Trapeze Networks

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Trapeze Smart Mobile™ provides all the components required to deploy a high-availability WLAN infrastructure for any size enterprise. The solution includes Mobility System Software, a full line of Mobility Exchange controllers, and Mobility Point access points, as well as the award winning RingMaster wireless management suite.

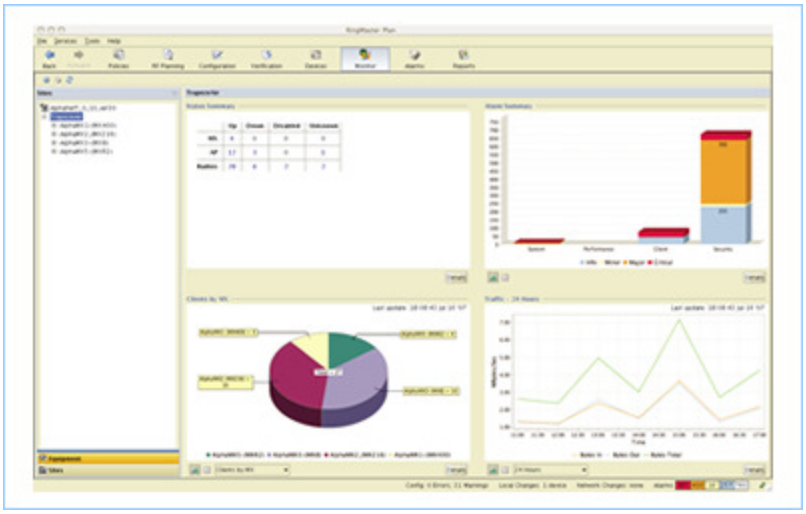
Smart Mobile overcomes all the limitations of current-generation WLANs through breakthrough technology called "intelligent switching" - a significant evolution and advance over today's limited WLAN architectures.

Smart Mobile's intelligent switching combines both centralized and distributed data forwarding based on the requirements of the underlying application,
resulting in optimized traffic flow, reduced latency, and ultra high performance - all without the high cost of upgrading network controller infrastructure.

Smart Mobile for the first time enables organizations to cost effectively deploy secure, massively scalable enterprise WLANs that support the most demanding data and voice applications while providing unlimited reach both indoors and outdoors.
RingMaster

RingMaster® Enterprise Wi-Fi® Management

RingMaster is a richly-featured, innovative, easy-to-use, full-lifecycle enterprise WLAN management suite. RingMaster enables network managers to perform all critical functions necessary for planning, configuring, deploying, monitoring, and optimizing their business Wi-Fi networks all from the same tool.



Predictive RF Planning
RingMaster provides unparalleled RF planning capabilities. By performing a Virtual Site Survey™, RingMaster automates coverage, capacity, and voice planning for indoor and outdoor areas. AutoCAD DXF and DWG, JPEG, and GIF floor plan files can be imported to create a useful RF plan. RingMaster factors in the RF characteristics of common building materials, including many types of doors, walls, ceilings, and other physical obstructions and uses that information to develop an accurate RF plan for the building. RingMaster provides an intuitive visual graphic display for signal strength, coverage holes, high interference, and high utilization areas. RingMaster automatically determines how many Trapeze Mobility Point™ Access Points or 3rd party Access Points need to be installed in any part of a building, taking into account RF obstacles and capacity requirements. RingMaster automates channel assignment and optimizes power levels. A detailed installation report can be generated that shows technicians exactly where to install the Access Points.

802.11n
RingMaster fully supports 802.11n planning for both the 2.4 GHz and 5 GHz channels. It plans for maximum capacity as well as compatibility with existing 802.11a/b/g networks. RingMaster plans for “hot zone” high density traffic areas such as auditoriums and large conference rooms where capacity is most needed.

Voice
Planning for voice over Wi-Fi deployments is simplified with special voice features. including the ability to plan for the signal strength requirements of most voice handsets, and ensuring the minimum data rate required for a quality voice call. The voice planning features also ensure that the signal strength will be above the required threshold for the entire coverage area.

Enhanced CAD Integration
For large deployments, layers in the bulding’s CAD design files can be specified and matched to the user’s preference as to where Wi-Fi coverage is desired and where it is not. Layers in the CAD drawing can also be specified as RF obstacles or further customized.

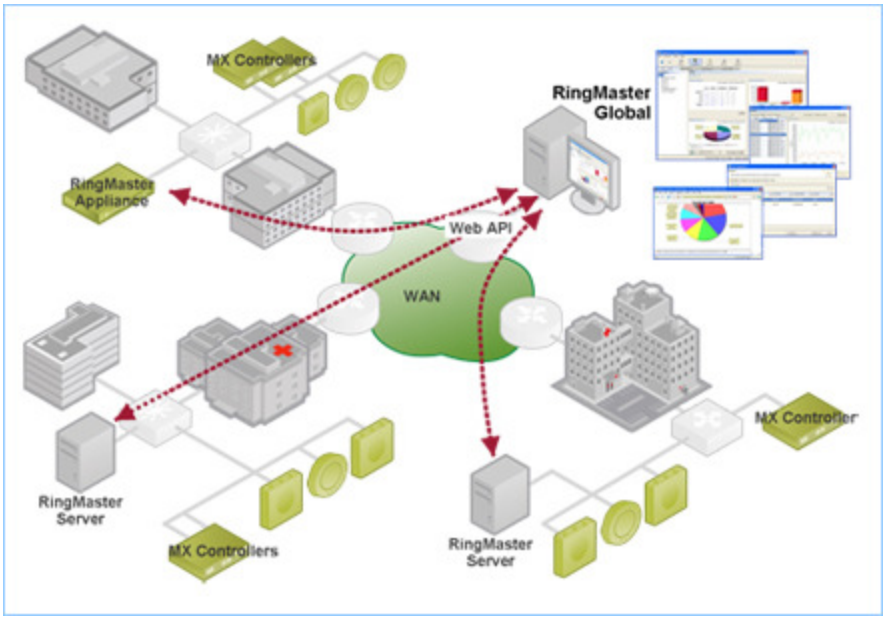
Outdoor Planning
RingMaster plans for outdoor coverage areas and sets up as mesh portals, mesh links and bridge links. It can define outdoor obstacles and set link margins. RingMaster graphically displays each outdoor link and dynamically adjusts for type, height, tilt and directionality of the antenna. It graphically displays the Fresnel Zone and all parameters can be adjusted to see its effect on the Fresnel Zone and link status.

RingMaster Global

RingMaster® Global

Provides a consolidated management view of large and geographically dispersed wireless networks comprising multiple RingMaster servers

RingMaster Global is a secure, highly scalable, manager of managers which provides a consolidated view of multiple wireless networks, each individually managed by a RingMaster server.



Large Network Scalability
RingMaster Global can manage up to 20 fullyloaded RingMaster servers or RM-200 appliances, supporting total network sizes up to 100,000 access points. This makes it an ideal platform for aggregating usage information and critical alarms for the largest Enterprises, as well as for monitoring throusands of small wireless networks operated by a manged service provider.

Powerful Analytics
While its main function is to aggregate and summarize important information that pertains to the whole deployment, it is not limited to consolidated views of the world.

RingMaster Global not only provides invaluable information about network status and alarms for each network, it also enables managers to analyze network loading and traffic patterns across the whole network.

And because it inherits the same hierarchical information structure as RingMaster, it is possible to drill down to any desired level of detail. For example one can search for an individual user, device, AP or controller anywhere in the deployment, and then launch the relevant RingMaster console for that network, in order to gather more detail if required.

Executive Reporting
Numerous standard reports are included, to provide executives and global network managers the snapshots they need for a dashboard of general health status and utilization trends across the whole deployment. These allow planners and management to quickly identify potential trouble spots, where capacity may not meet likely demand, or where too many users competing for their share of bandwidth may be degrading

performance for all. Or where too many users of a cetain type are experiencing timeouts, degraded performance or denial of service.

Flexible Architecture
RingMaster Global has a flexible architecture which allows for several deployment models, to support alternate management approaches adopted by different organizations.

In a distributed mode, RingMaster consolidates information from distributed RingMaster servers, in which each is deployed locally on the wireless network it is managing. This mode is typical for large multi-national Enterprises that have significant wireless deployments in many cities or countries, each of which is managed by local IT staff. SSL based security provides strict access control to prevent network managers responsible for one RingMaster server from accessing others.

In a centralized mode, RingMaster Global consolidates information from possibly fewer RingMaster servers all located in the same NOC, which are each managing one or more smaller networks around the globe. This mode is more typical for Wireless ISPs, or for large Enterprises that need to centrally manage a large number of small remote and branch offices. Any hybrid combination of these two modes is equally possible.

Enhanced Security
When RingMaster servers are centralized, RingMaster Global also serves as a centralized launch point for the RingMaster Console. When used in this mode, subordinate RingMaster servers can be put into groups which different administrators are able to access. In addition, to facilitate ease of deployment, RingMaster Global security uses RADIUS for authentication and authorization, giving Network administrators a single sign-on to RingMaster, RingMaster Global and other network resources they are entitled to access. All communication between client and server is encrypted using SSL.

SmartPass

SmartPass™ Secure Guest Access

SmartPass™ software is a highly scalable application enabling organizations to provide safe, secure guest access over their wireless networks. SmartPass secures your guest wireless network by requiring provisioned credentials for all guest users, while allowing you to specify flexible, fine-grained controls over when, how, and where guests can access the network. Easy to configure and use, SmartPass dramatically simplifies provisioning, control, and management of guest access.
Key features include:

- Total Control over Secure Guest Access
- Centralized Management of Guest Accounts
- Easy to Use for Non-technical Personnel
- Easy to Manage for Network Administrators
- Simplified Bulk-user Creation
- Comprehensive Reporting and Logging Provides Audit Trail
- Web API for Easy Integration with Third-party Applications
- Scales up to 10,000 Concurrent Guests Per Server
- Rapid Return on Investment

Mobility System Software

Mobility System Software™

Trapeze Mobility System Software™ (MSS™) drives all the networking functionality of Trapeze Smart Mobile™ wireless networks. MSS™ enables Smart Mobile's unique intelligent switching capability, which combines both centralized and distributed data forwarding based on the requirements of the underlying application.

The result is optimized traffic flow, radically reduced latency, and massive scalability. Smart Mobile WLANs can support the most demanding wireless applications indoors and outdoors, including voice over WLAN for thousands of users, and are 802.11n ready without the need for expensive controller upgrades.

MSS runs on all Trapeze Smart Mobile equipment, enabling Trapeze Mobility Exchange™ controllers and Mobility Point™ access points to operate as a single unified system.

MXR-2

MXR-2 Mobility Exchange®

The Trapeze Mobility Exchange® (MX®) family of intelligent WLAN controllers provide the platform for Trapeze Smart Mobile™ wireless networks.

Smart Mobile™ is the only WLAN architecture with intelligent switching, which combines both centralized and distributed data forwarding based on the requirements of the underlying application. Operating in conjunction with Trapeze Mobility Point™ (MP™) access points and Mobility System Software™ (MSS™), MX controllers can offload policy enforcement and data forwarding to the MPs, resulting in optimized traffic flow, radically reduced latency, and massive scalability.

Smart Mobile WLANs can support the most demanding wireless applications indoors and outdoors, including voice over WLAN for thousands of users, and are 802.11n ready without the need for expensive controller upgrades. MX controllers are available in multiple models to meet the entire range of enterprise WLAN needs, from small branch offices to large data centers, at the lowest total cost.

Branch Office WLAN Controllers

The MXR™ family is the latest generation of branch office WLAN controllers from Trapeze Networks. Designed for branch office, retail store and small business applications, the MXR family enables seamless and secure deployment of enterprise class wireless networks over any existing L2/L3 network without disruption. Despite its small form factor and low cost, the MXR family supports the same feature set as all of the Trapeze WLAN controllers. The Trapeze RingMaster™ planning and management suite enables MXR controllers to obtain their configuration locally or from a remote location, with automatic no-touch deployment and remote configuration and management capabilities - all of which require no onsite expertise.

The MXR-2™ WLAN controller features 2 10/100 Fast Ethernet ports, one of which provides Power-over-Ethernet (PoE), and supports up to 4 MP access points.

The MXR-2 combines L2 Ethernet switching, statefull LAN-speed per user and per service firewalls, wireless intrusion protection, 802.1Q trunking and per VLAN spanning tree (PVST+), complete wired to wireless quality of service (QoS), and automated RF management. Clusters of MXs called a Mobility Domain™ service provide seamless roaming, intrusion protection and RF management over the largest single site wireless LAN deployments. A Network Domain™ interconnects and distributes Mobility Domains to span wide geographic regions with secure, seamless mobility applications and Smart Mobile services.

MX-8

MX-8 Mobility Exchange®

The Trapeze Mobility Exchange® (MX®) family of intelligent WLAN controllers provide the platform for Trapeze Smart Mobile™ wireless networks.

Smart Mobile™ is the only WLAN architecture with intelligent switching, which combines both centralized and distributed data forwarding based on the requirements of the underlying application. Operating in conjunction with Trapeze Mobility Point™ (MP™) access points and Mobility System Software™ (MSS™), MX controllers can offload policy enforcement and data forwarding to the MPs, resulting in optimized traffic flow, radically reduced latency, and massive scalability.

Smart Mobile WLANs can support the most demanding wireless applications indoors and outdoors, including voice over WLAN for thousands of users, and are 802.11n ready without the need for expensive controller upgrades. MX controllers are available in multiple models to meet the entire range of enterprise WLAN needs, from small branch offices to large data centers, at the lowest total cost.

Branch Office and Distributed Wiring Closet Controllers

Designed for branch office and distributed wiring closet installations, the MX-8™ enables seamless and secure deployment of enterprise class wireless networks over any existing L2/L3 network without disruption.

The MX-8 WLAN controller features 8 10/100 Fast Ethernet ports for unshielded twisted-pair (UTP) environments, 6 of which provide Power-over-Ethernet (PoE), and supports up to 12 MP access points. The MX-8 can be ordered with an optional redundant power supply.

The MX-8 combines L2 Ethernet switching, stateful LAN-speed per user and per service firewalls, wireless intrusion protection, 802.1Q trunking and per VLAN spanning tree (PVST+), complete wired to wireless quality of service (QoS), and automated RF management. Clusters of MXs called a Mobility Domain™

service provide seamless roaming, intrusion protection and RF management over the largest single site wireless LAN deployments. A Network Domain™ interconnects and distributes Mobility Domains to span wide geographic regions with secure, seamless mobility applications and Smart Mobile services.

MX-216R

MX-216R Mobility Exchange®

The Trapeze Mobility Exchange® (MX®) family of intelligent WLAN controllers provide the platform for Trapeze Smart Mobile™ wireless networks.

Smart Mobile™ is the only WLAN architecture with intelligent switching, which combines both centralized and distributed data forwarding based on the requirements of the underlying application. Operating in conjunction with Trapeze Mobility Point™ (MP™) access points and Mobility System Software™ (MSS™), MX controllers can offload policy enforcement and data forwarding to the MPs, resulting in optimized traffic flow, radically reduced latency, and massive scalability.

Smart Mobile WLANs can support the most demanding wireless applications indoors and outdoors, including voice over WLAN for thousands of users, and are 802.11n ready without the need for expensive controller upgrades. MX controllers are available in multiple models to meet the entire range of enterprise WLAN needs, from small branch offices to large data centers, at the lowest total cost.

Data Center or Distributed Wiring Closet

The MX-216R is designed for data center, or distributed wiring closet installations, and enables seamless and secure deployment of enterprise class wireless networks over any existing L2/L3 network without disruption. The MX-216R supports up to 192 access points with flexible licensing bundles of 32 supported MPs™ for optimum price performance throughout the growth of your wireless LAN. It also features 2 Gigabit Ethernet ports which accept Small-Form Pluggable (SFP) optics for 1000BASE-SX/LX fiber connectivity, or 1000BASE-T unshielded twisted-pair (UTP) environments, 16 10/100 Fast Ethernet ports with Power-over-Ethernet (PoE) support, and comes with a redundant power supply as standard.

The MX-216R combines L2 Ethernet switching, statefull LAN-speed per user and per service firewalls, wireless intrusion protection, 802.1Q trunking and per VLAN spanning tree (PVST+), complete wired to wireless quality of service (QoS), and automated RF management. Clusters of MXs called a Mobility Domain™ provide seamless roaming, intrusion protection and RF management over the largest single site wireless LAN deployments. A Network Domain™ interconnects and distributes Mobility Domains to span wide geographic regions with secure, seamless mobility applications and Smart Mobile services.

MX-200R

MX-200R Mobility Exchange®

The Trapeze Mobility Exchange® (MX®) family of intelligent WLAN controllers provide the platform for Trapeze Smart Mobile™ wireless networks.

Smart Mobile™ is the only WLAN architecture with intelligent switching, which combines both centralized and distributed data forwarding based on the requirements of the underlying application. Operating in conjunction with Trapeze Mobility Point™ (MP™) access points and Mobility System Software™ (MSS™), MX controllers can offload policy enforcement and data forwarding to the MPs, resulting in optimized traffic flow, radically reduced latency, and massive scalability.

Smart Mobile WLANs can support the most demanding wireless applications indoors and outdoors, including voice over WLAN for thousands of users, and are 802.11n ready without the need for expensive controller upgrades. MX controllers are available in multiple models to meet the entire range of enterprise WLAN needs, from small branch offices to large data centers, at the lowest total cost.

Data Center or Distributed Wiring Closet

The MX-200R is designed for data center, or distributed wiring closet installations, and enables seamless and secure deployment of enterprise class wireless networks over any existing L2/L3 network without disruption. The MX-200R supports up to 192 access points with flexible licensing bundles of 32 supported MPs™ for optimum price performance throughout the growth of your wireless LAN. It also features 2 Gigabit Ethernet ports which accept Small-Form Pluggable (SFP) optics for 1000BASE-SX/LX fiber connectivity, or 1000BASE-T unshielded twisted-pair (UTP) environments, and comes with a redundant power supply as standard.

The MX-200R combines L2 Ethernet switching, statefull LAN-speed per user and per service firewalls, wireless intrusion protection, 802.1Q trunking and per VLAN spanning tree (PVST+), complete wired to wireless quality of service (QoS), and automated RF management. Clusters of MXs called a Mobility Domain™ provide seamless roaming, intrusion protection and RF management over the largest single site wireless LAN deployments. A Network Domain™ interconnects and distributes Mobility Domains to span wide geographic regions with secure, seamless mobility applications and Smart Mobile services.

MX-2800

MX-2800 Mobility Exchange®

The Trapeze Mobility Exchange™ MX-2800 is the next generation Smart Mobile WLAN controller for medium to large size enterprise WLAN deployments.

It brings unprecedented scalability, manageability, reliability and resiliency features to WLAN networks, mirroring the user experience of wired networks. Powered by Trapeze's unique hardware-accelerated WLAN processing engine and a high speed security co-processor, the MX-2800 scales to support the most demanding wireless applications indoors and outdoors, including voice over Wi-Fi for thousands of users. It offers 28 Gbps of throughput and supports up to 512 802.11n APs while providing always-on availability and hitless failover with no service interruption, even in the unlikely event of a controller failure.

The Trapeze Mobility Exchange™ (MX™) family of intelligent WLAN controllers provides the platform for Trapeze Smart Mobile™ wireless networks. Smart Mobile is the only WLAN architecture that offers intelligent switching, which combines both centralized and distributed data forwarding based on the requirements of the underlying application. Operating in conjunction with Trapeze Mobility Point™ (MP™) access points, and Mobility System Software™(MSS), MX controllers can offload policy enforcement and data forwarding to the MPs, resulting in optimized traffic flow, radically reduced latency, and massive scalability.

The MX-2800 is the latest generation of WLAN controllers from Trapeze Networks. Designed for data center or distributed wiring closet installations, the MX-2800 enables seamless and secure deployment of enterprise class wireless networks over any existing L2/L3 network without disruption.

The MX-2800 combines L2 Ethernet switching, stateful per user and per service firewalls, wireless intrusion protection, 802.1Q trunking and per VLAN spanning tree (PVST+), complete wired to wireless quality of service (QoS), and automated RF management. Clusters of MXs form a Mobility Domain™ which provides seamless roaming, intrusion protection and RF management over large single site wireless LAN deployments. A Network Domain™ interconnects Mobility Domains to support multiple sites and span wide geographic regions with secure, seamless mobility applications and Smart Mobile services.

MP-371 Indoor

MP-371 Indoor Mobility Point®

The Trapeze Mobility Point™ (MP™) family of multi-function indoor access points provides access point wireless services for Trapeze Smart Mobile™ wireless networks.

Configured and controlled by Trapeze Mobility Exchange™ (MX) controllers, all Trapeze Mobility Points perform local encryption to offload the WLAN controller, leaving the controller free to enforce stringent security policies and enable fast, seamless identity-based roaming.

The Trapeze Networks indoor MP-371 is a single radio 802.11a/b/g access point featuring dual diversity antennas on both 2.4 GHz and 5 GHz bands. The MP features two 10/100 Fast Ethernet ports for redundant connectivity and 802.3af Power-over-Ethernet (PoE), a plenum-rated (UL-2043) package which intentionally resembles a smoke detector to minimize visibility. With no obvious hallmarks of an AP, the MP-371 is less likely to be tampered with, but also features a built-in Kensington lock system for added physical security.

The MP-371 is simple to deploy, easy to manage, and supports any kind of service-data, voice and video-over wireless. It automatically calculates the data integrity and RF signal strength of the wireless channel and continually tunes for optimal RF channel and transmit power, while enforcing the prioritization of delay-sensitive voice and other critical applications. Wi-Fi Multimedia (WMM) or SpectraLink Voice Priority (SVP) can be configured to ensure optimal quality of service (QoS) for voice traffic. Policies allow per user, protocol or class-of-service (CoS) mapping.

The MP-371 plays a key role in rogue and intrusion detection as well as denial-of-service (DoS) attack detection. ActiveScan™ allows MPs to fulfill a dual role. It scans the active 802.11 band, channels and VLANs while simultaneously providing wireless connectivity to mobile clients. SentryScan™ allows MPs to act as dedicated sentries, providing nonstop scanning.

MP-422 Indoor

MP-422 Indoor Mobility Point®

The Trapeze Mobility Point™ (MP™) family of multi-function indoor access points provides access point wireless services for Trapeze Smart Mobile™ wireless networks.

Smart Mobile is the only WLAN architecture with intelligent switching, which combines both centralized and distributed data forwarding based on the requirements of the underlying application. Configured and controlled by Trapeze Mobility Exchange™ (MX™) controllers, MPs perform encryption and can also enforce policy and forward data, depending on the application needs. Smart Mobile WLANs can support the most demanding wireless applications indoors and outdoors, including voice over Wi-Fi for thousands of users, and are 802.11n ready without the need for expensive controller upgrades.

The Trapeze Networks indoor MP-422 is a new generation of intelligent access point that provides extended wireless coverage. It has dual radios (802.11a and 802.11b/g) featuring dual diversity antennas on both 2.4 GHz and 5 GHz bands. The MP features two 10/100 Fast Ethernet ports for redundant connectivity and 802.3af Power-over-Ethernet (PoE). Its enclosure intentionally resembles a smoke detector to minimize visibility. With no obvious hallmarks of an access point, the MP-422 is less likely to be tampered with, but also features a built-in Kensington lock system for added physical security.

Distributed forwarding can be enabled in the MP-422, resulting in optimized traffic flow, radically reduced latency, ultra high performance, and massive scalability. The MP-422 is simple to deploy, easy to manage, and supports any kind of service—data, voice and video—over Wi-Fi, automatically calculating the data integrity and RF signal strength of the wireless channel and continually tuning for optimal RF channel and transmit power, while enforcing the prioritization of delay-sensitive voice and other critical applications. Wi-Fi Multimedia (WMM) or SpectraLink Voice Priority (SVP) can be configured to ensure optimal QoS for voice traffic. Policies allow per user, protocol, or class-of-service (CoS) mapping.

In addition to traditional access point functionality, the MP-422 can also serve as an 802.11s Mesh AP, Mesh Point, Mesh Portal, or WDS Bridge to extend the reach of enterprise WLANs. Furthermore, the MP-422 can support such functionality 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-422 acts as the gateway node to the wired network, advertises services to mesh access point nodes, and enforces firewall, access and quality of service (QoS) policy, simultaneously performing broadcast suppression—all of which serve to optimize RF spectrum utilization in the mesh. The MP-422 can be configured with one radio for client services and the other for mesh service. Smart Mobile intelligent switching is supported in all mesh modes, enabling each mesh node to provide the shortest, least congested path to the destination over encrypted secure mesh links. The MP-422 can also be used in a dedicated bridging mode, to provide seamless connectivity between buildings without the expense of laying new cable. Advanced features such as mesh, bridging and distributed forwarding require MSS 6.0 or above.

The MP-422 plays a key role in rogue and intrusion detection as well as denial-of-service (DoS) attack detection. ActiveScan™ allows MPs to fulfill a dual role. The system scans all 802. 11 channels, while

simultaneously providing wireless connectivity to mobile clients. SentryScan™ allows MPs or individual MP radios to act as dedicated sentries, providing nonstop scanning. The MP-422 also supports location-based service applications that rely on Wi-Fi signal information for position location. Common usages include asset tracking or client location.

MP-82 Indoor

MP-82 Indoor Mobility Point®

The MP-82 is an enterprise-class 802.11n indoor access point designed for high-density deployments that emphasize throughput capacity over coverage. The MP-82 contains dual radios; one operating in the 2.4 GHz band and one in the 5 GHz band, with each radio supporting 2x3 operation (two transmit chains and three receive chains).

To protect the customer's investment in legacy 802.11 clients, and to ease the transition to 802.11n, the MP-82 is backwards compatible with legacy 802.11a/b/g clients in both the 2.4 GHz and 5 GHz bands. With 6 built-in internal antennas, the MP-82 provides omni-directional coverage without unsightly and insecure "rabbit ear" antennas.

The MP-82 features one 10/100/1000 Ethernet port operating in auto-negotiation mode in order to seamlessly adapt to the Ethernet infrastructure. To protect your investment in existing PoE infrastructure, the MP-82 is designed to allow full operation with existing standardsbased 802.3af PoE infrastructure. The MP-82 is also compatible with the newer high-power 802.3at PoE, but this is not required for full operation.

The MP-82 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 802.11 a/b/g clients. The MP-82 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-82 does not store data, encryption keys or security credentials locally and poses no security risk to the organization if stolen.

The MP-82 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.

As part of the Smart Mobile system, the MP-82 features NonStop reliability. If a WLAN controller fails, the AP will seamlessly failover to another controller and maintain the wireless networking session.

The MP-82 ships with a flexible mounting kit that supports ceiling-mounted, wall-mounted, and desktop-

mounted deployment. Its aesthetically-appealing enclosure is designed specifically to blend into typical office environments, minimizing attention to it's function. Furthermore, the MP-82 features a built-in Kensington lock system for added physical security.

Smart Mobile distributed traffic forwarding can be enabled in the MP-82, resulting in optimized traffic flow, reduced latency, and enhanced scalability. In addition to traditional access point functionality, the MP-82 also serves as a Mesh AP, or Wireless Distribution System (WDS) Bridge to extend the reach of enterprise WLANs where cabling can-not reach or is not desired.

This product brief provides highlights about this product. Please consult the full MP-82 data sheet and MSS data sheet for additional information. All product data sheets can be downloaded from our website on: www.trapezenetworks.com/products

MP-432 Indoor

MP-432 Indoor Mobility Point®

The Trapeze Mobility Point™ (MP™) family of multifunction access points (AP) provides wireless service for Trapeze Smart Mobile™ Wi-Fi wireless networks. Smart Mobile is the only WLAN architecture with intelligent switching, which combines both centralized and distributed traffic forwarding based on the requirements of the underlying application.

Configured and controlled by Trapeze Mobility Exchange™ (MX™) controllers, MPs perform encryption, enforce policy and forward data, depending on the application needs. Smart Mobile WLANs support the most demanding wireless applications indoors and outdoors, including voice over Wi-Fi for thousands of users, and enable migration to 802.11n without the need for expensive controller upgrades.

The Trapeze Networks indoor 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. The MP-432 is the only enterprise-class 802.11n access point with built-in internal antennas to provide outstanding coverage and range enhancements without having to configure “rabbit ear” antennas. The access point contains dual radios, one operating in the 2.4 GHz band and one 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 backwards 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 802.11 a/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 is the only AP in the industry that 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. In most deployment scenarios, the MP-432 operates in full functionality 3 x 3 MIMO dual radio mode with IEEE 802.3af. The MP-432 is compatible with existing standards-based 802.3af midspan PoE injectors or PoE switches in the closet.

As part of the Smart Mobile system, the MP-432 is the only 802.11n AP in the industry that features "Always On" reliability. If a WLAN controller fails for any reason, the AP will seamlessly failover to another controller and maintain the wireless networking session. Even a voice over Wi-Fi session will continue without interruption or dropping the voice call. With organizations relying upon their Wi-Fi network as their primary point of network connectivity, such redundancy and uptime service guarantees are quickly becoming mandatory.

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.

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 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.

Smart Mobile distributed traffic forwarding can be enabled in the MP-432, resulting in optimized traffic flow, reduced latency, and enhanced scalability. The MP-432 is simple to deploy and easy to manage. It supports any wireless networking service over Wi-Fi - data, voice and video. 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 802.11 a/b/g access points, providing an easy path for deployment and migration in mixed environments. It enforces the prioritization and Quality of Service (QoS) of delay-sensitive voice and other critical applications through Wi-Fi Multimedia (WMM) and SpectraLink Voice Prio rity (SVP). Beyond QoS, policies can be set to allow per user, per protocol, or per class-of-service (CoS) mapping.

To optimize network traffic, the MP-432 features automatic Band Steering. 802.11n operates in both the 2.4 GHz and 5 GHz bands. The 5 GHz band has 7 times the number of available channels as the 2.4 GHz band (21 5 GHz channels vs. 3 2.4 GHz channels in the US regulatory domain). With so many channels in 5 GHz, a well designed network will utilize this available spectrum to maintain ideal traffic flow. Unfortunately, many client devices that support both 2.4 GHz and 5 GHz channels default automatically to the crowded 2.4 GHz band. Band Steering automatically steers capable clients to the 5 GHz band without end user intervention, or having to change SSID, VLAN, or any other configuration. Consequently, Band Steering brings the performance promise for 802.11n to life. As 5 GHz capable devices migrate to the spacious 5

GHz band, the normally crowded 2.4 GHz band becomes freer to support 2.4 GHz only capable devices, including many voice handsets. The MP-432 also enables granular bandwidth management a nd load balancing features that significantly improve the network performance and end user experience with 802.11n.

In addition to traditional access point functionality, the MP-432 also serves as a Mesh AP, Mesh Point, 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. Smart Mobile intelligent switching and distributed traffic forwarding is supported in all mesh services, enabling each mesh node to provide the shortest, least congested path to the destination ov er secure encrypted mesh links. The MP-432 can also be used as a dedicated wireless bridge to provide seamless connectivity between buildings without the expense of laying new cables or leasing dedicated T1 lines.

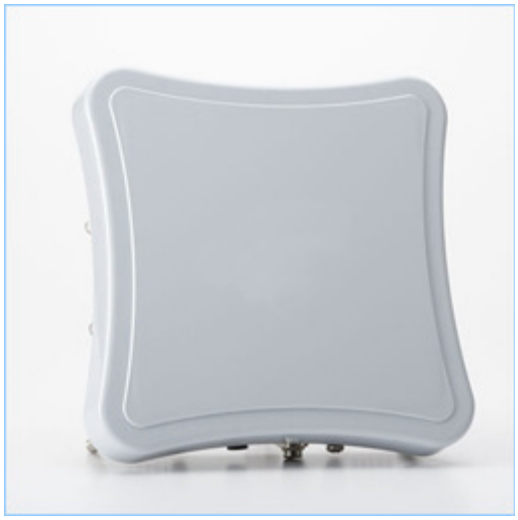
The MP-432 plays an important role in wireless intrusion detection systems and wireless intrusion prevention systems (WIDS/WIPS) as well as denial-of-service (DoS) attack detection and prevention. The MP-432's ActiveScan mechanism scans all 802.11 channels for WIDS/WIPS including 20 MHz and 40Mhz wide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

MP-620 Outdoor

MP-620 Outdoor Mobility Point®

The Trapeze Mobility Point (MP™) family of multi-function outdoor access points provides access point, mesh access point, mesh portal, point-to-point and point-to-multipoint wireless services for Trapeze Smart Mobile™ wireless networks.



Smart Mobile is the only WLAN architecture with intelligent switching, which combines both centralized and distributed data forwarding based on the requirements of the underlying application. Configured and controlled by Trapeze Mobility Exchange™ (MX™) controllers, MPs perform encryption and can also enforce policy and forward data, depending on the application needs. The result is optimized traffic flow, radically reduced latency, and massive scalability.

Smart Mobile WLANs can support the most demanding wireless applications indoors and outdoors, including voice over WLAN for thousands of users, and are 802.11n ready without the need for expensive controller upgrades.

The Trapeze Networks outdoor MP-620™ is a dual radio 802.11a and 802.11b/g access point that features 10/100 Fast Ethernet connectivity. The MP-620 complements Trapeze indoor MPs by delivering the same rich enterprise class feature set, with the same operations model, outdoors. With Smart Mobile technology, WLAN coverage and secure mobility can now be extended across the campus, enabling wireless users to stay connected as they roam from building to building. The MP-620 also features a weatherized package suitable for extreme outdoor environments and a built-in lightning arrestor. A variety of external antenna options ensure that the RF coverage area can be tailored to meet access requirements.

In addition to traditional access point functionality, the MP-620 can also serve as an 802.11s Mesh AP, Mesh Point, Mesh Portal, or WDS Bridge to extend the reach of enterprise WLANs. Furthermore, the MP-620 can support such functionality 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-620 acts as the gateway node to the wired network, advertises services to mesh access point nodes, and enforces firewall, access and quality of service (QoS) policy, simultaneously performing broadcast suppression—all of which serve to optimize RF spectrum utilization in the mesh. The MP-620 can be configured with one radio for client services and the other for mesh service. Smart Mobile intelligent switching is supported in all mesh modes, enabling each mesh node to provide the shortest, least congested path to the destination over encrypted secure mesh links. The MP-620 can also be used in a dedicated bridgin g mode, to provide seamless connectivity between buildings without the expense of laying new cable. Advanced features such as mesh, bridging and distributed forwarding require MSS 6.0 or above.

The MP-620 can be configured with one radio for client services and the other for wireless backhaul or mesh service, or in any hybrid combination desired in either the 2.4 GHz or 5 GHz bands. Smart Mobile intelligent switching is supported in all mesh modes, enabling each mesh node to provide the shortest, least congested path to the destination over encrypted secure mesh links.

The MP-620 is simple to deploy and easy to manage. It is supported by Trapeze RingMaster™ WLAN management software in the same way as any MP in the Trapeze Mobility System™. It supports RF Auto-tune outdoors, automatically calculating the data integrity and RF signal strength of the wireless channel and continually tuning for optimal RF channel and transmit power, while enforcing the prioritization of delay-sensitive voice and other critical applications. Wi-Fi Multimedia (WMM) or SpectraLink Voice Priority (SVP) can be configured to ensure optimal QoS for voice traffic. Policies allow per user, protocol or class-of-service (CoS) mapping.

The MP-620 plays a key role in rogue and intrusion detection as well as denial-of-service (DoS) attack detection. ActiveScan™ allows MPs to fulfill a dual role. They scan all 802.11 bands, channels and VLANs while simultaneously providing wireless connectivity to mobile clients. SentryScan™ allows MPs or individual MP radios to act as dedicated sentries, providing nonstop scanning.

MP-632 Outdoor

MP-632 Outdoor Mobility Point®

802.11n dual-radio 3x3 MIMO outdoor access point designed for high-performance client access, long distance bridging, and mesh services.

The Trapeze Networks outdoor MP-632 is a high speed 802.11n wireless LAN access point. With its dual radio, 3 x 3 Multiple Input / Multiple Output (MIMO) it delivers aggregate data rates up to 600 Mbps. It has 10/100/1000 Gigabit Ethernet connectivity and a dedicated 48VDC power port.

The MP-632 comes in a ruggedized, weatherproof enclosure suitable for extreme outdoor environments. It complies with NEMA4X and IP67 standards for corrosion resistance and features built-in lightning protection for antenna ports, as well as surge protection for Ethernet and power ports. It also has automatic thermal management inside the access point and includes RSSI meter functions on LEDs for easy antenna alignment in the field.

The MP-632 complements other Trapeze Networks' indoor and outdoor access points by delivering the same rich enterprise class feature set, with the same operations model, outdoors.

With Smart Mobile technology, WLAN coverage and secure mobility can now be extended across the campus, enabling wireless users to stay connected as they roam from building to building.

RM-200

RingMaster® Appliance RM-200

The Trapeze Networks® RingMaster Appliance is a highly-scalable, rack-mount management platform. It comes fully-loaded with the latest version of RingMaster® Enterprise, Trapeze's award-winning wireless LAN management software.

Enabling rapid deployment with minimal configuration, it allows large enterprises to manage their wireless networks without ever worrying about upgrading the management platform as the network scales over time. Unlike software-only management solutions that must be loaded on a general-purpose server, and require constant operating system maintenance upgrades and security patches, the RM-200 is a full-turnkey solution. It includes the award-winning RingMaster application and features enterprise-class hardened hardware with an optimized Linux-based operating system. Because of these optimizations, the RM-200 is virtually maintenance free and dramatically reduces operational cost.

Unprecedented Scalability

With support for 250 Access Points out of the box, the RM-200 scales to support as many as 5000 indoor or outdoor Access Points including 802.11n Access Points. For maximum flexibility additional licenses are available in conveniently sized increments ranging from 10 to 1000 Access Points. And with fully redundant dual RAID storage, the RM-200 offers ample capacity to support over twelve months of history, as well as daily backups of the configuration.

Flexible Remote Management

The RM-200 supports standard MIBs to allow remote management of the appliance using third party element managers such as HP OpenView or IBM Tivoli. In addition, the Webstart client feature lets network managers remotely download a RingMaster client and instantly begin managing the network from anywhere. The RM-200 also allows network managers to manage multiple-site wireless networks through a single RingMaster remote console. Alternatively, multiple network managers can each securely manage local networks by allowing multiple consoles simultaneously.

WLAN Lifecycle Management

RingMaster goes far beyond basic configuration and monitoring, extending to full-lifecycle enterprise WLAN management. It enables network managers to perform all critical functions necessary for planning, configuring, deploying, monitoring, and optimizing business Wi-Fi networks. RingMaster's intuitive interface and easy to use wizards provide extensive monitoring and reporting capabilities at device, user and network levels. While its award-winning, unique 3D predictive RF planning module takes the guess work out of planning and then configuring and deploying a wireless network, that is optimized for the capacity

requirements and application demands of the business.

LA-200

Location Appliance LA-200

Trapeze's Smart Mobile delivers the most scalable, real-time integrated WLAN based location services solution at the lowest total cost of ownership.

Smart Mobile Architecture Ensures Application Scalability

Smart Mobile provides the industry's most scalable location tracking services, enabling organizations to deploy across the enterprise without fear of crippling the performance of other applications, or compromising future voice over Wi-Fi deployment. Unlike any other Wi-Fi based location solution, Trapeze delivers reliable real-time positioning data across any Mobility Domain™ service without causing additional load on the WLAN controller – all made possible through Smart Mobile's intelligent switching architecture which enables network administrators to optimize the performance of location based applications through distributed switching.

Complete Software Ecosystem

Trapeze is partnered with location services technology leaders including Newbury Networks, PanGo, AeroScout and ekahau to ensure a complete location tracking ecosystem. Allowing rapid deployment alongside asset management, workflow, resource-planning, and network management applications, the Trapeze solution includes useful out-of-the-box location tracking tools as well as APIs for custom integration. Our partners offer additional off-the-shelf business-centric location tracking applications.

Universal Wi-Fi Client Support

The Trapeze solution supports any Wi-Fi client as well as chirping or beaconing "tags" on any frequency band. No special client software or agent is required.

Industry Leading Speed and Precision

Rapid response times and the precision of location reporting are critical factors in deploying real-time location services. Many mission-critical location applications demand immediate and accurate positional pinpointing to within a few meters. Smart Mobile location based services accurately detect and monitor the position of thousands of devices across the enterprise while also achieving the highest overall performance in the industry.