

# AB-MAX™

## Point to Multipoint

### Key Features

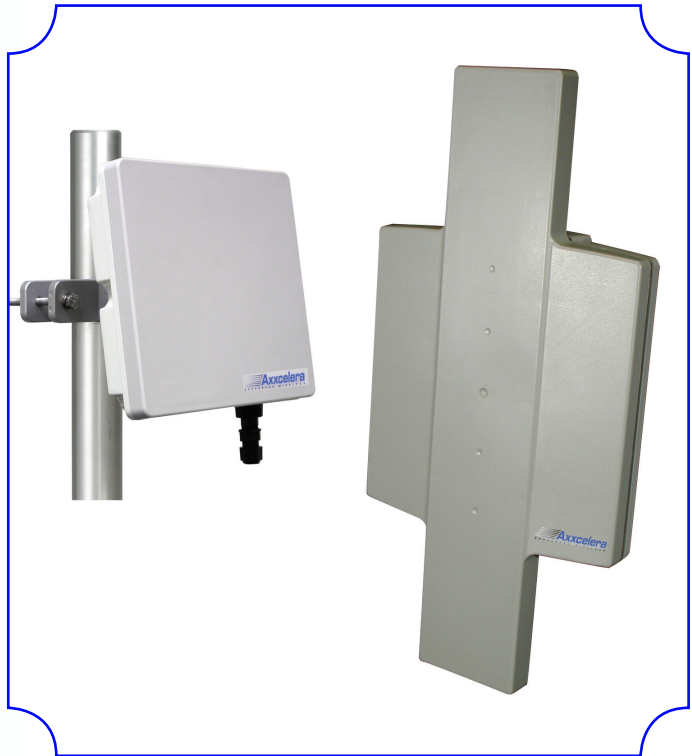
- WiMAX Compliant (802.16d), NLOS, Point-to-Multipoint system
- FCC and CE approved for U-NII and ISM bands
- Supports 5.47 - 5.85 GHz operation on a single platform
- QoS Support (CIR, PIR)
- Programmable dual-pol. Access Point antennas
- Dynamic Frequency Selection (DFS)
- Integrated GPS synchronization

### Benefits

- Improved cell penetration and range
- Improved cell throughput (Up to 64QAM modulation)
- Different SLAs for different end users

### Applications

- Wireless ISPs
- Rural Broadband
- Public Safety
- Transportation
- Cyber Cafes
- Enterprise Networks



## AXXCELERA BROADBAND

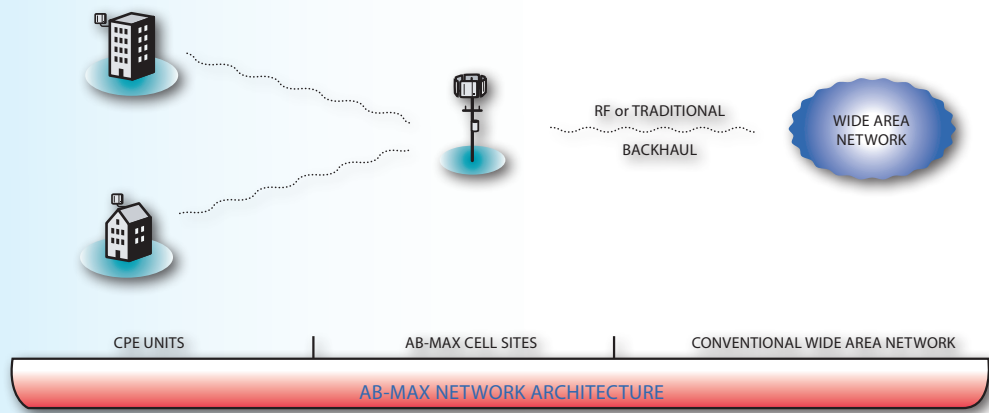
Axxcelera Broadband Wireless is a data networking solutions company that is developing leading-edge technology for the deployment of broadband wireless communications over the Internet. The AB-MAX™ fixed wireless broadband platform bridges the last mile, currently replacing the local loop for corporate and small business subscribers and migrating to the residential market and will be certified WiMAX compliant. Axxcelera is a principal member of the WiMAX Forum.

## AB-MAX OVERVIEW

AB-MAX™ consists of fixed broadband wireless access equipment (Access Point and CPE) for Internet, data, multimedia, video, voice, and other emerging IP based applications. Combining WiMAX with higher level network features, AB-MAX™ provides a robust, cost-effective alternative to wired alternatives such as T1/E1, DSL and cable modems.

## REASONS TO BUY AB-MAX

AB-MAX™ offers service providers a standards based Non Line of Site (NLOS) platform that helps improve cell range and penetration compared with proprietary single carrier solutions. It also supports Quality of Service (QoS) features like CIR and PIR along with advanced scheduling services like best effort service, real time polling and UGS services. This allows a service provider to offer different classes of service to different end customers. Deployments may use frequencies from the U-NII and ISM 5GHz spectrum. Select from various modulation options and antenna polarizations, all in a low cost, easy-to-deploy product.



**AB-MAX OPERATION**

AB-MAX™ offers numerous options for provisioning and management. For small campus type networks, AB-MAX™ can be configured in a static environment via a web interface. For larger networks, AB-MAX™ can be configured via an automated provisioning server, where each unit can be provisioned and managed from a single location. AB-MAX™ also includes support MIB-2, WiMAX MIB, and Axxcelera custom MIB.

**CELLSITE COMPONENTS**

- One or more environmentally sealed Access Points (AP), each with an integrated 60° by 7° beam width patch antenna
- Six Access Points provide 360° geographic coverage
- Ethernet switch or router
- Backhaul equipment such as that offered by Axxcelera
- Other third party equipment as required

**CUSTOMER PREMISES (CPE) COMPONENTS**

- AB-MAX™ Customer Premises Equipment (CPE) with integrated 20° by 20° beam width single polarization patch antenna

**NON LINE OF SIGHT**

WiMAX technology includes OFDM, which provides greater non line of sight deployment options.

**ENVIRONMENTAL CHARACTERISTICS**

Temperature Range	-33°C to +55°C ambient temperature
Humidity	Up to 100% at 45°C
Wind Loading	120 miles/hour (~193 km/hour) per Bellcore GR-487-CORE section 3.31

**SPECIFICATION SUMMARY**

Operating Frequency Range	5.47 - 5.725 GHz, 5.725 - 5.850 GHz (Per U-NII and ISM band Specifications)
Channel Bandwidth	5, 10, or 15 MHz
Modulation	Dynamic Adaptive (BPSK, QPSK, 16QAM, 64QAM)

**SPECIFICATION SUMMARY (Continued)**

Transmit Power*	Access Point: +15 dBm (5.47 - 5.725 GHz), +18 dBm (5.725 - 5.850 GHz) CPE: +15 dBm (5.47 - 5.725 GHz), +18 dBm (5.725 - 5.850 GHz)
Integrated Antenna	Access Point: 16 dBi, dual-pol. programmable CPE: 18 dBi, single-pol.
Rx Sensitivity	-92 dBm
Dimension	CPE: 8"Hx8"Wx3.2"D (203mm x 203mm x 81mm) Access Point: 20"Hx10"Wx2.5"D (508mm x 254mm x 65mm)
Weight	CPE: 7.7lbs (3.5kg) Access Point: 11.0lbs (5.0kg)
Net Channel Throughput (bands without DFS)	47Mbps@15MHz, 31Mbps@10MHz, 15Mbps@5MHz
Net Channel Throughput (bands with DFS)	43Mbps@15MHz, 28Mbps@10MHz, 14Mbps@5MHz
Certification:	FCC, CE, WiMAX**
External Antenna (optional)	N-Type connector
Security	x.509 authentication, CBC-Mode 56-bit DES, AES-CCM mode
Protocols	Ethernet Bridging per IEEE802.1D, VLAN per IEEE 802.1Q (CPE only) Differentiated Services per IEEE802.1D/p DHCP client (CPE only)
Interfaces	RJ45 socket offering 100BaseT Ethernet
Error Control	1/2, 2/3, or 3/4 FEC
Regulatory Compliance	FCC 15.247, FCC 15.401-407, RSS-210 A8, RSS-210 A9, R&TTE Directive 1999/5/EC, EN 301 893, EN 302 502; EMC: FCC Part 15, IC ICES-0003, EMC Directive 2004/108/EC, EN 301 489-1, EN 301 489-17; Safety: Low Voltage Directive 2006/95/EC, IEC 60950, EN 60950, UL 60950

\* Actual transmit power level is subject to local regulatory constraints.  
\*\*Planned



a Moseley company.

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Axxcelera Broadband Wireless is certified to the ISO 9001:2000 Quality Management System standard.

Axxcelera reserves the right to make changes to specifications of products described in this data sheet at any time without notice.

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