

PureWave Quantum 1000

Compact Mobile WiMAX Base Station

Making Mobile WiMAX Profitable

PureWave Quantum 1000 is a carrier-grade, outdoor 802.16e compliant compact base station that delivers macro base station performance in a pico base station package.

Superior Range, Greater Capacity, Lower Total Cost Of Ownership

The PureWave Quantum 1000 is a compact Mobile WiMAX base station that delivers a superior business model to the operator. Based on PureWave Smart Antenna Technology, The PureWave Quantum 1000 utilizes up to 4 antennas to greatly improve receive sensitivity, thereby extending the base station range and capacity.

The PureWave Quantum 1000 is an affordable base station that comes in a fully-integrated, small, elegant, yet rugged package. It is designed for full outdoor deployments without the need for a shelter and can be easily deployed virtually anywhere; on utility poles, walls, rooftops, cell towers, without the need for expensive remote RF heads.

The PureWave Quantum 1000 offers operators the flexibility of deploying it in conjunction with an ASN-GW or in a stand-alone configuration, with no ASN-GW. This ability makes even small WiMAX deployments profitable.

PureWave Quantum base stations operate as part of an open, standards based eco-system that allows our customers to choose best-of-breed components; from CPEs to ASN-GW. The PureWave Quantum Software Defined Radio (SDR) architecture allows operators to upgrade their networks by means of over-the-air software updates. As new standards emerge and new functionality becomes available, operators are assured of long term investment protection.





SUPERIOR RANGE

The 4 antenna system increases range in uplink-limited scenarios by substantially improving the receive performance of the system.

LESS POWER CONSUMPTION

Requires as little as 65 watts, significantly lowering operating costs and carbon footprint.

ASN-GW OPTIONAL

Can operate in stand-alone mode, without an ASN-GW, making even small deployments economical.

GREATER CAPACITY

Improved link performance increases throughput at any range.

FLEXIBLE MOUNTING

Can be deployed on towers, utility poles, walls, roof tops, etc. without the need for remote RF heads.

COMPLETELY WEATHERPROOF

No shelter required.

SOFTWARE DEFINED RADIO

Supports over-the-air, field upgrades of new functionalities and standards.

Specifications

General

Standards Compliance
IEEE 802.16e-2005

Frequency Bands
2.3-2.7 GHz, 3.3-3.7 GHz
(subject to regional regulations)

Channel Size
3.5*, 5, 7*, 10 MHz

Duplex Method
TDD

Number of Tx/Rx Antennas
2x2, 2x4

Tx Power per Antenna
33 dBm

Smart Antenna Techniques
MIMO A, MIMO B Uplink
Beamforming, *Uplink SDMA

Simultaneous Connections
(subject to regional regulations)
200+

QoS
BE, UGS, rtPS, ErtPS, nrtPS

Convergence Sublayer
Ethernet_CS, IP_CS, *IPv6,
Multi Host CPE,
IPv4, IPv6 pass through

Security
EAP Authentication and Encryption

Traffic Classification
Layer 2 IEEE 802.1p, 802.1Q, IP
DiffServ

Backhaul Interconnect
2 x GigE RJ-45, Inter-sector daisy-
chain support

Inter BS Synchronization
GPS

Throughput

Peak Throughput / Sector
DL: up to 40 Mbps; UL: up to 23 Mbps

• TCP/IP Application-Layer "goodput"
typically 15-20% lower.

• CPEs may not support all modulations
or throughputs.

Networking

Data
IEEE 802.3 CSMA/CD

Management
Remote CLI, Standard SNMP v2c, *v3

Mechanical, Electrical, and Environmental

Dimensions
24.6" (H) x 17.4" (W) x 4.5" (D)
62.5 cm (H) x 44.2 cm (W) x 11.4 cm (D)

Weight
23 pounds

Power
-48 VDC, 65 Watts

Temperature
-33 to +55 degrees C

Humidity
5 to 95% non-condensing

Surge Protection
UL497B

Lightning Protection
10kA IEC 6100-4-5
(*optional via external kit)

Weatherproofing
IP67

Power Cable

Cable Type
4 conductor 14-18AWG gauge
copper wire (2 power, 2 return)

Connector
Tyco 796095-2

Grounding
Bulkhead mounting screw

System Antenna

Connector
N-Type Female

GPS Antenna (Provided)

Connector
SMA, 50 ohms

Ethernet

Connector
RJ-45 Ethernet 568-B Straight
Connection

RS-232

Connector
RJ-45

*Future software upgrade

About PureWave Networks

PureWave Networks develops high performance, compact outdoor WiMAX base stations. It is the only company that utilizes advanced beamforming technology to achieve the coverage and capacity of a macro base station in a small form factor that can be deployed anywhere.

The PureWave Networks Quantum family of WiMAX base stations offer an open end-to-end solution that also allows customers to select components from the broad WiMAX ecosystem in building their networks. Our solutions are designed for any type of operator, from small WISPs to large mobile service providers. PureWave provides customers the lowest total cost of ownership in the industry through superior performance, ease of installation, dramatically lower equipment and operational cost, and minimal power consumption. PureWave Networks is headquartered in Mountain View, California. www.purewavenetworks.com

PureWave Networks, Inc., 2660-C Marine Way Mountain View CA 94043, Tel. 650-528-5200, Fax. 650-528-5222, sales@purewavenetworks.com

PureWave Networks, the PureWave Networks Logo, and PureMax are trademarks of PureWave Networks, Inc. Information in this document is subject to change without notice. PureWave Networks assumes no responsibility for any errors that may appear in this document. Copyright © 2009 PureWave Networks, Inc. All rights reserved.