

FlexWave™ WMX 5000

Carrier-Grade WiMAX Base Station



With the FlexWave™ WMX 5000, ADC delivers the industry's highest density, highest capacity, and highest performing base station. Designed for modular growth and service evolution, the FlexWave WMX 5000 sets a new standard for carrier-grade WiMAX base stations.

FlexWave WMX 5000 operates in licensed and license-exempt bands under virtually all wireless conditions, giving providers a versatile platform for maximizing WiMAX revenue opportunities.

The FlexWave WMX 5000 hardware is based on the ATCA open standard, incorporating the latest advances in reliability, availability, and serviceability for carrier-grade, high-speed telecommunications. Designed to accommodate up to 12 wireless sectors, the FlexWave WMX 5000 system requires just 5U of rack space — making it the highest density base station currently available. This versatile, space-saving solution allows operators to offer a broad range of voice, data, and multimedia services, while driving down the operational and capital outlays required to scale the network.

Features:

- Highest capacity; highest density WiMAX base station
- Modular design supporting pay-as-you-grow business model
- Seamless co-location with mini and micro base stations for expanded network coverage
- Comprehensive system redundancy for carrier-grade resilience
- Upgradeable to IEEE 802.16e based mobility

SPEC SHEET



www.adc.com • +1-952-938-8080 • 1-800-366-3891



FlexWave™ WMX 5000

Carrier-Grade WiMAX Base Station

The FlexWave WMX 5000 modular design accommodates a large number of deployment options. With 1:1 or 1:N redundant wireless sectors, the FlexWave WMX 5000 can support: 12-sector base station, redundant 6-sector base stations, redundant four sector and other configurations within a single chassis.

The FlexWave WMX 5000 meets stringent operator deployment needs, while bridging gaps from pre-WiMAX to fixed WiMAX, indoor consumer WiMAX, and fully mobile WiMAX.

Typical Applications

- Last mile, carrier deployments supporting small initial roll outs, growing to support thousands of subscribers in a single 5U platform
- Converged fixed-mobile service offering including multi-user, multi-application, and multi-service simultaneously
- Scalable VoIP service with per-subscriber QoS and dynamic link adjustment
- Fixed, nomadic, and portable WiMAX services evolving to support full mobility
- Bandwidth-hungry video and data applications requiring low latency and predictable performance
- Licensed or unlicensed WiMAX backhaul for municipal (mesh) network or cellular network remote site traffic

10/07 • 102578AE FlexWave™ WMX 5000



FlexWave™ WMX 5000

Carrier-Grade WiMAX Base Station

Specifications

RADIO AND SYSTEM SPECIFICATIONS

Compliance:

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

Duplexing Mode, PHY: Frequency:

TDD, OFDM 256 FFT: SOFDMA upgradeable
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, 5.150 - 5.35 GHz, 5.475 - 5.725 GHz

Channel Bandwidth:

3.0 MHz, 3.5 MHz, 5.5 MHz, 7.0 MHz
Future: 1.75 MHz, 5 MHz, 10 MHz

Step Size:

250 KHz

Radio Output Power:

17 dBm, 20 dBm, 30 dBm options

Receiver Sensitivity:

-95.1 dBm (3.5 MHz)

Modulation:

BPSK, QPSK, 16QAM, 64QAM

Forward Error Correction:

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

IP Networking Features/Options

IP Version:

IPv4 (RFC 791)

Bridging Mode:

IEEE 802.3d

Routing:

RIP V2, OSPF (future)

VLANs:

IEEE 802.1 P/Q

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 Protection, IP TOS, TCP/UDP Port

Scheduling/QoS:

UGS, rtPS, nrtPS, BE, CIR, MIR

Max # Sectors:

12 non-redundant; 6 with 1:1 redundancy

Active Connected Subscriber Units:

up to 6144 (512 per sector)

Uni-directional Service Flows:

up to 7168 managed

CARRIER GRADE FEATURES

Chassis:

5U Advanced TCA; 19" telco rack mountable

Power Options:

-48 VDC; AC

Modularity:

Individually deployable wireless sectors, fan unit, main system controller units

Redundancy:

Wireless sectors: 1:1; 1:N (future)

Main system controllers: 1:1

Power Distribution: 1:1

PHYSICAL INTERFACES

RF sectors, IF Port:

up to 12 if port for connection to BSR (type-F, Female, 75 ohM)

Ethernet Backhaul:

1 x 100 BT, 1 x 1000 BT (RJ45); 1 x 1000 B FX

Management:

10/100 BT; RS-232 (RJ45); 10 BT (RJ45); RS-232

External clock, Synchronization:

1Hz Sync (BNC), 10 MHz Clock (BNC)

Optional GPS External Clock Input (future)

Antenna Port:

Type-N

IF Port:

Type-F

10/07 • 102578AE FlexWave™ WMX 5000

MANAGEMENT

Remote Management and Monitoring:
Local Management and Monitoring:
Provisioning:
SNMP:

WaveCenter EMS Pro, CLI (Telnet), SNMP
 CLI (RS 232)
 Centralized using WaveCenter EMS Pro (SNMP)
 MIB II (RFC 1213), Enterprise MIB;
 SNMP V2 IEEE 802.16f MIB

MECHANICAL

Indoor Unit Dimensions (W x H x D):
Indoor Unit Weight:

19 x 8.6 x 17 (inches), 48.2 x 21.8 x 43.1 (cm)
 27 lbs / 12.2 kg (chassis only); 37 lbs / 16.8 kg
 (4 sector, 1 MSC, 1 Fan Unit, DC)

Outdoor Unit (W x H x D):
IDU-ODU Distance:

2.75 x 11.75 x 11.75 (inches), 7 x 29.8 x 29.8 (cm)
 up to 250 m

ELECTRICAL

Input DC Voltage:
Input AC Voltage:
Max Power Consumption:

-42 to -58 Volts (recommended), -36 to -72 Volts (maximum)
 85 to 264 VAC, 47 to 63 Hz
 530W DC & 550W AC

ENVIRONMENTAL

Weather Protection:
Operating Temperature (Outdoor Unit):
Humidity (Outdoor Unit):
RoHS Compliance:

INDOOR

na
 0° to 40° C (32° to 104° F)
 10–90%, non-condensing
 yes

OUTDOOR

IP65/NEMA-4
 -35° to 60° C (-31° to 149° F)
 5-95%, non-condensing
 yes



Web Site: www.adc.com

From North America, Call Toll Free: 1-800-366-3891 • Outside of North America: +1-952-938-8080
 Fax: +1-952-917-3237 • For a listing of ADC's global sales office locations, please refer to our web site.

ADC Telecommunications, Inc., P.O. Box 1101, Minneapolis, Minnesota USA 55440-1101
 Specifications published here are current as of the date of publication of this document. Because we are continuously improving our products, ADC reserves the right to change specifications without prior notice. At any time, you may verify product specifications by contacting our headquarters office in Minneapolis. ADC Telecommunications, Inc. views its patent portfolio as an important corporate asset and vigorously enforces its patents. Products or features contained herein may be covered by one or more U.S. or foreign patents. An Equal Opportunity Employer

102578AE 10/07 Revision © 2007 ADC Telecommunications, Inc. All Rights Reserved