

## Solution to Suit Any Subscriber Environment

The PacketMAX 300 series subscriber unit provides an intelligence and performance that meet the needs of large business and enterprises.



### PacketMAX 320

PacketMAX 320, part of the PacketMAX 300 series subscriber units from Aperto, permits service providers to effectively serve the most demanding segment of the WiMAX user base, large businesses and enterprises. With the PacketMAX 320, performance meets intelligence – a single system can support over 1000 tiered-service subscribers for multi-megabit applications like VoIP, multimedia, and web downloads. Subscribers can enjoy individual service flows for differentiated high-speed services to thousands of simultaneously connected users.

PacketMAX 320 operates in licensed and license-exempt WiMAX bands: 2 GHz, 3 GHz and 5 GHz. In the “lightly-licensed” US 3.65 GHz band and 5 GHz band – “license free” in many countries – these units make the business case highly attractive. The IEEE 802.16-204 standard compliant PacketMAX 320 leverages Aperto’s heritage as a WiMAX technology leader to go beyond the specifications to deliver superior link performance, unsurpassed quality of service, and the broadest range of networking features for an optimized WiMAX deployment. Intuitive to provision, install, and manage, the PacketMAX 320 is designed to help business subscribers reap the benefits of lower cost, broadband wireless access without the complication and expense of leased wire line service.

PacketMAX 320 provides wireless operators with the reliable performance needed to honor service level agreements required by the most demanding business customers and the capacity needed to support multidwelling residential customers. The choice of capabilities include: bridging, VLAN, Layer 2, 3, and 4 classification, centralized management and a host of features allowing scalable differentiated services for the large business and enterprise customer.

The PacketMAX 320 consists of an outdoor radio with integrated antenna, interfaced to an indoor unit that accepts AC power and interfaces to standard Ethernet switch. Ethernet cabling carries network signaling and system power between the indoor and outdoor units.

#### ■ ■ KEY FEATURES

- IEEE 802.16-2004 compliant
- Enterprise-grade performance and scalability
- Auto-Provisioning for large-scale, rapid deployments
- Service Level Agreement (SLA) enforcement over the air interface
- Advanced IP networking functions
- Dual flash for fail-safe, remote firmware upgrades
- License and license-exempt bands  
LOS, OLOS, NLOS operations
- Full remote-management capability with Aperto’s WaveCenter EMS Pro

#### ■ ■ Typical Applications

- High-end CPE serving both licensed and license-exempt frequencies
- MDU/MTU access for thousands of subscribers simultaneously
- Scalable, differentiated services with application-aware and subscriber-aware traffic classification and prioritization
- Cost-effective multi-megabit alternative to expensive leased line services
- Voice over IP services for large business, enterprise, and campuses



# PacketMAX 320 System Specifications

## Radio and System Specifications

Compliance	: IEE 802.16-2004
Duplex Mod PHY	: TDD, OFDM 256 FFT
Frequency	: 2.3-2.7 GHz, 3.3-3.4 GHz, 3.4-3.7 GHz, 5.1-5.9 GHz
Channel Bandwidth	: 3.5 MHz, 7.0 MHz
Radio Output Power	: 20 dBm(2 GHz, 3 GHz, 5.8 GHz), 17 dBm (5.2 GHz, 5.6 GHz)
Modulation	: QPSK, 16QAM, 64QAM
Integrated Antenna Gain	: 2 GHz, 13 dBi : 3 GHz, 17 dBi, 20 dBi : 5 GHz, 20 dBi, 24dBi
Optional External Antenna	: Yes, Type-N antenna option, 50 Ohm
Forward Error Correction	: Convolution coding 1/2, 2/3, 3/4
Cyclic Prefix	: 1/16

## IP Networking Features/Options

Networking	: IPV4, DHCP Client
Bridging	: IEEE 802.1d
VLANs	: IEEE 802.1P/Q

## Security/Encryption

Authentication	: X.509 Certificates
Encryption	: DES for Data Encryption, 3DES Key Encryption

## Multi-Service/Multi-User Support

Traffic Classifier	: Layer 2, Layer 3, Layer 4 parameters
Scheduling/QoS	: BE, UGS
Active Connected Hosts	: 250 Max
Uni-directional Service Flows	: 13 Max

## Management

Remote Management, Provisioning, and Monitoring	: Centralized using WaveCenter EMS Pro
SNMP Support	: MIB II (RFC 1213) WiMAX (IEEE 802.16f), MIB, Aperto Enterprise MIB

## Mechanical

Outdoor Unit Dimensions (L x H x W)/Weight	: 13 dBi: 24.75 x 25.5 x 7 cm / 3 lbs : 17 dBi: 24.75 x 25.5 x 7 cm / 3 lbs : 20 dBi: 25.50 x 33.0 x 7 cm / 3.2 lbs : 24 dBi: 36.20 x 40.6 x 7 cm / 3.5 lbs
Indoor Unit Dimensions (L x H x W)/Weight	: 6 x 3.1 x 14.5 cm / 1 lbs
Antenna Alignment	: LED visual indicator, pole mount and wall mount
Interfaces	: Single RJ-45 LAN port

## Electrical

Input AC Voltage	: 110 – 120 VAC, 50-60 Hz, 0.4A
Max Input Current	: 1.1A @ 18V DC, 20W max

## Environmental

Operating Temperature	: -40 to +55 degrees Celsius
RoHS Compliance	: Yes

## ■ ■ About Aperto Networks

Aperto Networks helps leading service providers deliver affordable wireless voice and broadband profitably by building the world's most advanced WiMAX base stations and subscriber units. Aperto fundamentally changes the economics of delivering voice and broadband services through IP-rich, point-to-point and point-to-multipoint networks, allowing carriers to offer a wider variety of services to more customers using less equipment. Its carrier-class WiMAX technology offers industry-leading subscriber density, quality of service, ease of use and reliability. Aperto is a founding board member of the WiMAX Forum as well as a founder and lead contributor to IEEE 802.16 and the ETSI-BRAN standards. Serving more than 400 customers in over 90 countries, Aperto Networks is based in Milpitas, California. For more information on Aperto Networks, go to [www.apertonet.com](http://www.apertonet.com).