



# Baicells EG7035E-M11 User Manual

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V100R001C00



## About This Document

This document introduces the specifications of Baicells EG7035E-M11 CPE and guides users to install and configure it.

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## Revision Record

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# 1. Product Overview

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## 1.1 Introduction

Baicells is a high-tech company dedicated in wireless broadband access solutions and service operation. With the advent of the Internet+ era, the development of WBB is imminent. Through continuous innovation, Baicells launches the world first mobile broadband system based on the Internet architecture and unlicensed spectrum. Baicells can provide series CPEs, include indoor and outdoor unit on different spectrums.

Baicells EG7035E-M11 is a high performance outdoor CPE. The EG7035E-M11 has the superior wireless access performance and comprehensive routing capabilities, which have the abilities to bring the end-users WBB services.

## 1.2 Features

The EG7035E-M11 is designed according to the simplicity principle, which can evolve in a short period and realize fast customization, delivery and deployment as well. The main features of the EG7035E-M11 is as follows:

- Support TD-LTE network according to the operator's choice.
- LTE TDD 3550MHz ~ 3700MHz
- Support the 100Mbps Ethernet interface.
- Intuitionist and convenient Web-based management.
- Built-in LTE bipolar directional high gain antenna.
- Support TR069 and OMA-DM network management protocol.
- Support cell lock, SIM lock, and Pin lock.
- User-friendly design of LED indicator.
- Power supply with PoE.
- Support pole installation or wall mounting.

## 1.3 Appearance

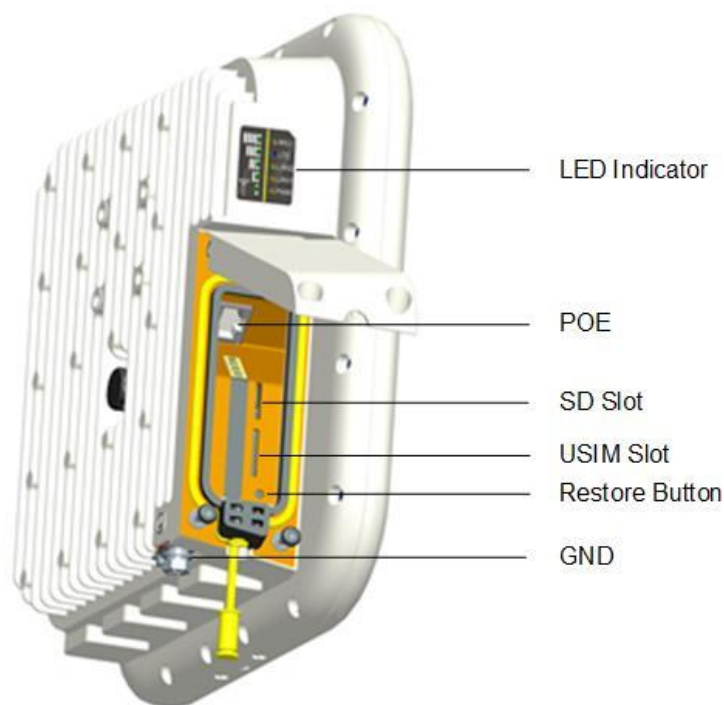
The EG7035E-M11 appearance is shown in Figure 1-1.

Figure 1-1 EG7035E-M11 Appearance



The EG7035E-M11 interfaces and buttons are shown in Figure 1-2.

Figure 1-2 Interface and Button of EG7035E-M11



The EG7035E-M11 interface and button description is given in Table 1-1.

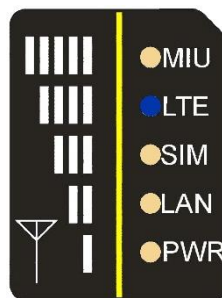
Table 1-1 Description of EG7035E-M11 Interface and Button

Interface & Button	Description
PoE	Connected to the PoE power adapter
SD slot	Support SD card
USIM Slot	Support 1.8V/3.0V USIM 2FF
Restore Button	Long press over 10 seconds to restore the factory settings

Interface & Button	Description
LED Indicator	LTE signal strength Indicator& status indicator
GND	Connected to Earth by conductor

The LED indicators are shown in Figure 1-3.

Figure 1-3 LED Indicators of EG7035E-M11






The description of LED indicators are given in Table 1-2.

Table 1-2 LED Indicator Description

Identity	Description	Color	Status	Description
MIU	-	Yellow	OFF	Reserved.
			Steady On	Reserved.
			Blanking	Reserved.
LTE	Network state Indicator	Blue	OFF	LTE disconnected.
			Steady On	LTE connected.
SIM	SIM card status indicator	Yellow	Steady On	The SIM card is normal.
			Blanking	The SIM card is abnormal or not inserted.
LAN	100Mbps Eth Indication	Yellow	OFF	Ethernet connection does not established.
			Steady On	Ethernet connection is normal.
			Blanking	Data is transmitting.
PWR	Power Indicator	Yellow	OFF	No Power Supply
			Steady On	Power On



Identity	Description	Color	Status	Description	
LTE Signal	5 LTEs, Indicate connection state and signal strength	Green	All OFF	Signal is too weak to attach.	
			Steady On	According to signal strength in turn light up	
			Blanking		Scanning the LTE network
					The CPE is authenticating.
					CPE is getting IP address from the LTE network.

## 2. Technical Specifications

---

### 2.1 Basic Specification

Table 2-1 Basic Specification

Item	Description
LTE Standard	3GPP Release 9
Ethernet LAN Port	One RJ-45 port 10/100 auto-sensing, auto-MDX, PoE
LED Indicators	Power/LET Signal/LAN Indicator
USIM	Support 1.8V/3V 2FF
Restore Button	Tact Button Long press over 10s to restore the factory settings
Power Supply	Input: Universal range 100V~240V AC
Dimension	About 248mm * 248mm * 80mm
Weight	About 1800g
Color	Pantone white C

### 2.2 RF Specification

Table 2-2 RF Specification

Item	Description
Mode	TDD LTE
Channel Bandwidth	5 MHz /10 MHz /15 MHz /20 MHz
MAX Output Power	23±2dBm
LTE Standard	3GPP R9
LTE Band	Band48
Antenna Gain	19.5 dBi

### 2.3 SW Specification

Table 2-3 SW Specification

Item	Description
Language Settings	English
Network Mode	Bridge / NAT

Item	Description
SIM	<ul style="list-style-type: none"> <li>PIN Management</li> <li>SIM Lock</li> </ul>
Network Connection setup	<ul style="list-style-type: none"> <li>Create, delete, and edit APNs</li> <li>Set up dial-up connection automatically</li> <li>Set up dial-up connection manual</li> </ul>
LTE Scan Mode	<ul style="list-style-type: none"> <li>Full Band</li> <li>Cell Lock</li> <li>Band / Frequency Preferred</li> </ul>
VPN	<ul style="list-style-type: none"> <li>Support VPN pass through</li> <li>Support PPTP tunnel mode</li> </ul>
NAT	<ul style="list-style-type: none"> <li>Port forwarding</li> <li>Port trigger</li> <li>DMZ</li> <li>UPnP</li> </ul>
Statistics	<ul style="list-style-type: none"> <li>LAN Link Status</li> <li>Transmit / Receive traffic</li> <li>Running Time</li> </ul>

## 2.4 Device Management

Table 2-4 Device Management

Item	Description
Maintenance	<ul style="list-style-type: none"> <li>Date &amp; Time setting</li> <li>Reset</li> <li>Restore factory settings</li> <li>Restore/Backup Configuration File</li> <li>Local upgrade</li> <li>FOTA upgrade</li> </ul>
TR069	Can enable or disable TR069 Management
Port mirror	Can enable or disable the port mirror function
Syslog	Support the syslog function can send the log to the PC via LAN
Diagnostics	Support the Ping and trace route

## 2.5 Environment Specification

Table 2-5 Environment Specification

<b>Item</b>	<b>Description</b>
Operating Temperature	-40°C ~ 55°C
Storage Temperature	-40°C ~ 70°C
Operating Humidity	5% ~ 95%

## 3. Installation Guide

### 3.1 Support Materials

Before installation, prepare the following support materials accordingly, as given in Table 3-1.

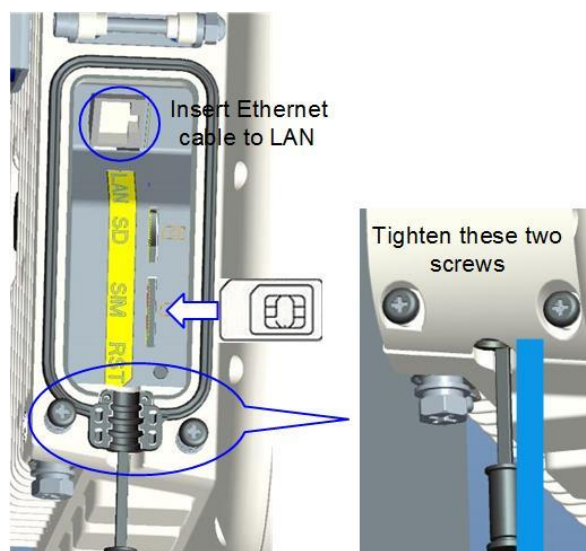
Table 3-1 Support Materials for Installing

Item	Description
Ethernet cable	Outdoor Shield CAT5E Shorter than 330 feet
Ground wire	16mm <sup>2</sup> yellow-green wire

### 3.2 Install USIM Card and Ethernet Cable

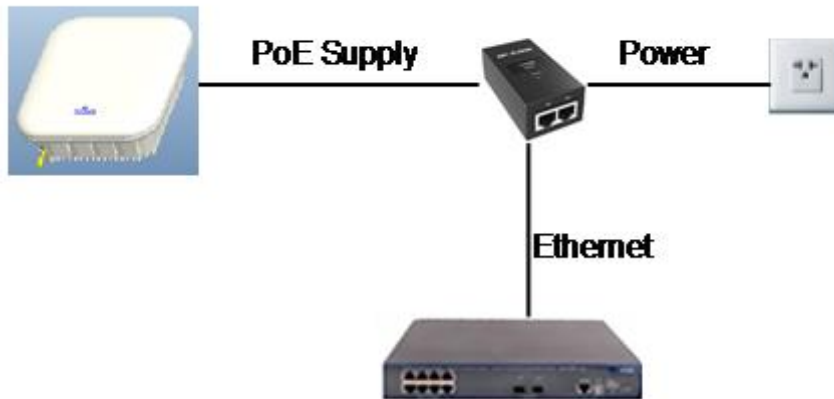
1. Screw the two screws on the waterproof cover.
2. Open the waterproof cover, and connect the Ethernet cable to the Ethernet interface.
3. Insert the USIM card to the USIM slot. Note following the directions.
4. Close the waterproof cover and tighten the two screws on the cover, as shown in Figure 3-1.

Figure 3-1 Install Ethernet Cable and USIM Card



5. Connected Ethernet cable to the power adapter, as shown Figure 3-2.  
Pay attention to the power adapter interface directions.

Figure 3-2 Connection Diagram

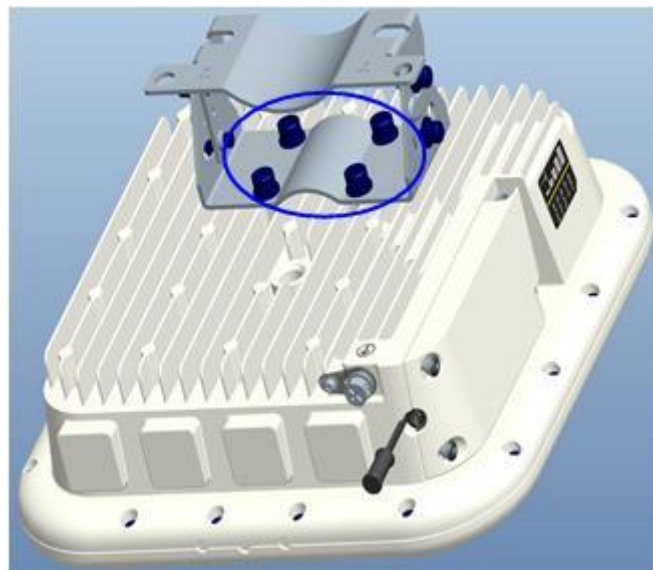


6. Power on, the LED indicator will light up.

### 3.3 Install on Pole

1. Tighten the screws at the bottom of the bracket, as shown in Figure 3-3.

Figure 3-3 Install the Bracket



2. Install the bracket on pole as shown as Figure 3-4.

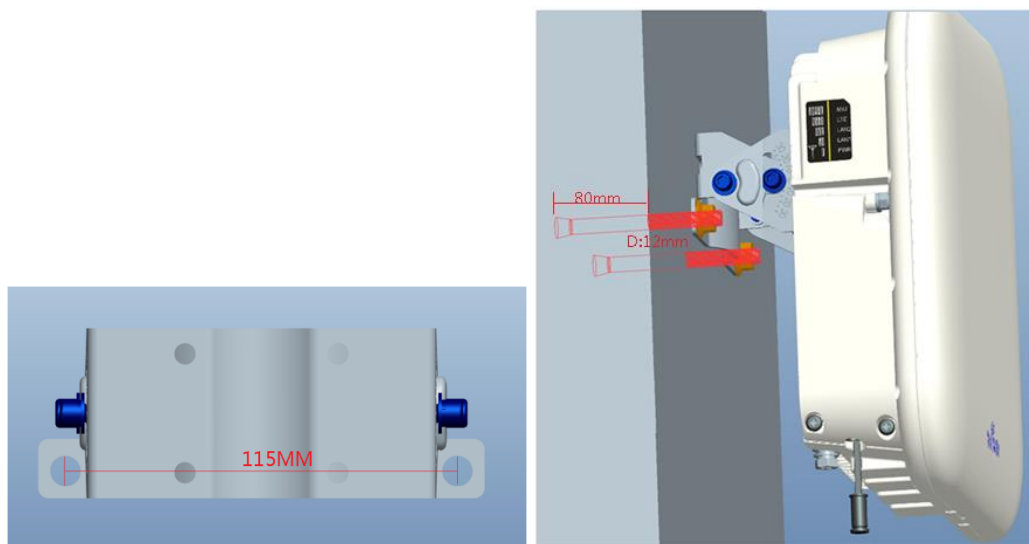
Figure 3-4 Install on Pole



### 3.4 Install on Wall

Install bracket on wall as show as Figure 3-5.

Figure 3-5 Install on Wall

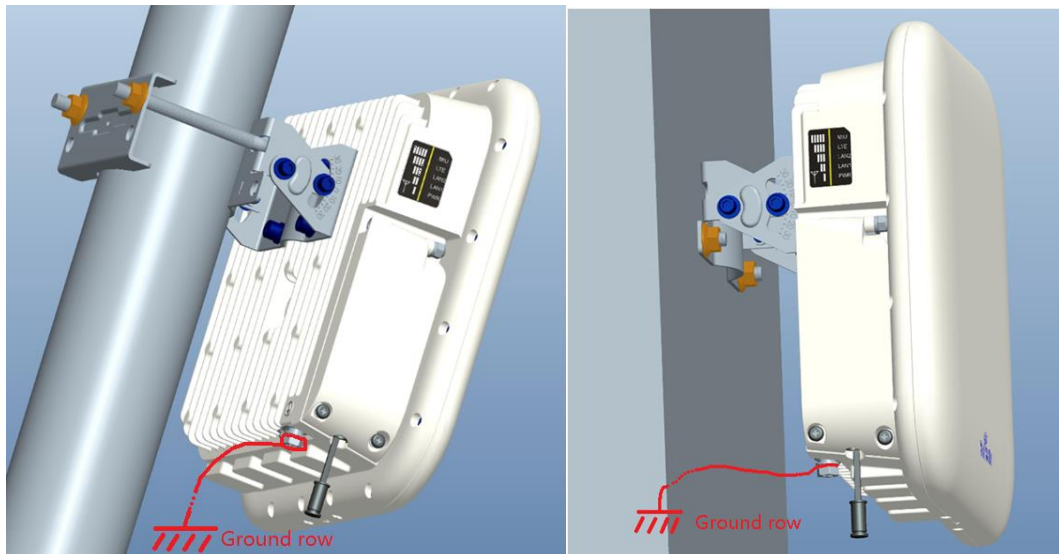


### 3.5 Grounding

The EG7035E-M11 must be grounding, please contact professional person to operation.

Using grounding cable, connect the grounding screw to the ground row, as shown in Figure 3-6.

Figure 3-6 Grounding



## 3.6 Regulatory Compliance

### FCC Compliance

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.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 50cm between the radiator & your body.

## 4. Configuration Guide

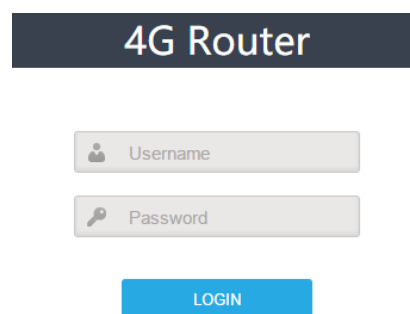
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### 4.1 Log in

The EG7035E-M11 manages, configures, and maintains the device by web management page. The steps to log in are as follows:

1. In the address column of browser, type in **http://192.168.150.1**, then press “**Enter**”, login in page is shown in Figure 4-1.

Figure 4-1 Login Page



2. Enter the user name and password, click "**LOGIN**". After password authentication, you can log on to the web management page.

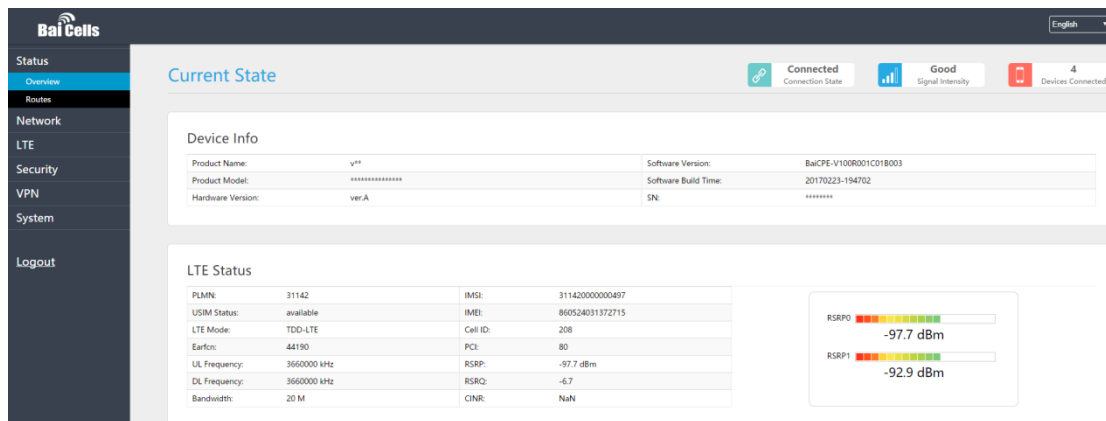
The default user name and password is admin.

For security, it is recommended that you open the firewall, and keep your login password, WLAN FTP passwords and password well.

### 4.2 View Status

In the overview area, you can view the device information and LTE status, such as Product name, Software version, PLMN, IMSI, RSRP, RSRQ, CINR, SINR, Tx Power, Cell ID, PCI, and so on, as shown in Figure 4-2.

Figure 4-2 View Status



## 4.3 Basic Configuration

### 4.3.1 LTE Setting

To set the LTE Network, perform the following steps:

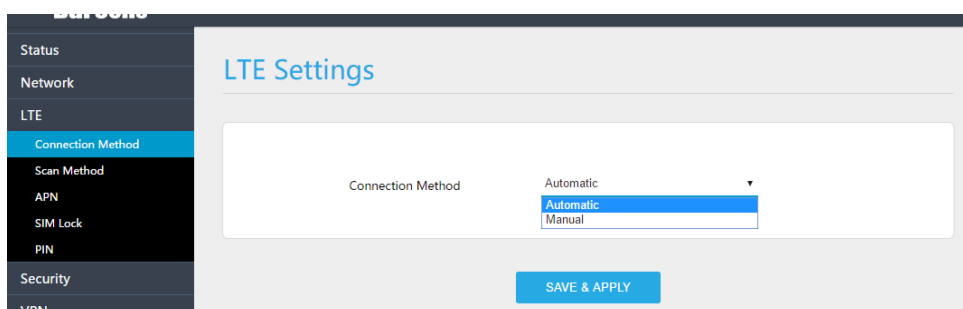
1. Choose **LTE**.
2. In the LTE Setting area, configure the LTE network.

### 4.3.2 Set Connection Method

To set the LTE network connection method, perform the following steps:

1. Choose “**LTE>connection Method**”, enter the setting connection method page, as shown in Figure 4-3.

Figure 4-3 Set Connection Method



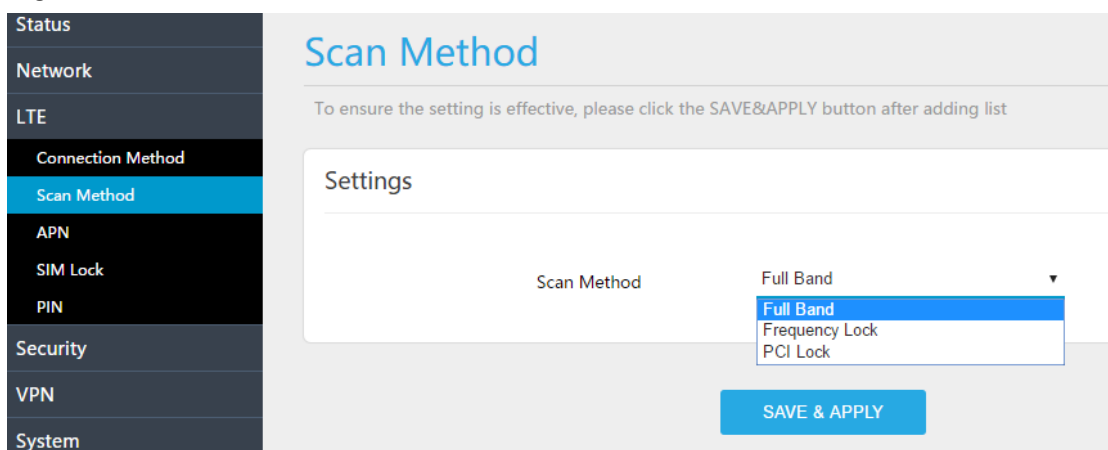
2. In the connection Method area, set the connection method
3. There are two methods to connect the LTE network, it is needed to choose a method between Auto and Manual, if you want to auto connect to the LET network you should choose the Auto, otherwise you should choose Manual.
4. Click **“SAVE & APPLY”**.

### 4.3.3 Set Scan Mode

To set the LTE network scan mode, perform the following steps:

1. Choose **“LTE>Scan Method”**, enter the setting scan method page, as shown in Figure 4-4.

Figure 4-4 Set Scan Mode



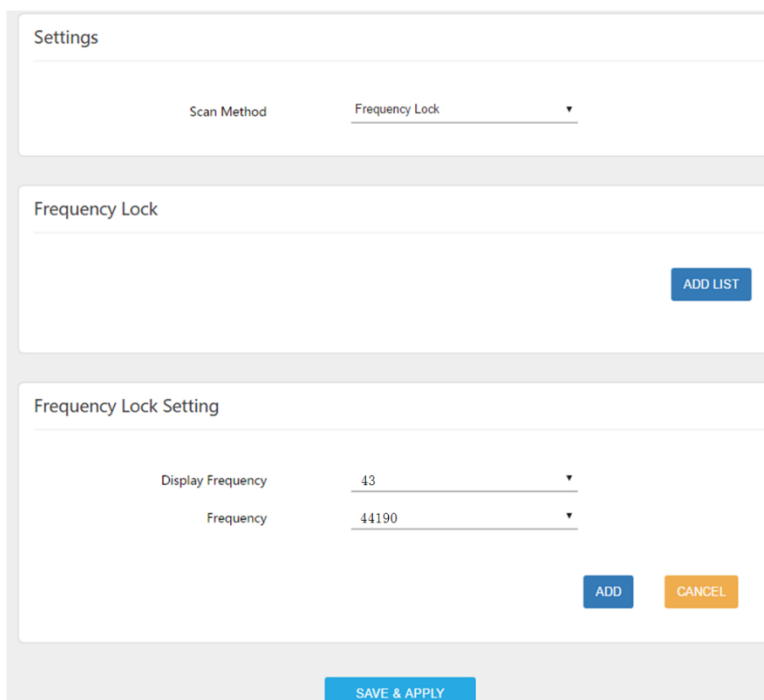
2. In the Scan Method area, set the scan mode
3. You can choose full Band, **Frequency Lock**, or **PCI Lock**.

### 4.3.4 Lock Frequency (Earfcn)

To clock the frequency, perform the following steps:

1. Choose **“LTE>Scan Method”**.
2. In the LTE Scan Method area, click Frequency Lock to lock the frequency.
3. Click **ADD LIST**, choose a band and frequency, and then click **Add** to add the band and frequency to the list, as shown in Figure 4-5.

Figure 4-5 Lock Frequency



The screenshot shows a web-based configuration interface. At the top, there is a 'Settings' section with a 'Scan Method' dropdown menu set to 'Frequency Lock'. Below this is a 'Frequency Lock' section with an 'ADD LIST' button. The 'Frequency Lock Setting' section contains two dropdown menus: 'Display Frequency' set to '43' and 'Frequency' set to '44190'. There are 'ADD' and 'CANCEL' buttons in this section. At the bottom of the interface is a 'SAVE & APPLY' button.

4. Click **“SAVE & APPLY”**.

### 4.3.5 Lock PCI

To lock the PCI, perform the following steps:

1. Choose **“LTE>Scan Method”**.
2. In the LTE Scan Method area, click PCI Lock to lock the PCI.
3. Click ADD LIST you can choose a band, frequency and PCI, then click Add to add the frequency and PCI to the list, as shown in Figure 4-6.

Figure 4-6 Lock Frequency

### Scan Method

To ensure the setting is effective, please click the SAVE&APPLY button after adding list

Settings

Scan Method      PCI Lock ▼

PCI Lock

[ADD LIST](#)

PCI Lock Setting

Display Frequency       ▼

Frequency       ▼

PCI     

[ADD](#)      
 [CANCEL](#)

[SAVE & APPLY](#)

4. Click **“SAVE & APPLY”**.

## 4.3.6 SAS Settings

Single Mode   Multi Mode

	userid	Baiccels_01
	fccid	2AG32EG7035E96
	SN	1103000040188AP0120
	callSign	baiccels
	cbsdCategory	A <span style="float: right;">▼</span>
	radioTechnology	E_UTRA
	antennaGain	19.5
	antennaModel	Internal
	antennaBeamwidth	90
	antennaDowntilt	0
	antennaAzimuth	0
	horizontalAccuracy	3
	verticalAccuracy	3
	groupType	INTERFERENCE_COORDINATION <span style="float: right;">▼</span>
	groupid	Baiccels_01
	cpId	cp1123
	cpIName	CPI_User_123
	latitude	68535340
	longitude	-158539720
	cpIheight	55
	cpIheightType	AGL <span style="float: right;">▼</span>
	indoorDeployment	Outdoor <span style="float: right;">▼</span>
	localCallActivationTime	2019-07-15T00:00:00Z

## Appendix A **FAQs**

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### **The POWER indicator does not turn on.**

- Make sure that the power cable is connected properly and the CPE is powered on.
- Make sure that the power adapter is compatible with the CPE.

### **Fails to Login to the web management page.**

- Make sure that the CPE is started.
- Verify that the CPE is correctly connected to the computer through a network cable. If the problem persists, contact authorized local service suppliers.

### **The CPE fails to search for the wireless network.**

- Check that the power adapter is connected properly.
- Check that the CPE is placed in an open area that is far away from obstructions, such as concrete or wooden walls.
- Check that the CPE is placed far away from household electrical appliances that generate strong electromagnetic field, such as microwave ovens, refrigerators, and satellite dishes.

If the problem persists, contact authorized local service suppliers.

### **The power adapter of the CPE is overheated.**

- The CPE will be overheated after being used for a long time. Therefore, power off the CPE when you are not using it.
- Check that the CPE is properly ventilated and shielded from direct sunlight.






### **The parameters are restored to default values.**

- If the CPE powers off unexpectedly while being configured, the parameters may be restored to the default settings.

After configuring the parameters, download the configuration file to quickly restore the CPE to the desired settings.

## Appendix B Shipping List

The product outward appearance, the color take the material object as, the picture only supply reference.

Index	Content	Picture	Amount
1	EG7035E-M11 CPE		1
2	Power cord		1
3	PoE adapter		1
4	Mounting bracket		1
5	User Manual		1



Caution:

This device complies with Part 15 of the FCC rules and Industry Canada license-exempt RSS standard(s). 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.

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications or change to this equipment. Such modifications or change could void the user's authority to operate the equipment.

This radio transmitter (identify the device by certification number or model number if Category II) has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this 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.

The device has been evaluated to meet general RF exposure requirement.

To maintain compliance with FCC's RF exposure guidelines, this equipment should be installed and operated with a minimum distance of 50cm between the radiator and your body.