

# Nova 1WG1 (Nova-233) Outdoor TDD eNB



## INTRODUCTION

The Baicells Nova 1W Generation 1 (Nova-233) series eNodeBs are a type of outdoor 2\*1Watt micro base station. Nova 1W eNB supports wired backhaul connections to backbone LTE networks, providing wireless access for user terminals to implement voice and data service transmissions. Nova 1W eNBs support TDD-LTE frequencies and a private network frequency.

The Nova eNB makes use of the current LTE transmission resources to reduce the operator's investment with low-cost, enhanced outdoor coverage. This solution can be used widely by telecom operators, broadband operators, and enterprises to promote the user experience in residential and commercial settings.

For private networks, the Nova 1W eNB can be used widely in governments, public security, transportation, petroleum, electricity, forestry, water conservancy, coal mining, and other areas requiring wireless broadband coverage.

## FEATURES

- Standard LTE TDD mode for bands 38, 40, 41, 42, 48, and customized frequencies
- Compact design suitable for public and private deployments
- Any IP based backhaul can be used, including public transmission
- Lower power consumption to reduce OPEX
- Plug-and-play with SON capabilities
- IoT with most EPC vendors
- Excellent NLOS coverage performance
- Peak rate 110 Mbps DL, 14 Mbps UL with 20 MHz spectrum
- Supports eGW for S1 aggregation to reduce signaling load of MME, and local traffic offload and charging with both integrated LGW and eGW
- 5 / 10 / 15 / 20 MHz bandwidth operation
- Local and Web based GUI interface; intuitive network management through BaiOMC

## HARDWARE SPECIFICATIONS

LTE Mode	TDD
Frequency Bands	38 / 40 / 41 / 42 / 48 and customized
Channel Bandwidth	5 / 10 / 15 / 20 MHz
Max Output Power	30 dBm / antenna
Receive Sensitivity	<ul style="list-style-type: none"> <li>-100 dBm @ bands 42/48</li> <li>-101 dBm @ bands 38/41</li> <li>-102 dBm @ band 40</li> </ul>
Synchronization Mode	• GPS • 1588v2
Backhaul Mode	1 RJ-45 Ethernet interface (1 GE)
MIMO	DL: 2x2
Dimensions	13 in (H) x 8.7 in (W) x 4.1 in (D) 330 mm (H) * 220 mm (W) * 105 mm (D)
Installation Method	Pole or wall mounted
Antenna	External high-gain antenna
Power Consumption	< 45W
Power	48V DC, AC adaptor (multi-national standards)
Weight	About 11 lbs (5 kgs)

Note 1: - Different models support different frequencies

Note 2: The test method of receiving sensitivity is proposed by the 3GPP TS 36.104, which is based on 5 MHz bandwidth, FRC A1-3 in Annex A.1 (QPSK, R=1/3, 25RB) standard.

## ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-40°F to 131°F / -40°C to 55°C
Storage Temperature	-45°F to 158°F / -45°C to 70°C
Humidity	5% to 95%
Atmospheric Pressure	70 kPa to 106 kPa
IP Protection Rating	IP66
Power Interface	• Differential mode: ±10 KA
Lightning Protection	• Common mode: ±20 KA

## ADDITIONAL INFORMATION

Filter Range	Model	Description
2496-2690 MHz	mBS1142	Band 41
2570-2620 MHz	mBS1140	Band 38
3400-3600 MHz	mBS1110	Band 40
3400-3600 MHz	mBS1101	Band 42
3550-3700 MHz	mBS1100	Band 48

## SOFTWARE SPECIFICATIONS

LTE Standard	TDD 3GPP Release 9
Peak Rate	<ul style="list-style-type: none"> <li>20 MHz: <ul style="list-style-type: none"> <li>- SA1: DL 80 Mbps, UL 14 Mbps</li> <li>- SA2: DL 110 Mbps, UL 14 Mbps</li> </ul> </li> <li>10 MHz: <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> </li> </ul>
Business Capacity	96 concurrent users
QoS Control	3GPP standard QCI
Modulation	<ul style="list-style-type: none"> <li>UL: QPSK, 16QAM, 64QAM</li> <li>DL: QPSK, 16QAM, 64QAM</li> </ul>
Voice Solution	CSFB, VoLTE, eSRVCC
Traffic Offload	<ul style="list-style-type: none"> <li>Local IP Access (LIPA)</li> <li>Selected IP Traffic Offload (SIPTO)</li> </ul>
SON	<ul style="list-style-type: none"> <li>Automatic setup</li> <li>Automatic Neighbor Relation (ANR)</li> <li>PCI confliction detection</li> </ul>
Spectrum Scanning	Supported
UL Interference Detection	Supported
RAN Sharing	Supported
Network Management Interface	TR069 interface protocol
MTBF	≥ 150000 hours
MTTR	≤ 1 hour
Maintenance	Remote/local maintenance
	Online status management
	Performance statistics
	Fault management
	Local or remote software upgrade
	Logging
	Connectivity diagnosis
	Automatic start and configuration
	Alarm reporting
	KPI recording
User information tracing	
Signaling trace	