PacketMAX 4000 Subscriber Unit

Product Brief

Macro WiMAX Base Station for Mobility

PacketMAX® 4000 allows operators to economically deploy fixed, nomadic, portable, and mobile WiMAX services.

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The PacketMAX 4000 brings Aperto's industry-leading WiMAX technology into a compact form factor designed for mobile WiMAX service delivery. For service providers entering the mobile WiMAX market or those expanding coverage of an existing network, the PacketMAX 4000 is an economical and elegant solution.

WiMAX operators can deploy services ahead of the market growth, positioned to capitalize as mobile WiMAX grows in subscribers and technology evolution. PacketMAX 4000 offers a non-ASN standalone mode (similar to Profile B) that provides a small scale deployment option to operators who plan to support only fixed and nomadic subscribers initially. The base station seamlessly handles the QoS classification and subscriber session management functions. As the network grows and supports mobility, the operator can easily integrate a WiMAX ASN gateway. PacketMAX 4000 gives maximum flexibility in radio options including OBSAI interface and compatiblity with high-powered radios operating in relevant portions of the 2.3-2.7 GHz and 3.3-3.8 GHz bands.

PacketMAX 4000 enables self-install business models by supporting enhanced range and building penetration capabilities offered by MIMO, uplink sub-channelization, and scalable ODFMA technologies. Fully compliant with the IEEE 802.16-2005 standard, PacketMAX 4000 utilizes efficient techniques such as Maximal Ratio Combining (MRC), Adaptive MIMO Matrix A and B, as well as ASN mobility profile management to perform seamless handover of hundreds of simultaneously active subscriber units. Supporting up to 512 users per sector, operators achieve maximum revenue while minimizing cost.

Fully compliant with the IEEE 802.16-2005 standard, PacketMAX 4000 utilizes efficient techniques such as STC, MRC, MIMO Matrix A and B, antenna diversity, and ASN mobility profile-management to perform seamless handover of hundreds of simultaneously active subscriber units. Supporting over 250 users per sector, operators achieve maximum revenue while minimizing cost.

PacketMAX 4000 uses a split IDU/ODU design. The 2U indoor unit provides backhaul and radio control functions. The outdoor unit consists of a spectrum-specific radio and antenna.

KEY FEATURES

- Fully compliant with IEEE 802.16-2005 standard
- Fixed, nomadic, portable and mobile WiMAX
- Modular design supporting pay-as-you-grow business model
- Flexible radio options supporting OBSAI standard interface
- Comprehensive system redundancy for carrier-grade resilience
- Centralized management using WaveCenter™ EMS Pro

Typical Applications

- Nomadic and portable WiMAX services evolving to fully mobile applications
- Converged fixed-mobile service for multi-user and multi-service business and consumer applications
- Scalable voice service for enterprises or residential customers with per-subscriber QoS and dynamic link adjustment

WiMAX FORUM CERTIFIED

A Decade of Wireless Broadband Leadership.

PacketMAX 4000 System Specifications

Radio and System Specifications

Compliance	: IEEE 802.16e-2005
Duplexing Mode PHY	: TDD; ODFM
Frequency	:2.5-2.7 GHz
Channel Bandwidth	: 5 MHz, 10 MHz
Radio Output Power	: 36 dBm
Link Enhancement Features/Options	: MIMO matrix A, MIMO matrix B, sub-channelization

IP Networking Features/Options

Bridging Mode	: IEEE 802.1d
VLANs	: IEEE 802.1 P/Q
Convergence Sublayer	: IP-CS, Eth-CS

Multi-Service/Multi-User Support

Traffic Classifier	: All L2, L3, L4 parameters
Scheduling/QoS	: UGS, rtPS, ertPS, nrtPS, BE
Active Connected Subscriber Units	: 512 per sector

Carrier Grade Features

Modularity	: Wireless system controller, backhaul card, DC power supply, fan module
Redundancy	: Fan module, power module

Physical Interfaces

Radio Interface	: OBSAI 3.072 GB/s (MM/LC, optical)
Ethernet Backhaul	: 1 x 100 BaseT(RJ45)
Management	: Remote
External clock, Synchronization	: 1 PPS in; 1 PPS out

Management

Remote Management and Monitoring	: WaveCenter EMS Pro, SNMPv2
Local Management and Monitoring	: CLI (RS232) *For Aperto internal use only
Provisioning	: Centralized using WaveCenter EMS Pro

Mechanical

Indoor Unit	: 2U, 19” Rack mountable

Electrical

Input DC Voltage	: -48V (-56V DC to -42V DC)

Environmental

Weather Protection	: Radio only
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.

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