WIXB-100

802.16d Pico Base Station

(Antenna Excluded)

The WIXB-100 Pico Base Station is designed as one part of BrickOne Solution, independent from landline infrastructure limits, specifically covering last mile, bridging, point-to-multi-point, even backhauling for mobile cellular networks. WIXB-100 is suitable for the transmission of multimedia services (voice, Internet, email, games and others) at high data rates.

Compliant to the state-of-the-art 802.16d standard

IEEE 802.16d is a key enabling technology of BWA system, which provides high-rate, long range transmission and widely wireless coverage. Based on the IEEE 802.16 specification, WIXB-100 is optimized and designed for fixed BWA system to support multiple services and increase the capacity with guaranteed QoS.

Industry-leading RF design with adaptive modulation and coding technology

WIXB-100 supports adaptive modulation and coding in both downlink and uplink and dynamically assign modulation schemes in established link, depending on channel condition and distance. It significantly increases the system overall capacity, maximizes the throughput and extends effective range.

Utilize 5.8GHz unlicensed band

Operating over 5.8GHz unlicensed band, WIXB-100 can be rapidly deployed around the world without licensing expensive spectrum fee to reach possibly the lowest Total-Cost-of-Ownership (TCO).

Connection-oriented QoS

Quality of the wireless channel is randomly changes with time, and typically different for a variety of applications, including voice, video and multimedia services. WIXB-100 implements connection-oriented architecture that is able to support multiple connections, each with its own QoS requirement.

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Advanced traffic scheduling

WIXB-100 supports four types of traffic scheduling flow, defined in IEEE 802.16, which resolves contention for bandwidth, determines the transmission order of each packet and offers fairness amongst service classes and bandwidth utilization.

Efficient channel bandwidth allocation

Wireless bandwidth is usually a scarce resource that needs to be used efficiently. WIXB-100 offers several channel bandwidth settings ranging from 5MHz to 20MHz, flexible for the increase of user connection, without wasting channel bandwidth.

Non-Line-of-Sight (NLOS) coverage

In addition to the support of various channel bandwidths and adaptive modulation and coding, WIXB-100 also supports advanced antenna technology to provide good non-line-of-sight (NLOS) characteristics, making wireless connection more stable and reliable.

Integrated all-in-one compact design

WIXB-100 integrates control unit and RF unit altogether within a compact enclosure. It eliminates the installation efforts and makes devices easy to maintenance.

IP68 weather-proof system for outdoor environment

Designed specifically with industrial grade components and IP68 weather-proof enclosure, WIXB-100 is able to operate under harsh condition, like humid, water splash and dust environment.

WIXB-100 is suitable for the following fixed deployment applications:

- Last-mile high-speed broadband connections (SMB, Residential and SOHO)
- Cost-effective building-to-building connectivity (PtP, PtMP)
- Broadband access extension in licensed and/or unlicensed bands to suburban, rural, off-shore areas
- Backhaul applications for mobile networks
- Private network or proprietary applications for police or military as far as security is concerned
- Disaster recovery, mobile emergency station or distant health-care
- Video surveillance

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General Specifications

Model Name	WIXB-100
Standard	IEEE802.16-2004
Radio	
RF Power	+17 dBm (typical)
Frequency Band	5.725~5.850GHz
Channel Bandwidth	5MHz/ 10MHz/ 20MHz
Transmission Scheme	256 FFT OFDM
Modulation	BPSK, QPSK, 16QAM, 64QAM
Duplexing	TDD
Throughput	Up to 70 Mbps @ 20MHz
Coverage	Non-Line-of-Sight
External Antenna	N-type connector for external antenna
Networking	
Network connection	10/100Base-T Ethernet RJ-45
IP	Static IP for management
Bridge mode	Transparent bridge
Filter	MAC and IP-based
BS Learning	MAC learning policy
MAC	
Scheduling	UGS, rtPS, nrtPS, BE
QoS	Compliant to IEEE802.16-2004
Access	TDMA, UL/DL split
Security	
Device Authentication	PKMv1/ X.509
Wireless encryption	DES/AES
Management	
Remote Management	SNMPv1/v2, standard MIB and private MIB WEB HTTP
Log	System log and specific module log
Upgrade	LAN, over-the-air
Other	
Power consumption	18 W (maximum)

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Power requirement	Power-over-Ethernet 48VDC Power adapter 100~240VAC/ 0.95A
Dimension	230×230×65(mm)
Weight	2.5 kg
Operating temperature	-30℃~ 70℃
Operating humidity	0~95%
Enclosure	Water-proof, IP68
Type Approval	FCC, CE, SRRC, ITU-T K.21 (Lightening) RoHS

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