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Thank you for purchasing Huawei EC228 EV-DO USB Modem (hereinafter referred to as EC228).

EC228 is a wireless device based on the CDMA2000 1x and CDMA2000 1xEV-DO Rev. A protocols. From your computer, you can communicate with all benefits of CDMA technology on CDMA networks at a high speed.

EC228 provides data transmission at up to 3.1 Mbit/s download with receiving diversity technology, and up to 1.8 Mbit/s upload.

**Note**: Download and Upload speeds may vary based on network and environmental factors.
This manual briefs the profiles of EC228, including the preparation, installation/uninstall process, and safety precautions.
You are highly recommended to read the manual before using the EC228.

Getting to Know Your EC228

This is a sketch for EC228. The actual product may differ.

USB interface

Indicator

Anternna interface
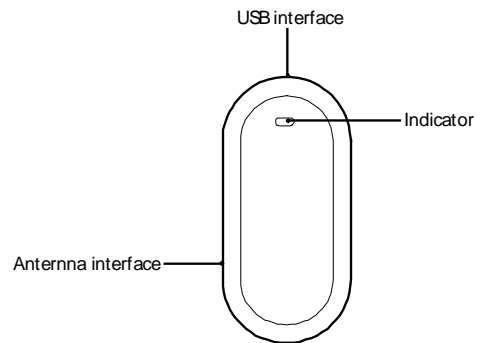
Indicator

Indicates the status of the EC228.

Indicator Status	Description
On	The EC228 is powered on.
Blinking once every 2s	• The EC228 is searching the network. • The network is not found.
Blinking twice every 2s	The network is found.
Blinking once every 0.2s	The EC228 is engaged in a call or a data service.
Off	The EC228 is removed, powered down, or reset.

Requirements for the Computer

To correctly install and use EC228, the following configurations for the computer are required.

Item	Required Configuration
USB interface	USB 2.0 Full Speed
CPU	866 MHz Pentium or above
Memory	128 MB or above
Free space on the hard disk	100 MB or above
Operating system	Windows XP, Windows 2000 or Window Vista
Screen resolution	1024 × 768 is recommended

Note: Improper configurations may degrade the computer performance. Make sure that the computer configurations meet the requirements.
For Windows XP, it is recommended to install patches such as Service Pack 2 or above.
For Windows 2000, it is recommended to install patches such as Service Pack 4 or above.

Installation Guide

The procedure for installing is subject to the operating system installed on your computer. The following section takes Windows XP as an example. If there is any difference, follow the actual installation prompts.

Connecting the EC228 with a Computer

Note: First, power on a computer. Then connect the EC228 with the computer. Otherwise, the normal installation of the EC228 can be affected.

The following figure is the sketch map of the data cable.

Auxiliary USB data cable

Main USB data cable

Mini-USB Connetor
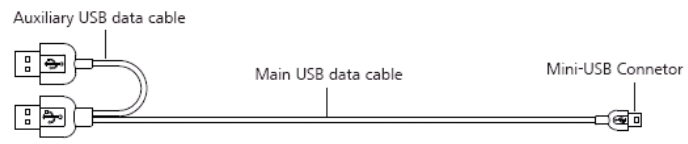
1. Plug the mini-universal series bus (USB) connector into the EC228.

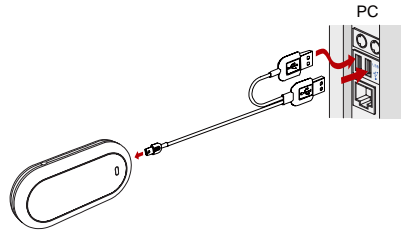2. Plug the connectors of the main USB data cable and the auxiliary USB data cable into the USB interfaces of the computer.

Installing the Management Program

1. Connect the EC228 with the computer.
2. The OS auto detects and recognizes new hardware and starts the installation wizard.

Note: If the auto-run program does not respond, go to the driver path. Find and double-click the **AutoRun.exe**, and then the program will run.

3. Follow the prompts of the installation wizard.
4. After the program is installed, the shortcut icon for management program is displayed on the desktop.

Removing the EC228

Follow these steps strictly to remove the EC228 from your PC. Otherwise, your system may be damaged, even if it is in the standby mode.

Note: Before removing the EC228, you need to log out of the management program first.

1. Double-click [icon] in the system tray.
   The **Safely Remove Hardware** interface is displayed.
2. Select Huawei Device (actual name based on the name displayed in this menu – "Huawei Mobile Connect - 3G Modem" for example) in the **Hardware devices** list, and click **Stop**.
   The **Stop a Hardware device** interface is displayed.

3. Click **OK**.
4. When the **Safe To Remove Hardware** prompt is displayed, click **OK** and remove the EC228.

Starting the Management Program

Double-click the shortcut icon on the desktop to start the management program.

Uninstalling the Management Program

1. Click **Start** Menu.
2. Click **Control Panel**.
3. Find the management program, and click **Add/Remove Program** to uninstall it.

Warnings and Precautions

Please read the safety information carefully to ensure the correct and safe use of your wireless device.

General Recommendations for Use

Always handle your wireless device with care and keep it in a clean and dust-free place. Do not expose your wireless device to open flames or lit tobacco products.

- Always keep your wireless device dry.
- Do not drop, throw or try to bend your wireless device.
- Do not paint or scratch your wireless device.
- Do not attempt to disassemble your wireless device. Doing so will void warranty. Only authorized personnel are allowed to do so.
- Use approved accessories only. Do not connect your wireless device to any incompatible products.

Laws and Regulations

- Do not operate your wireless device where it may be unsafe to do so or where you are required not to do so.
- To deactivate your wireless device, stop all applications using the wireless device first and then remove the wireless device from your PC.
- Obey all local laws, regulations, rules, orders, signs and notices while using the wireless device. Signs about the use of mobile phones should also be obeyed as referring to other wireless equipment including wireless devices provided by Huawei.

Electronic Device

- Deactivate your wireless device near high-precision electronic devices. The wireless device may affect the performance of these devices.
- Pacemaker manufacturers recommend that a minimum separation of 15 cm be maintained between a wireless device and a pacemaker to avoid potential interference with the pacemaker. Deactivate your wireless device, if it may have disturbance to the pacemaker.

Deactivate in Explosive Areas

Deactivate your wireless device where the air is potentially explosive. It is rare, but your PC could generate sparks.

Deactivate in Blasting Areas

Deactivate your wireless device where blasting is in progress. Remote-controlled radio frequency (RF) devices are often used at

construction sites to set off blasting.

Deactivate in Aircrafts

Deactivate your wireless device before boarding or in any aircraft. Wireless devices can cause interference in aircrafts.

Deactivate at Hospitals

Obey regulations or rules at hospitals. Deactivate your wireless device near medical equipment. Wireless devices can cause interference to cardiac pacemakers, implanted defibrillators or other medical equipment.

Deactivate near Hearing Devices

Deactivate your wireless device near hearing devices. People with hearing aids may experience interfering noise near wireless devices.

Recommendations for Children

Do not allow children to play with your wireless device. They could hurt themselves or others, or could accidentally damage the wireless device. Your wireless device contains small parts with sharp edges that may cause an injury or a choking hazard.

Deactivate While Driving

Do not use the wireless device while driving.

Immunity to Interference

Your wireless device is immune to interferences caused by audible signals.

Cleaning and Maintenance

- Before you clean or maintain the wireless device, stop all applications using the wireless device and remove your wireless device from your PC.
- Clean your wireless device with a piece of soft antistatic cloth.
- If the wireless device or any of its accessories does not work, turn to an authorized service center for help.

Environmental Protection

Observe the local regulations regarding the disposal of your packaging materials, old wireless device and its accessories. Please promote their recycling.

UIM Cards

While inserting or removing the UIM card, protect yourself against electrostatic discharge (ESD). Do not touch the connector of the UIM card. As a precaution, always make sure that the wireless device is already in your hand before you insert or remove the UIM card.

Restart on ESDs

Software will attempt to re-initialize a connection once a substantial electrostatic discharge causes the device to reset. If the software is not operational after an ESD, restart the software application.

Agency/Regulatory Information

The wireless device is approved for use in many regions of the world. In these regions, the device meets all radio frequency exposure requirements. The following approvals and notices apply in specific regions as noted.

CE Approval (European Union)

The wireless device is approved to be used in the member states of the EU. Huawei declares that the wireless device is in compliance with the essential requirements and other relevant provisions of the Radio and Telecommunications Terminal Equipment Directive 1999/5/EC (R&TTE Directive).

Radio Frequency Exposure

To ensure compliance at all times with the R&TTE Directive* 1999/5/EC, the wireless device can be held in the hand but still requires a minimum distance of 1.5 cm from the body when in operation.

* The general public RF exposure limits referenced in the R&TTE Directive are consistent with the published Guidelines of the International Commission on Non-Ionizing Radiation Protection (ICNIRP) 1998. ICNIRP is a formally recognized non-governmental organization in Non-Ionising Radiation Protection for the World Health Organisation (WHO), the International Labour Organisation (ILO) and the European Union (EU). For more information, visit the ICNIRP website at www.icnirp.de.

Certification Information (SAR)

THIS DEVICE MEETS THE GOVERNMENT'S REQUIREMENTS FOR EXPOSURE TO RADIO FREQUENCY ELECTROMAGNETIC FIELD.

Your wireless device is a low-power radio transmitter and receiver. When it is running, it emits low levels of radio frequency energy (also known as radio waves or radio frequency fields).

Governments around the world have adopted comprehensive international safety guidelines, developed by scientific organizations, e.g. ICNIRP (International Commission on Non-Ionizing Radiation Protection) and IEEE (Institute of Electrical and Electronics Engineers Inc.), through periodic and thorough evaluation of scientific studies. These guidelines establish permitted levels of radio wave exposure for the public. The levels include a safety margin designed to assure the safety of all persons, regardless of age and health, and to account for any variations in measurements.

Specific Absorption Rate (SAR) is the unit of measurement for the amount of radio frequency energy absorbed by the body when you use a wireless device. The SAR value is determined at the highest certified power level in laboratory conditions, but the actual SAR level of the wireless device while operating can be well below the value. This is because the wireless device is designed to use the minimum power required to reach the network.

All models of Huawei's wireless device are designed to meet radio frequency exposure guidelines such as European Council Recommendation and Federal Communications Commission Notice (United States).

European Council Recommendation: Before a wireless device model is available for sale to the public, it must be tested according to the technical standard-EN 50361 and not exceed the limit established by the European Council Recommendation: 1999/519/EC for safe exposure.

The SAR limit adopted by the 1999/519/EC is 2.0 watts/kilogram (W/kg) averaged over ten gram of tissue..

[EN 50361 scope states "This basic standard applies to any electromagnetic field (EM) transmitting devices intended to be used with the radiating part of the equipment in close proximity to the human ear including mobile phones, cordless phones, etc. The frequency range is 300 MHz to 3 GHz. Therefore, the above text does not address primary use of the wireless device product.]

Federal Communications Commission Notice (United States):
Before a wireless device model is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government-adopted requirement for safe exposure.

The SAR limit adopted by the USA and Canada is 1.6 watts/kilogram (W/kg) averaged over one gram of tissue. [There is no reference to the specific reference standard or its applicability to the intended use of the product.]

FCC Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body when using it via USB cable according to FCC standard.

Class B Digital Device

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on,

the user is encouraged to try to correct the interference by one or more of the following measures:

• Reorient or relocate the receiving antenna.

• Increase the separation between the equipment and receiver.

• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

• Consult the dealer or an experienced radio/TV technician for help.

Warning: Changes or modifications made to this equipment not expressly approved by *HUAWEI* may void the FCC authorization to operate this equipment.

FCC ID: QISEC228

Version: V100R001_01   Part Number: 31018531

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