ZyXEL

- IEEE 802.16e-2005 Standard-based (TDD SOFDMA)
- Integrated Secure Voice Data Transmission in a Compact, Creative Stylish Design Securely
- MIMO Matrix A and Matrix B Support
- 2.5 GHz or 3.5 GHz Frequency Band Support
- Up to 26 dBm Transmission Power, Built-in High Gain Antenna
- Fixed Wireless Internet Access with Embedded VoIP and Wi-Fi Access Point
- Five Classes of QoS Support
- Over-the-air Software Upgrade
- Mechanism with a Stylish Outlook and Adapt to Harsh Environments

Ultimate WiMAX MIMO Technology for Outdoor Application

Benefits

High-gain MIMO Antenna Built-in to the Outdoor CPE

The MAX-3x6HW2 Series Outdoor Units provides integrated antenna (MAX-306HW2 for CROSS-Polarization 12 dBi, MAX-316HW2 for CROSS-Polarization 14 dBi) for easy installation and high performance in different environments.

Ultimate Wireless Broadband Technology

ZyXEL's MIMO products support state-of-the-art Matrix A and Matrix B modes with aggregate throughput up to 26 Mbps.

Software Upgrade over the Air

Through the WiMAX radio interface, MAX-3x6HW2 Series Outdoor CPE supports TR-069 fully configurable and software upgradeable through events triggered by the operators.

Embedded VoIP and Wi-Fi Access Point in the Indoor Unit

The MAX-3x6HW2 Series Outdoor CPE supports SIP (RFC3261)-based VoIP signaling suitable for IP telephony service deployments, while the sophisticated voice compression and QoS mechanisms provide high-quality voice communications.

Advanced IP Networking Features

The MAX-3x6HW2 Series Outdoor CPE supports advanced IP networking functionalities, including all Secure NAT Router features needed to access the Internet safely.

Easy-to-Install Multi-User Solution

The MAX-3x6HW2 Series Outdoor CPE consists of two boxes interconnected with RF cable. The Indoor Unit is powered by external power adapter, and the Outdoor Unit comprises of an integrated antenna and included flexible wall- and pole-mounting kits to fit different environments.

MAX-3x6HW2 Series
WiMAX MIMO Outdoor CPE

802.16e WiMAX | 3.5GHz WiMAX | 2.5GHz WiMAX | TR-069 | OMA-DM

Specifications

System Specifications

WiMAX Air Interface

- Aggregate throughput Up to 26 Mbps
- QoS management based on classification: BE, UGS, rtVR, nrtVR, ertVR
- Security: PKMv2, EAP-TLS, EAP-TTLS/CHAP/PAP/MSCHAP/MSCHAPv2, CMAC message authentication, CCM mode 128-bit AES data ciphering
- Idle mode, sleep mode, hand over, bs-initiated scanning and reporting, NIHO
- ARQ, HARQ

Network Discovery & Selection (ND&S)

- Auto selection
- User selection

Roaming

- HOME NSP lock
- EAP roaming ID
- CAPL/RAPL configuration

IP Networking

- IPv4, IPv6* (feature upgradable)
- User configurable router (RIPv1, RIPv2) and NAT (one-to-one, many-to-one) embedded security: firewall with SPI, content filtering, Java/Active X/cookie/keyword blocking
- Major ALG (SIP/FTP/H.323)
- DHCP client/server/relay

Voice over IP

- SIP V2 (RFC 3261) and SDP (RFC 2327)
- G.711 a/u, G.723 and G.729 codec
- Echo cancellation G.168
- VAD (Voice Activity Detection), silence suppression and CNG (Comfort Noise Generation)
- DTMF detection and generation
- Fax, modem detection and pass-through (T.38)

Phone Features

- Caller ID and message waiting indicator (RFC 3842)
- Call waiting, call hold, call forward (unconditional/busy/no answer) and call transfer (blind and attended transfer)
- Early media, music on hold
- MWI (Message Waiting Indicator)(RFC 3842), IVR (Interactive Voice Response)

NAT Traversal

- STUN (RFC 3489)
- Outbound Proxy
- Manual configuration SIP and RTP

Management

- Remote TFTP/HTTP firmware upgrade
- Web-based/SNMP/Telnet management
- Over-the-air firmware upgrade: TR-069* or OMA-DM* (optional feature)

Others

- Video streaming
- Online subscription
- Device configuration
- MS provision

Hardware Specification

Outdoor Unit (MAX-306 or MAX-316)

- The CROSS-Polarization 12 dBi built-in antenna for 2.5 GHz (MAX-306)
- The CROSS-Polarization 14 dBi built-in antenna for 3.5 GHz (MAX-316)
- The pole & wall-mounting kits
- One LAN RJ-45 with PoE, Ethernet cable connecting Indoor and Outdoor Units
- One vent connector
- Rated for outdoor weather environment including ultraviolet sun radiation

Indoor Unit (MAX-306HW2)

- Four Ethernet connectors: 10/100Base-T Auto MDI/MDIX (RJ-45 plug)
- Two FXS POTS phone ports for conventional phone (RJ-11 plug)
- LEDs: Power indication, WiMAX connection status, Wi-Fi connection status, LAN status, VoIP status LED
- Factory default reset button

Physical Specifications

- Item weight: 4,000 g (8.84 lb)
- Item dimensions:
  - ODU:
    231 (W) x 236 (D) x 70 (H) mm
    (9.09 (W) x 9.29 (D) x 2.76 (H) inches)
  - IDU:
    216 (W) x 164 (D) x 52 (H) mm
    (8.5 (W) x 6.46 (D) x 2.05 (H) inches)
- Item and package weight: 5,100 g (11.27 lb)
- Package dimensions:
  400 (W) x 300 (D) x 235 (H) mm
  (15.74 (W) x 11.81 (D) x 9.25 (H) inches)

Environmental Specifications

Outdoor Unit (MAX-306 or MAX-316)

- Operating temperature: -40°C ~ 60°C
- Storage temperature: -40°C ~ 65°C
- Operating humidity: 10% ~ 90% (non-condensing)
- Storage humidity: 10% ~ 95% (non-condensing)

Indoor Unit (MAX-306HW2)

- Operating temperature: 0°C ~ 45°C
- Storage temperature: -25°C ~ 55°C
- Operating humidity: 10% ~ 90% (non-condensing)
- Storage humidity: 10% ~ 95% (non-condensing)
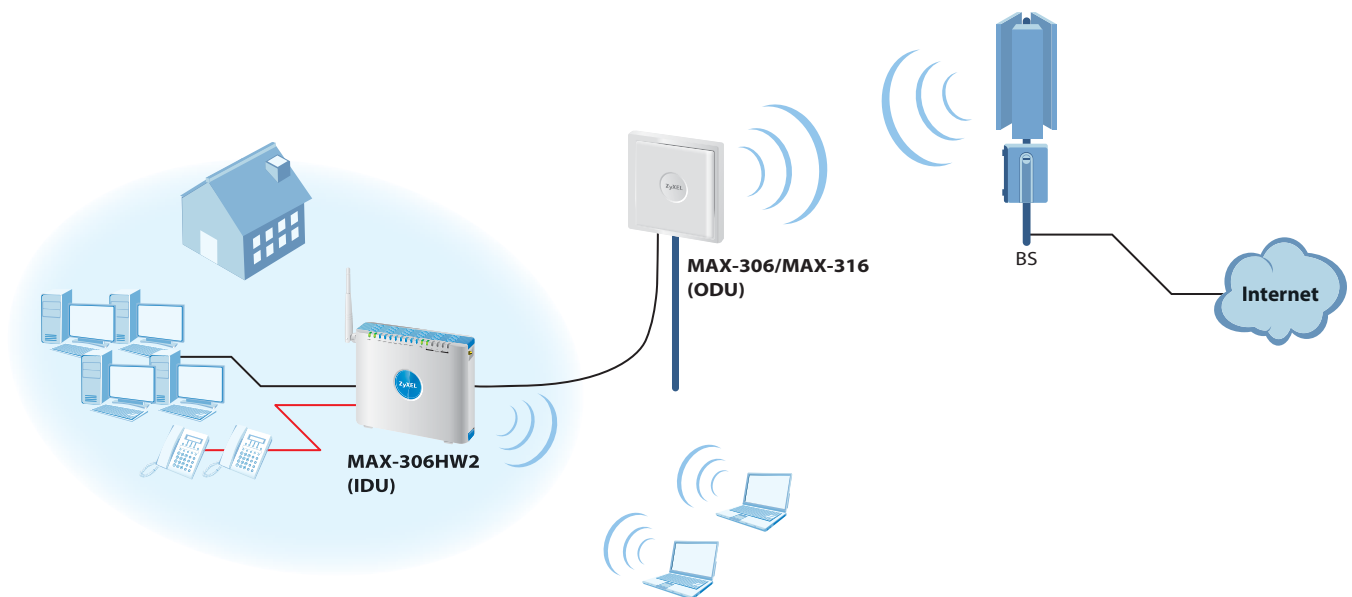
Certification

- FCC EMC and Safety Certified (MAX-306HW2)
- CE EMC and Safety Certified (MAX-316HW2)
- Water tightness: IEC529/IP67
- Salt spray: IEC 60068-2-11 96 hours
- Wind resistance testing: Hurricane/Wind Speed 56.1-61.2 (m/s)
- WiMAX Forum Wave II Compatible

Feature Matrix

Model	MAX-306HW2	MAX-316HW2
Product Photo		
Frequency Band	2.5 GHz	3.5 GHz
Ethernet	4	4
VoIP	2	2
Wi-Fi	802.11b/g	802.11b/g
Antenna Gain	12 dBi Cross-Polarized	14 dBi Cross-Polarized
Antenna Type	Directional	Directional
Tx Power	26 dBm	26 dBm
Network Management	TR-069 or OMA DM	TR-069 or OMA DM
Available Status	Now	Now

Application Diagram

MAX-306/MAX-316
(ODU)

BS

Internet

MAX-306HW2
(IDU)

ZyXEL