

LTE Private Base Station Outdoor High-Efficiency

GP-PBS1000-LTE Series



Introduction

GP-PBS1000-LTE Series is a high-performance, industrial-grade LTE FDD private base station designed for outdoor deployment. It supports multiple frequency bands and flexible bandwidths (5/10/15/20 MHz), with downlink speeds up to 195 Mbps and uplink up to 71 Mbps. The device integrates high-gain antenna support, GPS sync, IP backhaul, and SON features for plug-and-play deployment.

GP-PBS1000-LTE Series complies with IP67 waterproof and dustproof standards, and is tested for operating temperature, surge protection, voltage input, and vibration resistance. It is ideal for industrial private wireless networks in sectors such as oil & gas, mining, metallurgy, power, transportation, emergency response, and smart industrial parks.

Network Feature

- Support LTE : B1/B3/B5/B7/B8/B20/B28
- Support bandwidth: 5/10/15/20 MHz
- Max data rate: 195 Mbps DL at 20 MHz
- Max data rate: 71 Mbps UL at 20 MHz
- Up to 1024 RRC connected users
- Provides excellent NLOS coverage
- Support S1 interface aggregation
- Support local traffic offload with eGW for user billing

Easy Deployment

- Support external high-gain antennas
- High transmit power for wider coverage
- IP backhaul including public transmission
- GPS synchronization supported
- Low power consumption, reduces OPEX
- SON-based plug-and-play
- Interoperable with standard EPC

Management & Security

- GUI-based local and remote management
- Compatible with NMS for unified configuration, monitoring, and maintenance
- Supports TR-069 protocol for third-party network management integration
- Enhanced security with advanced authentication to prevent external attacks
- Support remote software upgrades for feature expansion and performance optimization

Software Parameters

Protocol compliance	3GPP Release 10
Maximum throughput	20MHz: Downlink19Mbps/Uplink 71Mbps 10MHz: Downlink97.5Mbps/Uplink31Mbps
Service capability	1024 RRC Connect Users
QoS control	3GPP Standard QCI
Modulation scheme	MCS0(QPSK)toMCS27(256QAM) DL:QPSK,16QAM,64QAM,256QAM UL:QPSK,16QAM,64QAM
EVM (Error Vector Magnitude)	QPSK<5% 16QAM<5% 64QAM<5% 256QAM<3.5%
Voice solution	VoLTE、CSFB
Traffic offloading	Local offload
SON (Self-Organizing Network)	Self-configuration, ANR, PCI conflict detection
Embedded EPC	HaloB
Cascading	HaloD
Cell interference detection	Support
RAN sharing	MOCN
Network management interface	TR069
Operation and maintenance	Supports remote/local maintenance via SSH protocol
	Supports online status management
	Supports performance statistics
	Supports fault management
	Supports configuration management
	Supports local/remote software upgrade and loading
	Supports logging
	Supports connectivity diagnostics
	Supports auto-start and self-configuration at boot
	Supports alarm reporting
	Supports user information tracking
	Supports signaling tracing

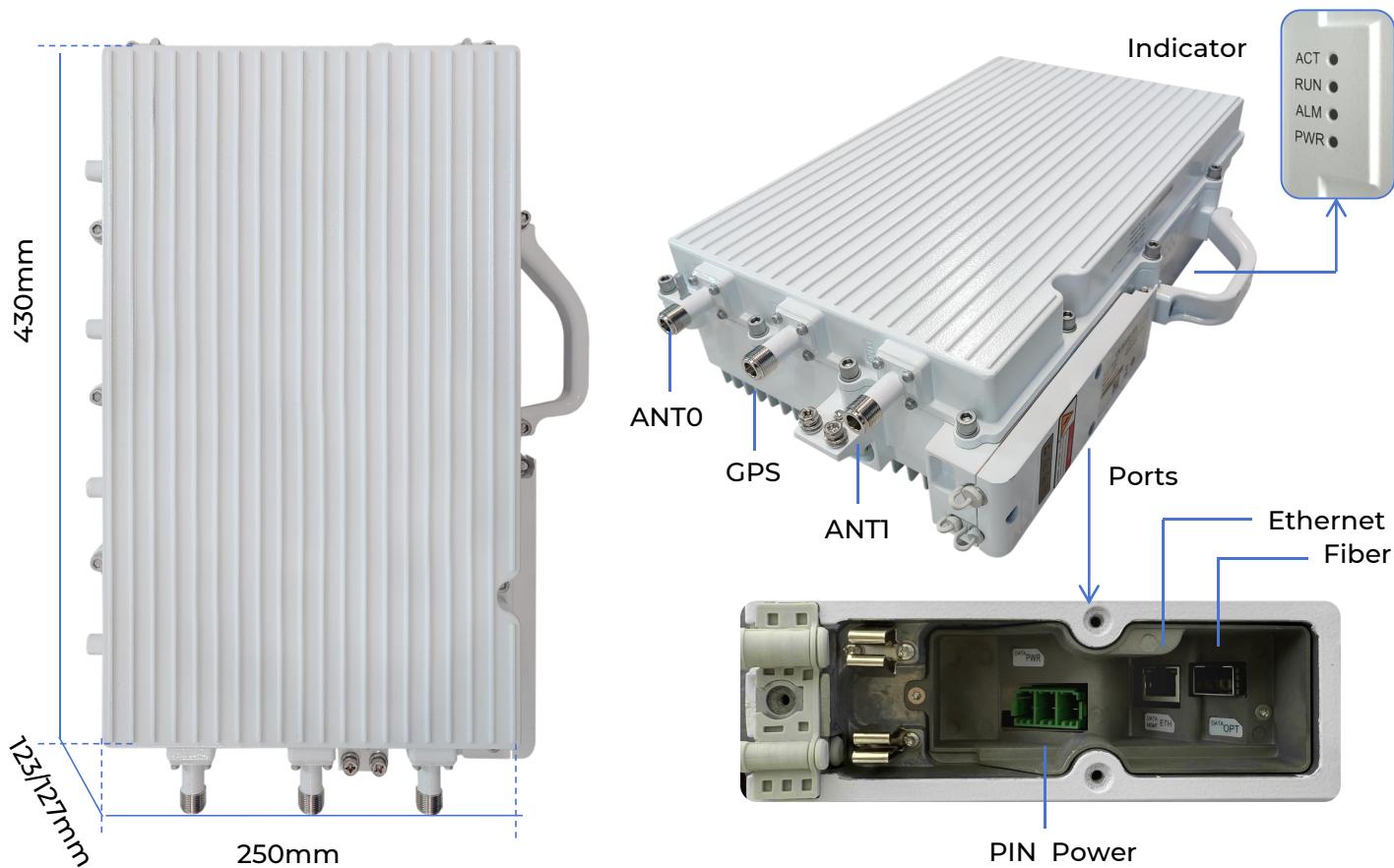
Hardware Parameters

Operating mode	FDD
Operating frequency band ^a	1/3/5/7/8/20/28 (Support customizable bands)
Operating bandwidth	Band1/3/7/20/28: 5/10/15/20 MHz ; Band5/8: 5/10 MHz
Transmit power	0dBm ~ 49dBm (Adjustable)
Receive sensitivity ^b	-102 dBm
Synchronization method	GPS
Interface	1* SFP Port + 1*1GE RJ45 Ethernet
Dimensions	Band 1/3/7: 430 mm (H) x 250 mm (W) x 123 mm (D) (excluding connectors/handle) 457 mm (H) x 276 mm (W) x 123 mm (D) (including connectors/handle) Band 5/8/20/28: 430 mm (H) x 250 mm (W) x 127 mm (D) (excluding connectors/handle) 457 mm (H) x 276 mm (W) x 127 mm (D) (including connectors/handle)
Weight	Approximately 11.8 kg (including pre-installed bracket) Approximately 11.45 kg (excluding pre-installed bracket)
Installation method	Pole or wall mounting
Antenna type	External high-gain antenna
Power consumption	Typical power consumption < 200W, rated power consumption < 300W
LED indicator	4 LED status indicators: PWR / RUN / ACT / ALM
Power Supply	40VDC ~ 57VDC, nominal 48VDC
Operating Temperature	-40°C to 55°C
Storage Temperature	-45°C to 70°C
Humidity	Humidity: 0%–95% (non-condensing)
IP protection rating	IP67
Air pressure	70 kPa ~ 106 kPa
Power interface lightning protection	Differential mode: ± 10 kA Common mode: ± 20 kA
MTBF	≥ 150000 Hour
MTTR	≤ 1 Hour
Frequency stability	$\pm (0.05\text{PPM}+12\text{Hz})$
Adjacent channel selectivity	3GPP TS36.104
ACLR	3GPP TS36.104

a: Different models support different frequency bands.

b: Receive sensitivity is measured according to the testing method recommended by 3GPP TS 36.104, based on a 5 MHz bandwidth and receive sensitivity measured for FRC A1-3 in Annex A.1 (QPSK, R=1/3, 25RB) standard.

Appearance & Accessories



Packing *1



Device*1



PIN Power cable*1



Accessories*1



Manual*1

Model Selection

Model	GP-PBS1000-LTE	For other options, please contact GPSENKE!
Working Mode	FDD	
Working Band	1/3/5/7/8/20/28	
Antenna	External high-gain antenna	
Power	DC48V	

INDUSTRIAL NETWORK SOLUTION SPECIALIST



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