

## Malibu Networks AirMAX™ System: 2.4 GHz BTS and CPE

Malibu Networks is pleased to introduce the Malibu Networks AirMAX system designed exclusively for point-to-multipoint operations in the 2.4 GHz ISM band. The system is composed of a BTS, CPE, a full featured Service Management System (SMS) and Malibu Networks' patent pending QoS implementation, MAXimum IP.™

With the benefits of MAXimum IP a service provider will see an immediate, dramatic increase in their bottom line. MAXimum IP accomplishes this through two primary means. First, by employing MAXimum IP the efficiency of the system is increased resulting in a subscriber throughput improvement of at least 2 times the effective bandwidth as compared to similar systems without MAXimum IP.

Second, MAXimum IP offers considerably more than just minimum and maximum bandwidth control per CPE as well as per each subscriber behind the CPE, a claim no other vendor can make today. Maximum IP also gives the service provider the ability to control jitter and latency as well - enabling additional high value services to be sold and supported. Real time traffic such as voice and gaming can now be offered to the end user.

Combined with the full featured SMS for services and subscriber definition, the service provider can easily create, package and sell an expanded set of services never before available in a system at this price point.

The CPE and BTS portions of the system are all outdoor units (ODU) ruggedized for the harshest environments with an operating temperature range of up to 160 degrees F. With this approach, installation times are reduced and the skill-set required is substantially reduced.

Reliability and cost effectiveness were key design goals for this system. By utilizing standard, off-the-shelf components Malibu Networks achieves both of these goals. Malibu Networks' product is reliable and takes advantage of volume production resulting in a access solution that outperforms other competitive solutions on a cost/benefit scale.



**The Technology is MAXimum IP.  
The Product is AirMAX.**

## System

Specification	Performance
Operating Frequency	2.4 -2.483 GHz ISM
Data Rate per sector	11Mbps
Non-overlapping channels	3
CPE's per Sector	100
Subscribers per CPE	Up to 100
Range	Up to 20 km

## RF

Specification	Performance
Waveform	DSSS
Duplexing	TDD
Modulations	BPSK, QPSK, CCK
Power Output	Up to 20dBm
Receive Sensitivity at BER 10-6	<ul style="list-style-type: none"> <li>- 94 dBm @ 1 Mbps</li> <li>- 91dBm @ 2 Mbps</li> <li>- 89 dBm @ 5.5 Mbps</li> <li>- 85 dBm @ 11 Mbps</li> </ul>

## Networking & Security

Specification	Performance
Protocols Supported	Static IP, NAT, DHCP Server, SNMPv2
Interfaces	10/100BaseT
Security	Rule based packet filtering 128 bit WEP with Dynamic Key Exchange

## QoS

Specification	Performance
Implementation	Per flow queuing and scheduling, fair and dynamic bandwidth allocation
Traffic Shaping and Policing	Delay and Jitter control
Class of Service	Guaranteed, Controlled and Best Effort
Packet Classification	Layer 3 and layer 4 classification including TOS and RTP payload

## AirMAX Element Management and Provisioning

Feature	AirMAX SMS
Base station management interfaces	Command line interface , GUI-based SMS, SNMP Agent
CPE management interfaces	Web browser-based GUI
Management protocol	SNMP v2, with multiple community strings
MIBs	MIB II, 802.11, Malibu enterprise MIB
Open interfaces	Provisioning, accounting, and billing applications
Base station software management	Download across network
CPE software management	Download across network

## Physical and Environmental

Specification	Performance
Temperature Range	-20 to +70 °C Operational Temp Range
Power	- Supply- Consumption 100-240VAC, 50-60Hz, 1.5 amps maximum
Mounting	1" to 2" pole mount
Dimensions	11"(h) x 8"(w) x 3"(d)

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