



LC300 LTE CPE

Quick user guide v1.0

FCC Statement

Warning: Changes or modifications to this unit not expressly approved by the party responsible

for compliance could void the user's authority to operate the equipment.

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

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 RF Radiation Exposure Statement Caution: To maintain compliance with the FCC's RF exposure guidelines, place the product at least 20cm from nearby persons.

High power radars are allocated as primary users of the 5.25 to 5.35 GHz and 5.65 to 5.85 GHz bands. These radar stations can cause interference with and/or damage this device. No configuration controls are provided for this wireless equipment allowing any change in the frequency of operations outside the FCC grant of authorization for US operation according to Part 15.407 of the FCC rules

1. Overview

The LC300 CPE is a highly advanced LTE outdoor multi-service product solution specifically designed to meet integrated data, voice and Wi-Fi access needs for residential, business and enterprise users. The product consists of an outdoor data CPE unit (ODU) and an indoor multiservice gateway unit (HGW) that supports advanced networking, VoIP gateway and WLAN AP functionalities. It enables wide service coverage and provides high data throughput and networking features to customers who needs easy broadband access, low cost VoIP service and Wi-Fi connectivity.

■ Operator Device Specification

Model	Description & User Interface
IDU	• 1 RJ45 10/100/1000M ETH (PoE), 2 RJ45 10/100/1000M ETH, 1 RJ11/FXS Line • SYS, NET, SIG(Tri color), 2.4G Wi-Fi, 5G Wi-Fi, LAN1-2, LINE • 48V/0.5A DC • Dimensions: 135 mm (L) × 105 mm (W) × 30mm (D) • Weight: < 300g
ODU	• 1 RJ45 10/100/1000M LAN Port • PWR, NET, SIM, Poe, ACT, RF(5LEDs) • 48V/0.5A PoE supply, ODU Power <15 Watts • Dimensions: 164 mm (L) × 56 mm (W) × 280 mm (D) • Weight: <1.5 Kg

■ Radio Interface Specification

Frequency Bands	2/4/5/7 /38 Remark:B42/43 will be added in the future
Radio Access	3GPP E-UTRA Release 9
Operation Mode	TDD/FDD, 2Tx DL MIMO
Output Power	B2 21 ± 2.5dBm / B4 21 ± 2.5dBm / B5 23 ± 2dBm
	B7 22 ± 2.8dBm / B38 22 ± 2.8dBm
Antenna	B2 3dBi, B4 4dBi, B5 0dBi, B7 7dBi, B38 7dBi
Throughput	Category 12
SIM Support	SIM card slot (2FF)

■ Wi-Fi Interface

Radio Access	802.11a/b/g/n/ac (2.4GHz 300 Mbps, 5GHz 867Mbps)
Output Power	802.11b/802.11g/802.11n 2.4G WiFi are 14 ± 2dBm
	802.11a/802.11n/802.11ac 5G WiFi are 13 ± 3dBm
Antenna	2.4G 2dBi, 5G 3dBi
Security	64/128-bit WEP, WPA/WPA2

2. Getting Started

■ Packing list and CPE Unit

Upon receiving the product, please unpack the product package carefully. Each product is shipped with the following items:

Table 2-1 Packing List

CPE Products	Quantity
ODU unit	1
IDU unit	1
Clamp	2
48V DC Power adapter	1
Ethernet Cable	1

If you find any of the items is missing, please contact our local distributor immediately.

CPE Unit:

Unpacking the Equipment Table 2-1 lists all the standard parts that are supplied in your LTE CPE Unit Installation Package. Please take the time to unpack the package and check its contents against this list.



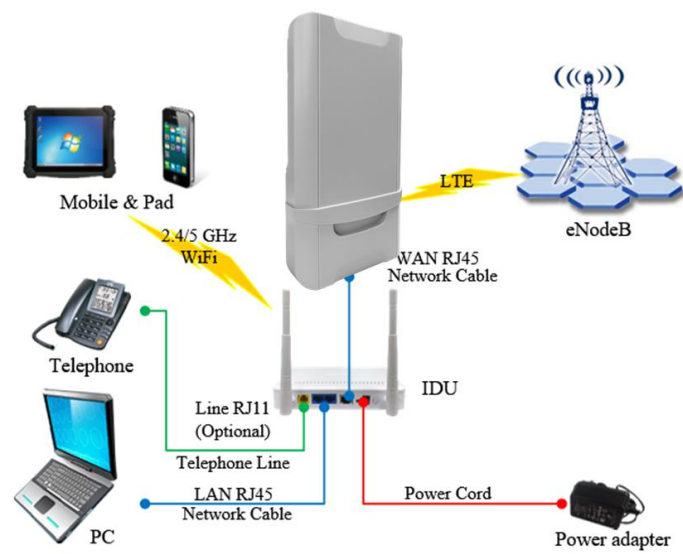
■ Installing and power on

For outdoor CPE product, it is suggested that the CPE device be installed in a shaded area to avoid direct sun light exposure and prolong the device life.

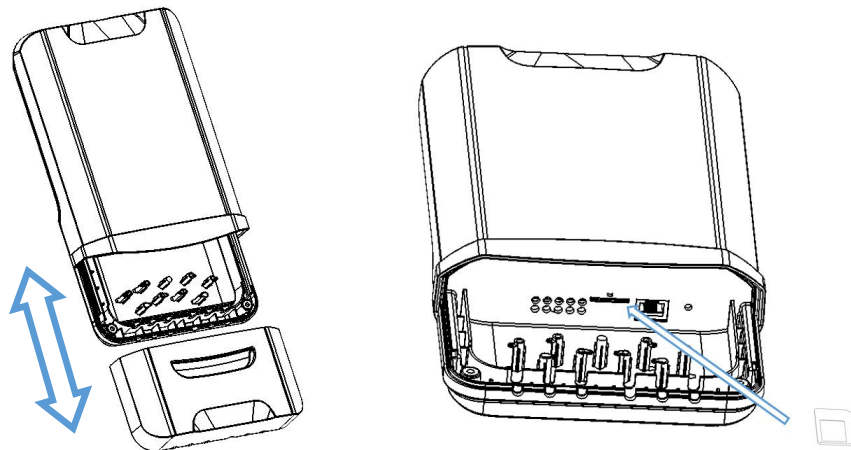
To power on the device, the CPE must use a 48V DC power supply adapter. The power adapters can operate in 90-250V AC range and therefore can be used in different country. An Ethernet cable is required to connect the WAN port of IDU with the POE(LAN) port of ODU. By the way, the ODU don't support the hot-plugging. Once the device is powered up, the user should wait for about 2 minutes before the device becomes operational. For CPE with the SYS LED indicator, a solid light indicates the system has completed the startup procedure.

To connect PC, LAN switch or other type of IP device to the CPE product, the user should use standard CAT6 Ethernet cable and connect to the appropriate LAN port. Once connected, the CPE(IDU) LAN LED indicator should be on.

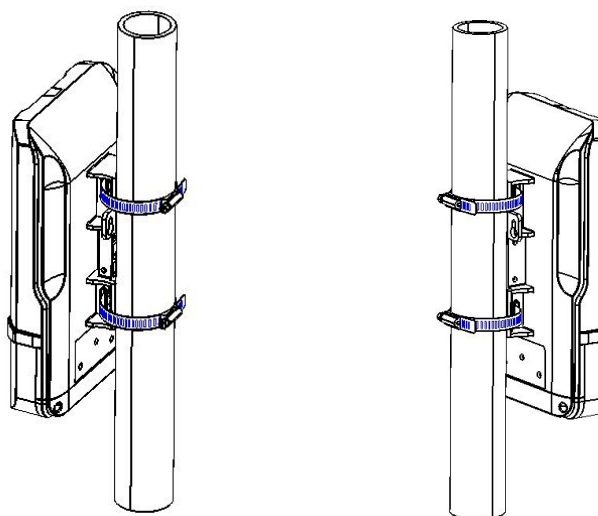
To use the phone service, operator can simply plug the phone line to the CPE RJ11 port in the back. If the line is not registered or configured, a fast-busy tone will be provided and the corresponding LINE LED light will be off.



■ Insert SIM Card



■ Installing Outdoor Unit (ODU) – Clamp



3. LED Display

Type	LED	Function	Description
IDU	SYS	Power indicator	Green color – Device is powered on.
	NET	WAN port status	Blinking green – The data is in transmission.
	SIG	RF signal indicator	Red: RSRP < -118dBm Green: -118dBm <= RSRP < -105dBm Blue: -105dBm <= RSRP
	2.4G & 5G	Wi-Fi indicator	Light is on – 2.4G & 5G Wi-Fi is on.
	LAN1&LAN2	LAN port status	Solid green – LAN port is up. Blinking green – LAN data activity in progress.
	Line	POTS line status	OFF – Line is not registered or provisioned. Green Color – The line is ready and registered Green Blinking – Voice Call in progress

Type	LED	Function	Description
ODU	PWR	Power indicator	Solid green – Device is power on.
	NET	WAN port status	OFF – NO wireless network access. Solid Green – WAN data transmission in progress
	SIM	SIM card indicator	Light is on – SIM card state is ready. Blinking Green – SIM card is error.
	PoE	LAN port status	Solid Green – LAN port is up.
	ACT	LAN port status	Blinking Green – LAN data transmission.
	RF (5LEDs)	RF Signal Strength	5 level signal strengths indication by 5 green LEDs. 1st Green LED: -115dBm < RSRP 2nd Green LED: -115dBm <= RSRP < -105dBm 3rd Green LED: -105dBm <= RSRP < -95dBm 4th Green LED: -95dBm <= RSRP < -85dBm 5th Green LED: -85 <= RSRP

4. Managing CPE Device

The LC300 offers rich management features which facilitate the task of service provider. It supports local management access, Telnet, WEB, and centralized remote OTA configuration, upgrades management and device monitoring via standard TR-069 ACS systems. The following describes the basic procedures for configuring the device for LTE operation.

■ WEB Login

It is a preferred to setup the CPE using a Web browser from a local PC connected to device LAN port. The operator should ensure that the connected PC has acquired IP address via DHCP from the device. After IP connectivity is established between the PC and CPE device, the operator may launch a Web browser and specify <http://172.16.1.1> in the address bar. A window will pop up requesting password. Input the user login password and then click the “**Log in**” button. After successful log on, the default home page of the WEB GUI interface will appear. Note the default password is “[admin](#)”.



5. System Information

■ System Status

The menu shows the general system info of the CPE device. It includes system, general, WAN, LAN, Wi-Fi information.

The screenshot displays the Inadria web management interface. On the left is a dark sidebar with a menu containing: Device Status, LTE Settings, Network Settings, Wi-Fi Settings, Data Services, VoIP Settings, and Management. The main content area has a breadcrumb trail: Home / Device Status / System Info. The page is divided into three sections: Device Info, Radio WAN Configuration, and LAN Configuration, each containing a table of system parameters.

Device Info	
Manufacturer	
Product Name	
Software Version	
Hardware Version	
SN	
System Current Time	
System Up Time	
Operation Mode	Router (NAT)

Radio WAN Configuration	
Connected Type	LTE PON
IP Address	
Subnet Mask	
Default Gateway	
DNS Server	

LAN Configuration	
LAN IP Address	192.168.0.1
Subnet Mask	255.255.255.0
MAC Address	
DHCP Server Status	Enable
DHCP IP Address Pool	192.168.0.2 - 192.168.0.100
DNS Proxy Status	Enable

6. FAQ and Troubleshooting

Problem	Suggested Solution
My PC cannot connect to the CPE.	● Re-plug the PC Ethernet cable and check if the PC LAN connection is up or showing activity. ● Check if the CPE Power is on. If it is not, check the power cord and make sure it is connected properly. Also verify that the AC power supply is available. ● If the PC LAN shows no activity and POE adapter LED is off but the power cord and ETH cable are connected properly and there is AC supply, then it is likely the POE adapter is damaged. Please contact distributor to obtain replacement part.
My PC cannot acquire IP from the CPE.	● First check if the Network card is up and working properly. Then check the PC Network card configuration and make sure the DHCP is enabled. ● To release and renew the correct IP address, please unplug the Ethernet cable from PC and wait for about 5 seconds, then connect it again. ● If the problem persists, please contact the operator or distributor for further diagnose.
My CPE networking is not working properly.	● You may want to check if the LTE connection is up and running properly. You can do this by login the WEB GUI and check the Interface Info page. ● You may want to perform a factory reset and see if the problem is being corrected. You can do this by log into the WEB GUI using "admin" password and perform restore the unit to default factory setting. ● If the problem cannot be corrected by factory reset, please contact the operator or distributor for further diagnose.
I forget the login password and like to reset the unit to factory default.	● User can hold the IDU RESET button between WAN port and DC port for 10 seconds with power on to clear and reset the unit to factory default setting. ● After the unit is reset to factory default, you can login using the default password.