WiMAX FORUM FOUNDING MEMBER

alvarion®
Your Open WiMAX Choice

BreezeMAX® Extreme 5000

WiMAX™ 16e pioneer for the license-exempt market

madison technologies

Powerful Interference Mitigation Techniques for Overcoming Obstacles

BreezeMAX Extreme 5000 supports MIMO, providing Sensitivity Time Control and Maximal Ratio Combining advanced antenna techniques in both the base station and end user devices. Designed with state-of-the-art Orthogonal Frequency Division Multiple Access and error correction coding techniques (leveraging 16e PHY) as well as enhanced capabilities with integrated spectrum analyzer, Dynamic Frequency Selection and dynamic channel selection, BreezeMAX Extreme 5000 offers best Non-Line-of-Sight (NLOS) and interference resilience.

Efficient Delivery of Broadband Applications to any Environment

The ideal choice for WISPs, municipalities, utilities, enterprises and public safety networks, BreezeMAX Extreme 5000 with SISO/MIMO single or dual sector models, can maximize capacity over range or vice versa for better answering deployment needs.

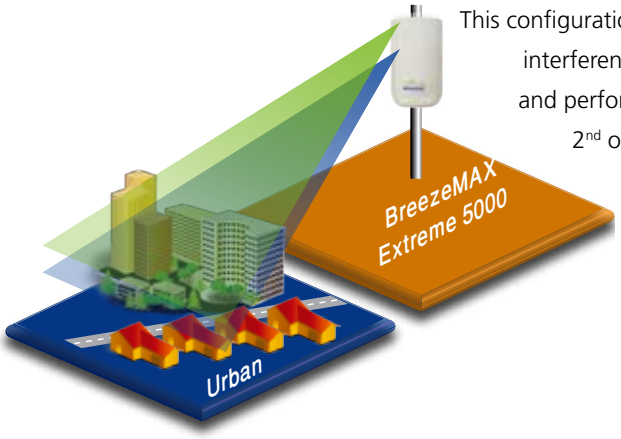
BreezeMAX Extreme 5000 supports unmatched sector capacity, coverage and deployment variety for enhanced implementation of fixed, nomadic and mobile applications in rural and urban deployments.

BreezeMAX Extreme 5000 Advantages

- WiMAX 16e QoS for license-exempt frequencies
- Advanced interference mitigation techniques for leading performance and reliability
- MIMO A/B support for increased coverage and capacity
- Reliable video transmission and inherent multicast support
- Compact all-outdoor, easily installed single unit
- Secure connectivity with embedded encryption mechanisms
- Reliable and ruggedized infrastructure for extreme outdoor conditions
- Fast ROI with reduced TCO by utilizing an all-in-one, single platform with ASN gateway and dual sector support
- Mobile, portable and fixed servicesMIMO

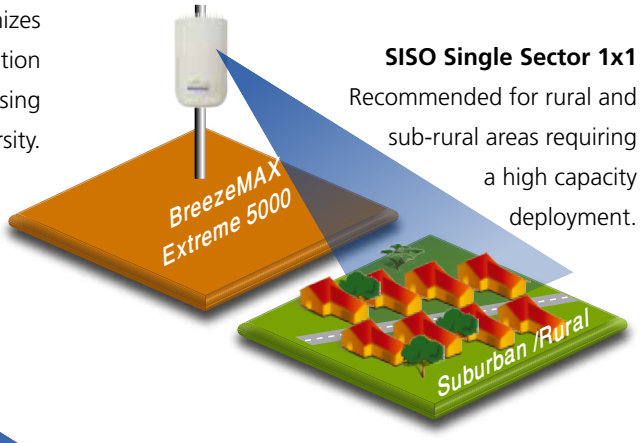
MIMO Single Sector 2x2

Recommended for high capacity urban, video driven and NLOS deployments. This configuration maximizes interference mitigation and performance using 2nd order diversity.



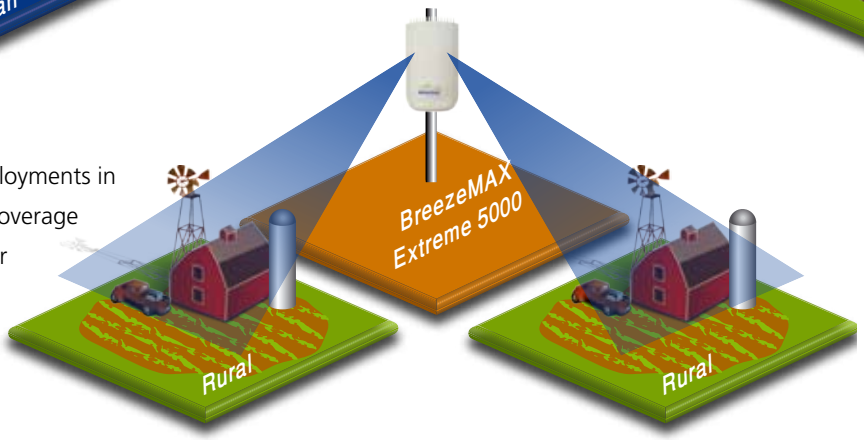
SISO Single Sector 1x1

Recommended for rural and sub-rural areas requiring a high capacity deployment.



SISO Dual Sector 1x1

Recommended for deployments in rural areas with large coverage requirements and lower capacity demands per sector.



WiMAX 16e for the License-exempt Market

BreezeMAX Extreme 5000 is the first wireless broadband solution to bring WiMAX 16e technology to the 5 GHz license-exempt market. This best-of-breed base station is designed for a variety of applications and business models and offers advanced air-protocol capabilities, superior performance and standard protocol support.

A highly integrated, all outdoor base station, BreezeMAX Extreme 5000 is designed for ease-of-deployment and reduced total cost of ownership. With an easy configuration and self-sustained ecosystem, the BreezeMAX Extreme 5000 is ideally suited for Wireless Internet Service Providers (WISPs), municipalities, utilities, enterprises and public safety networks.

Features & Highlights of BreezeMAX

ApplicationsCarrier-class WiMAX 16e Solution for the 5 GHz License-exempt Market

BreezeMAX Extreme 5000 brings state-of-the-art standardised technology to the license-exempt market providing WiMAX Quality of Service (QoS) and enhanced coverage and capacity. BreezeMAX Extreme 5000 is designed to support interoperability and certification and complies with WiMAX Forum® guidelines, enabling ecosystems to benefit from WiMAX 16e economy-of-scale.

All-in-One, All Outdoor Solution for Profitable Up & Go Services

The compact design of BreezeMAX Extreme 5000 enables reduced CAPEX and OPEX for low total cost of ownership and accelerated ROI. This all-in-one solution integrates the base station, antenna, ASN- gateway and GPS receiver to provide an all outdoor solution that is easy to deploy on communication towers, rooftops and street poles.

Leverage WiMAX QoS for Enhanced and Swift Delivery of Triple Play Services

Featuring inherent WiMAX QoS, BreezeMAX Extreme 5000 enables simultaneous support of multiple applications using service differentiation for real-time triple play (voice, video and data) and non real-time applications.

BreezeMAX Extreme 5000 Supports a Wide Range of Applications

To arrange a demonstration or to speak with our Alvarion Technical Support Team, call Madison Technologies on 1800 66 99 99.

Specifications

Radio & Modem		
Unit Type	All outdoor base station	
Configuration options	Single sector MIMO – integrated / external antenna Single sector SISO+ – integrated / external antenna Dual sector SISO – external antenna	
Frequency	Base Station 4900-5350 MHz 5470-5950 MHz	CPE 4900-5950 MHz
Channel bandwidth	5 MHz, 10 MHz, 2x10 MHz	5 MHz, 10 MHz
Number of channels	MIMO: 2Rx, 2Tx SISO: 1Rx, 1Tx	2Rx, 1Tx
Radio access method	IEEE 802.16-2005 (16e OFDMA)	
Operational mode	TDD	
Central frequency resolution	2.5 MHz (for 5 MHz channel), 5 MHz (for 10,2x10 MHz channel)	
FFT size	512/1024	
Supported modulation	QPSK 1/2, 3/4 + Rep QAM16 1/2, 3/4 QAM64 2/3, 3/4, 5/6	
Air link optimization support	HARQ, CTC, compressed DL / UL Maps	
Diversity	2x2, MIMO Matrix A, MRC, MIMO Matrix B	
Transmit Power		
Transmit Power	Base Station	CPE
	0-21 dBm, 1dB resolution	QAM64: 18 dBm, QAM16: 20 dBm QPSK: 21 dBm , ATPC of 20 dB 1 dB resolution
Integrated antenna gain	14.5 dBi	16 dBi
Security		
Authentication	Centralised over RADIUS, MS chap v.2 EAP TTLS over RFC-2865	
Data encryption	AES WiMAX 16e	
Interfaces		
Network Standard Compliance	IEEE 802.3 CSMA/CD	
Data Interface	10/100 Mbps, half/full duplex with auto negotiation	
Power	In: PoE (55V DC) In: 48V DC Out: PoE (55V DC) feeding backhaul CPE	
GPS	Antenna (TNC), receiver integrated in unit GPS chaining support	
Mechanical	Base Station	CPE
Dimensions (HxDxW)	51 x 28 x 14.7 cm	23 x 23 x 6.3 cm
Weight - Extreme 5000 Unit	11 kg	2 kg
- Mounting Kit	5kg	
Environmental		
Operating temperature	-40°C to 55°C	
Operating humidity	5%-95% non condensing, weather protected	
Standard Compliance		
EMC	ETSI EN 301 489-1, FCC p15	
Safety	CE EN 60950-1/22, UL 60950-1/22	
Environmental	ETS 300 019 part 2-1, 2-2, 2-4, IP67	
Radio	ETSI EN 302 326, ETSI EN 301 390 ETSI EN 301 893, ETSI EN 302 502 FCC part 15.247, FCC part 15.407, RSS-111, RSS-210	
Humidity	ETSI 300 019-2-4 Class T4.1E (IEC-60068-2-56)	
Regulatory compliance	ROHS	