

ZyXEL



Zero-Install, Indoor, Single Unit

- IEEE 802.16e-2005 WiMAX Air Interface (TDD SOFDMA)
- 2.5GHz (MAX-200M1), 3.5GHz (MAX-210M1) and 2.3GHz (MAX-230M1)
- High Transmit Power (27dBm), 6dBi Built in Antenna, and External Antenna Option
- AAS Beamforming Smart Antenna
- 802.16e Security for Authentication and Ciphering
- QoS Management
- Local and Remote Control and SW Upgrade Capabilities
- One Analog Phone Connection for SIP (RFC3261) VoIP
- One Ethernet Plug with Advanced Embedded IP Networking Features



Benefits

The Ultimate Broadband Wireless Technology

The MAX-200 series supports the IEEE 802.16e-2005, state of the art SOFDMA based, radio interface, also known as WiMAX.

SIP Based VoIP Communication

VoIP signaling supports standard SIP (RFC3261), suitable for IP telephony service deployment. Sophisticated voice compression and QoS mechanisms provides toll quality voice communication.

Advanced IP Networking Features

MAX-200 series supports advanced IP networking features including all the security needed for the user to safely access to internet.

Built-In Internal Antenna & Flexible External Antenna

MAX-200 series not only provides 6dBi antenna internally, but also provide flexible external antenna system which let users could be easy to change higher gain antenna themselves according to their specific needs.

Easy to Deploy

MAX-200 series is a single simple box designed to be self-installable by end user without operator's truck roll-out. Rich LED bars show the WiMAX radio signal strength can be used to adjust the direction and position.

Software Upgrade Over the Air

MAX-200 Series is fully configurable and software upgradeable over the WiMAX radio interface and can be triggered by operator.

IEEE802.16e Simple Indoor CPE

MAX-200M1
MAX-210M1
MAX-230M1

WIRELESS



Specifications

WiMAX Air Interface

- Reference standard: IEEE 802.16e-2005 SOFDMA
- Radio Access Method: TDD
- Frequency: 2.500-2.700GHz (MAX-200M1), 3.400-3.600GHz (MAX-210M1) and 2.300-2.400GHz (MAX-230M1)
- Channel Bandwidth / FFT size: 3.5MHz / 512FFT, 5MHz / 512FFT, 7MHz / 1024FFT, 8.75MHz/1024 FFT and 10MHz/1024FFT (software selectable)
- Central frequency resolution: 125kHz
- Modulation: QPSK, 16QAM, 64QAM (DL only)
- FEC: CC (Convolutional Coding), CTC (Convolutional Turbo Code)
- Smart antenna: AAS beamforming according to WiMAX Forum profile
- Maximum output power at antenna port : 27dBm ± 1dB
- Rx diversity by switching on 2 antennas
- Built in patch antenna : 6dBi, 70° azimuth, 30° elevation
- SMA antenna connector, equipped by default with 2dBi omni antenna, 60° beam width
- Up to 5 Mbps downlink, 2 Mbps uplink user data
- QoS management, relying on classification
- Security: EAP-TTLS/CHAP based user authentication, CMAC message authentication, CCM mode 128-bits AES data ciphering

IP Networking

- 1 Ethernet connection 10/100 Base-T (RJ45 plug)
- DNS relay, DNS cache
- User configurable Router (RIPv1, RIPv2) and NAT (one-to-one, many-to-one)
- Embedded Security : NAT Firewall with SPI, DoS, DDOS
- VPN pass through (IPSec, PPTP & LT2P Pass-Through)

Voice Over IP

- 1 Analogue phone (POTS) connection (RJ11 plug)
- SIP based VoIP (SIP version 2, SDP)
- G711, G723 (option) and G729ab codec's, including Voice Activity Detection, Silence suppression, Comfort Noise Generation when applicable
- G168 echo cancellation
- DTMF detection
- Fax and Modem pass through (G.711)

- Fax T.38
- CW (Call waiting), Call Waiting w/ Caller ID, Call Forwarding (Unconditional/Busy/No Answer), Call transferring, 3 way conference w/ Local mixing, Call Hold / Call Retrieve, Incoming Call Policy (Call Accept/ Call Forward/Call Block), Second Call
- CLIP (Calling Line Identification Presentation), CLIR (Calling Line Identification Restriction)
- Early Media, Flash Hook Timer, Music on Hold, MWI (Message Waiting Indicator (RFC 3842)), IVR (Interactive Voice Response), Speed Dial (Phone Book)

Management / Diagnostic

- Web based management from local PC, including configuration, diagnostics and SW upload capability
- Over the air remote management and firmware upgrade : SNMP, Telnet, CLI, TR-069, FTP/TFTP

Mechanical

- Size: 120 (H) x 160 (L) x 50 (W) mm
- LEDs : Power indication, WiMAX connection status, LAN status, VoIP status LED
- Interface: Power Jack, Reset Key, 1LAN RJ45, 1VoIP RJ11, SMA RF connector
- Operator marking capability

Electrical

- External power supply: 18VDC
- Average power consumption in worst case scenario : 10W, peak : 15W

Environmental – Regulatory – Certification

- WEEE Eco directive 2002/95/EC
- WiMAX certification as soon as applicable
- Storage conditions : -25°C to 55°C, 10% to 95% humidity
- Operation conditions : 0°C to 45°C, 10% to 90% humidity (non condensing)
- EMC and Safety : ETSI EN 301 489, EN 60950, CE marked for EMC and Safety

For more product information, visit us on the web www.ZyXEL.com

Corporate Headquarters
ZyXEL Communications Corp.
Tel: +886-3-578-3942
Fax: +886-3-578-2439
Email: sales@zyxel.com.tw
<http://www.zyxel.com>

ZyXEL Denmark A/S
Tel: +45 39 55 07 00
Fax: +45 39 55 07 07
Email: sales@zyxel.dk
<http://www.zyxel.dk>

ZyXEL France SARL
Tel: +33 (0)4 72 52 97 97
Fax: +33 (0)4 72 52 19 20
Email: info@zyxel.fr
<http://www.zyxel.fr>

ZyXEL Hungary
Tel: +36-1-336-1646
Fax: +36-1-325-9100
Email: info@zyxel.hu
<http://www.zyxel.hu>

ZyXEL North America
Tel: +1-714-632-0882
Fax: +1-714-632-0858
Email: sales@zyxel.com
<http://www.us.zyxel.com>

ZyXEL Russia
Tel: +7 (095) 542-8920
Fax: +7 (095) 542-8925
Email: info@zyxel.ru
<http://www.zyxel.ru>

ZyXEL Sweden A/S
Tel: +46 (0) 31 744 77 00
Fax: +46 (0) 31 744 77 01
Email: sales@zyxel.se
<http://www.zyxel.se>

ZyXEL Ukraine
Tel: +380 44 494 49 31
Fax: +380 44 494 49 32
Email: sales@ua.zyxel.com
<http://www.ua.zyxel.com>

ZyXEL Czech s.r.o.
Tel: +420 241 091 350
Fax: +420 241 091 359
Email: info@zyxel.cz
<http://www.zyxel.cz>

ZyXEL Finland Oy
Tel: +358-9-4780 8400
Fax: +358-9-4780 8448
Email: sales@zyxel.fi
<http://www.zyxel.fi>

ZyXEL Germany GmbH.
Tel: +49 (0) 2405-6909 0
Fax: +49 (0) 2405-6909 99
Email: sales@zyxel.de
<http://www.zyxel.de>

ZyXEL Kazakhstan
Tel: +7-327-2-590-699
Fax: +7-327-2-590-689
Email: sales@zyxel.kz
<http://www.zyxel.kz>

ZyXEL Norway A/S
Tel: +47 22 80 61 80
Fax: +47 22 80 61 81
Email: sales@zyxel.no
<http://www.zyxel.no>

ZyXEL Spain
Tel: +34 902 195 420
Fax: +34 913 005 345
Email: sales@zyxel.es
<http://www.zyxel.es>

ZyXEL UK Ltd.
Tel: +44 (0) 1344 303044
Fax: +44 (0) 1344 303034
Email: sales@zyxel.co.uk
<http://www.zyxel.co.uk>

