

# Nova-436Q Outdoor TDD eNodeB



## INTRODUCTION

The BaiCells Nova-436Q is a two-carrier outdoor eNodeB (eNB) that operates using standardized Long-Term Evolution (LTE) Time Division Duplexing (TDD) technology. This advanced 4x1W eNB delivers carrier aggregation (CA) across contiguous and non-contiguous channels, as defined by 3GPP. Each carrier can handle up to 20 MHz bandwidth; therefore, when aggregated the total bandwidth is 40 MHz. With Nova-436Q, you can achieve the capabilities of two eNBs with just one hardware unit. The benefits include increased capacity, better coverage, and less footprint.

Note: Future software for the 436Q will support dual carrier (split) mode, where you can run the eNB as two separate carriers, each with up to 20 MHz bandwidth.

## FEATURES

Note: Features may vary based on model or region.

### Easy Deployment

- Suitable for private and public deployments
- Any IP based backhaul can be used, including public transmission
- Supports GPS synchronization
- Lower power consumption to reduce OPEX
- Plug-and-play with future self-organizing network (SON) capabilities
- IoT with most Evolved Packet Core (EPC) vendors

### Better Performance

- 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 13 standards
- Supports 5/10/15/20 MHz bandwidth on each carrier
- Supports 2 carriers, and will be software upgradeable to split mode and other features
- Excellent non-line-of-sight (NLOS) coverage
- Aggregate peak rate: (up to) DL 220 Mbps, UL 56 Mbps with 2x20 MHz and using all Cat6/7 UEs
- 32 concurrent users; upgradeable to higher capacity in future software releases
- Supports 4-port antenna or 2 antennas with 2 ports

### Easy Management

- GUI-based local and remote Web management
- TR069 network management interface support
- Highly secured with equipment certification against potential intrusion risk

## HARDWARE SPECIFICATIONS

LTE Mode	TDD
Frequency Bands	42/43/48
Channel Bandwidth	5/10/15/20 MHz per carrier
Max Output Power	30 dBm / antenna
Power Supply	+/- 48VDC, AC adaptor (multi-national standards)
Power Consumption	< 60W
Receive Sensitivity	-100 dBm
Synchronization	GPS
Interfaces	1 optical (SFP) and 1 RJ-45 Ethernet interface (1 GE)
MIMO	DL: 2x2 on each carrier
Installation	Pole or wall mount
Antenna	External high-gain antenna (1) 4-port or (2) 2-port
Dimensions (HxWxD)	12.2 x 9.4 x 4.1 inches 310 x 239 x 105 millimeters
Weight	12.1 lbs / 5.5 kgs

## SOFTWARE SPECIFICATIONS

LTE Standard	3GPP Release 13		
Peak Rate (up to)	<b>2x20 MHz:</b>	<u>DL (Mbps)</u>	<u>UL (Mbps)</u>
Rates based on using all Cat6/7 UEs	SA1 :	2x80 (160)	2x28 (56)
	SA2 :	2x110 (220)	2x14 (28)
SA - Special Subframe Assignment (configurable parm)	<b>2x10 MHz:</b>	<u>DL (Mbps)</u>	<u>UL (Mbps)</u>
	SA1 :	2x40 (80)	2x14 (28)
	SA2 :	2x55 (110)	2x7 (14)
User Capacity	32 concurrent Future: 64* and then 96+96*		
QoS Control	3GPP standard Quality of Service Class Identifier (QCI)		
Modulation	DL: QPSK, 16QAM, 64QAM, 256QAM* UL: QPSK, 16QAM, 64QAM		
Traffic Offload	Local IP Access (LIPA) Selected IP Traffic Offload (SIPTO)		
Voice	VoLTE*		

SON	Self-organizing network*: <ul style="list-style-type: none"> <li>• Automatic setup</li> <li>• Automatic Neighbor Relation (ANR)</li> <li>• PCI conflict detection</li> </ul>
RAN Sharing	Supported
Network Mgmt	TR069
MTBF	≥ 150000 hours
MTTR	≤ 1 hour
Maintenance	<ul style="list-style-type: none"> <li>• Local/Remote Web maintenance</li> <li>• Online status management</li> <li>• Performance statistics</li> <li>• Fault management</li> <li>• Local/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>

\*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% RH
Atmospheric Pressure	70 kPa to 106 kPa
Ingress Protection Rating	IP66
Power Interface Lightning Protection	Differential mode: ±10 KA Common mode: ±20 KA

## GLOBAL PART NUMBER

mBS31001	Nova-436Q outdoor TDD eNodeB - LTE Release 13, 4x1W (30 dBm), 4 port, 3.5 GHz (3550-3700 MHz), B42/43/48 <ul style="list-style-type: none"> <li>• FCC certification: 2AG32MBS3100190</li> </ul>
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Notes:

- 1 - Other models available for other regions. Contact [sales\\_na@baicells.com](mailto:sales_na@baicells.com).
- 2 - Customized versions may be requested.