Nova-233 G2 Outdoor FDD/TDD eNB

INTRODUCTION

This Baicells Nova-233 generation 2 (G2) eNodeB is an outdoor LTE FDD/TDD base station with 2*1W output power (2x2 MIMO with 1W output each channel). The unit is compact, lightweight, and easy to deploy.

The second-generation Nova-233 incorporates a vast set of enhancements requested by customers, such as SFP, port rearrangement for easier weatherproofing, lower weight, and even improved mounting hardware.

FEATURES

- Standard LTE network modes:
  - FDD bands 1/3/5/7/13/28A
  - TDD bands 38/39/40/41/42/43/48 and customized
- Peak rate (20 MHz):
  - FDD: 150 Mbps DL, 50 Mbps UL
  - TDD: 112 Mbps DL, 20 Mbps UL
- Max 255 (FDD) and 96 (TDD) concurrent users
- Supports 5/10/15/20 MHz bandwidth operation
- Super slim, beautiful design suitable for private and public 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

HARDWARE SPECIFICATIONS

LTE Mode	FDD/TDD
Frequency Bands	FDD: Bands 1/3/5/7/13/28A TDD: Bands 38/39/40/41/42/43/48 and customized
Channel Bandwidth	FDD Bands 1/3/7: 5/10/15/20 MHz FDD Bands 5/13/28A: 5/10 MHz TDD: 5/10/15/20 MHz
Max Output Power	30 dBm / antenna
Receive Sensitivity	FDD Band 7: -100 dBm FDD Bands 1/3: -101 dBm FDD Bands 5/13/28A: -102 dBm TDD Bands 42/43/48: -100 dBm TDD Bands 38/39/40/41: -101 dBm
Synchronization Mode	• Network listening (FDD only) • GPS • 1588v2 (TDD only)
Backhaul Mode	One optical and one RJ-45 Ethernet interface (1 GE)
MIMO	DL: 2*2

Interfaces	1 optical (SFP) port and 1 RJ-45 Ethernet Interface (1 GE)
Dimensions (HxWxD)	FDD: 13.7 x 9.6 x 3 Inches 345 x 245 x 77 millimeters TDD: 8.9 x 12 x 2.9 inches 227 x 305 x 74 millimeters
Installation Method	Pole or wall mount
Antenna	External high-gain antenna
Power Consumption	FDD: < 70W TDD: < 45W
Power Supply	+/- 48V DC, AC adaptor (multi-national standards)
Weight	FDD: 12.8 lbs (5.8 kg) TDD: 9.7 lbs (4.4 kg)

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.

SOFTWARE SPECIFICATIONS

LTE Standard	3GPP Release 9	
Peak Rate	FDD	20 MHz: DL 150 Mbps, UL 50 Mbps 10 MHz: DL 75 Mbps, UL 25 Mbps
	TDD	• 20 MHz: SA1: DL 80 Mbps, UL 20 Mbps SA2: DL 112 Mbps, UL 14 Mbps • 10 MHz: SA1: DL 40 Mbps, UL 14 Mbps SA2: DL 55 Mbps, UL 7 Mbps
User Capacity	Maximum 255 (FDD) and 96 (TDD) concurrent users	
QoS Control	3GPP standard QCI	
Modulation	FDD UL: QPSK, 16QAM FDD DL: QPSK, 16QAM, 64QAM TDD UL: QPSK, 16QAM, 64QAM TDD DL: QPSK, 16QAM, 64QAM	
Voice Solution	CSFB, VoLTE, eSRVCC	
Traffic Offload	Local IP Access (LIPA) Selected IP Traffic Offload (SIPTO)	
SON	Self-Organizing Network • Automatic setup • Automatic Neighbor Relation (ANR) • PCI confliction detection	
Spectrum Scanning (TDD)	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 (TDD)

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

mBS1105	Nova-233 1W Gen 2 eNB Bands 42/43