



## INTRODUCTION

The Baicells Nova-246 is a powerful outdoor dual carrier eNodeB (eNB) with 2x20W output power - that's 2x2 MIMO with 20 Watts per channel housed in one unit. Using two 2-port antennas or one 4-port antenna with one Nova-246 in split mode not only increases capacity but enables economical wireless broadband access in challenging locations.

Take, for example, a small rural community surrounded by mountains, with homes and businesses along a narrow valley corridor. Two 180° sectors facing opposite directions and attached to Nova-246 provides a "butterfly" coverage solution.



The Nova-246 eNB is based on the most prevalent high-speed wireless networking technology in the world today: Long-Term Evolution (LTE). It conforms to 3GPP standards and uses Time Division Duplexing (TDD) technology.

Using Band 41, this eNB is a good choice for addressing non-line-of-sight (NLOS) challenges; it provides the power and LTE intelligence to help penetrate obstructions such as heavy foliage, tall buildings, and hilly terrain.

In a later software upgrade, Nova-246 will offer the option to operate in Carrier Aggregation (CA) mode. CA mode combines contiguous or non-contiguous channels into a single data channel (up to 40 MHz) for even greater capacity.

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

## HIGHLIGHTS

Note: Features may vary based on model or region.

- Standard LTE TDD Band 41
  - Customization may be requested; contact [sales\\_na@baicells.com](mailto:sales_na@baicells.com).
- Dual carrier (split mode), with planned software upgrade to Carrier Aggregation
- Extended cell coverage via higher transmission power
- Minimized power consumption to reduce OPEX
- Excellent non-line-of-sight (NLOS) coverage performance
- Peak rate: (up to) 220 Mbps DL, 14 Mbps UL with 2x20 MHz spectrum
- Maximum 192 concurrent users total (96/carrier)
- GUI-based local and remote management
- TR-069 network management protocol supported
- Attaches to any IP based backhaul, including public transmission
- IoT with all mainstream EPC vendors

## HARDWARE SPECIFICATIONS

LTE Mode	TDD
Frequency Band	41 and customized
Channel Bandwidth	10/15/20 MHz
Max Output Power	43 dBm per carrier
Power Supply	-48V DC (-57V to -42V DC), AC adaptor (multi-national standards)
Power Consumption	< 180W
Rx Sensitivity	-102 dBm
Synchronization	GPS
Interfaces	1 optical (SFP) and 1 RJ-45 Ethernet (1 GE)
MIMO	DL: 2x2 per carrier
Dimensions (HxWxD)	17.3 x 9.5 x 4.7 inches 440 x 240 x 120 millimeters
Weight	26.5 lbs / 12 kg

## SOFTWARE SPECIFICATIONS

LTE Standard	3GPP Release 9
Peak Rate (up to)	2x20 MHz - Per Carrier: <ul style="list-style-type: none"> <li>SA1: DL 80 Mbps, UL 28 Mbps</li> <li>SA2: DL 110 Mbps, UL 14 Mbps</li> </ul> 2x10 MHz - Per Carrier: <ul style="list-style-type: none"> <li>SA1: DL 40 Mbps, UL 14 Mbps</li> <li>SA2: DL 55 Mbps, UL 7 Mbps</li> </ul>
SA - Special subframe Assignment (configurable parm)	
User Capacity	192 concurrent users total (96 concurrent users per carrier)
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: <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	TR-069
MTBF	≥ 150000 hours
MTTR	≤ 1 hour
Spectrum Scanning	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> <li>Automatic start and configuration</li> <li>Alarm reporting</li> <li>KPI recording</li> <li>User information tracing</li> <li>Signaling trace</li> </ul>

## 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 ~ 106 kPa
Ingress Protection Rating	IP66
Power Interface Lightning Protection	Differential mode: ±10 KA Common mode: ±20 KA

## GLOBAL PART NUMBERS

sBS21001	<p>Nova-246 outdoor dual carrier TDD eNodeB - LTE Release 9, 2x20W (43 dBm), 2T2R, 48VDC, 1 Eth+1Opt, external antenna(s), B41 (2496-2690 MHz)</p> <ul style="list-style-type: none"> <li>FCC certification: In progress</li> </ul>
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### Notes:

- 1 - Other models available for other regions. Contact sales\_na@baicells.com.
- 2 - Customized versions may be requested.