



PacketMAX 100 Subscriber Unit

Solution to Suit Any Subscriber Environment

The PacketMAX 100 WiMAX subscriber unit provides an economical solution for small business, home offices, and consumers.



PacketMAX 100

KEY FEATURES

- IEEE 802.16-2004 and WiMAX Forum certification design
- Intel PRO/Wireless 5116 technology
- Superior QoS for multi-service support including premium voice services
- 2.5 GHz, 3.3 GHz, 3.5 GHz, and 5 GHz frequency bands
- LOS, OLOS, NLOS deployments

PacketMAX 100

Aperto PacketMAX™ 100 Series subscriber unit allow service providers to take full advantage of the growing WiMAX market. The PacketMAX 100 is economically deployed and delivers the features required to address the underserved small business, home office, and residential markets. With a PacketMAX 100 subscriber unit, end users can browse web pages, make voice calls, view streaming video, and download files—simultaneously and at multi-megabit speeds over a robust wireless link. PacketMAX 100 supports the OFDM 256 FFT PHY specified for WiMAX Forum™-certified products.

Aperto offers PacketMAX 100 models operating in 2.5 GHz, 3.5 GHz, and 5 GHz bands using spectrum efficient TDD scheduling. PacketMAX 100 units are compliant with the 802.16-2004 standard and interoperate seamlessly within a heterogeneous network environment. Leveraging Aperto's heritage as the WiMAX technology leader, the PacketMAX system delivers superior link performance, unsurpassed quality of service, and a broad range of networking features for optimized WiMAX deployment.

Providers can install the PacketMAX 100 in minutes. The units do not require a direct line of sight with the base station, and they support centralized WiMAX provisioning from the remote management and monitoring station. The PacketMAX 100 subscriber unit consists of an outdoor unit with an integral antenna that connects to a compact indoor unit via a standard outdoor-rated cat-5 cable, which carries ethernet traffic and system power between indoor and outdoor units.

Aperto offers three PacketMAX 100 models designed to meet a variety of subscribers and network requirements: PacketMAX 100, 120, and 190. The choice of capabilities includes: IP networking, WiFi access, integrated VoIP processing, corporate networking, extended range antennas, and a host of features allowing simultaneous differentiated services for the small enterprise and home office user.

Typical Applications:

- Economical last mile access solution for small to medium enterprises, home office consumers, and remote sites
- Rapid service deployment for accelerated time-to-revenue from new sites/subscribers
- High capacity and QoS enables wireless T1/E1 services for enterprise voice and data
- "Wireless DSL" service offering greater bandwidth and lower cost to the end user
- Offer Voice over IP-based services with single integrated solution
- Extended range WiFi for completely unwired networking experience



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Wireless to the MAX

PacketMAX 100 System Specifications

Radio and System Specifications

Compliance	: IEEE 802.16-2004 (3.5T1, 3.5T2), ETSI HyperMAN
Duplexing Mode, PHY	: TDD, OFDM 256 FFT
Frequency	: 2.5 - 2.7 GHz, 3.3 - 3.4 GHz, 3.4 - 3.6 GHz, 5.725 - 5.925 GHz Future: 3.6 - 3.8 GHz; 5.425 - 5.725 GHz, 4.9 GHz
Channel Bandwidth	: 1.75 MHz, 3.5 MHz, 6 MHz; 7.0 MHz;
Center Frequency Step Size	: 125 KHz
Radio Output Power	: 19 dBm; all frequencies
Receiver Sensitivity	: -100 dBm
Modulation	: BPSK, QPSK, 16QAM, 64QAM
Forward Error Correction	: Convolution coding 1/2, 2/3, 3/4
Integral Antenna Gain	: 15.5 dBi
Optional External Antenna	: Yes

IP Networking Features/Options

IP Version	: IPV4 (RFC 791)
Bridging Mode	: IEEE 802.3d
VLANs	: IEEE 802.1 P/Q
WiFi Access	: 802.11 b/g (PM 190)

Security/Encryption

Authentication	: X.509 based authentication
Encryption	: 3DES, AES CCM 128, 1024

Multi-Service/Multi-User Support

Traffic Classifier	: MAC DA/SA, 802.1 P/Q, IP SA/DA, IP Prot, IP TOS, TCP/UDP Port
Scheduling/QoS	: UGS, RTPS, NRTPS, BE, CIR, MIR
VoIP/Fax Signaling, Codecs	: SIP (RFC 3261), T.38, G.711, G.729a, G.723.1 (PM 120)
Echo Cancellation	: G.165, G.131 (PM120)
Active Connected Hosts	: 5
Bi-directional Service Flows	: 4

Management

Remote Management and Monitoring	: WaveCenter EMS (SNMP)
Remote Management Access	: Telnet, SNMP, HTTP
Provisioning	: Centralized using WaveCenter EMS (SNMP)
SNMP	: MIB II (RFC 1213), WiMAX MIB, Aperto Enterprise MIB; IEEE 802.16f (future)

Mechanical

Outdoor Unit Dimensions (l*h*w)/weight	: 20.3 cm x 20.3 cm x 6 cm/5.2 lbs (including pole mount)
Indoor Unit Dimensions (l*h*w)/weight	: 14.5 cm x 3.1 cm x 6 cm/1 lbs
IDU-ODU Distance	: 100 m

Electrical

Input DC Voltage	: DC 36 – 57V (IEEE 802.3af compliant)
Max Input Current	: 0.27A @ 48V DC

Environmental

Weather Protection	: IP65/NEMA-4
Operating Temperature (Outdoor Unit)	: -35° – 65° C
Humidity (Outdoor Unit)	: 0 – 90% noncondensing
RoHS Compliant	: Yes

About Aperto Networks:

Aperto Networks, a founding board member of the WiMAX Forum, develops the world's most advanced, carrier-class WiMAX base stations and subscriber units. They enable carriers to profitably offer broadband services through IP-rich point-to-point and point-to-multipoint wireless networks that are easy to deploy and provide unsurpassed subscriber density, QoS, and reliability. For more information, visit www.apertonet.com.