



# u4G-UE1000

Outdoor CPE Specification

# Introduction

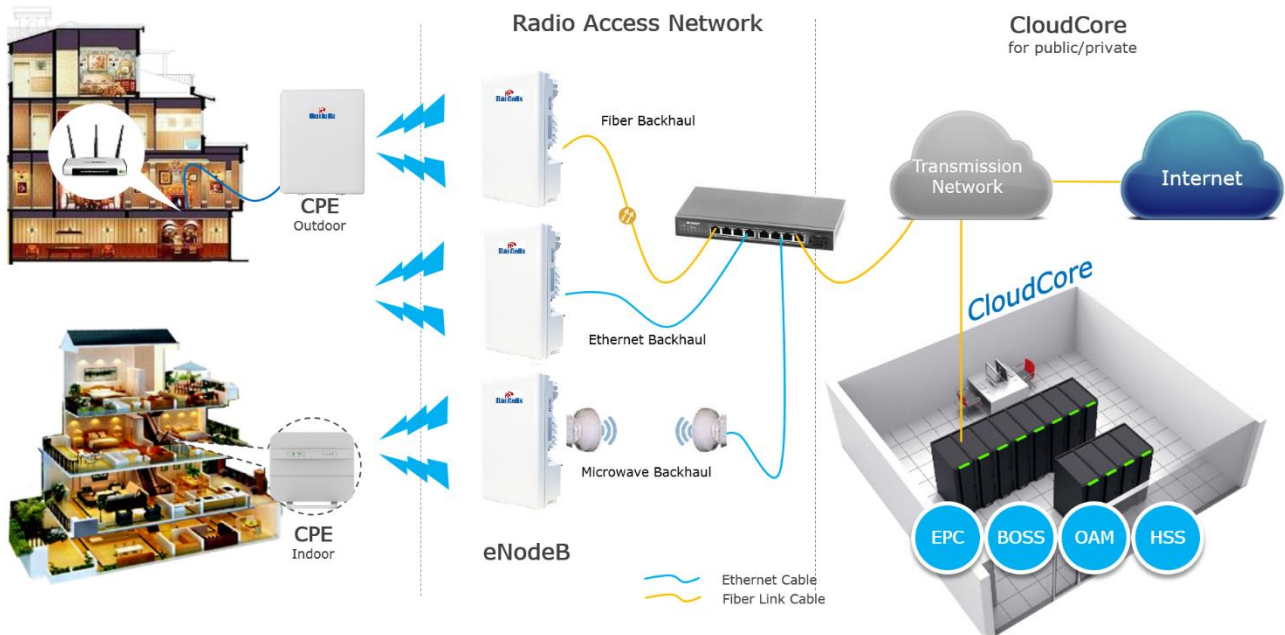
Baicells is a private, high-tech company providing innovative LTE wireless broadband access solutions. The Baicells solutions support fixed wireless access and mobile scenarios. With the vision to connect the unconnected, Baicells has introduced breakthrough technologies to LTE, like moving a complete LTE system to unlicensed spectrum and building it with an IT based architecture.

With the Baicells turnkey end-to-end solutions, it becomes much easier to provide wireless internet within everyone's reach at a very low cost. These innovative solutions can be used by mobile operators, broadband access operators, Internet Service Providers (ISP), Mobile Virtual Network Operators (MVNO), governments, and enterprise private networks.

The Baicells u4G-UE1000 is a type of LTE-Unlicensed Outdoor Customer Premise Equipment (CPE) working on unlicensed frequency, which provides superior wireless access performance and comprehensive routing capabilities to bring wireless broadband data and voice services to end-users. It converts high-speed LTE FDD signals to WiFi signals on the local area network (LAN).



The typical topology of u4G-UE1000 deployment is as follows, which solution provides wireless broadband and wired Ethernet data services for customers.



## Highlights

- Supports LTE-FDD frequency bands 46 and self-define frequency.
- Complies with 3GPP Release 9 CAT4 standards.
- 1000 Mbps Ethernet interface.
- Convenient, simple, GUI-based local and remote Web management.
- Built-in bipolar directional high-gain LTE antenna.
- TR069 network management protocol.
- Cell lock, SIM lock, and Pin lock.
- User-friendly LED indicators.
- Power supply with standard PoE at/af.
- Pole mounted or wall mounted.

## Basic Specifications

Item	Description
UE-Category	3GPP R9, CAT 4
USIM Slot	1.8V/3.0V USIM 2FF
Ethernet Port	1 RJ45, LAN, 10/100/1000 auto-sensing, auto-MDX, PoE at/af
Power Supply	Input: Universal range 100V~240V AC Output: standard PoE at/af
Reset Button	Tactile button. Long press over 10s to restore the factory settings
LED Indicators	MIU/LTE/SIM/LAN/PWR/LTE Signal
Dimensions	205mm (H) x 155mm (W) x 70mm (D)
Weight	About 1500 g

## LTE Specifications

Item	Description
LTE Mode	FDD
LTE Bands	Customized frequency FDD band DL:5725MHz ~ 5925MHz / UL:5150MHz ~ 5250MHz
TXRX	1T2R
Peak Rate	20MHz: DL: 150Mbps UL: 75Mbps
Channel Bandwidth	10MHz/20MHz
Modulation	UL: QPSK, 16QAM, 64QAM DL: QPSK, 16QAM, 64QAM
Receive Sensitivity	-93dBm @ QPSK, 20MHz, 25°C

MAX Output Power	26dBm ( $\pm 2$ )/TX ANT
Antenna Type	Internal directional antenna
Antenna Gain	14dBi $\pm 1$ @5150MHz ~5925MHz, 2 Ports
Polarization	$\pm 45^\circ$
Antenna Efficiency	>75%
Isolation	$\leq -15$ dB
VSWR	$\leq 2$
Horizontal Beam Width (3dB)	33 $\pm 3^\circ$ @5150MHz ~5925MHz, 2 Ports
Vertical Beam Width (3dB)	22 $\pm 3^\circ$ @5150MHz ~5925MHz, 2 Ports

## SW Specifications

Item	Description
Language Support	English/Chinese
Network Mode	NAT/Router/Bridge
IP Protocol	IPv4/IPv6
SIM Management	PIN Management, SIM Lock
Network Connection Management	Auto/Manual
LTE Scan Mode	Full band scan, Frequency Lock, PCI Lock
WLAN	WiFi for CPE Alignment
VPN	<ul style="list-style-type: none"> <li>L2TP L2/L3</li> <li>GRE L2/L3</li> </ul>
NAT	<ul style="list-style-type: none"> <li>Port forwarding</li> <li>DMZ</li> <li>ALG</li> <li>Port Trigger</li> </ul>

Firewall	<ul style="list-style-type: none"> <li>• IP/MAC/URL Filter</li> <li>• Access Control</li> <li>• Block Port Scanner / SYN Flood</li> <li>• SPI Filter</li> </ul>
Network Management	TR069
Diagnostics	<ul style="list-style-type: none"> <li>• TCPDump</li> <li>• Ping</li> <li>• Trace route</li> </ul>
Statistics	<ul style="list-style-type: none"> <li>• LTE Status/Connection Time/System Up Time</li> <li>• Device Status</li> <li>• DHCP Client List</li> <li>• WiFi Station List</li> <li>• LTE Status</li> <li>• Firewall Status</li> </ul>
Maintenance	<ul style="list-style-type: none"> <li>• Date &amp; Time setting</li> <li>• Reboot</li> <li>• Restore factory settings</li> <li>• Restore / Back up configuration file</li> <li>• Firmware upgrade locally/OTA (over the air)</li> </ul>
System Log	<ul style="list-style-type: none"> <li>• Operating Log</li> <li>• Run-time Log</li> <li>• Filter/Select/Display/Export Log</li> </ul>
Antenna Select	N/A

## Environmental Specifications

Item	Description
Operating Temperature	-40°C to 55°C
Storage Temperature	-40°C to 70°C
Operating Humidity	5% to 95%
IP Level	IP65

# Model List

Models	Description
u4G-UE1000	u4G-UE1000( LTE CPE ODU, Self-defined FDD, CAT4, 1T2R, 1GE, PoE at/af, IP65)

# 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 A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

### 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 40 cm between the radiator & your body.