



## INTRODUCTION

The Baicells Nova227 is a unique tool for your toolbox. We have built and priced this lower power 2x250mW microcell eNodeB (eNB) specifically for tightly clustered pockets of customers, coverage holes, edges of your network, or simply opportunistic micro-targeting, like RV parks, marinas, and high-density dwellings such as townhomes and apartments. As with all Baicells products, the Nova227 supports Long-Term Evolution (LTE) technology, and it operates in Time Division Duplexing (TDD) mode.

When paired with self-install indoor user equipment (UE), such as customer sets can be captured quickly and with a near-immediate ROI. For private network operators, this microcell is perfect for clusters of cameras, such as those used at traffic intersections and other devices.

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

## FEATURES

Note: Features may vary based on model or region.

- Standard LTE TDD Bands 38/40/41/42/43/48
  - Customization may be requested; contact [sales\\_na@baicells.com](mailto:sales_na@baicells.com)

- GUI-based local and remote Web management
- Compact, all-in-one design of internal antenna and integrated GPS
- Any IP based backhaul can be used, including public transmission protected by Internet Protocol Security (IPSec)
- Excellent non-line-of-sight (NLOS) coverage performance
- IoT with all standard LTE Evolved Packet Core (EPC)
- Cloud /Local/Embedded EPC (HaloB) is supported for more convenient and economical deployment.
- Peak rate (up to): DL 110 Mbps, UL 14 Mbps @ 20 MHz bandwidth
- 32 concurrent users
- Supports Citizens Broadband Radio Service (CBRS) Part 96 certified
- PoE+ power supply; only one Ethernet cable required for data transmission and power supply
- Lower power consumption to reduce OPEX, can be powered easily by Baicells compact outdoor UPS EPB41511

## HARDWARE SPECIFICATIONS

LTE Mode	TDD
Frequency Bands	38/40/41/42/43/48 and customized
Channel Bandwidth	5/10/15/20 MHz
Max Output Power	24 dBm / port
Power Supply	PoE+ IEEE 802.3at
Safe Voltage Range	42 V to 58 V
Power Consumption	< 20 W
Rx Sensitivity	-101 dBm @ band 38/40/41 -100 dBm @ band 42/43/48
Synchronization	GPS, 1588v2
Interface	One RJ-45 Ethernet backhaul interface (1 GE)
MIMO	DL: 2x2
Installation	Pole or wall mount
Antenna Type	Internal high-gain antenna <ul style="list-style-type: none"> <li>• Horizontal Beamwidth 65°</li> <li>• Vertical Beamwidth 20°</li> <li>• Polarization: ±45°</li> </ul>
Antenna Gain	10.5 ± 0.5 dBi@ band 38/40/41 13 ± 0.5 dBi@band 42/43/48
Electrical Down Tilt	10 degrees*
Dimensions (HxWxD)	9.8 x 9.8 x 3.2 inches 248 x 248 x 80 millimeters
Weight	4.4 lbs / 2.0 kg
MTBF	≥ 150000 hours
MTTR	≤ 1 hour

\* Note: Only for the pBS2120 model.

## 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
SA - Subframe Assignment (configurable parameter)	10 MHz: SA0: DL 25 Mbps, UL 21 Mbps SA1: DL 40 Mbps, UL 14 Mbps SA2: DL 55 Mbps, UL 7 Mbps

User Capacity	32 concurrent users
QoS Control	3GPP standard QCI
Modulation	DL: QPSK, 16 QAM, 64 QAM UL: QPSK, 16 QAM, 64 QAM
Voice	VoLTE, Circuit Switched Fallback (CSFB) to GSM
Traffic Offload	Local breakout
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	Multi-Operator Core Network (MOCN)
Network Mgmt	TR-069
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 reporting</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

## GLOBAL PART NUMBERS

pBS11004	<p>Nova227 outdoor TDD eNodeB – LTE Release 9, 2x250mW (24 dBm), 2 port, 10.5 dBi integrated 65-degree antenna, 2.5 GHz, B41</p> <ul style="list-style-type: none"><li>• FCC certification: 2AG32PBS11004 (2501-2685 MHz)</li><li>• IC certification: 20982-PBS11004 (2500-2690 MHz)</li></ul>
pBS2120	<p>Nova227 outdoor TDD eNodeB – LTE Release 9, 2x250mW (24 dBm), 2 port, 13 dBi integrated 65-degree antenna, 3.5 GHz, B42/43/48</p> <ul style="list-style-type: none"><li>• FCC certification: 2AG32PBS212096N (3655-3695 MHz)</li><li>• IC certification: 20982-PBS2120 (3650-3700 MHz)</li></ul>
pBS11001	<p>Nova227 outdoor TDD eNodeB – LTE Release 9, 2x250mW (24 dBm), 2 port, 10.5 dBi integrated 65-degree antenna, 2.5 GHz, B38</p>
pBS11003	<p>Nova227 outdoor TDD eNodeB – LTE Release 9, 2x250mW (24 dBm), 2 port, 10.5 dBi integrated 65-degree antenna, 2.3 GHz, B40</p>
pBS11005	<p>Nova227 outdoor TDD eNodeB – LTE Release 9, 2x250mW (24 dBm), 2 port, 13 dBi integrated 65-degree antenna, 3.4 GHz, B42</p>
pBS11006	<p>Nova227 outdoor TDD eNodeB – LTE Release 9, 2x250mW (24 dBm), 2 port, 13 dBi integrated 65-degree antenna, 3.6 GHz, B43</p>

Note: Customized versions can be requested.