

# Nova-233 G2 Outdoor TDD eNodeB



## INTRODUCTION

This Baicells Nova-233 generation 2 (G2) eNodeB (eNB) is an outdoor Long-Term Evolution (LTE) product that can operate in Frequency Division or Time Division (FDD\*/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.

\*Note: FDD availability in U.S. pending FCC certification. Only TDD is available at this time in U.S.

## FEATURES

Note: Features may vary based on model or region.

- Standard LTE TDD Bands 42/43/48
  - Customization may be requested; contact [sales\\_na@baicells.com](mailto:sales_na@baicells.com).
- Complies with 3GPP Release 9 standards
- GUI-based local and remote Web management
- TR069 network management protocol support

- Integrated 13 dBi internal antenna; option for external high-gain antenna
- Any IP based backhaul can be used, including public transmission
- Lower power consumption to reduce OPEX
- IoT with most Evolved Packet Core (EPC) vendors
- Excellent non-line-of-sight (NLOS) coverage performance
- Peak rate @20 MHz: DL 112 Mbps, UL 20 Mbps
- 96 concurrent users
- Supports 5/10/15/20 MHz bandwidth operation

## HARDWARE SPECIFICATIONS

| LTE Mode            | TDD   |
|---------------------|---|
| Frequency Bands     | 42/43/48 and customized                           |
| Channel Bandwidth   | 5/10/15/20 MHz                                    |
| Max Output Power    | 30 dBm / antenna                                  |
| Power Supply        | +/- 48V DC, AC adaptor (multi-national standards) |
| Power Consumption   | < 45W   |
| Receive Sensitivity | -100 dB   |
| Synchronization     | GPS, 1588v2*                                      |

\*Future software release

|                    |  |
|--------------------|--|
| Interfaces         | One optical (SFP) and one RJ-45 Ethernet interface (1 GE)                  |
| MIMO               | DL: 2x2  |
| Installation       | Pole or wall mount   |
| Antenna Type       | Integrated internal 13 dBi antenna<br>Optional: External high-gain antenna |
| Dimensions (HxWxD) | 8.9 x 12 x 2.9 inches<br>227 x 305 x 74 millimeters                        |
| Weight             | 9.7 lbs / 4.4 kg   |

## SOFTWARE SPECIFICATIONS

|   |   |
|---|---|
| LTE Standard  | 3GPP Release 9  |
| Peak Rate   | 20 MHz:<br>SA1: DL 80 Mbps, UL 20 Mbps<br>SA2: DL 112 Mbps, UL 14 Mbps<br>10 MHz:<br>SA1: DL 40 Mbps, UL 14 Mbps<br>SA2: DL 55 Mbps, UL 7 Mbps  |
| SA - Special Subframe Assignment (configurable parameter) |   |
| User Capacity   | 96 concurrent users   |
| QoS Control   | 3GPP standard QCI   |
| Modulation  | DL: QPSK, 16QAM, 64QAM<br>UL: QPSK, 16QAM, 64QAM  |
| Voice   | VoLTE*  |
| Traffic Offload   | Local IP Access (LIPA)<br>Selected IP Traffic Offload (SIPTO)   |
| SON   | Self-Organizing Network <ul style="list-style-type: none"> <li>• Automatic setup</li> <li>• Automatic Neighbor Relation (ANR)</li> <li>• PCI confliction detection</li> </ul>   |
| RAN Sharing   | Supported   |
| Network Mgmt  | TR069   |
| MTBF  | ≥ 150000 hours  |
| MTTR  | ≤ 1 hour  |
| Spectrum Scanning   | TDD supported   |
| UL Interference Detection                                 | Supported   |
| Maintenance   | <ul style="list-style-type: none"> <li>• Remote/local maintenance</li> <li>• Online status management</li> <li>• Performance statistics</li> <li>• Fault management</li> <li>• Local or remote software upgrade</li> <li>• Logging</li> <li>• Connectivity diagnosis</li> </ul> |

|  |  |
|--|--|
|  | <ul style="list-style-type: none"> <li>• Automatic start and configuration</li> <li>• Alarm reporting</li> <li>• KPI recording</li> <li>• User information tracing</li> <li>• Signaling trace (TDD)</li> </ul> |
|--|--|

\*Future software release

## 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<br>Common mode: ±20 KA |

## GLOBAL PART NUMBERS

|         |  |
|---------|--|
| mBS1105 | Nova-233 outdoor Gen 2 TDD eNodeB - LTE Release 9, 2x1W (30 dBm), 2 port, 3.5 GHz, B42/43/48* <ul style="list-style-type: none"> <li>• FCC certification: 2AG32MBS1105 (3655-3695 MHz)</li> <li>• IC certification: 20982-MBS1105 (3650-3700 MHz)</li> </ul> |
|---------|--|

\*Notes:

- 1 - Band 48 available via firmware download where applicable.
- 2 - Other models available for other regions. Contact [sales\\_na@baicells.com](mailto:sales_na@baicells.com).
- 3 - Customized versions may be requested.