



PacketMAX[®] Base Station Radio (2GHz)

Carrier Class WiMAX BSR

Aperto's 802.16d products offer a full range of high-performance PacketMAX base station radios covering relevant frequencies in the 2 GHz band

Product Specification

PacketMAX 2 GHz Base Station Radio



The industry-leading PacketMAX series of Base Station Radios (BSR) are available in a variety of frequency bands to address regulatory requirements and spectrum availability across more than 90 countries. The compact, high-performance radios are available for the 2.3, 2.5, and 2.7 GHz frequency bands. The BSR from Aperto Networks offer patented link-management technology for enhanced link-reliability and high spectral efficiency even under interference conditions.

As with all PacketMAX WiMAX products, the base station radios are in full compliance with WiMAX standards including IEEE 802.16-2004, operating OFDM 256 FFT PHY in TDD mode.

The PacketMAX base station system has two components: the all-outdoor base station radio (BSR) and the indoor chassis. The BSR transceiver will accept an OFDM signal at 70 MHz from either the PacketMAX 3000 or PacketMAX 5000 WiMAX base station. A single cable connects the outdoor radio with the PacketMAX IDU supplying power, 20 MHz reference along with 70 MHz intermediate frequency TDD, and telemetry. The unit is moisture sealed and operates in inclement and extreme weather conditions.

Aperto Networks also offers Base Station Radios in the 3.3, 3.5, 3.65, 5.2, 5.6, and 5.8 GHz bands for use in licensed, license-exempt, and lightly-licensed spectrum. All Aperto products are environmentally conscious and RoHS compliant.

Interface and Connectors

PacketMAX Part Number	PM-BSR-23, PM-BSR-25, PM-BSR-27	
Interface Type	IF	Antenna
Interface Spec/Standard	IF Port, 70 MHz	RF Antenna Port
Connector Type and Spec	Type-F, Male, 75 Ohm	Type-N, Female, 50 Ohm

PacketMAX[®] 2 GHz WiMAX BSR System Specifications

Part Number	PM-BSR-23, PM-BSR-25, PM-BSR-27				
Description	2.3 GHz, 2.5 GHz, and 2.7 GHz Base Station Radio				
SYSTEM OVERVIEW	Frequency Range	2.3-2.4 GHz 2.495-2.690 GHz 2.7-2.9 GHz			
	Channel Bandwidth RX/TX Switching Time Access Method	3.5 GHz, 5 MHz, 7.0 MHz 3 us TDD; OFDM 256 FFT			
TX	Output Power	20 dBm			
	Modulation Transmit Power Accuracy Frequency Step Size Frequency Stability	BPSK, QPSK3/4, 16 QAM3/4, 64 QAM3/4 +/- 1dB 125 kHz +/- 2 PPM			
RX	Input Dynamic Range	60 dB			
	Max Input Power, Operational	-30 dBm			
	Sensitivity (dBm @ BER 10-6)		3.5 MHz	5.0 MHz	7.0 MHz
		BPSK-1/2	-95.1	-93.4	-92.0
		QPSK-1/2	-92.1	-90.4	-89.0
		QPSK-3/4	-89.6	-87.9	-86.5
		16QAM-1/2	-86.6	-84.9	-83.5
		16QAM-3/4	-83.1	-81.4	-80.0
		64QAM-2/3	-81.0	-80.0	-79.0
		64QAM-3/4	-80.0	-79.0	-76.0
Minimum Interference ACI		1st 2nd	1st 2nd	1st 2nd	
16QAM-3/4		13 dB 32 dB	13 dB 32 dB	13 dB 32 dB	
64QAM-3/4		06 dB 25 dB	06 dB 25 dB	06 dB 25 dB	
Elec and Mech	Dimensions (w*h*d)	11.75 x 11.75 x 2.75 inches			
	Average Power Consumption IF Frequency Operating Temperature Environment	30 Watts 70 MHz -35 to +60° C IP65			
IDU Compatibility	PM5000-WSC-S-21, PM5000-WSC-18, PM3000(All IDUs)				
Regulatory	Safety Standards	EN 609501-1, 2002			
	EMI Standards	EN300 385[14], Class A			
	RoHS Compliance	Yes			

About Aperto Networks:

Aperto Networks, a founding board member of the WiMAX Forum, develops the world's most advanced, carrier-class WiMAX base stations and subscriber units. They enable carriers to profitably offer broadband services through IP-rich point-to-point and point-to-multipoint wireless networks that are easy to deploy and provide unsurpassed subscriber density, QoS, and reliability. For more information, visit www.apertonet.com.