

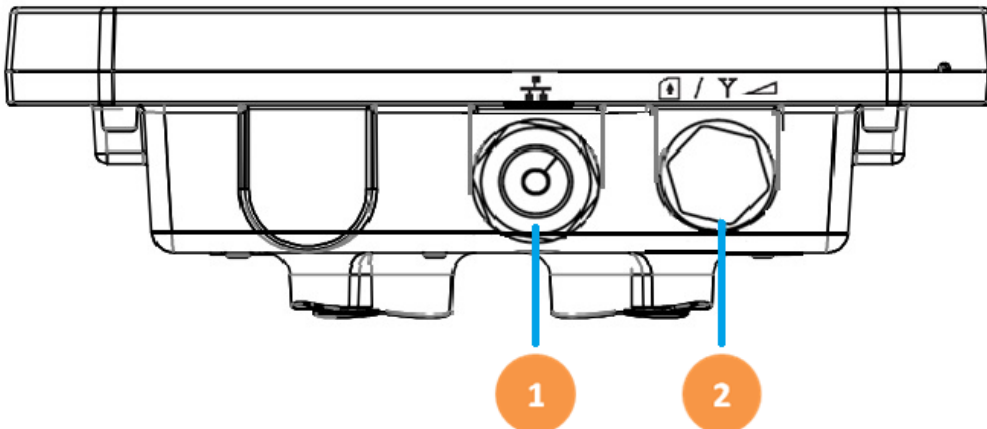
**Cat 12 LTE B41 HE Outdoor CPE**

# **Quick Installation Guide**

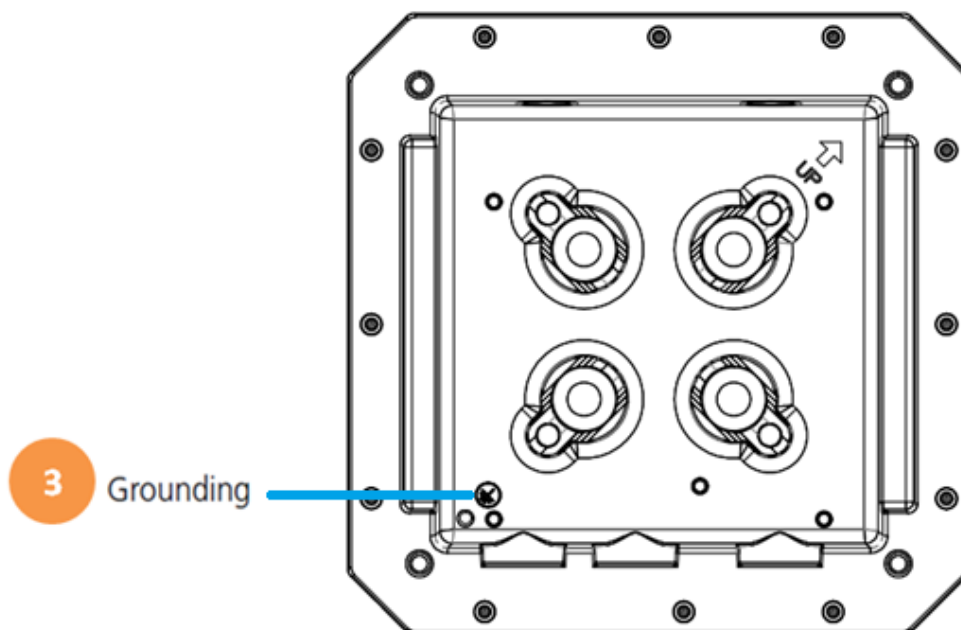


# Connectors


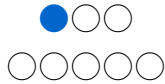
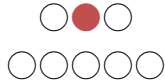
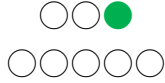
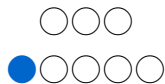
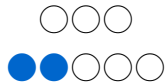
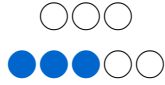
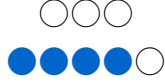
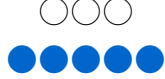
1. One RJ-45 connector for connecting to the PoE adaptor.
2. LED indicator inside and SIM card slot for inserting SIM card.
3. A grounding screw on the rear panel.



The Grounding screw (marked  $\overline{\text{T}}$ ) is located on the rear panel of the ODU.

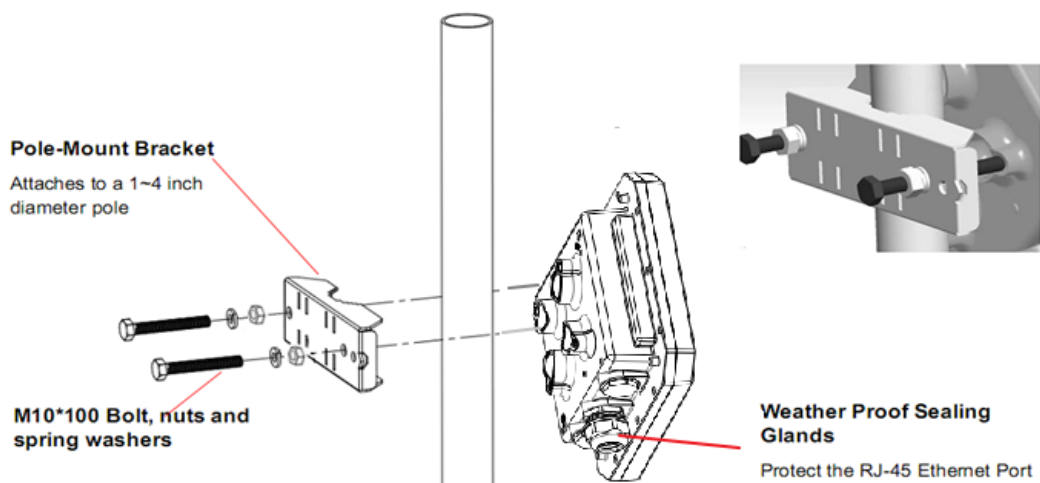


# LED Indicators

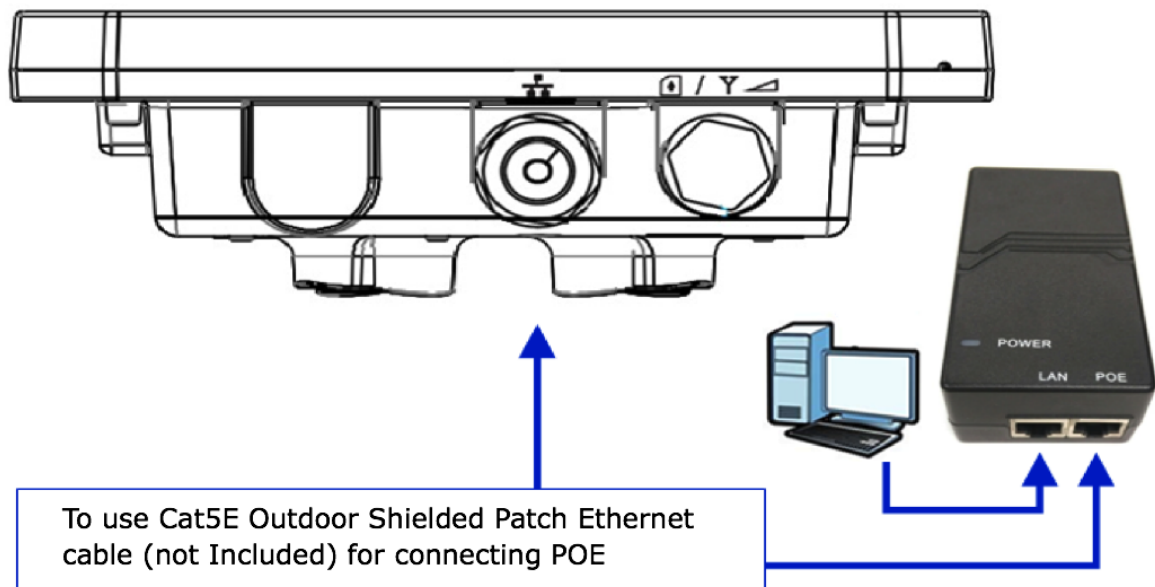
LED name	Location	Color	LED Behavior	Status Indication
<b>LED List</b>				
<b>MAIN power</b>		<b>Blue</b>	<b>ON</b>	Power On
			<b>OFF</b>	Power Off
<b>Ethernet status</b>		<b>Orange</b>	<b>Steady ON</b>	Detect Ethernet Device Connected
			<b>Blinking</b>	N/A
			<b>OFF</b>	No Ethernet connection
<b>SIM status</b>		<b>Green</b>	<b>Steady ON</b>	SIM DETECTED (with LTE connection)
			<b>Blinking when On-hook</b>	SIM NO DETECTED / SIM NOT INSERTED
			<b>OFF</b>	SIM DETECTED (without LTE connection)
<b>LTE Status LED : Link Status</b>			When CPE is power on, each LED indicates each link status ; change upon customer requirement	
LTE 1		<b>Blue</b>	<b>Steady ON</b>	Signal is poor SINR < 7dB
LTE 2		<b>Blue</b>	<b>Steady ON</b>	Signal is weak 7dB ≤ SINR < 11dB
LTE 3		<b>Blue</b>	<b>Steady ON</b>	Signal is Good 11dB ≤ SINR < 18dB
LTE 4		<b>Blue</b>	<b>Steady ON</b>	Signal is very good 18dB ≤ SINR < 23dB
LTE 5		<b>Blue</b>	<b>Steady ON</b>	Signal is Excellent SINR ≥ 23dB

## Installing LTE outdoor CPE

- ◆ **Selecting a Location:** LTE Outdoor CPE should be pole-mounted outdoors and aligned so its antenna faces the nearest LTE eNB. When selecting a suitable location for the unit, consider these guidelines:
  - Place LTE Outdoor CPE as high as possible to achieve the best possible link quality.
  - Place the LTE Outdoor CPE away from power and telephone lines.
  - Avoid placing LTE Outdoor CPE too close to any metallic reflective surfaces.
  - Be sure to ground LTE Outdoor CPE with an appropriate grounding wire (not included) by attaching it to the grounding screw on the unit and to a good ground connection.
- ◆ **Mounting the ODU:** Mount LTE Outdoor CPE on a 1"-4" pole using the supplied kit, or the optional tilt accessory.
  - **Using the clamp**
    1. Thread the M10\*100mm bolt through a spring washer, flat washer and the bracket holes.
    2. With the connector facing downward, attaché LTE Outdoor CPE to a 1"-4" pole.
    3. Attach the bracket to the other side of the pole.
    4. Thread the M10\*100mm bolts through both holes on either side, and tighten the nuts.



# Connecting the Cables



- ◆ **Outdoor Connection:** Connect a grounding cable between the Ground terminal of the LTE outdoor CPE and a good ground connection.
- ◆ **Preparing and connecting the cable:** Use only **5E 4x2x24# FTP (or above) outdoor Shielded Patch Cable** from an approved manufacturer.

## 1. Insert the RJ-45 cable:

Insert the Cat5 RJ-45 cable into the sealing gland base and connect it to the RJ-45 connector at the bottom of the ODU, labeled. Make sure that the connector is completely inserted and tightened.

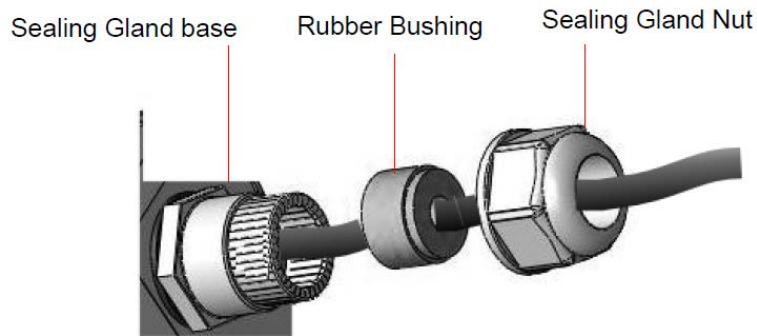
((Suggest to use Cat 5E 4x2x24# F/STP outdoor Shielded Patch Cable))

((The total length of the Ethernet cables from the ODU to the IDU's RJ-45 (WAN) PoE port. Must not exceed 100m))

## 2. Connect the cable

- Remove the sealing cable gland plug from the gland nut.
- Open the sealing gland nut and remove it. Do not disassemble the gland base from the bracket.

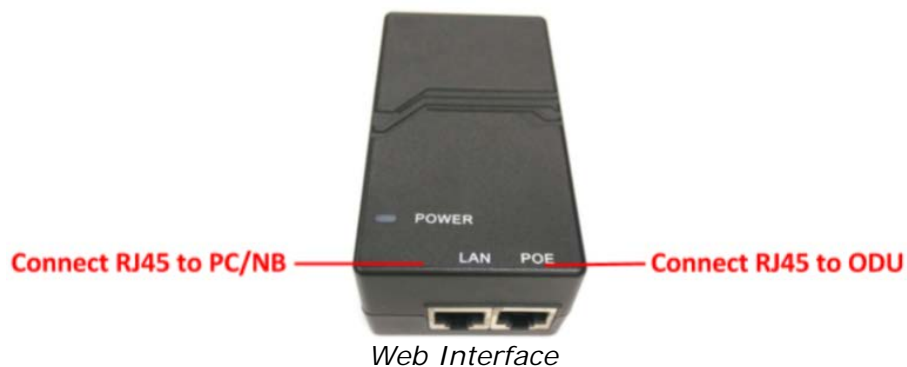
- Insert the cable into the sealing gland base and connect it to the RJ-45 connector at the bottom of the CPE. Make sure the connector is completely inserted and tightened.
- Insert the rubber bushing on the cable into the gland base.



- Tighten the gland nut. Use the dedicated tool for fastening the sealing glands.

#### ◆ PoE Connection

1. It is assumed that the RJ-45 is already connected to the LTE outdoor CPE. Assemble an RJ-45 connector with a protective cover on the other end of the LTE outdoor CPE cable.
2. Connect the other end of the RJ-45 cable to the PoE adaptor which labeled "**PoE**".
3. Connect RJ45 cable from PoE adaptor which label "**LAN**" to a PC/NB/Hub/Switch.



Web Interface

Please follow the steps below to configure your device through the web interface:

**Step1:** Open the Web browser (Internet Explorer) and enter the default IP address of the ODU CPE, which is: <http://192.168.254.251>

**Step2:** Enter ODU administrator login username/password to access the web management interface. The default username/password is [admin/admin](#).



The screenshot shows a login interface with two input fields: 'USERNAME' with the placeholder 'Enter Username' and 'PASSWORD' with the placeholder 'Enter Password'. Below these fields is a grey 'Apply' button and a blue 'Language' dropdown menu.

GUI Interface

**Step3:** The page shown here gets displayed in your browser after login; you can now configure the device settings.

The screenshot shows the 'Status' page of the web management interface. On the left is a navigation menu with options: LTE Network, Network, IPv6, Firewall, Management, Monitoring, and About. The main content area shows 'LTE Network' status: Mode: LTE, Network Operator: [redacted]. Below this is a 'Network' section with fields for LAN IP Address (192.168.254.251), LAN Subnet Mask (255.255.255.0), WAN IP Address (10.3.100.53), and WAN Subnet Mask (255.0.0.0). At the bottom right are 'Close', 'Refresh', and 'Auto' buttons.

GUI Interface

Mode:	<b>LTE</b>
Operator:	<b>APN Name</b>
Signal:	 (More bar means better signal)  (Disconnect, no signal)

**Federal Communication Commission Interference 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 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:** 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 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.

**FCC Caution:** Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

**IMPORTANT NOTE:**

**FCC Radiation Exposure Statement:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance **26** cm between the radiator & your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.



## **Professional installation instruction**

Please be advised that due to the unique function supplied by this product, the device is intended for use with our interactive entertainment software and licensed third-party only. The product will be distributed through controlled distribution channel and installed by trained professional and will not be sold directly to the general public through retail store.

### 1. Installation personal

This product is designed for specific application and needs to be installed by a qualified personal who has RF and related rule knowledge. The general user shall not attempt to install or change the setting.

### 2. Installation location

The product shall be installed at a location where the radiating antenna can be kept **26** cm from nearby person in normal operation condition to meet regulatory RF exposure requirement.

### 3. External antenna

Use only the antennas which have been approved by Gemtek. The non-approved antenna(s) may produce unwanted spurious or excessive RF transmitting power which may lead to the violation of FCC limit and is prohibited.

### 4. Installation procedure

Please refer to user's manual for the detail.

### 5. Warning

Please carefully select the installation position and make sure that the final output power does not exceed the limit set force in relevant rules. The violation of the rule could lead to serious federal penalty.