomly.
	Off	There is no WiMAX network signal.
LAN	On	The LAN port is being used.
	Blink	The data is being transmitted. The larger the amount of data is, the higher the blinking frequency is.
	Off	The LAN port is unused.

Indicator	Status	Meaning
TEL	On	The TEL port is being used.
	Blink	The TEL interface has an incoming call.
	Off	The telephone is on-hook or the TEL interface is disabled.
Power	On	The CPE is powered on.
	Off	The CPE is powered off.

Notes:

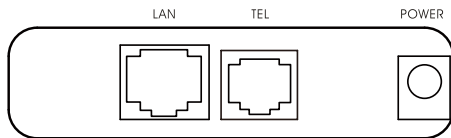
WiMAX: Worldwide Interoperability for Microwave Access

LAN: Local Area Network

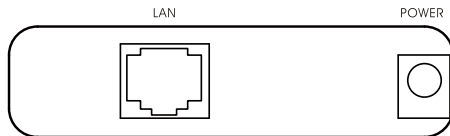
CPE: Customer Premises Equipment

 **Rear Panel**

BM632/BM622/BM652



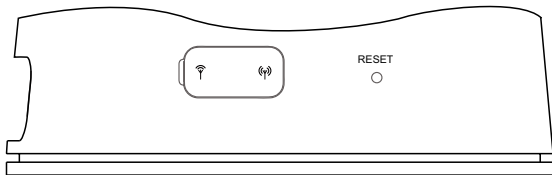
BM631a



The following table lists the functions of the ports on the rear panel.

Port	Description
POWER	The interface is used to connect to the output interface of the power adapter.
TEL	The interfaces are used to connect a telephone line.
LAN	The interfaces are used to connect the CPE to the computer.

Side Panel



Button	Description
RESET	<p>Press and hold the button for one to eight seconds to restart the CPE.</p> <p>Press and hold the button for over eight seconds to restore the default settings of the CPE.</p> <p>Once you restore the default settings, all the customized data will be lost. Use this function with caution.</p>

04 | Preparing for Installation

Selecting a Proper Installation Position

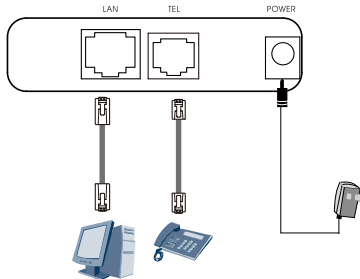
- Obstacles such as concrete or wooden walls may affect the transmission of WiMAX network signals. Therefore, install the CPE in an open space.
- Keep the CPE away from any household appliance that produces a strong electric or magnetic field, such as a microwave oven, a refrigerator, or a satellite dish antenna.

Connecting Cables

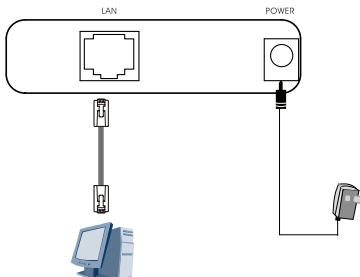
CAUTION

During lightning weather, power off the CPE and disconnect it from the power supply. Do not touch the antenna.

BM632/BM622/BM652



BM631a




When the cables are connected correctly, the CPE will search for a WiMAX network automatically. After accessing the network successfully, the CPE can be used.



Connecting the External Antenna (Optional)

CAUTION

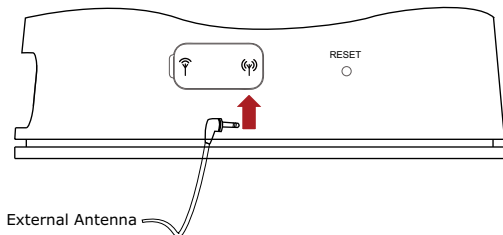
- Do not use the external antenna outdoors.
- During lightning storms, stop using the external antenna, and disconnect it from the CPE.

Two external antennas can be connected to the CPE at a time. If only one antenna is connected, connect it to the main antenna interface labeled with . Otherwise, the CPE may fail to work normally. To connect an external antenna, do as follows:

- a. Power off the CPE.

- b.** Connect the external antenna to the CPE.
- c.** Put the external antenna in an open space without any obstacle surrounded, to ensure good reception of network signals.

The schematic figure is only for your reference. The actual external antenna may differ.



05 | Logging in to the Web UI

Take the Windows XP operating system and the Internet Explorer 6.0 as examples.

Ensure that the CPE is connected to the PC. If you log in to the Web-based utility of the CPE for the first time, do as follows:

- a.** Set the IP address of the PC and ensure that the IP address of the PC is in the same network segment as that of the CPE.



- By default, the IP address of the CPE is 192.168.1.1 and the subnet mask of the CPE is 255.255.255.0.
- It is recommended that the IP address and DNS settings be obtained automatically.

- b.** Start the Internet Explorer, enter **http://192.168.1.1** in the address bar,

and then press **Enter**.

- c. Enter the correct user name and password in the displayed Web-based utility, and then click the Login button.



Both the initial user name and password are **user**.

- d. After the user name and the password are verified, you can perform operations on the Web-based utility.



- For details about the settings of advanced parameters, see the online help in the Web-based utility.
- To read the online help, you need to install the Adobe Reader 6.0 or later versions.

06 | Troubleshooting

The power indicator is not on.

- Check the power supply, ensuring that the power supply is properly connected.
- Check whether the power adapter meets the specification.

The WiMAX indicator is not on.

- Check the power supply, ensuring that the power supply is properly connected.
- Check whether you have activated the WiMAX online service.
- Place the device in an open space without any obstacle around it, such as a cement wall or a wooden wall, which affects reception of WiMAX network signals.
- Place the device far away from an electrical device that produces a strong magnetic field or a strong electric field, such as a microwave oven, a fridge, or a satellite dish antenna.

The WiMAX network cannot be found.

- Ensure that the antenna is properly connected.
- Check the power supply, ensuring that the power supply is properly connected.
- Place the device in an open space without any obstacle around it, such as a cement wall or a wooden wall, which affects reception of WiMAX network signals.
- Place the device far away from an electrical device that produces a strong magnetic field or a strong electric field, such as a microwave oven, a fridge, or a satellite dish antenna.

If the problem persists, contact the local service provider.

You cannot log in to the Web-based utility.

- Check the power supply, ensuring that the power supply is properly connected.
- Check whether the network cable between the device and the computer is properly connected. Ensure that the device is properly connected to the computer.
- Check whether the parameters of the Web-based utility are properly set.
- Check the Internet Explorer parameters, ensuring that the proxy server is disabled. Take the Internet Explorer 6.0 as an example. Disable the proxy server as follows:
 - i. Start the Internet Explorer 6.0.
 - ii. Choose **Tools > Internet Options...** , and then click the **Connections** tab.
 - iii. Click **LAN Settings....**
 - iv. Deselect **Use a proxy server for your LAN**. If select, click the check box to deselect it. Then click **OK**.
 - v. Log in to the Web-based utility.

The device or the power adapter overheats.

- The device may get heated after being used for a long time. Therefore, power off the device when you do not use the device.
- Place the device in a well-ventilated place and do not expose the device to direct sunlight.

If the problem persists, contact the local service provider.

07 | Specifications

WiMAX Parameters	
Standard	IEEE 802.16e-2005
Frequency	3.4–3.62 GHz (BM632/BM631a)
	2.496–2.69 GHz (BM622)
	2.3–2.4 GHz (BM652)
Multiple Access Method	Orthogonal Frequency-Division Multiple Access (OFDMA)
Duplex Mode	Time-Division Duplex (TDD)
Modulation	QPSK, 16QAM, 64QAM (For downlink only)
Data Rate	Up to 15Mbps downlink, 5Mbps uplink
Port	
BM632/BM622/BM652	One FE port; one POTS port
BM631a	One FE port
Other Parameters	
Power adapter input	100–240 V AC
Power consumption	10W
Power supply to device	12V 1A
Operating temperature	0 to 40°C (32 to 104°F)
Operating humidity	5 % to 95 % (non-condensing)
Dimensions (L×W×H)	130mm×128mm×185mm
Notes:	
FE: Fast Ethernet, POTS: Plain Old Telephone Service	



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Issue: 02(2009-09-05)

Part Number: 00517891