



## INTRODUCTION

Operators who hope to provide better wireless service in places with dense user populations, such as subways, airports, enterprise buildings, exhibition centers, shopping malls, gymnasiums, and hotels, are sometimes limited by the cost to rewire and make other investments in structures or infrastructures. Baicells introduces the NeutralCell multi-frequency (LTE FDD and TDD) small cell wireless broadband access solution.

NeutralCell meets the requirements of different operators' communication systems by working with a variety of frequency bands and transmit power levels. Such flexibility accommodates mixed service portfolios and use cases by operators worldwide.

Neutral host service providers can attach NeutralCells to construction sites and provide the public wireless service to various operators by renting the stations to them. With the equipment already in place, it helps operators to resolve the need to deploy special sites quickly (e.g, for special events), and saves on the building and operation costs that would otherwise be incurred by each individual operator. The commercial use of neutral hosts undoubtedly creates a sustainable and win-win opportunity for operators and neutral host service providers.

## FEATURES

- Integrated design of baseband and RF
- Standards-based 3GPP TDD/FDD technology that provides high-speed data service
- Supports up to 3 bands/operators plus Wi-Fi simultaneously
- Single LTE module support for 5 MHz, 10 MHz, 15 MHz, and 20 MHz bandwidth
- Portable, plug-and-play, flexible deployments
- Ethernet backhaul, and PoE and DC adaptor power supplies
- Quick, easy LTE network integration to realize accurate coverage and improve network capacity
- Built-in high-gain antenna with optional connector for external varied-gain antenna
- Built-in DHCP server, DNS client, and NAT functionality to provide strong, high-speed routing capabilities
- Rich security services to provide timely protection against potential security risks and illegal intrusion
- Convenient and simple local and remote Web management GUI
- Network management functions for configuring, managing, monitoring, and maintaining the network
- User-friendly LED indicators

## HARDWARE SPECIFICATIONS

LTE Mode	TDD/FDD
Frequency Bands	FDD: 1/2/3/4/5/7/8/12/13/17/20/28 TDD: 34/38/40/41/42/48
Channel Bandwidth	5 / 10 / 15 / 20 MHz
Output Power	24 dBm $\pm$ 2 dB per module, for up to 3 modules
Receive sensitivity	-103 dBm @ 20 MHz
Synchronization Mode	GPS, NTP, air-interface synchronization (same or different frequency)
Backhaul Mode	Ethernet
MIMO	2*2 MIMO per module
Wi-Fi	802.11 a/b/g/n/ac (2.4 GHz / 5 GHz)
Dimensions (HxWxD)	10.2 x 10.2 x 2.4 inches 260 x 260 x 60 millimeters
Installation Methods	Desktop, pole or wall mount
Antenna	Built-in omni antenna (Wi-Fi only)
Max Power Consumption	< 40W
Power	220V AC to 12V DC, AC adaptor POE non-standard
Weight	3.3 lbs / 1.5 kg

## SOFTWARE SPECIFICATIONS

LTE Standard	TDD 3GPP Release 9		
Peak Rate	FDD	20 MHz	DL: 150 Mbps UL: 75 Mbps
		10 MHz	DL: 75 Mbps UL: 30 Mbps
	TDD	20 MHz	SA1: DL: 80 Mbps UL: 20 Mbps
			SA2: DL: 110 Mbps UL: 10 Mbps
		10 MHz	SA1: DL: 40 Mbps UL: 7 Mbps
			SA2: DL: 55 Mbps UL: 5 Mbps
User Capacity	32 concurrent users for each operator (single module), totaling 96 concurrent		
Scheduling Mode	Based on QoS scheduling		

Modulation	QPSK, 16QAM, 64QAM
Voice Solution	CSFB, VoLTE, SRVCC
Traffic Offload	Local IP Access (LIPA) Selected IP Traffic Offload (SIPTO)
SON	Self-Organizing Network: Supports plug-and-play, automatic start, optimization, and configuration
RAN Sharing	Supported
Network Management Interface	TR069 interface protocol
Southbound Interface	Web service, socket, FTP, and other interface modes
MTBF	$\geq$ 150000 hours
MTTR	$\leq$ 1 hour
Maintenance	Remote/local maintenance, based on SSH protocol Remote maintenance Online status management Performance statistics Fault management Configuration management Local or remote software upgrades, loading Logging Connectivity diagnosis Automatic start and configuration Alarm reporting

## ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	23°F to 104°F / -5°C to 40°C
Humidity	15% to 85%
Atmospheric Pressure	86 kPa to 106 kPa