

Mobility Point® MP-432

DATA SHEET

Mobility Point MP-432

802.11n dual radio 3x3 MIMO
Indoor access point designed for
low-density deployments requiring
maximum coverage.



The Mobility Point family provides access point, bridging and wireless mesh services for indoor and outdoor deployments of Smart Mobile wireless LANs.

Mobility Point MP-432

The MP-432 is a high performance 802.11n (3 x 3) Multiple Input / Multiple Output (MIMO), dual radio access point, with maximum aggregate data rates of up to 600 Mbps. It is designed for low-density deployments requiring maximum coverage.

It features built-in internal antennas to provide outstanding coverage and range enhancements without having to configure "rabbit ear" antennas. One radio operates in the 2.4 GHz band and the other in the 5 GHz band, with each radio featuring three radio transmit and receive chains. 3 x 3 MIMO provides significantly better range performance over implementations which use a more limited 2 x 3 system.

The MP-432 is backward compatible with legacy 802.11a/b/g clients in the 2.4 GHz and 5 GHz bands to provide investment protection without the need for a second overlay network.

The MP-432 is compliant with the IEEE 802.11n Draft 2.0 standard, software upgradeable to the final standard, and tested extensively for interoperability with 802.11n clients and legacy 802.11a/b/g clients. The MP-432 supports all relevant encryption methods including WPA2 (Wi-Fi Protected Access 2 based on 802.11i), WPA (Wi-Fi Protected Access), in both Enterprise (802.1X) and Personal (pre-shared key) modes. The MP-432 does not store data, encryption keys or security credentials locally on the access

point, and poses no security risk to the organization if stolen. A stolen MP-432 would be a useless inoperable device if not connected to an authorized network.

The MP-432 also features two 10/100/1000 Ethernet ports for redundant data connectivity and redundant Power over Ethernet (PoE). The Gigabit Ethernet ports run in auto-negotiation mode to seamlessly adapt to the Ethernet infrastructure. The MP-432 has extensive Power over Ethernet configuration options to fit the need of any deployment model.

The MP-432 can be powered by any standards-based 802.3af, 802.3af+ (draft 802.3at), or 802.3 at power source. If there is little to no current PoE infrastructure investment, a high power 802.3af+ device is recommended. If a significant investment in 802.3af PoE exists, or for other reasons a significant 802.3af PoE investment is contemplated, the MP-432 can operate with full functionality with this infrastructure. When powered with 802.3af on both ports simultaneously, the MP-432 operates in 3 x 3 MIMO on both radios. If powered with 802.3af on only, both radios operate in 2 x 3 MIMO mode.

The MP-432 is compatible with all generations of Trapeze Networks Mobility Exchange WLAN controllers, and can be deployed without any hardware upgrades to the installed base of controllers.

Mobility Point MP-432 (continued)

The MP-432 can be mounted with the same mounting brackets used for legacy Trapeze Networks access points. The UL2043 rating of the MP-432 allows the access points to be placed above the ceiling tile in plenum areas regulated by municipal fire codes. Its enclosure design resembles a smoke detector to appear innocuous and minimize attention, making it less likely to be tampered with, while featuring a built-in Kensington lock system for added physical security.

The MP-432 is simple to deploy and easy to manage. To enhance the quality of the connection, the MP-432 automatically calculates the integrity and RF signal strength of the wireless channel, continually tuning for the optimal RF channel and transmit power. The MP-432 includes Automatic Channel Allocation and Automatic Power Allocation systems that support both 20 MHz wide and 40 MHz wide channels for 802.11n. The system is compatible with the auto channel and power allocation tools in the legacy 802.11a/b/g access points, providing an easy path for deployment and migration in mixed environments.

In addition to traditional access point functionality, the MP-432 also serves as a Mesh AP, Mesh Portal, or Wireless Distribution System (WDS) Bridge to extend the reach of enterprise WLANs where cabling cannot reach or is not desired. The MP-432 can support these services in either point-to-point or point-to-multipoint topologies, allowing maximum flexibility within a mesh or bridged environment. In Mesh Portal mode, the MP-432 is the gateway node to the wired network and advertises services to mesh access point nodes. It enforces firewalls, access policy, and quality of service (QoS) while performing broadcast suppression—all of which serve to optimize RF spectrum utilization in the mesh network. The MP-432 can be configured with one radio for client services and the other for mesh service.

The MP-432 plays an important role in wireless intrusion detection systems and wireless intrusion prevention systems (WIDS/WIPS) as well as denial-of-service (DoS) attack detection and prevention. The MP-432's ActiveScan mechanism scans all 802.11 channels for WIDS/WIPS including 20 MHz and 40MHz wide channels, while simultaneously providing wireless connectivity to Wi-Fi clients.

The SentryScan option allows the MP-432 or individual radios in the MP-432 to act as dedicated sentries, providing nonstop scanning and protection. The MP-432 also supports Dynamic Beacon Frame Protection, the strongest level of beacon protection in the industry, to ensure 802.11 beacon frames are not spoofed by an intruder.

For location based services, the MP-432 supports the LA-200 Location Appliance and other location engines that rely on Wi-Fi signal information for position location. Common applications include asset tracking and client location.

The MP-432 uses the same Mobility System Software™ as all other Trapeze Mobility Points. For more information about the security and networking capabilities of the MP-432, please read the Mobility System Software datasheet.

Key Features

Radios	
Dual Radios	<ul style="list-style-type: none"> 802.11a/n (5 GHz) and 802.11b/g/n (2.4 GHz) concurrent operation
Internal Antenna	<ul style="list-style-type: none"> Optimized gain pattern for maximum radio coverage True omni-directional antenna allows position-independent placement
Radio Transmit Power Setting	<ul style="list-style-type: none"> Granular Transmit Power Settings in single dBm increments Configurable power allows control of RF cell size
Reliability	
RF Auto-Tuning	<ul style="list-style-type: none"> Self-tuning for optimal channel, data rate and transmit power Eliminates coverage holes if adjacent APs go out of service
Link and power resiliency	<ul style="list-style-type: none"> Dual attached Power-over-Ethernet with redundant network link
Scalability	
Clients	<ul style="list-style-type: none"> Supports up to 500 simultaneous clients
Encryption	<ul style="list-style-type: none"> Dedicated hardware-based line-rate encryption for certified operation of WPA (TKIP), WPA2, (AES), 40-bit WEP, 128-bit WEP, and Dynamic WEP with per session rotating keys
802.11n	
	<ul style="list-style-type: none"> 3 x 3 MIMO (3 Radio Transmit and 3 Radio Receive chains) with two spatial streams 20 MHz and 40 MHz channels PHY data rates up to 300 Mbps per radio. 600 Mbps aggregate total Adaptive Frame Aggregation L2 (MPDU-Aggregation) and L3 (MSDU Aggregation) Maximal Ratio Combining Cyclic Delay Diversity (CDD)



Security

Physical Security	<ul style="list-style-type: none"> Highly inconspicuous design, looks like a smoke detector No data, security credentials or encryption keys stored locally No console port; no local access possible If stolen, no configuration information or data goes with it Stolen AP can be "blacklisted" Integrated Kensington security lock
WIDS/WIPS	<ul style="list-style-type: none"> Either radio can be configured independently for ActiveScan or SentryScan

Installation

Mounting	<ul style="list-style-type: none"> One snap invisible ceiling grid attachment Compatible with MP-37x and MP-422 Trapeze mounting brackets
Powering	<ul style="list-style-type: none"> Any mobility exchange controller with PoE Any PoE-enabled switch or PoE injector
RF Planning	<ul style="list-style-type: none"> Outage resiliency planning for RF Auto-Tuning using RingMaster®

Specifications

Hardware Specifications

Dimensions	<ul style="list-style-type: none"> Diameter: 8.11 inches (20.59 cm) Height: 3.23 inches (8.2 cm)
Weight	<ul style="list-style-type: none"> Without mounting bracket: 28.2 ounces (0.8 kg) With mounting bracket: 31.7 ounces (0.9 kg)
Interfaces	<ul style="list-style-type: none"> Two RJ-45 ports for 10/100/1000Mbps Ethernet and Power-over-Ethernet (PoE)
Environmental	<ul style="list-style-type: none"> Operating temperature: 0°C to 50°C (32°F to 122°F) Storage temperature: -25°C to 70°C (-4°F to 158°F) Humidity: 10% - 95% (non-condensing)
Status Indicators	<ul style="list-style-type: none"> 3 LEDs: Power, Radio 1, and Radio 2, indicate activity and various states

802.11n Radio Specifications

Operating Frequency	<ul style="list-style-type: none"> 2.4 GHz to 2.484 GHz and 5.15 GHz to 5.85 GHz
Modulation	<ul style="list-style-type: none"> Orthogonal Frequency Division Multiplexing (OFDM)
Transmit Power	<ul style="list-style-type: none"> Based on regulatory domain, up to 19 dBm in 2.4 GHz, up to 18 dBm in 5 GHz
Configurable Association Rates	<ul style="list-style-type: none"> Modulation Coding Scheme MCS 0 – MCS 15 (6.5Mbps – 300Mbps) Legacy Rates: 54 Mbps, 48 Mbps, 36 Mbps, 24 Mbps, 18 Mbps, 12 Mbps, Mbps and 6 Mbps with automatic rate fallback

802.11a Radio Specifications

Operating Frequency	<ul style="list-style-type: none"> 5.15 GHz to 5.85 GHz
Modulation	<ul style="list-style-type: none"> Orthogonal Frequency Division Multiplexing (OFDM)
Transmit Power	<ul style="list-style-type: none"> Based on regulatory domain, up to 19 dBm in 2.4 GHz, up to 18 dBm in 5 GHz
Configurable Association Rates	<ul style="list-style-type: none"> 54 Mbps, 48 Mbps, 36 Mbps, 24 Mbps, 18 Mbps, 12 Mbps, 9 Mbps and 6 Mbps with automatic fallback

802.11b Radio Specifications

Operating Frequency	<ul style="list-style-type: none"> 2.4 GHz to 2.484 GHz
Modulation	<ul style="list-style-type: none"> Direct-Sequence-Spread-Spectrum (DSSS)
Transmit Power	<ul style="list-style-type: none"> Based on regulatory domain, up to 19 dBm in 2.4 GHz, up to 18 dBm in 5 GHz
Configurable Association Rates	<ul style="list-style-type: none"> 11 Mbps, 5.5 Mbps, 2 Mbps, and 1 Mbps with automatic fallback

802.11g Radio Specifications

Operating Frequency	<ul style="list-style-type: none"> 2.4 GHz to 2.484 GHz
Modulation	<ul style="list-style-type: none"> Orthogonal Frequency Division Multiplexing (OFDM)
Transmit Power	<ul style="list-style-type: none"> Based on regulatory domain, up to 19 dBm in 2.4 GHz, up to 18 dBm in 5 GHz
Configurable Association Rates	<ul style="list-style-type: none"> 54 Mbps, 48 Mbps, 36 Mbps, 24 Mbps, 18 Mbps, 12 Mbps, 9 Mbps and 6 Mbps with automatic fallback

Radio Approvals	
Operating Channels	<ul style="list-style-type: none"> Based on regulatory domain
5GHz Radio Approvals	<ul style="list-style-type: none"> USA: 47CFR(FCC) Part 15.407 Canada: IC RSS-210, Issue 6 Japan: TELEC ARIB STD-70 (per the new W52/W53 requirements)
2.4GHz Radio Approvals	<ul style="list-style-type: none"> USA: 47CFR (FCC) Part 15.247 Canada: IC RSS-210, 1 Issue 6 EU: ETSI EN300 328-2, EN301 489-1 and -17 Japan: TELEC RCR STD 33B, ARID STD-T66
Standards Compliance	
IEEE	<ul style="list-style-type: none"> 802.3i: 10BASE-T Ethernet 802.3u: 100BASE-TX Fast Ethernet 802.3ab: 1000 BASE-TX Gigabit Ethernet 802.3af: Power over Ethernet 802.3af+: (pre-standard 802.3at) Power over Ethernet 802.11 a/b/g/n, 802.11d, 802.11e, 802.11h, 802.11i, 802.11k 802.1X Network Access Control and Mutual Authentication 802.11a, 802.11b, 802.11g and 802.11n Wireless LAN 802.11e quality of service (QoS) (WMM), call admission control (TSPEC), Unscheduled Automatic Power Save Delivery (U-APSD) 802.11i Fast Roaming (PMK Cache), encryption (AES/CCMP and TKIP) Wi-Fi Protected Access (WPA) and Wi-Fi Protected Access 2 (WPA2) Wi-Fi Multimedia (WMM) & Wi-Fi Multimedia Power Save (WMM-PS)
IETF	<ul style="list-style-type: none"> IETF CAPWAP WG Taxonomy and Architecture compatibility
Regulatory Compliance	
Safety	<ul style="list-style-type: none"> UL 60950-1, 1st Edition CAN/CSA C22-2 No. 60950-1-03 CB Scheme to IEC 60950-1 1st Edition EU Low Voltage Directive 2002/95/EC
Environmental	<ul style="list-style-type: none"> WEEE: EU Directive 2002/96/EC ROHS: EU Directive 2003/95/EC EN60601-1-2 (2001): EU Medical Directive
Other	<ul style="list-style-type: none"> EU EMC: Directive 89/336/EC ROHS: EU Directive 1999/5/EC FCC Part 15, Class B IECS-003, Class B
DFS-2 and DFS-3	<ul style="list-style-type: none"> EN 301 893 v1.5.1

Ordering Information

Ordering Information	
MP-432	<ul style="list-style-type: none"> AP with dual radios: 802.11a/n and 802.11b/g/n, dual Gigabit Ethernet port, internal 3 X 3 MIMO antennas
PD-3001-xx	<ul style="list-style-type: none"> PowerDsine PD-3001, single port 802.3af midspan PoE injector (PD Note)
PD-6006-xx	<ul style="list-style-type: none"> PowerDsine PD-6006/AC/M, managed 6-port 802.3af midspan PoE injector (PD Note)
PD-6012-xx	<ul style="list-style-type: none"> PowerDsine PD-6012, managed 12-port 802.3af midspan PoE injector (PD Note)
PD-7006-xx	<ul style="list-style-type: none"> PowerDsine PD-7006, managed 6 port 802.3af+ midspan PoE injector (PD note)
PD-7012-xx	<ul style="list-style-type: none"> PowerDsine PD-7012, managed 12 port 802.3af+ midspan PoE injector (PD note)
PD-7024-xx	<ul style="list-style-type: none"> PowerDsine PD-7024, managed 24 port 802.3af+ midspan PoE injector (PD note)
PD NOTE	<ul style="list-style-type: none"> Please specify the appropriate region code for included power cord type in place of the XX: North America (NA), Europe (EU), United Kingdom (UK), Japan (JP), or Australia (AU)