



INTRODUCTION

The Baicells Nova-246 eNodeB (eNB) is an advanced two-carrier outdoor Long-Term Evolution (LTE) product that operates in Time Division Duplexing (TDD) mode. This eNB provides users with high-speed broadband wireless access to the Internet using 2*20W output power (2x2 MIMO with 20W output each channel). This eNB is capable of operating in Single Carrier (SC) mode or Dual Carrier (DC) mode, also called split sector mode. DC is a software licensed feature.

In DC mode, each carrier is treated as an independent cell, supporting 96+96 users, and each supporting 5, 10, 15, or 20 MHz bandwidth. Using a Nova-246 in DC mode simplifies and streamlines the deployment of split sectors.

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

FEATURES

Note: Features may vary based on model or region.

- Standard LTE TDD Bands 38/40/41
 - Customization may be requested; contact sales_na@baicells.com
- Complies with 3GPP Release 12 standards

- Support two carriers, and software upgradable to two CC carrier aggregation.
- Supports 5/10/15/20 MHz bandwidth per carrier and their combinations
- GUI-based local and remote Web management
- TR069 network management interface support
- Any IP based backhaul can be used, including public transmission protected by Internet Protocol Security (IPSec)
- Supports external high-gain antenna
- Higher transmission power for extended coverage
- Cloud /Local/Embedded EPC (HaloB) is supported for more convenient and economic deployment.
- Excellent non-line-of-sight (NLOS) coverage performance
- Peak rate (per unit): DL 220 Mbps, UL 28 Mbps @ 2x20 MHz bandwidth
- 96 concurrent users per carrier, 192 total
- IoT with all standard LTE Evolved Packet Core (EPC)
- Lower power consumption to reduce OPEX, can be powered easily by Baicells compact outdoor UPS EPB83521/EPB93531

HARDWARE SPECIFICATIONS

LTE Mode	TDD
Frequency Bands	38/40/41 and customized
Channel Bandwidth	5MHz, 10MHz, 15MHz, 20MHz
	5MHz+5MHz
	10MHz+10MHz, 20MHz +20MHz
	20MHz +10MHz, 20MHz +15MHz
Max Output Power	43 dBm / port
Power Supply	-48V DC, AC adaptor (multi-national standards)
Power Consumption	< 200W
Receive Sensitivity	-102 dBm
Synchronization	GPS, 1588v2
Interfaces	One optical (SFP) and one RJ-45 Ethernet interface (1 GE)
MIMO	DL: 2x2 on each carrier
Installation	Pole or wall mount
Antenna Type	External high-gain antenna compatible with eNB N-Type connectors
Dimensions (HxWxD)	17.3 x 9.5 x 5.5 inches 440 x 240 x 140 millimeters
Weight	26 lbs / 12 kgs
MTBF	≥ 150000 hours
MTTR	≤ 1 hour

SOFTWARE SPECIFICATIONS

LTE Standard	3GPP Release 12		
Peak Rate (up to) in DC mode	2x20 MHz:	DL (Mbps)	UL (Mbps)
	SA0 :	2x50 (100)	2x42 (84)
	SA1 :	2x80 (160)	2x28 (56)
	SA2 :	2x110 (220)	2x14 (28)
	2x10 MHz:	DL (Mbps)	UL (Mbps)
	SA0 :	2x25 (50)	2x21 (42)
SA1 :	2x40 (80)	2x14 (28)	
SA2 :	2x55 (110)	2x7 (14)	

User Capacity	96 concurrent users in single carrier mode 96+96 concurrent users in DC mode
QoS Control	3GPP standard QCI
Modulation	DL: QPSK, 16QAM, 64QAM UL: QPSK, 16QAM, 64QAM
Voice	VoLTE, Circuit Switched Fallback (CSFB)
Traffic Offload	Local breakout
SON	Self-organizing network: <ul style="list-style-type: none"> • Automatic setup • Automatic Neighbor Relation (ANR) • PCI confliction detection
RAN Sharing	Multi-Operator Core Network (MOCN)
Network Management	TR069
Spectrum Scanning	Supported
UL Interference Detection	Supported
Maintenance	<ul style="list-style-type: none"> • Remote or local maintenance • Online status management • Performance statistics • Fault management • Local or remote software upgrade • Logging • Connectivity diagnosis • Automatic start and configuration • Alarm reporting • KPI reporting • User information tracing • Signaling trace

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 Common mode: ±20 KA

GLOBAL PART NUMBER

sBS81060 (G)	Nova-246 outdoor TDD eNodeB - LTE Release 12, 2x20W (43 dBm), 2 port, 2570MHz-2620MHz, B38
sBS81000 (G)	Nova-246 outdoor TDD eNodeB - LTE Release 12, 2x20W (43 dBm), 2 port, 2300MHz-2400MHz, B40
sBS81040 (G)	Nova-246 outdoor TDD eNodeB - LTE Release 12, 2x20W (43 dBm), 2 port, 2496MHz-2690MHz, B41 <ul style="list-style-type: none">FCC certification: 2AG32SBS81040

Note: Customized versions may be requested.