



INTRODUCTION

The Baicells Nova-436Q is an advanced two-carrier outdoor eNodeB (eNB) that is compliant with 3GPP LTE TDD technology. This 4x1W eNB is capable of operating in Carrier Aggregation (CA) mode or Dual Carrier (DC) / split mode.

In CA mode, contiguous or non-contiguous channels are aggregated to provide up to 40 MHz bandwidth. This essentially doubles the downlink capacity when the CA 436Q is used with all CAT6/7 user equipment. In DC mode, each carrier is treated as an independent cell, supporting 32+32 users, and each supporting 5, 10, 15, or 20 MHz bandwidth. Using a Nova-436Q in DC mode simplifies and streamlines the deployment of split sectors.

In addition to having the option to operate Nova-436Q in either CA or DC mode, HaloB (an embedded MME option) comes as a default feature in the base software. Baicells's patented HaloB solution migrates the necessary core network functions to the eNB.

This product comes with a standard product warranty; extended warranty is available.

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
- Integrated small cell form factor for quick and easy installation
- Configured out of the box to work with Baicells CloudCore
- Embedded HaloB ("lite" EPC) solution
- Supports GPS synchronization
- Supports CBRS

- Supports CBRS
- Plug-and-play with self-organizing network (SON) capabilities
- IoT with all mainstream EPC vendors

Better Performance

- Standard LTE TDD Bands 48 and partial 42, 43
 - Customization may be requested; contact sales_na@baicells.com.
- Complies with 3GPP Release 13 standards
- Supports 5/10/15/20 MHz bandwidth per carrier
- Excellent non-line-of-sight (NLOS) coverage
- Aggregate peak rate: (up to) DL 220 Mbps, UL 56 Mbps^b with 2x20 MHz, using all Cat6/7 or higher UEs
- 32 concurrent users per carrier, 32+32 in DC mode; upgradeable to higher capacity in future releases
- Lower power consumption, which reduces OPEX
- Supports 4-port antenna or 2 antennas with 2 ports

Easy Management

- GUI-based local and remote Web management
- TR-069 network management interface support
- Flexible cloud or local NMS/EMS management using Baicells Operations Management Console (OMC)

Flexible Operating Mode Options

- HaloB (embedded "lite" EPC)
- Carrier Aggregation license available
- Dual Carrier license available

HARDWARE SPECIFICATIONS

LTE Mode	TDD
Frequency Bands	48 and partial bands 42, 43
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	~100W (peak)
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	eNB has N-Type connectors and supports external high-gain antenna(s), either (2) 2-port antennas or (1) 4-port antenna
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)	2x20 MHz:	DL (Mbps)	UL (Mbps)
Rates based on using all Cat6/7 or higher UEs	SA1 :	2x80 (160)	2x28 (56)
	SA2 :	2x110 (220)	2x14 (28)
SA - Special Subframe Assignment (configurable parm)	2x10 MHz:	DL (Mbps)	UL (Mbps)
	SA1 :	2x40 (80)	2x14 (28)
	SA2 :	2x55 (110)	2x7 (14)
User Capacity	32 concurrent users 32+32 in DC mode Future software release: 64 and 96		
QoS Control	3GPP standard Quality of Service Class Identifier (QCI)		
Modulation	DL: QPSK, 16QAM, 64QAM, and future software release 256QAM UL: QPSK, 16QAM, 64QAM		
Traffic Offload	Local IP Access (LIPA) Selected IP Traffic Offload (SIPTO)		
Voice	VoLTE (future software release)		

SON	Self-organizing network: <ul style="list-style-type: none"> • Automatic setup • Automatic Neighbor Relation (ANR) • PCI confliction detection
RAN Sharing	Supported
Network Mgmt	TR-069
MTBF	≥ 150000 hours
MTRR	≤ 1 hour
Maintenance	<ul style="list-style-type: none"> • Local/Remote Web maintenance • Online status management • Performance statistics • Fault management • Local/Remote software upgrade • Logging • Connectivity diagnosis • Automatic start and configuration • Alarm reporting • KPI recording • User information tracing • Signaling Trace^a

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-CA	Nova-436Q outdoor TDD eNodeB - LTE Release 13, 4x1W (30 dBm), 4 port, 3.5 GHz (3550-3700 MHz), B42/43/48. Includes Carrier Aggregation. <ul style="list-style-type: none"> • FCC certification: 2AG32MBS31001 • IC certification: 20982-MBS31001
mBS31001-DC	Nova-436Q outdoor TDD eNodeB - LTE Release 13, 4x1W (30 dBm), 4 port, 3.5 GHz (3550-3700 MHz), B42/43/48. Includes Dual Carrier (Split Mode). <ul style="list-style-type: none"> • FCC certification: 2AG32MBS31001 • IC certification: 20982-MBS31001

Notes:

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