

# FlexWave™ WMX 300/305

WiMAX Subscriber Unit



ADC's FlexWave™ WMX 300 subscriber unit allows service providers to effectively serve the most demanding segment of the WiMAX user base: large businesses and enterprises. It delivers the entire range of functions required to suite virtually any business environment while supporting high speed service to hundreds of simultaneously connected users.

With the FlexWave WMX 300 performance meets intelligence—a single system can support hundreds of connected users of business and consumer applications: voice, web browsing, file downloads, streaming video, and other multi-megabit data services simultaneously managed over the wireless link.

The FlexWave WMX 300 supports the OFDM 256 FFT PHY and operates in licensed and licensed exempted WiMAX bands: 2.5 GHz, 3.5 GHz, and 5 GHz bands globally. FlexWave WMX 300 is compliant with the 802.16d-2004 standard and offers software upgradeability to the 802.16e-2005 amended standard in some models (WMX 305).

## Features:

- IEEE 802.16d-2004 compliant
- Software upgradeable to 802.16e-2005 (some models)
- Enterprise grade performance and scale
- Service Level Agreement (SLA) Enforcement
- LOS, OLOS, NLOS deployments

SPEC SHEET



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# FlexWave™ WMX 300/305

## WiMAX Subscriber Unit

The FlexWave WMX 300 delivers 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 FlexWave WMX 300 is designed to help business subscribers reap the benefits of lower cost, multi-megabit wireless data service bypassing the complication and expense of leased wire line service.

The FlexWave WMX 300 is designed to meet a variety of subscribers and network requirements. The choice of capabilities includes: bridging, IP networking, integrated VoIP processing, extended range antennas, and a host of features allowing scalable differentiated services for the large business and enterprise customers.

Consisting of an outdoor radio with integral antenna, the FlexWave WMX 300 is interfaced to an indoor networking unit. An indoor unit interfaces to a standard Ethernet network and conveniently accepts AC power. Ethernet cabling carries network signaling and system power between the indoor and outdoor units. An optional external antenna is available for even greater gain.

### Typical Applications

- High end customer premise equipment for large business and enterprise customers
- MDU/MTU access to hundreds of subscribers simultaneously
- Scalable differentiated services with application aware and subscriber aware traffic classification and prioritization
- Low cost multi-megabit data service alternative to expensive leased line service
- Emulated multi-T1/E1 circuits over WiMAX for interconnecting TDM traffic from PBXs, key systems and legacy TDM equipment
- Create “hot zones” by backhauling Wi-Fi access used for municipal and mesh network configurations
- Enterprise Voice over IP services

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## WiMAX Subscriber Unit

### Specifications

#### RADIO AND SYSTEM SPECIFICATIONS

**Compliance:**

IEEE 802.16d-2004 (3.5T1, 3.5T2), ETSI HiperMAN, 802.16e-2005 upgradeable (some models)

**Duplexing Mode, PHY:**

TDD, OFDM, 256 FFT

**Frequency:**

3.3 – 3.4 GHz, 3.4 – 3.6 GHz, 5.725 – 5.925 GHz  
Future: 2.5 – 2.7 GHz, 3.6 – 3.8 GHz 5.15 – 5.35 GHz, 5.425 – 5.725 GHz

#### Channel Bandwidth

**WMX 300:**

3.0 MHz, 3.5 MHz, 5.5 MHz, 7.0 MHz

**WMX 305:**

Future: 1.75 MHz, 5 MHz, 10 MHz

2.5 GHz ( 5.0 MHz, 10.0 MHz)

3.5 GHz ( 5.0 MHz, 7.0 MHz, 10.0 MHz)

**Future: 1.75 MHz, 5 MHz, 10 MHz**

**Step Size:**

250 KHz

**Radio Output Power:**

20 dBm; all frequencies

**Receiver Sensitivity:**

-95.1 dBm

**Modulation:**

BPSK, QPSK, 16QAM, 64QAM

**Forward Error Correction:**

Convolution coding 1/2, 2/3, 3/4

**Integral Antenna Gain:**

16 dBi @ 3.5 GHz

**Optional External Antenna:**

Yes

#### IP NETWORKING FEATURES/OPTIONS

**IP Version:**

IPv4 (RFC 791)

**Bridging Mode:**

IEEE 802.3d

**VLANs:**

IEEE 802.1 P/Q

#### SECURITY/ENCRYPTION

**Authentication:**

X.509 certificates

**Encryption:**

3DES, AES CCM 128, 1024

#### MULTI-SERVICE/MULTI-USER SUPPORT

**Traffic Classifier:**

MAC DA/SA, 802.1 P/Q, IP SA/DA IP Protection, IP TOS, TCP/UDP Port

#### Scheduling/QoS:

UGS, rtPS, nrtPS, BE, CIR, MIR

**Active Connected Hosts:**

250 max

**Uni-directional Service Flows:**

14 max

#### MANAGEMENT

**Remote Management and Monitoring:**

WaveCenter EMS Pro

**Remote Management Access:**

Telnet, SNMP, HTTP

**Provisioning:**

Centralized using WaveCenter EMS Pro

**SNMP:**

MIB II (RFC 1213), Enterprise MIB, IEEE 802.16f MIB

#### MECHANICAL

**Outdoor Unit (HxWxD)/weight:**

20.5 x 20.5 x 6.7 cm (8" x 8" x 2.6")/2.35 kg (5.2 lbs)  
– including pole mount

**Indoor Unit (HxWxD)/weight:**

6 x 3.1 x 14.5 cm (1.2" x 2.3" x 5.7")/.45 kg (1 lb)

**IDU-ODU Distance:**

up to 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:**

-35° to 60°C (-31° to 140°F)

**Humidity (outdoor unit):**

5 – 95% noncondensing

**RoHS Compliant:**

Yes

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