



INTRODUCTION

This Baicells Nova-233 generation 2 (G2) eNodeB (eNB) is an outdoor Long-Term Evolution (LTE) product that can operate in Time Division (TDD) Duplexing mode. This eNB provides users with high-speed broadband wireless access to the Internet using 2x1W output power (2x2 MIMO with 1W output each channel). The unit is compact, lightweight, and easy to deploy.

The Nova-233 incorporates a vast set of enhancements requested by customers, such as SFP support, lower weight, port rearrangement for easier weatherproofing, and even improved mounting hardware.

The product comes with a standard one-year warranty; extended warranty is available.

FEATURES

Note: Features may vary based on model or region.

- Standard LTE TDD Bands 38/39/40/41/42/43/48
 - Customization may be requested; contact sales_na@baicells.com
- Complies with 3GPP Release 9 standards
- GUI-based local and remote Web management
- TR069 network management protocol support
- Support external high-gain antenna
- Any IP based backhaul can be used, including public transmission protected by Internet Protocol Security (IPSec)
- Cloud /Local/Embedded EPC (HaloB) is supported for more convenient and economic deployment.
- Excellent non-line-of-sight (NLOS) coverage performance
- Peak rate (up to): DL 110 Mbps, UL 14 Mbps @ 20 MHz
- 96 concurrent users
- Supports Citizens Broadband Radio Service (CBRS) Part 96 certified
- IoT with all standard LTE Evolved Packet Core (EPC)
- Lower power consumption to reduce OPEX, can be powered easily by Baicells compact outdoor UPS EPB41511

HARDWARE SPECIFICATIONS

LTE Mode	TDD
Frequency Bands	38/39/40/41/42/43/48 and customized
Channel Bandwidth	5/10/15/20 MHz
Max Output Power	30 dBm / port
Power Supply	+/- 48V DC, AC adaptor (multi-national standards)
Power Consumption	< 45W
Receive Sensitivity	-100 dBm @band42/43/48 -101 dBm @band38/39/40/41
Synchronization	GPS, 1588v2
Interfaces	One optical (SFP) and one RJ-45 Ethernet interface (1 GE)
MIMO	DL: 2x2
Installation	Pole or wall mount
Antenna Type	External high-gain antenna compatible with eNB N-Type connectors
Dimensions (HxWxD)	8.9 x 12 x 2.9 inches 227 x 305 x 74 millimeters
Weight	11.4 lbs / 5.15 kg
MTBF	≥ 150000 hours
MTRR	≤ 1 hour

SOFTWARE SPECIFICATIONS

LTE Standard	3GPP Release 9
Peak Rate (up to)	20 MHz: SA0: DL 50 Mbps, UL 42 Mbps SA1: DL 80 Mbps, UL 28 Mbps SA2: DL 110 Mbps, UL 14 Mbps 10 MHz: SA0: DL 25 Mbps, UL 21 Mbps SA1: DL 40 Mbps, UL 14 Mbps SA2: DL 55 Mbps, UL 7 Mbps
SA - Subframe Assignment (configurable parameter)	SA0: config. 0 (DSUUU) SA1: config. 1 (DSUUD) SA2: config. 2 (DSUDD)
User Capacity	96 concurrent users
QoS Control	3GPP standard QCI
Modulation	DL: QPSK, 16QAM, 64QAM UL: QPSK, 16QAM, 64QAM
Voice	VoLTE, Circuit Switched Fallback (CSFB) to GSM
Traffic Offload	Local breakout
SON	Self-Organizing Network <ul style="list-style-type: none"> • Automatic setup • Automatic Neighbor Relation (ANR) • PCI confliction detection
RAN Sharing	Multi-Operator Core Network (MOCN)
Network Mgmt	TR069

Spectrum Scanning	Supported (TDD)
UL Interference Detection	Supported
Maintenance	<ul style="list-style-type: none"> • 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 reporting • User information tracing • Signaling trace

GLOBAL PART NUMBER

mBS1105	<p>Nova-233 outdoor Gen 2 TDD eNodeB - LTE Release 9, 2x1W (30 dBm), 2 port, 3.5 GHz, B42/43/48</p> <ul style="list-style-type: none"> • FCC certification: 2AG32MBS110596N (3655-3695 MHz) • IC certification: 20982-MBS1105 (3650-3700 MHz)
mBS11001	Nova-233 outdoor Gen 2 TDD eNodeB - LTE Release 9, 2x1W (30 dBm), 2 port, 1.8 GHz, B39
mBS11002	Nova-233 outdoor Gen 2 TDD eNodeB - LTE Release 9, 2x1W (30 dBm), 2 port, 2.5 GHz, B41
mBS11003	Nova-233 outdoor Gen 2 TDD eNodeB - LTE Release 9, 2x1W (30 dBm), 2 port, 2.5 GHz, B38
mBS11004	Nova-233 outdoor Gen 2 TDD eNodeB - LTE Release 9, 2x1W (30 dBm), 2 port, 2.3 GHz, B40

Notes:

- 1 - Band 48 available via firmware download where applicable.
- 2 - Customized versions may be requested.

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-40°F to 131°F / -40°C to 55°C
Storage Temperature	-49°F to 158°F / -45°C to 70°C
Humidity	5% to 95%
Atmospheric Pressure	70 kPa to 106 kPa
Ingress Protection Rating	IP66
Power Interface Lightning Protection	Differential mode: ±10 KA Common mode: ±20 KA