

## LTE Outdoor CPE Quick Start Guide

### Introduction

LTE outdoor CPE is a highly advanced LTE outdoor multi-service product solution specifically designed to meet integrated data needs for residential, business and enterprise users. The product supports advanced Gigabit networking functionalities. It enables wide service coverage and provides high data throughput and networking features to customers who need easy broadband access.

### Packing List

Make sure you have everything you need to properly configure the device.

|  |  |  |  |
|--|--|--|--|
|  |  |  |  |
|  |  |  |  |

### How does it work

- Connect the Power Adapter to PoE injector.
- PoE injector provides the power to ODU via LAN cable.
- PC connects LAN Cable to PoE, then PC can surf the Internet when ODU accesses the LTE network.

This quick installation guide shows you how to configure your ODU in order to access the Internet.

### Configure hardware

**CAUTION** Please make sure that you are familiar with all accident prevention and safety procedures necessary for working at height and with electricity before starting to install the device. DO NOT install the ODU during a lightning storm.

**CAUTION** Make sure the ODU is turned off before you insert your SIM card. It is recommended to NOT connect the PoE cable when you do this step. Otherwise, the SIM card may be damaged.

### Mount the ODU

**Preparation work**

Before installing the CPE, verify that you have all the items listed in the packing list: ODU unit- Power Adapter & PoE - Steel clamp- Ethernet Cable - Cable glands - Slotted end cap- Quick Start Guide.

If any of the items is missing or damaged, please contact your LTE device provider.

Please also prepare the following tools: Screw Drivers- Adjustable spanner- Debug Ethernet Cable;

**Choose Install Location**

When choosing a location to install the ODU, remember that the ODU's front panel should point towards your service provider's nearest base station. You do not need to be able to see the base station from the ODU's position. However, if you have trouble with signal reception, a Line of Sight (LoS) connection may produce better results.

The ODU must be within the lightning rod protection scope (45 degrees) to avoid being damaged by a lightning strike.

If the ODU is installed on a rooftop, the ODU must be less than 2 m above the rooftop.

The ODU performance varies according to the installation position and nearby obstacles, especially metal objects. You are advised to install the ODU in an open area without obstacles.

### Installing Outdoor Unit

Pole Mounting:

### Ethernet Cable Connection:

NOTE: Make sure you have inserted your SIM card into the ODU.

**Step 1** Connect the CAT5e or higher level Ethernet cable which is connected to the ODU to the PoE port.

**Step 2** Connect the included Ethernet cable from the computer to Data port of the PoE.

**Connect the PoE**

Place a CAT5e (or above) Ethernet cable (not included) from the location of your intended Router to the desired PC location.

If you intend to use cable clamps or other methods to secure the cable, do not tighten them until you finish installing the Router and ODU.

**Step 1** Connect the CAT5e (or above) Ethernet cable to PoE.

**CAUTION** Do not connect to a computer or switch directly to the PoE port due to high PoE power.

**Step 2** Connect the power adapter to the PoE injector. The POWER LED turns on a solid green-yellow once connected.

**Step 3** Connect the included Ethernet cable from the computer to one of the Router's Ethernet ports.

### LED Behavior

When setting up the Outdoor Unit, the LED will have the following behavior.

| ODU |   |
|-----|---|
|     | Steady on Power on                        |
|     | Off No power supply                       |
|     | Steady on Internet available              |
|     | Off Internet unavailable                  |
|     | Blinking (ODU internal) Searching network |
|     | Steady on SIM ready                       |
|     | Off No SIM detected                       |
|     | Green Signal strong                       |
|     | Yellow Signal good                        |
|     | Red Signal weak                           |
|     | Blinking Green and Red Firmware upgrade   |

### Configure the CPE

**Login to the website**

Use a browser to access the management web page to configure and manage the CPE. The following procedure describes how to use a computer running Windows 7 or above version and Internet Explorer to connect to the CPE webpage.

**Step 1** Connect to the CPE correctly.

**Step 2** Start Internet Explorer, type <http://192.168.0.1> in the address bar, and press Enter.

**Step 3** Enter the user name and password, and click Log In. You can connect to the management web page after the password is verified.

### Configuration of LTE

**Step 1** Connect to the CPE correctly.

**Step 2** Go to the management website.

**Step 3** Choose Settings → Network → LTE Settings.

**Step 4** Set the connection mode and scan mode.

### Settings

Connected Network: Auto

| Status       | Value      |
|--------------|------------|
| DL MCH       | 0          |
| UL MCH       | 0          |
| DL Frequency | 2000.0 MHz |
| UL Frequency | 2000.0 MHz |
| Modulation   | 256QAM     |
| RS-S         | -80 dBm    |
| RS-R         | -80 dBm    |
| RS-M         | -80 dBm    |
| RS-T         | -80 dBm    |
| RS-B         | -80 dBm    |
| RS-C         | -80 dBm    |
| TX Power     | 0.00W      |
| PCI          | 42         |
| CSRS         | 20.0 dB    |

**The default setting is automatic connection and full band scanning. If you want to connect to the LTE network according to your needs, you can set the connection mode as manual, and simply scan a specific band.**

### Frequently Asked Questions

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

- Make sure that the power cable is connected to the PoE, and the CPE is connected to the right port of the PoE.
- Make sure that the power adapter and PoE are compatible with the CPE.

**Fails to Log in to the web management page.**

- Make sure that the CPE is powered on.
- 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 LTE network.**

- Check that the power adapter and PoE have connected to the CPE 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 CPE power adapter has overheated**

- The CPE is heated after being used for long time. Therefore, you must turn off the CPE when not you are using.
- Check that the CPE is properly ventilated and protected 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.

**Notice**

Some features of the product and its accessories described herein rely on the software installed, capacities and settings of local network, and may not be activated or may be limited by local network operators or network service providers, thus the descriptions herein may not exactly match the product or its accessories you purchase.

We reserves the right to change or modify any information or specifications contained in this manual without prior notice or obligation.

### FCC Regulations:

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 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.

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

### FCC RF Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. To comply with FCC RF Exposure compliance requirements, this grant is applicable to only Mobile Configurations. The antennas used for the transmitter must be installed to provide a separation distance of at least 20cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

- Note:**
- 尺寸：595x130mm（单页尺寸：85x130mm）
  - 材质：128g铜版纸
  - 折叠方式：风琴折
  - 印刷要求：彩色印刷，字迹图片清晰，无错印漏印，无明显污渍。

| GENERAL TORANCE |       |      |      |      |      | QUANTITY       | 1      | SMWAVE 上海旷通科技有限公司 |                    |          |            |  |
|-----------------|-------|------|------|------|------|----------------|--------|-------------------|--------------------|----------|------------|--|
| DIM             | GRADE | A    | B    | C    | D    | SCALE          | 1:1    | PART NAME         | LTE outdoor CPE说明书 |          |            |  |
| 0~8             | ±     | 0.03 | 0.05 | 0.10 | 0.20 | SIZE           | A1     | PART NO.          | ---                |          |            |  |
| 8~25            | ±     | 0.05 | 0.08 | 0.20 | 0.30 | UNIT           | mm     | PROJECT NAME      | 波浪壳                |          |            |  |
| 25~80           | ±     | 0.08 | 0.12 | 0.30 | 0.40 | SHEET          | 1 of 1 | DESIGN            | Zhou Mo            | MATERIAL | SEE NOTES  |  |
| 80~250          | ±     | 0.12 | 0.20 | 0.40 | 0.50 | VIEW DIRECTION |        | CHECK             | Wang Huaibing      | FINISH   | SEE NOTES  |  |
| 250~            | ±     | 0.20 | 0.30 | 0.50 | 0.60 | SELECT         | A      | APPROVAL          | Tong Mingxu        | DATE     | 2021-05-17 |  |