

Spectra LTE-U Outdoor FDD eNB



INTRODUCTION

The Baicells Spectra Long-Term Evolution – Unlicensed (LTE-U) 2x320mW eNodeB enables smart LTE device users to be served by unlicensed 5.8 GHz spectrum using Frequency Division Duplexing (FDD) technology. Providing the stability and bandwidth of LTE service while avoiding the cost of licensed spectrum is a significant advantage for wireless operators.

With the advantage of LTE technology, Spectra LTE-U provides much higher receiving sensitivity; better QoS control; and continuous networking (via GPS synchronization) when compared to Wi-Fi.

The LTE-U eNodeB is easy to deploy and can help wireless operators to provide better coverage and higher capacity with minimal effort. It comes with a standard one-year warranty; extended warranty is available.

FEATURES

Easy Deployment

- Slim design suitable for private and public deployments
- Any IP based backhaul can be used, including public transmission
- Supports GPS synchronization
- Low power consumption; can easily be integrated with solar power

- Plug-and-Play with self-organizing network (SON) capabilities
- Includes internal high-gain directional RF antenna and ships with GPS antenna

Better Performance

- Peak rate DL150 Mbps/UL75 Mbps @20 MHz spectrum
- Maximum 32 concurrent users
- Supports eGW (optional) for S1 aggregation to reduce signaling load of MME
- Supports local traffic offload and charging in cooperation with eGW
- Supports 5/10/15/20 MHz bandwidth operation

Easy Management

- Efficient remote configuration, monitoring, and maintenance operations with Baicells network management system (NMS), BaiOMC
- Highly secured with equipment certification against potential intrusion risk

Smooth Evolution

- Abundant features achievable with software upgrade
- Smooth evolution to C-RAN architecture, which supports centralized scheduling for better networking performance, with Baicells central network unit (CNU)

HARDWARE SPECIFICATIONS

LTE Mode	FDD
Frequency Bands	UL: 5150-5250 MHz DL: 5725-5825 MHz and customized
Channel Bandwidth	5/10/15/20 MHz
Max Output Power	27 dBm / antenna
Receive Sensitivity*	-102 dBm per antenna
Synchronization Mode	GPS (a GPS comes with the eNB)
Backhaul Mode	1 standard optical (SFP) and 1 RJ-45 Ethernet interface (1 GE with PoE+)
MIMO	DL: 2x2
Dimensions (HxWxD)	10.2 x 7.5 x 3.6 inches 260 x 190 x 90 millimeters
Installation Method	Pole or wall mount
Antenna	<ul style="list-style-type: none"> • Internal directional antenna: 15±1 dBi • Horizontal beamwidth: 45°±3 • Vertical beamwidth: 13°±3 • Polarization: ±45°, Isolation > 25 dB • Efficiency > 80%
Power Consumption	< 65W
Power Supply	+/-48V DC 1.5A (maximum) PoE+ (802.3 bt standard)
Weight	8.8 lbs (4 kg)

*Test method for Receive Sensitivity follows 3GPP TS 36.104, which is based on 5 MHz bandwidth, FRC A1-3 in Annex A.1 (QPSK, R=1/3, 25RB) standard.

SOFTWARE SPECIFICATIONS

LTE Standard	3GPP Release 9
Peak rate	20 MHz: DL 150 Mbps, UL 75 Mbps
Max User Capacity	32 concurrent users
QoS Control	3GPP standard QCI
Modulation	UL: QPSK, 16QAM, 64QAM DL: QPSK, 16QAM, 64QAM
Traffic Offload	<ul style="list-style-type: none"> • Local IP Access (LIPA) • Selected IP Traffic Offload (SIPTO)
SON	Self-organizing network: <ul style="list-style-type: none"> • Automatic setup • Automatic Neighbor Relation (ANR) • PCI confliction detection

RAN Sharing	Supported
Network Management Interface	TR069 interface protocol
MTBF	≥ 150000 hours
MTTR	≤ 1 hour
Maintenance	Remote/local maintenance Online status management Performance statistics Fault management Local or remote software upgrade Logging Connectivity diagnosis Automatic start and configuration Alarm reporting KPI recording User information tracing Signaling trace

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-40°F to 131°F -40°C to 55°C
Storage Temperature	-49°F to 176°F -45°C to 80°C
Humidity	5%~95%
Atmospheric Pressure	70 kPa to 106 kPa
Ingress Protection Rating	IP65
Power Interface Lightning Protection	Differential mode: ±10 KA Common mode: ±20 KA

GLOBAL PART NUMBER

u4G-AP1000	u4G-AP1000 (FDD Outdoor Micro cell, unlicensed frequency, DL: 5725-5825 MHz/UL 5150-5250 MHz, 2T2R, 27 dBm, 48V DC, PoE+, American standards)
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