



# XM9W00

## IEEE 802.16d WiMAX 3.5GHz mPCI module

### Introduction

WiMAX is a Worldwide Interoperability for Microwave Access. To combine WiMAX with current wireless technology, it makes a better performance at longer distance and faster transmission.

The XM9W00 Mini-PCI module integrates the latest WiMAX technology, and fully complies with IEEE 802.16d standard to provide the customer to tailor the motherboard, providing the higher layer application processor and peripherals according to their specific needs.

### Features

- Compliant with PCI 2.3 Standard
- Support WiMAX profM3\_PMP profile.
- Support 802.16-2004 and provides forward compatibility with IEEE 802.16d for basic mobility.
- Reduces your time to market and development costs.
- Duplex Modes: TDD and HFDD with 3.5GHz RF card.
- Supports Quality of Service (QoS)
- IEEE 802.3 Convergence Sub Layer support.
- Downlink/Uplink remote management.
- Real-Time Linux Based OS.
- Embedded WiMAX testing functions.

### Specification

Standard	IEEE 802.16-2004, HiperMAN/WiMAX Fixed profile		
Modulation	OFDM (BPSK, QPSK, 16-QAM, 64-QAM)		
RF Frequency	3.4 - 3.6GHz in 250KHz steps		
Duplexing Method	TDD & HFDD		
Bandwidth	3.5MHz & 7MHz		
TX Maximum output power (at antenna port)	20dBm		
TX Dynamic Range	30dB		
	Burst Type	IEEE Spec. [dB]	Typical [dB]
	BPSK 1/2	-13.0	-31.5
	QPSK 1/2	-16.0	-31.5
Relative TX Constellation Error (@ Maximum output power)	QPSK 3/4	-18.5	-31.5
	16-QAM 1/2	-21.5	-31.5
	16-QAM 3/4	-25.0	-31.5
	64-QAM 2/3	-29.0	-31.5
	64-QAM 3/4	-30.0	-31.5
Maximum RX power (BER< 10 <sup>-6</sup> )	-20dBm		
Maximum tolerable RX power	0dBm		
	Burst Type	IEEE Spec. [dBm]	Typical [dBm]
	BPSK 1/2	-93.1	-95.0
	QPSK 1/2	-90.1	-93.0
Maximum RX Receiver Sensitivity (3.5MHz BW, BER< 10 <sup>-6</sup> )	QPSK 3/4	-87.6	-89.5
	16-QAM 1/2	-84.6	-86.5
	16-QAM 3/4	-81.1	-83.0
	64-QAM 2/3	-77.1	-79.0
	64-QAM 3/4	-75.1	-77.0
RX Input Dynamic Range	30dB		
<b>Board Mechanical/Rating</b>			
Dimension	59.75mm (W) * 80.00mm(L), PCB thickness 1mm		
Operating Voltage	3.3V, 5V (through Mini-PCI connector)		
Average Power Consumption	≤ 4.7W		
Operating Temperature	0°C ~ +55°C ambient temperature		
Storage Temperature	-20°C ~ 70°C ambient temperature		
Operating humidity	90% maximum (non-condensing)		
Storage humidity	90% maximum (non-condensing)		



**Head Office:** 1F, No.21, Yanfa 2nd RD., SBIP, Hsin-Chu 300, Taiwan ( R.O.C. )

**Factory:** No.77, Youyi Rd., Jhunan Township, Miaoli County 350, Taiwan, (R.O.C.)

**Taipei Office:** 3F, No.188, sec. 2, Jhongsing Rd., Sindian City, Taipei County 231, Taiwan, R.O.C.

**Tel:** 886-3-578-9090

**Tel:** 886-37-580-777

**Tel:** 886-2-8665-0457

**Fax:** 886-3-578-9520

**Fax:** 886-37-580-799

**Fax:** 886-2-8665-0877