Spectra LTE-U Outdoor FDD eNodeB

INTRODUCTION

The Baicells Spectra Long-Term Evolution – Unlicensed (LTE-U) 2x320mW eNodeB (eNB) 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.

Spectra LTE-U provides much higher receiving sensitivity; better QoS control; and continuous networking (via GPS synchronization) when compared to Wi-Fi. It is easy to deploy and enables wireless operators to provide better coverage and higher capacity with minimal effort. The eNB comes with a standard one-year warranty; extended warranty is available.

*Note: FDD availability in U.S. pending FCC certification

FEATURES

Note: Features may vary based on model or region.

- Easy Deployment

- Slim design suitable for private and public deployments
- Supports GPS synchronization
- Low power consumption; can be integrated with solar power (future)
- Plug-and-Play with self-organizing network (SON) capabilities
- Includes internal high-gain directional RF antenna and embedded GPS antenna

- Better Performance

- Peak rate (up to): DL 150 Mbps, UL 75 Mbps @20 MHz bandwidth
- 32 concurrent users
- Supports 5/10/15/20 MHz bandwidth operation
- Supports local traffic offload and charging in cooperation with BaiWCG

- 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

- Additional features available through software upgrade
- Smooth evolution to C-RAN architecture; centralized scheduling for better network performance; Baicells central network unit (CNU)

HARDWARE SPECIFICATIONS

LTE Mode	FDD
Frequency Bands	DL: 5725-5825 MHz and custom UL: 5150-5250 MHz and custom
Channel Bandwidth	5/10/15/20 MHz
Max Output Power	27 dBm / antenna
Power Consumption	< 65W
Power Supply	+/-48V DC 1.5A (maximum) PoE+ (802.3 at standard)
Receive Sensitivity	-102 dBm per antenna
Synchronization	GPS (included)
Interfaces	1 standard optical (SFP) and 1 RJ-45 Ethernet interface (1 GE with PoE+)
MIMO	DL: 2x2
Installation	Pole or wall mount
Antenna	• Internal directional: 15±1 dBi • Horizontal beamwidth: 45°±3 • Vertical beamwidth: 13°±3 • Polarization: ±45°, Isolation > 25 dB • Efficiency > 80%
Dimensions (HxWxD)	10.2 x 7.5 x 3.6 inches 260 x 190 x 90 millimeters
Weight	8.8 lbs / 4 kg

SOFTWARE SPECIFICATIONS

LTE Standard	3GPP Release 9
Peak rate	@20 MHz: DL 150 Mbps, UL 75 Mbps
User Capacity	32 concurrent users
QoS Control	3GPP standard QCI
Modulation	DL: QPSK, 16QAM, 64QAM UL: QPSK, 16QAM, 64QAM
Traffic Offload	• Local IP Access (LIPA) • Selected IP Traffic Offload (SIPTO)
SON	Self-organizing network: • Automatic setup • Automatic Neighbor Relation (ANR) • PCI confliction detection
RAN Sharing	Supported
Network Mgmt	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	Spectra LTE-U unlicensed frequency outdoor FDD eNodeB - DL 5725-5825 MHz, UL 5150-5250 MHz, 2T2R, 27 dBm, 48V DC, PoE+ micro cell • FCC certification: 2AG32U4GAP1000 (5155-5925 MHz) • IC certification: 20982-U4GAP1000 (5730-5820 MHz)

Notes:

1 - Other models may be available for other regions. Contact sales_na@baicells.com.

2 - Customized versions may be requested.