ZyXEL

- IEEE 802.16e mobile WiMAX standard compliant
- Provides home gateway networking features
- MIMO Matrix A and B supported and beamforming
- Supports Maximum Ratio Combining (MRC) and adaptive Tx Diversity
- Dual built-in invisible MIMO antenna with Tx Diversity
- Supports five classes of WiMAX QoS standard
- Support remote management capabilities
- Over-the-Air (OTA) software upgrade
- Two levels of Web access control
- Support network discovery and selection
- Built-in self-diagnostic tools

MAX208M2W
MAX218M2W
WiMAX Indoor VoIP Wi-Fi IAD

Ultimate WiMAX MIMO Technology for Ultimate Mobility

Benefits

Maximum freedom of mobility

The ZyXEL MAX208M2W/MAX218M2W WiMAX indoor VoIP Wi-Fi IAD provides users with seamless broadband wireless connectivity, as well as the freedom to surf the Internet and access any information at home, in the office or anywhere under WiMAX coverage.

Ultimate Wireless broadband technology

ZyXEL's MAX208M2W/MAX218M2W supports state-of-the-art WiMAX technologies such as Maximum Ratio Combining (MRC), MIMO Matrix A and B and beamforming that enable superior radio performance and extensive radio coverage, while the adaptive Tx Diversity improves the uplink performance.

Software upgrades over the air

The MAX208M2W/MAX218M2W provides both TR-069 and OMA-DM functionalities for Over-the-Air (OTA) remote management and software upgrades. These features can effectively reduce the operating cost.

Built-in invisible WiMAX antenna

With the dual high-gain internal WiMAX antenna, users can enjoy real plug-and-play experience without manually re-orienting the device.

SIP-based VoIP communication

The MAX208M2W/MAX218M2W supports SIP (RFC3261)-based VoIP signaling suitable for IP telephony service deployments, while sophisticated voice compression and QoS mechanisms provide high-quality voice communications.

Advanced IP networking features

The MAX208M2W/MAX218M2W supports advanced IP networking functionalities, including Bridge and NAT Router features needed to access the Internet and Firewall security to protect the Internet access activities.

Easy deployment

The MAX208M2W/MAX218M2W can be easily installed by end users without operator assistance; and the built-in TR-069 and OMA-DM features also support automatic device provisioning to reduce the deployment cost.

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

ZyXEL

MAX208M2W
MAX218M2W
WiMAX Indoor VoIP Wi-Fi IAD

Specifications

System Specifications

WiMAX Air Interface
- Standard compliance:
  IEEE 802.16e-2005 SOFDMA/TDD
- Frequency:
  - MAX208M2W: 2.5 ~ 2.7 GHz
  - MAX218M2W: 3.4 ~ 3.6 GHz
- Channel Bandwidth: 5/7/10 MHz
- DL Modulation: QPSK, 16QAM, 64QAM
- UL Modulation: QPSK, 16QAM
- FEC: CC, CTC
- Maximum output power at antenna port:
  Typical 26.5 dBm
- Sensitivity: -96 dBm@ QPSK 1/2
- Invisible antenna: 6 dBi Omni x 2
- QoS: 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
- BS-initiated scanning and reporting
- Network Initiated HO (NIHO)
- ARQ, HARQ

ND&S
- Auto selection/User selection
- Online subscription

Roaming
- HOME NSP lock
- EAP roaming ID
- CAPL/RAPL Configuration

Wi-Fi Air Interface
- IEEE 802.11n (1x1) compliance
- Data rate: 150 Mbps
- Backward compatible to 802.11b/g
- Wireless Protected Setup (WPS)

- Transmit output power and sensitivity:
  - 802.11b: 16 ±2 dBm, -85 dBm
  - 802.11g: 14 ±2 dBm, -71 dBm
  - 802.11n: 13 ±2 dBm, -65 dBm

IP Networking
- Supports Bridge and NAT Router mode
- LAN to WiMAX QoS classification
- Firewall with SPI
- Content Filtering
- Major ALG (SIP/FTP/H.323)
- DHCP client/server

VoIP
- SIP (RFC 3261) version 2
- SDP (RFC 2327)
- RTP (RFC 1889)
- RTCP (RFC 1890)
- Codec: G.711 a/u and G.729 A/B
- Echo cancellation: G.168
- Voice Activity Detection (VAD), Silence
  suppression and Comfort Noise Generation
  (CNG)
- Dynamic jitter buffer
- DTMF Detection and Generation
- Fax Pass-through

Phone Features
- Caller ID and Message Waiting Indicator
  (RFC 3842)
- T.38 Fax relay
- Call Waiting, Call Hold
- Call Forward (Unconditional/Busy/No Answer)
- Call transfer (Unattended and Attended Transfer)
- Early Media, Music on Hold
- Speed Dial

Management
- FTP/HTTP Firmware Upgrade
- Web-based/SNMP/Telnet/SSH Management

Hardware Specifications
- Two Ethernet connector: 10/100BaseT Auto
  MDI/MDIX (RJ-45 plug)
- Two FXS POTS phone port for conventional
  phone (RJ-11 plug)
- Status LEDs Indicators: POWER, WiMAX, Wi-Fi,
  RSSI, LAN (On connector), VoIP
- WLAN/WPS button
- Reset to Factory Defaults button

Power Specifications
- External power supply: 12 V DC
- Average power consumption at peak: 25 W

Physical Specifications
- Item weight: 493 g (1.09 lb)
- Item dimensions (WxDxH):
  164 x 93 x 259 mm (6.46" x 3.66" x 10.20")
- Packing weight: 1,065 g (2.35 lb)
- Packing dimensions (WxDxH):
  302 x 205 x 105 mm (11.89" x 8.07" x 4.13")

Environmental Specifications

Operating Environment
- Temperature: 0°C ~ 45°C
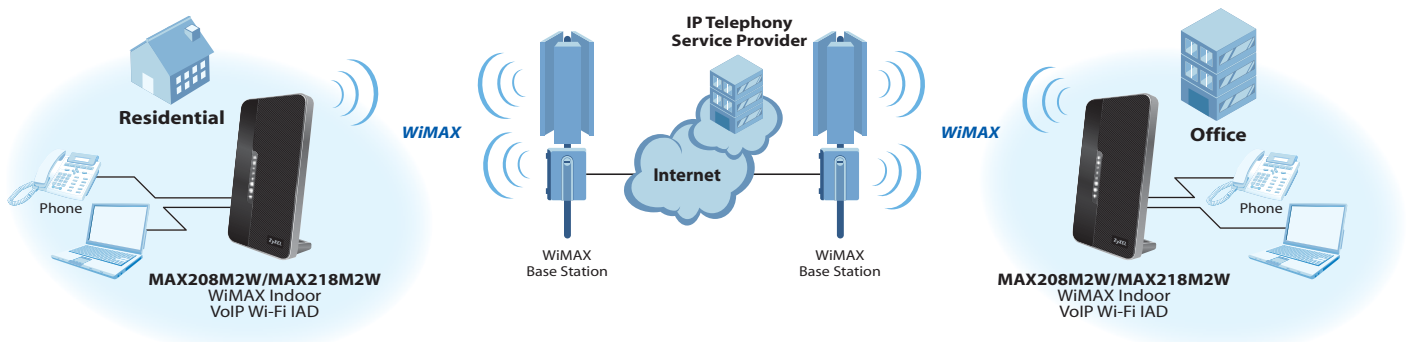- Humidity: 10% ~ 90%

Storage Environment
- Temperature: -25°C ~ 55°C
- Humidity: 10% ~ 95%

Certification
- FCC Certification (MAX208M2W)
- CE Certification (MAX218M2W)
- WiMAX Forum Wave II compliant

Application Diagram

Residential
Phone
MAX208M2W/MAX218M2W
WiMAX Indoor
VoIP Wi-Fi IAD

WiMAX

IP Telephony
Service Provider
Internet
WiMAX
Base Station
WiMAX
Base Station

WiMAX

Office
Phone
MAX208M2W/MAX218M2W
WiMAX Indoor
VoIP Wi-Fi IAD

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