Nova-436 Outdoor TDD Base Station

INTRODUCTION

The Nova-436 is our next generation of LTE base stations. In addition to the Baicells price:performance you've come to expect, these advanced base stations deliver carrier aggregation, even across discontiguous channels or may be used to "split sector," for maximum footprint and capacity in one package. And, unlike competitive products, each carrier can have as high as 20 MHz of independent channel width. Like all Baicells eNBs, the Nova-436 is lightweight, draws low wattage, and can be plug-and-play.

FEATURES

Easy Deployment

- Super slim and beautiful design, suitable for private and public deployments.
- Any IP based backhaul can be used, including public transmission.
- Multiple choices for synchronization: GPS, air interface listening (intra/inter-frequency), 1588 v2
- Low power consumption; can be integrated conveniently with solar power.
- Plug-and-Play with self-organizing network (SON) capabilities.

Better Performance

- Nova-436 supports 2 component carrier aggregation (CCA), which can double the data rate
- Maximum aggregate peak rate of 224 Mbps DL
- Excellent non-line-of-sight (NLOS) coverage performance.
- 96 concurrent users per sector.
- Up to two 2x2 high-gain antennas can be used
- Supports emergency gateway (eGW) option for S1 aggregation to reduce the signaling load of the Mobility Management Entity (MME).
- Supports local traffic offload and charging in cooperation with eGW, and with both integrated local gateway service (LGS) and external eGW.
- Supports 2*10 MHz / 2*20 MHz operation bandwidth

Easy Management

- Efficient, remote configuration, monitoring, and maintenance operations with Baicells network management system (NMS), called the Baicells Operations Management Console (BaiOMC).
- Highly secured with equipment certification against potential intrusion risk.

Smooth Evolution

- Continuous research and development to bring additional features through software upgrades.
- Designed for smooth evolution to cloud-based radio access network (C-RAN) architecture using the Baicells central network unit (CNU) to support centralized scheduling for better networking performance.

HARDWARE SPECIFICATIONS

LTE Mode	TDD
Frequency Bands	3550 to 3700 MHz
Channel Bandwidth	2*10 / 2*20 MHz
Output Power	Nova-436: 36 dBm (30 dBm per antenna), 4*1W
Receiving Sensitivity	-100 dBm
Synchronization Mode	Air interface listening GPS synchronization 1588v2 PTP
Backhaul Mode	Copper (RJ-45) and optical fiber Ethernet
MIMO	2*2
Dimensions	Nova-436: 12 (H) x 8.3 (W) x 3.7 (D) inches, 300 (H) x 210 (W) x 95 (D) mm
Installation Method	Pole mounted, wall mounted
Antenna	External, N-type female
Overall Power	Nova-436: < 85W
Power	+/- 48V DC (-36V to -60V), 100V to 277V, AC adaptor (multi-national standards)
Weight	Nova-436: About 13 lbs (6.0 kg)

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-40°F to 131°F / -40°C ~ 55°C
Humidity	5%~95% RH
Atmospheric Pressure	70 kPa to 106 kPa
IP Protection Grade	IP65
Lightning Protection	Differential mode: ±10 KA Common mode: ±20 KA

SOFTWARE SPECIFICATIONS

LTE Standard	3GPP Release 12
Maximum Throughput	Channel bandwidth 20MHz ▪ TDD1: DL 82 Mbps; UL 20 Mbps (per carrier) ▪ TDD2: DL 112 Mbps; UL 10 Mbps (per carrier) Channel bandwidth 10MHz ▪ TDD1: DL 40 Mbps; UL 10 Mbps (per carrier) ▪ TDD2: DL 55 Mbps; UL 5 Mbps (per carrier)
Business Capacity	96 users per sector
QoS Control	3GPP standard Quality of Service Class Identifier (QCI)
Modulation Mode	UL: QPSK, 16QAM, 64QAM DL: QPSK, 16QAM, 64QAM
Voice Solution	CSFB, VoLTE, SRVCC
Traffic Offload	Local IP Access (LIPA) Selected IP Traffic Offload (SIPTO)
SON	Automatic setup Automatic Neighbor-cell Recognition (ANR) PCI confliction detection
RAN Sharing	Supported
Network Management Interface	TR069 interface protocol
MTBF	≥ 50000 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