

M4.5710A

Dual-band Access Point



The MESH4G™ M4.5710A Access Point is an enterprise class, 10 Mbps, direct sequence, spread spectrum wireless transceiver offering channels of operation in both the 5.8 and 5.3 GHz unlicensed bands.

The M4.5710A supports up to 500 subscriber units and includes an integrated antenna as well as a comprehensive set of management and deployment tools.

Product Overview

- Dual-band 5.8 GHz / 5.3 GHz, software switchable
- Up to 18-mile range, 12 dB fade margin
- 10 Mbps usable subscriber throughput
- Supports up to 500 subscribers each
- Dual polarized antenna, 60° beamwidth

The M4.5710A consists of the radio integrated together with a dual-polarised, software switchable, multi-element planar antenna with a 60 degree beamwidth all in an outdoor enclosure. The Access Point is powered via Power-over-Ethernet (PoE) for ease of installation and is ideal for most outdoor wireless solutions.

Versatility & Scalability

Tight channels, two bands of operation, coupled with dual polarity antennas allow total collocation potential of up to 22 access points for a fully loaded cell site. More typical deployments involve anywhere from 1 to 6 access points. With a 60 degrees antenna beamwidth, you can cover a full 360 degree site with 6 access points.

Features such as eleven channels, all user-selectable, non-overlapping and programmable, coupled with dual polarity antennas allow for maximum flexibility and permit the administrator to change channel assignments quickly and to minimise susceptibility to interference.

All programming of the network and of authorised subscriber units is consolidated at the AP to maintain full network control. Supported protocols such as Telnet, SNMP, HTTP, and FTP allow network operators to configure and manage the AP database remotely to modify channel plans, configuration, the Subscriber Unit database, and other parameters.

Management and Deployment Tools

The AP offers a host of management tools designed to allow network operators to quickly and efficiently deploy and manage their M4.5710A network.

A few features are listed below:

- Site Survey - this tool scans entire band and reports back average and peak interference
- RF LINK / Speed test - tests each SU for quality of link and reports overall bandwidth as well as dropped packet errors.
- Receive Threshold Control - Setting to increase or decrease receiver sensitivity depending on range and interference conditions.
- Channel Planning - Use the M4.5710A default channels or assign any frequency to one of 30 available channels in single MHz increments
- Power Leveling - This powerful feature will automatically adjust the output power of each subscriber unit to the specified RSSI Target. This feature allows each SU's signal to be received at the AP at approximately the same level regardless of the AP's distance.
- SNMP - monitor the status of all SU's via Simple Network Management Protocol (SNMP), built in web browser interface, Telnet. Collects and reports all vital SU statistics and status.

M4.5710A

SPECIFICATIONS

Radio Parameters

Frequency of Operation

High Band (ISM Band): 5725 MHz to 5850 MHz
Low Band (U-NII Band): 5250 MHz to 5350 MHz

Channels

High Band (ISM Band): 6 non-overlapping channels
Low Band (U-NII Band): 5 non-overlapping channels

AP Antenna Gain

14 dBi

AP Beamwidth

60° azimuth, 10° elevation

Modulation Format

Direct Sequence Spread Spectrum (DSSS) with
RAKE

Certification/Compliance

FCC Part 15.247, 15.407

Receiver Sensitivity (1E10-6 BER)

1600 byte packets: -83 dBm, 64 byte packets: -87
dBm

Data and Operational Parameters

Access Method

TDD with SmartPolling.

User Data Throughout

10 Mbps

Format

10/100 Base T

Network Protocols

All IEEE 802.3/802.3u compliant protocols

Configuration and Management

Telnet, SNMP, TFTP, HTTP

Upstream/Downstream Throughput

Dynamic, automatically adjusts to suit demand

Bandwidth Control

Committed Info Rate (CIR) and Maximum Info Rate
(MIR) setting per subscriber unit

Physical Interfaces

Ethernet (via shielded RJ45)

10/100 BaseT, auto-sense, auto-negotiate

Serial (via RJ11)

9600 baud

Ethernet Packet

Up to 1600 byte long packets (supports VLAN/VPN
pass through)

Power Parameters

Power Method

Power-over-Ethernet (PoE) via DC voltage injected at
PoE J-box

Voltage Input Limits into Radio

10.5 VDC . 24 VDC

Standard Power Supply

120 VAC to 24 VDC adapter

PoE Cat-5 Max Cable Length

300 feet on 24 AWG STP Cat-5 cable

Power

13.4 W

Physical and Environmental

Radio Enclosure

All-weather, powder coated, cast aluminum with poly-
carbonate radome

Temperature Range

-40° to 60° C (-40° to 140° F)

NEMA Rating

NEMA 4

Radio Dimensions

12.5" x 8" x 2.75"

Radio Weight

4 lbs

User Interfaces

RJ45 (shielded) and RJ11

* Please note- this product is not
approved for use in the EU