



BEC MX-1200

**(4G/LTE) Gigabit Multi-Service
Broadband Router**

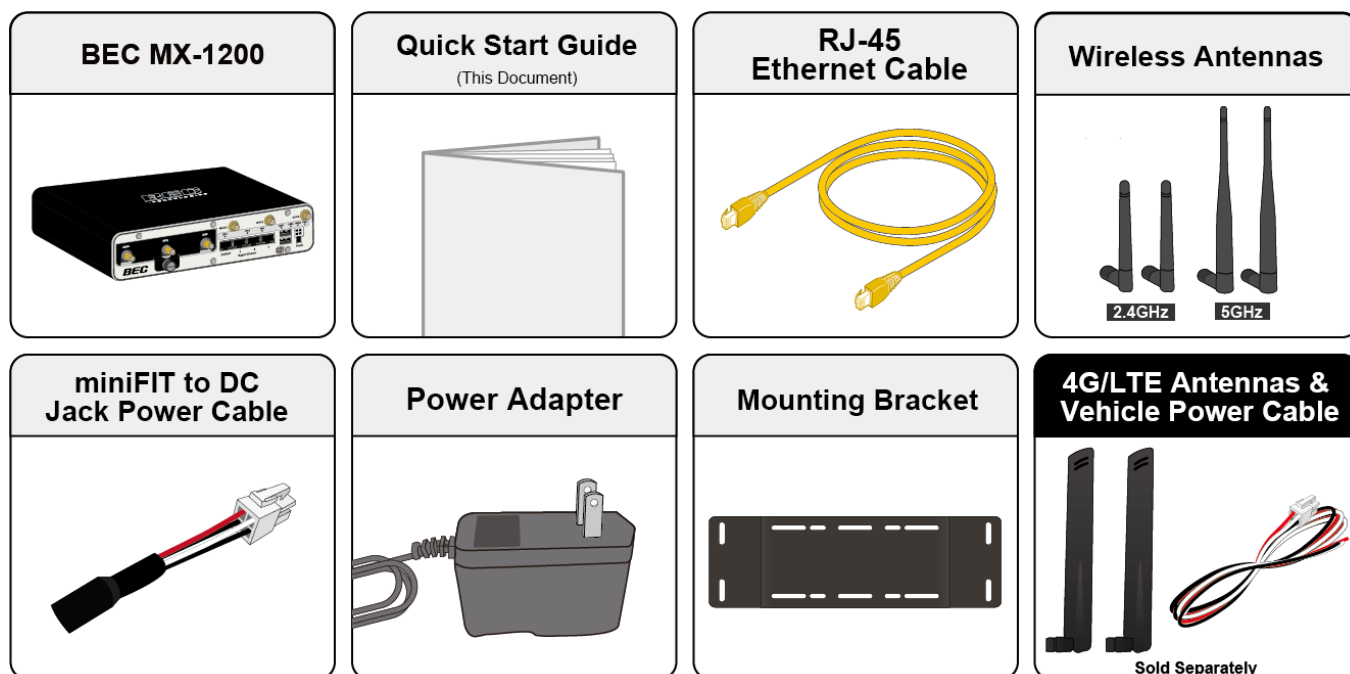
Quick Start Guide



PLEASE READ THE QUICK START GUIDE AND FOLLOW THE STEPS CAREFULLY. THIS QUICK START GUIDE WILL HELP YOU INSTALL THE DEVICE PROPERLY AND AVOID IMPROPER USAGE. IF YOU NEED MORE INFORMATION ON THIS SOFTWARE CONFIGURATION, PLEASE REFER TO THE ONLINE USER MANUAL.

Package Contents

- ✓ BEC MX-1200 (4G/LTE) Gigabit Multi-Service Broadband Router * 1
- ✓ This Quick Start Guide * 1
- ✓ RJ-45 Ethernet Cable * 1
- ✓ 2.4GHz Wi-Fi Antenna (Short) * 2 + 5GHz Wi-Fi Antenna (Long) * 2
- ✓ MiniFIT to DC Power Cable * 1
- ✓ DC Power Adapter * 1
- ✓ Mounting Bracket * 1



NOTE: ALL IMAGES SHOWN ARE FOR ILLUSTRATION PURPOSE ONLY. PACKAGE CONTENTS MAY DIFFER FROM ACTUAL PRODUCTS.

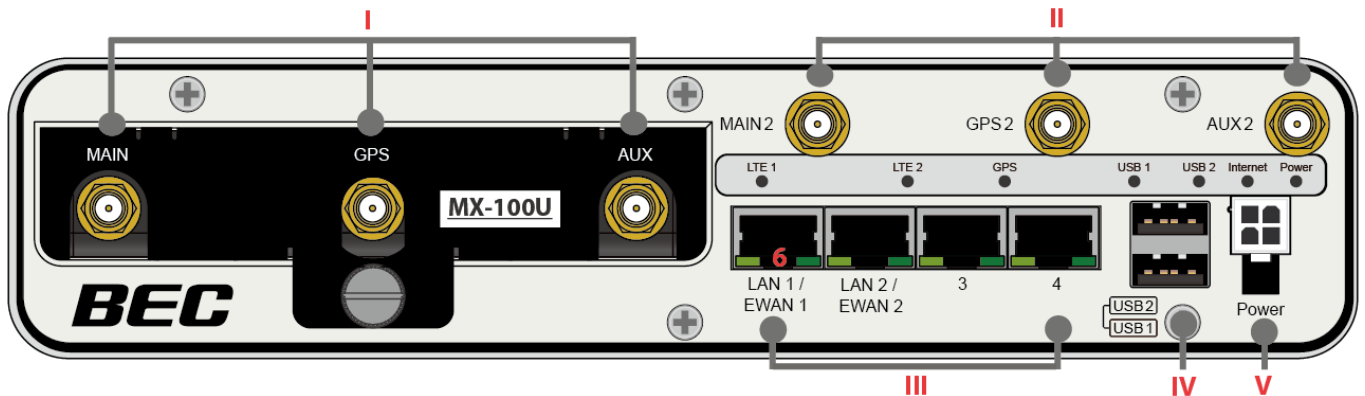


- Do not use the router in high humidity or at high temperature.
- Do not use the same power source for the router as other equipment.
- Do not open or repair the case yourself. If the router is too hot, turn off the power immediately and have it repaired at a qualified service center.
- Avoid using this product and all accessories outdoors.



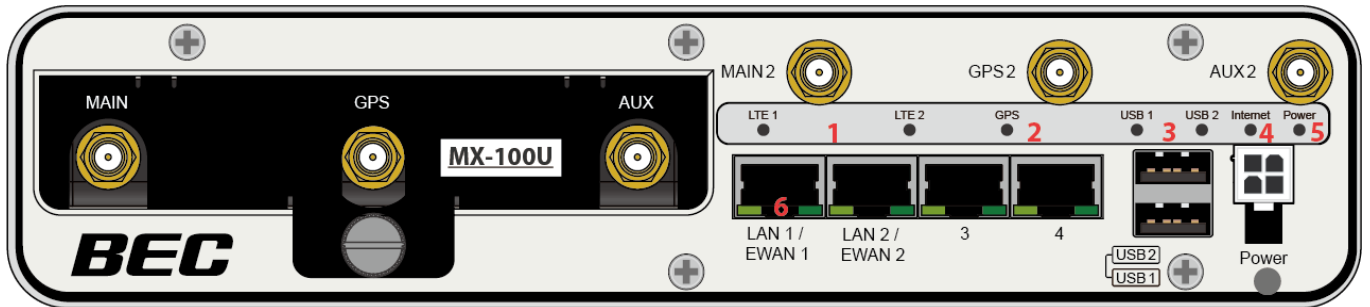
- Place the router on a stable surface.
- Only use the power adapter that comes with the package. Using a different voltage rating power adapter may damage the router.

Front Panel - Connectors



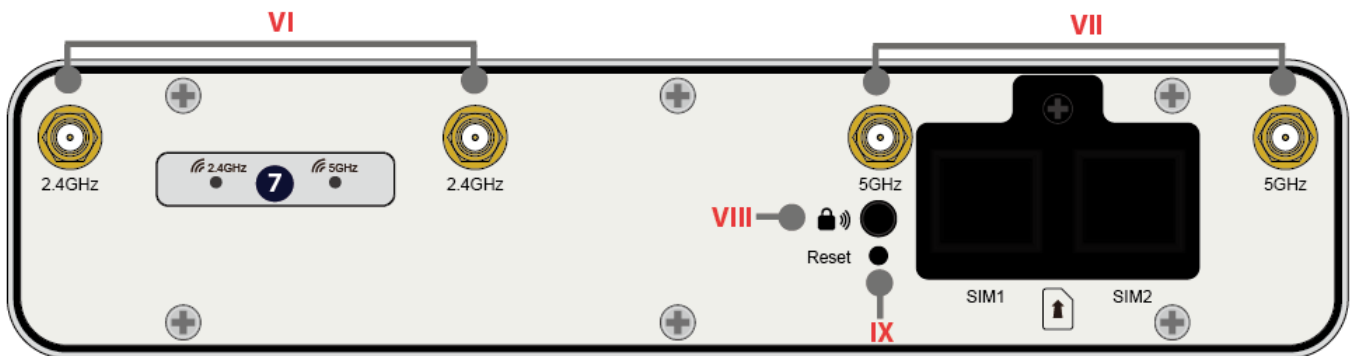
PORTS		MEANING
I	(Optional) LTE 1 (Main/GPS/Aux) Antenna Connectors	<u>MX-100U as Primary LTE Connectivity</u> SMA female connectors Manually screw the mobile and/or GPS antennas tight to the female connectors for mobile connection 1
II	(Optional) LTE 2 (Main/GPS/Aux) Antenna Connectors	<u>MX-1200 Embedded as Secondary LTE Connectivity</u> SMA female connectors Manually screw the 3G/4G and/or GPS antennas tight to the female connectors for mobile connection 2
III	Gigabit LAN Ethernet (1 - 4)	Connect a UTP Ethernet cable (Cat-5 or Cat-5e) to one of the four LAN ports when connecting to a PC or an office/home network of 10Mbps /100Mbps /1000Mbps * LAN 1/EWAN 1 & LAN 2/EWAN 2 Connect to a Fiber/ Cable/ xDSL Modem with using a RJ-45 cable for broadband connectivity <u>Note: LAN1 and/or LAN2 automatically becomes an EWAN port when EWAN internet interface is configured in the management GUI</u>
IV	USB Ports	The USB can support setup for storage/file sharing. Connect an external USB dongle / hard drive for storage
V	Power	Connect the supplied Power cable to this jack port


Front Panel - LEDs





LEDS		MEANING	
1	LTE 1 / LTE 2 (Received Signal Strength Indicator)	Green	RSSI greater than -69 dBm. Excellent signal condition
		Green Flashing quickly	RSSI from -81 to -69 dBm. Good signal condition
		Red Flashing quickly	RSSI from -99 to -81 dBm. Fair signal condition
		Red Flashing slowly	RSSI less than -99 dBm. Poor signal condition
		Red	No signal and the 4G LTE module is in service
		Off	No LTE module or LTE module fails
2	GPS	Green	GPS is up and ready to use
3	USB 1 / USB 2	Green	Connecting to a USB dongle or a hard drive
4	Internet	Green	Internet is connected, and traffic is passing through the device
		Red	IP request failed
		Off	Either in bridged mode or WAN connection is not ready
5	Power	Green	System is up and ready
		Red	Boot failure
6	Gigabit Ethernet (LAN 1 - 4)	Green	Transmission speed is at Gigabit speed (1000Mbps)
		Orange	Transmission speed is at 10/100Mbps
		Blinking	Data being transmitted/received

Back Panel – Wi-Fi Connectors & LEDs

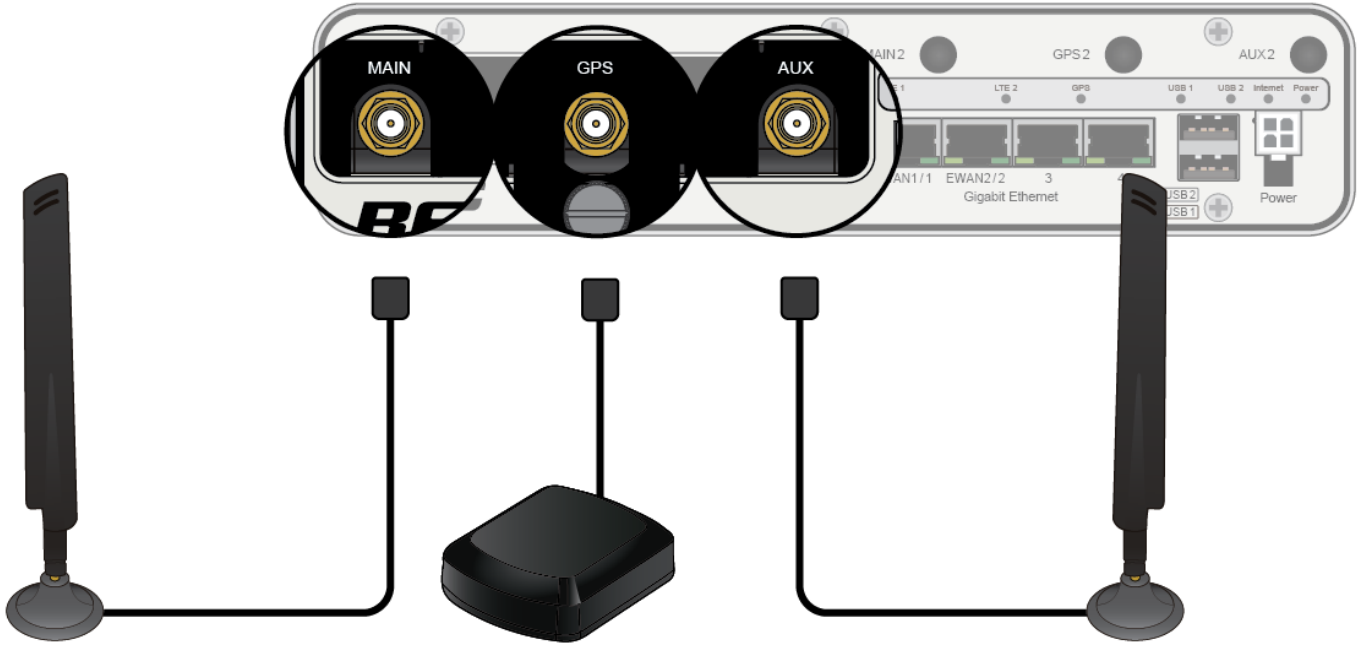


LEDS		MEANING	
7	Wi-Fi 2.4G / 5G 	Green	Wireless connection to 2.4G or/and 5G network is established
		Blinking	Data being transmitted / received

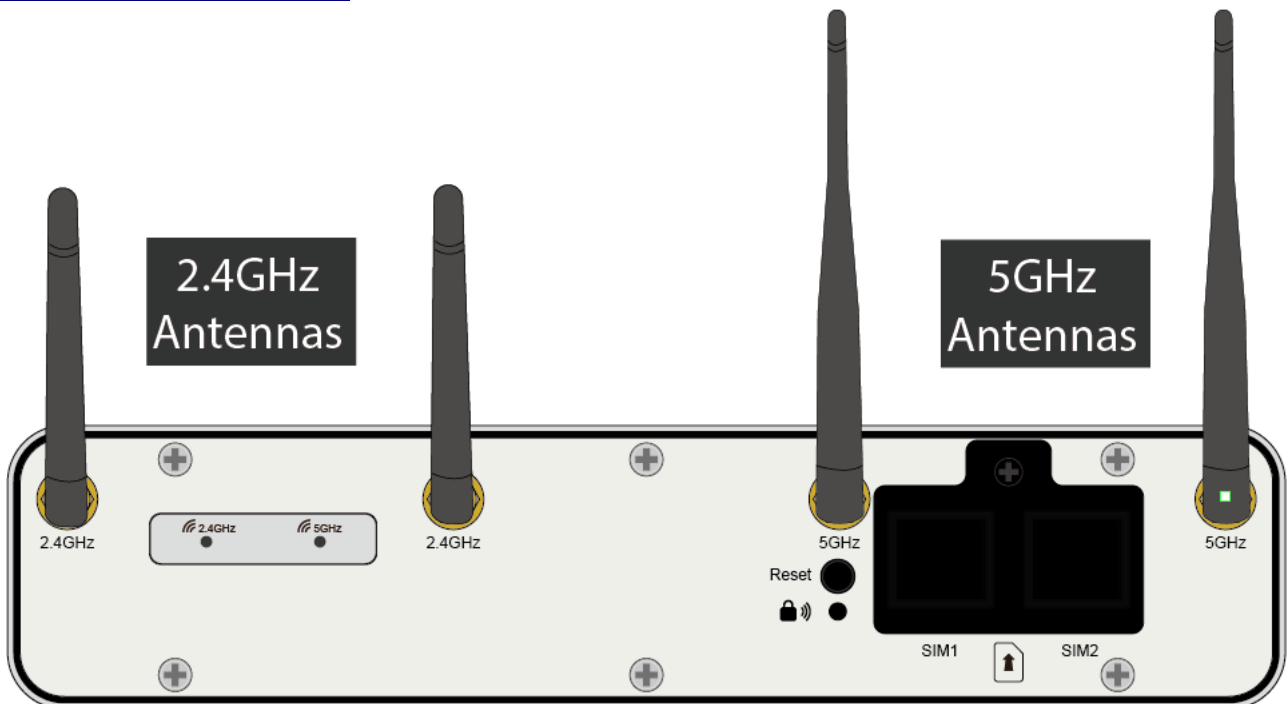
PORTS		MEANING
VI	2.4GHz Wi-Fi Antenna	Find two (2) short 2.4GHz Wi-Fi antennas and screw them onto the antenna connectors
VII	5GHz Wi-Fi Antenna	Find two (2) long 5GHz Wi-Fi antennas and screw them onto the antenna connectors
VIII	WPS & Wireless On/Off 	By controlling the pressing time, users can achieve two different effects: (1) WPS* : Press & hold the button for less than 6 seconds to trigger WPS function. (2) Wireless ON/OFF button : Press & hold the button for more than 6 seconds to enable or disable the wireless. * Refer to the WPS section in the User Manual for more details.
XI	Reset	After the device is powered on, press it 6 seconds or above : to restore to factory default settings (this is used when you cannot login to the router, e.g. forgot your password)
	SIM1 / SIM2 Card Slots	Primary: SIM1. Secondary: SIM2 If only have one SIM card, insert it to SIM1. Insert the mini SIM card (2FF) with the gold contact facing up. Push the mini SIM card (2FF) inwards <i>to eject</i> it * Power off the MX-1200 before inserting or removing the SIM card(s)

Hardware Connection

LTE & GPS



2.4GHz and 5GHz Wi-Fi



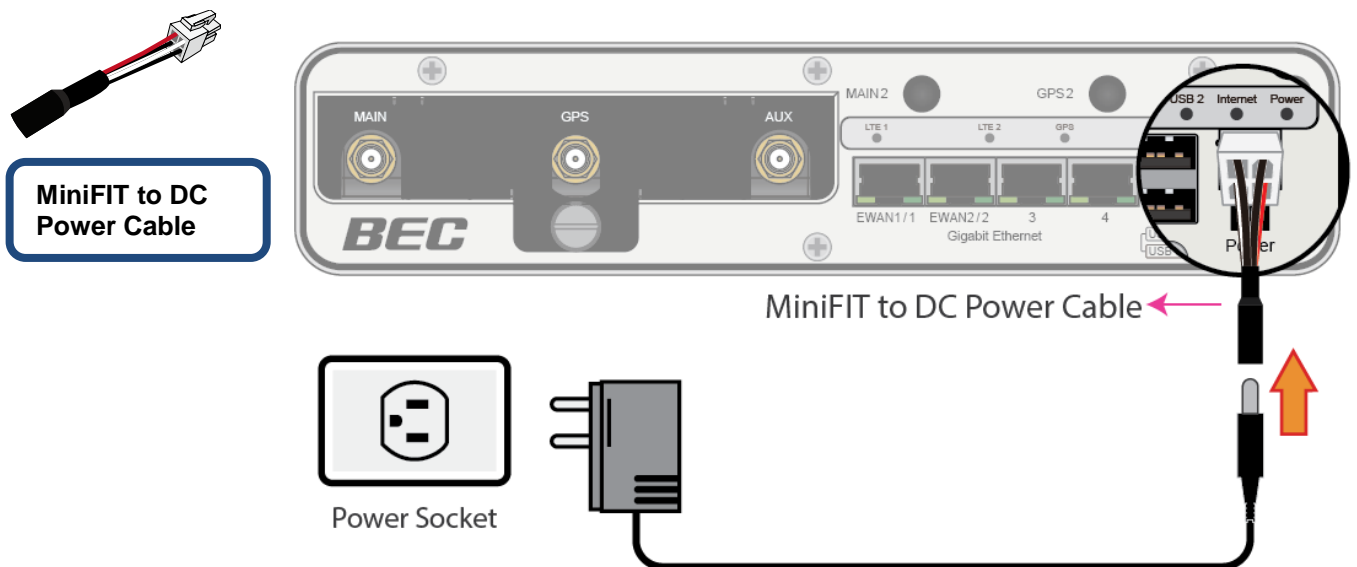
Hardware Installation

1. Power Connection

There are two power sources to power on the MX-1200. (1) DC power adapter or (2) Vehicle Electrical System

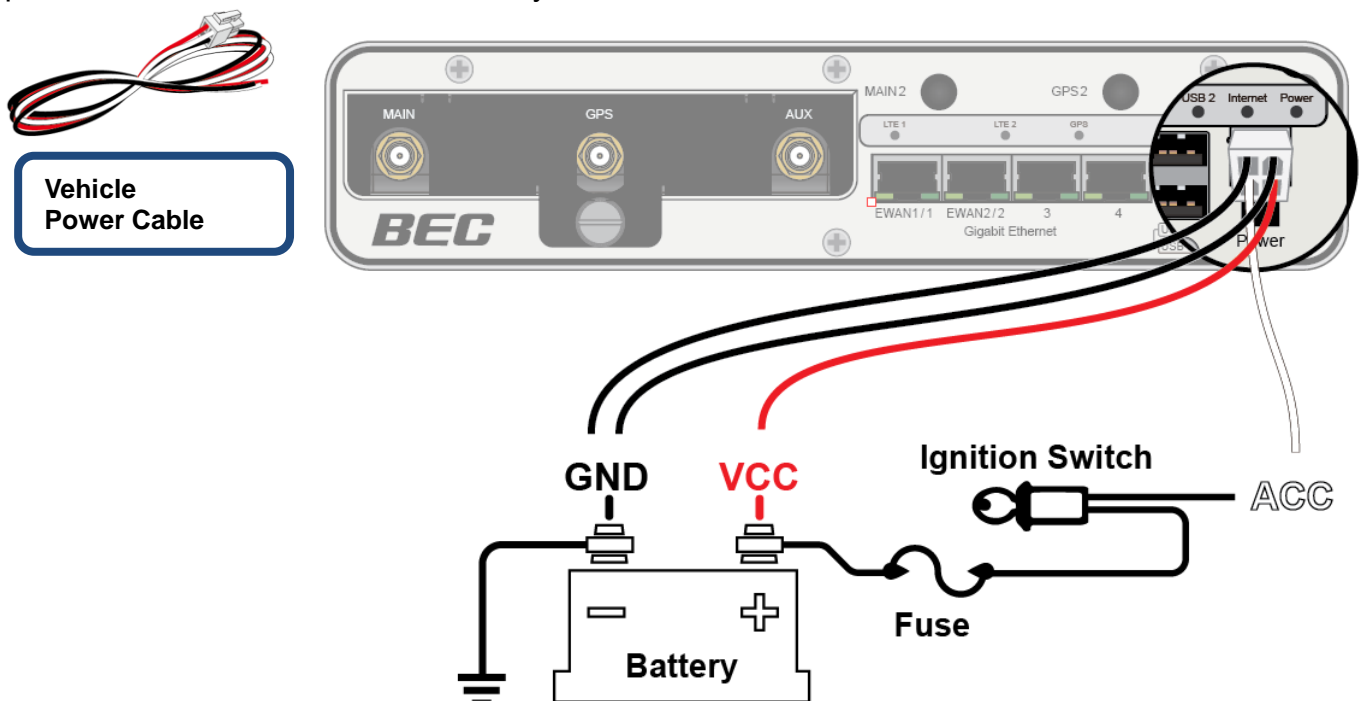
A. Using the Supplied DC Power Adapter

Attach the miniFIT-to-DC-Power-Cable to the 4-pin connector of the MX-1200. Then plug in the supplied power adapter to the wall and the power plug to the DC jack of the power cable to power ON the MX-1200.



B. Using Vehicle Electrical System

Attach the vehicle hardware power cable to the MX-1200 and connect the wire leads of the power cable to the vehicle's electric system

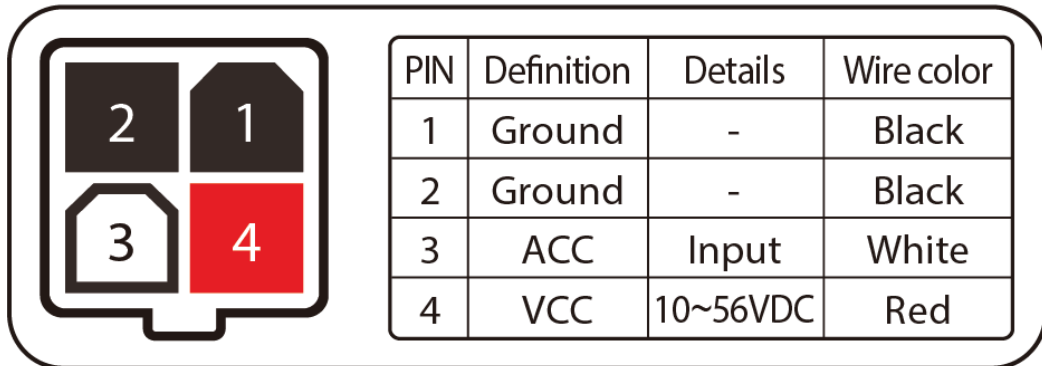


Power PIN Definition

BLACK Wire (PIN 1 & 2): Ground (GND). Use one of the BLACK wires for a neutral or ground connection

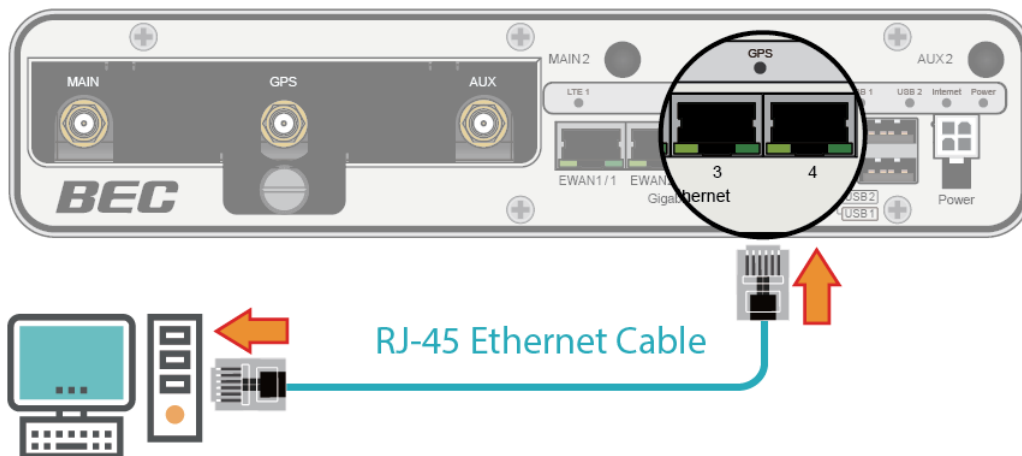
WHITE Wire (PIN 3): ACC/ON for Ignition Input wire need to be connecting into vehicle accessory wire.

RED Wire (PIN 4): VCC/OFF Voltage wire to the battery. DC power range from 0V to 56V.



2. LAN Connection

Connect the supplied RJ-45 Ethernet cable to one of the Ethernet ports, and the other side to the PC's Ethernet interface.

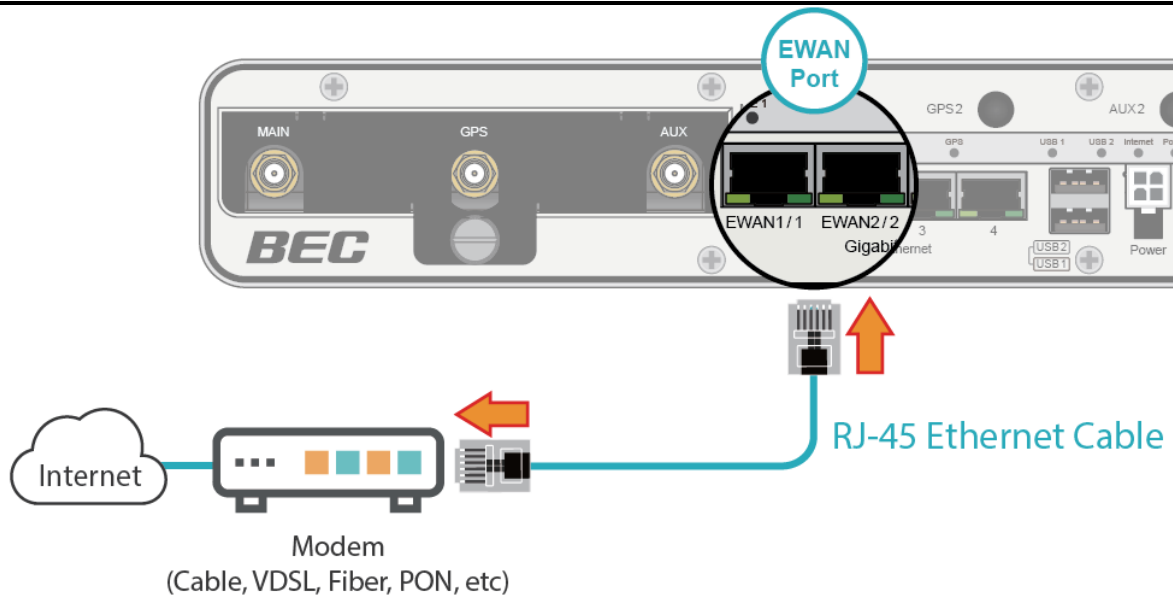


3. WAN Link Interface and Connection

BEC MX-1200 supports Internet failover and failback on multiple WAN interfaces, dual E-WAN, Wi-Fi WAN and 4G/LTE (optional) **<Please refer to User Manual for detailed Internet setup>**

A. Ethernet WAN Connections

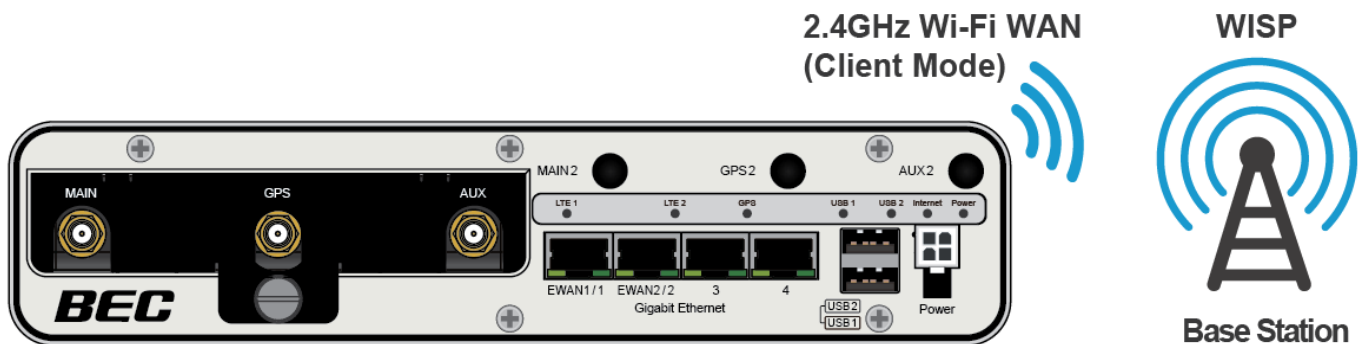
MX-1200 supports dual WAN Internet connections; both WANs work simultaneously. Connect RJ-45 Ethernet cable to one or both **E-WAN port(s)** and connect the other side to another alternative broadband device, such as Cable Modem, VDSL, Fiber Modem or PON optic line.



B. Wi-Fi Connection (Client Mode)

MX-1200 also supports Wi-Fi as WAN known as Wi-Fi Client. The Wi-Fi client connects to a remote Wi-Fi Access Point (AP) for remote network or Internet access.

MX-1200 supports both 2.4GHz and 5GHz. Currently, the Wi-Fi client only available in the 2.4GHz band.



C. 4G/LTE Connection (Via MX-100U 4G/LTE Modem)

Insert the MX-100U to the MX-1200

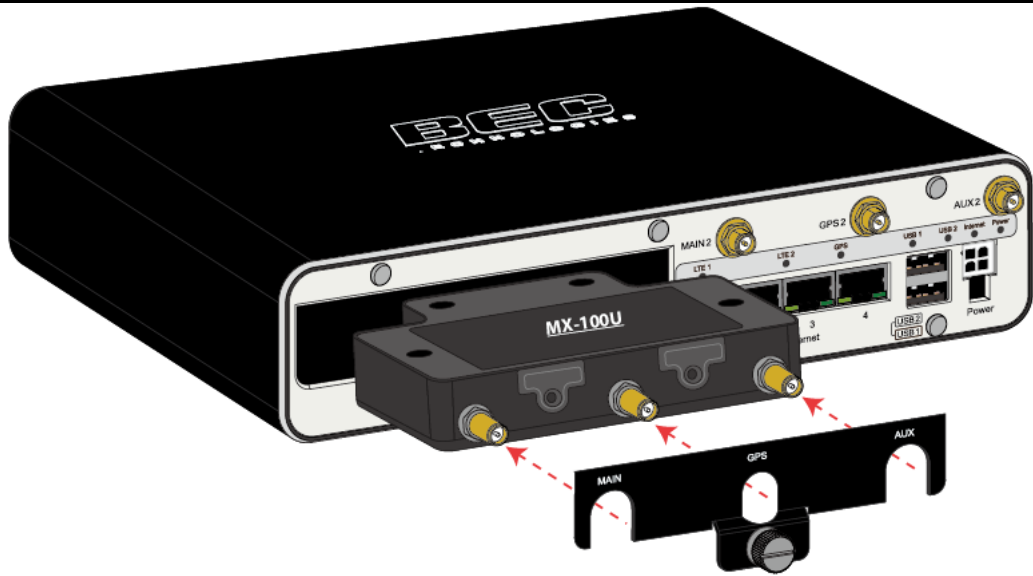
Using the MX-100U, a 4G/LTE modem, to upgrade your existing MX-1200 to support mobile 4G/LTE service.

- 1) Remove the metal plate.
- 2) Insert the SIM card(s). MX-100U supports dual-SIM and failover feature.



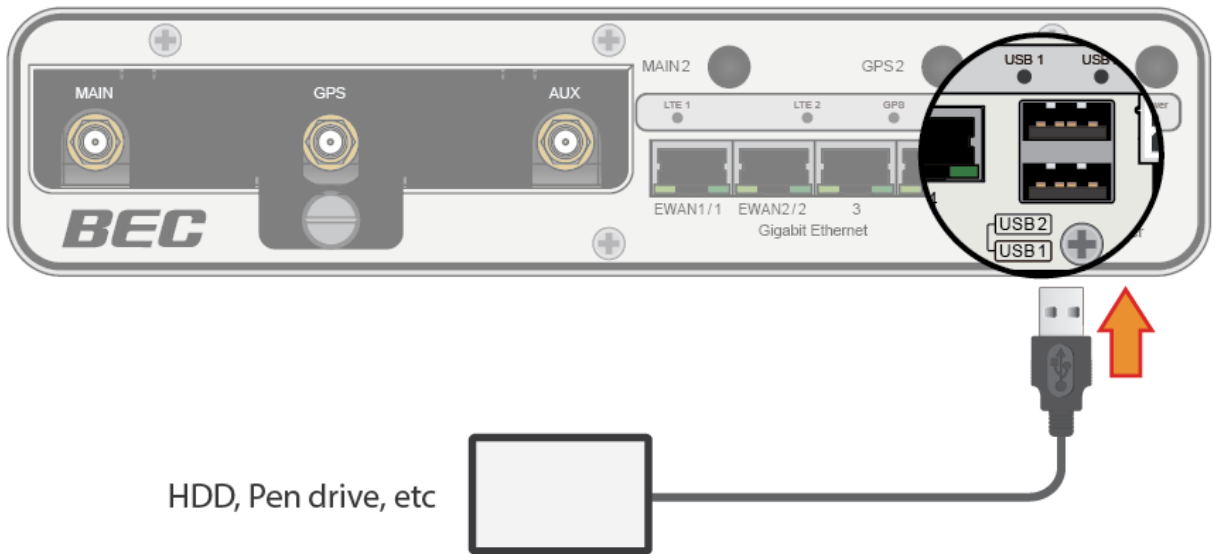
NOTE: Insert the SIM with gold contact facing up. Make sure that the SIM card has been slid into the bottom of the slot with a click. When removing the SIM card, press the SIM card again it will be ejected from the card slot.

- 3) Insert and firmly attach the MX-100U to the MX-1200.
- 4) Put and screw the metal plate back to the MX-1200.



4. B for Network File Sharing

BEC MX-1200 has built-in FTP and Samba Servers, simply plug in an external USB HD then follow the instruction setup in the User Guide.

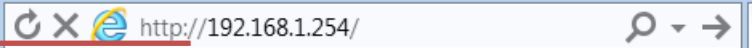


Connecting to the Router

The default IP of modem is **192.168.1.254** with subnet 255.255.255.0. Make sure the attached PC to this router is in the same subnet and has an IP address in the range between 192.168.1.1 ~ 192.168.1.253.

Open a web browser and type **http://192.168.1.254** in the URL address bar.

URL Address bar: type
http://192.168.1.254



The login prompt will appear. Input the default username (**admin**) and password (**admin**) for Account type, Administrator. *This username / password may vary by different Internet Service Providers.

Quick Setup Your Router

Wired Broadband Connection - before start configuring the MX-1200, make sure you have the EWAN(s) connected with your Internet box(es) or fiber line(s).

Step 1: Change administration password

Setup a new password for “admin” account for device management. The default password is “admin”. Click Continue to go on to the next step.

*The password may vary by different Internet Service Providers.

New Password: assign a new, **unique password**

Confirm Password: re-enter the new password again

Next Step: click **Next**

Step 2: Time Zone configuration

Enable and select your Time Zone then click Continue to go on to the next step.

Time Zone: select your **time zone**

Next Step: click **Next**

Step 3: Setup Wireless Connection

Access Point: select **Activated**

SSID: Assign a **unique name**

Channel: pick from **1~11**

Security Type: select a mode

- **Disable (No security)**
- **WPA**
- **WPA2 (Most secure one)**
- **WPA / WPA2 (auto detect WPA mode with wireless clients)**
- **WEP (Less secure one)**

Pre-Shared Key: key for wireless authentication

- **WPA / WPA2 Share Key:** Assign a key between 8 ~ 63 characters.
- **WEP:** select **Open System**, use default WEP Key 1 then assign **26 Hex codes**

Next Step: click **Next**

Step 4: WAN / Internet Connection Setup

Select the appropriate WAN protocol then fill out the information provided by your ISP in all relevant parameters.

Example: WAN Interface in EWAN mode.

Protocol: select one of them

- **Dynamic IP Address** (Obtain an IP address automatically)
- **Static IP Address** (Manually assign an IP)
- **PPPoE**
- **Bridge Mode**

Net Step: click **Continue**

Step 5: Save Confirmation Settings

Click "Next" to save and complete the Quick Setup. You should now be able to access to the Internet.

Please see the relevant sections of User Manual for detailed information.

Troubleshooting

1. None of the LEDs are on when you turn on the router.

Check the connection between the adapter and the router. If the error persists, you may have a hardware problem. In this case you should contact technical support.

2. You have forgotten your router login and/or password.

Try the default login and password, please refer to User Manual. If this fails, you can restore your router to its factory settings by holding the Reset button on the back of your router for 6 seconds or more.

3. Can't ping any PCs on the LAN.

Check the Ethernet LEDs on the front panel. The LED should be on for a port that has a PC connected. If it is off, check the cables between your router and the PC. Make sure you have uninstalled any software firewall for troubleshooting. Verify that the IP address and the subnet mask are consistent between the router and the workstations.

Product Support and Contact Information

Most problems can be solved by referring to the **Troubleshooting** section in the User Manual. If you have other inquiries or need further technical support, please contact with your Internet Service Provider or visit us at www.bectechnologies.net.

FCC Statement

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.

FCC Caution:

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
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.