



# XMBW00

## IEEE 802.16d WiMAX 5.8GHz mPCI module

### Introduction

WiMAX (World Interoperability for Microwave Access), based on the IEEE 802.16 standard, is expected to enable true broadband speeds over wireless networks at a cost point to enable mass market adoption.

There are two major applications of WiMAX today: fixed WiMAX applications are point-to-multipoint enabling broadband access to homes and businesses, whereas mobile WiMAX offers the full mobility of cellular networks at true broadband speeds. Both fixed and mobile applications of WiMAX are engineered to help deliver ubiquitous, high-throughput broadband wireless services at a low cost. The XMBW00 Mini-PCI module is fixed WiMAX applications.

### 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 with 5.8GHz 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 WirelessHUMAN Fixed profile		
Modulation	OFDM (BPSK, QPSK, 16-QAM, 64-QAM)		
RF Frequency	5.150 – 5.875GHz by band options of 200MHz in 5MHz steps		
Duplexing Method	TDD		
Bandwidth	10 MHz		
TX Maximum output power (at antenna port)	17dBm		
TX Dynamic Range	30dB		
Relative TX Constellation Error (@ Maximum output power)	Burst Type	IEEE Spec. [dB]	Typical [dB]
	BPSK 1/2	-13.0	-30.0
	QPSK 1/2	-16.0	-30.0
	QPSK 3/4	-18.5	-30.0
	16-QAM 1/2	-21.5	-30.0
	16-QAM 3/4	-25.0	-30.0
	64-QAM 2/3	-29.0	-30.0
	64-QAM 3/4	-30.0	-30.0
Maximum RX power (BER<10 <sup>-6</sup> )	-20dBm		
Maximum tolerable RX power	0dBm		
Maximum RX Receiver Sensitivity (BER<10 <sup>-6</sup> )	Burst Type	IEEE Spec. [dBm]	Typical [dBm]
	BPSK 1/2	-88.5	-89.0
	QPSK 1/2	-85.5	-86.0
	QPSK 3/4	-83.0	-83.5
	16-QAM 1/2	-80.0	-80.5
	16-QAM 3/4	-76.5	-77.0
	64-QAM 2/3	-72.5	-72.5
	64-QAM 3/4	-70.5	-70.5
RX Input Dynamic Range	60dB		

### Board Mechanical/Rating

Dimension	59.75mm (W) * 68.30mm(L), PCB thickness 1mm
Operating Voltage	3.3V, 5V (through Mini-PCI connector)
Average Power Consumption	≤3.9W
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)