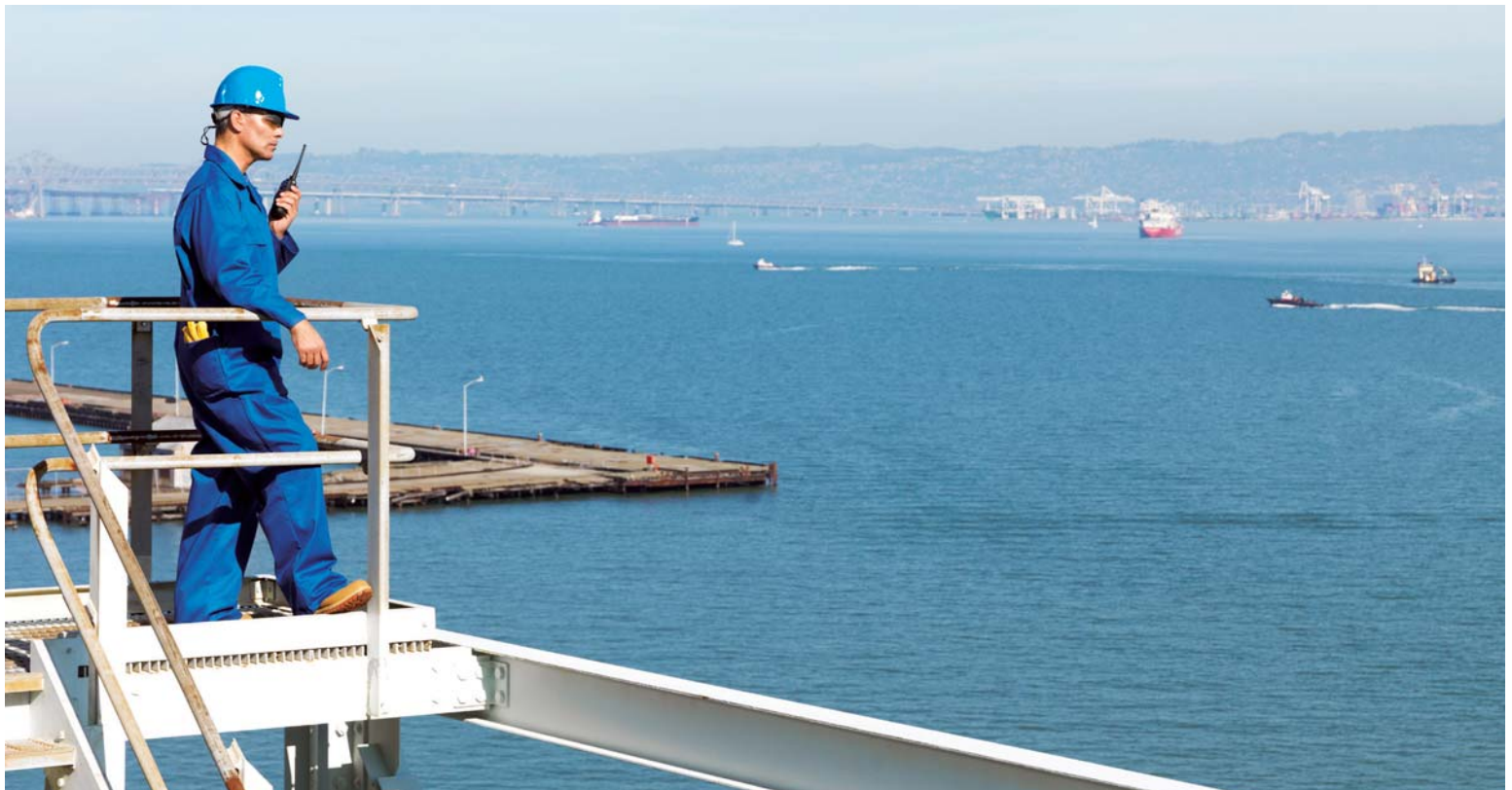




# ONE POINT WIRELESS DESIGN AND MANAGE TRUSTED, HIGH VALUE WIRELESS NETWORKS



## A REVOLUTION IN EASE-OF-USE

Networks today are evolving more and more towards a primarily wireless architecture. Because the performance of wireless networks depends on many different factors, the process of network design and management used to be complicated and ponderous and did not always yield the desired results. Motorola One Point Wireless has changed all that. It provides an innovative set of Network Design and Management Tools developed to work together to make the design, deployment and management of indoor wireless LAN and outdoor wireless broadband networks something they've never been before. Simple.

### MOTOROLA'S HOLISTIC APPROACH

Advanced prediction engines in the design tools leverage Motorola's deep expertise in wireless technology and take the guesswork out of designing each network layer for optimal coverage, capacity and performance. With innovative unified, map-based network visualizations, our outdoor Wireless Manager lets you see every network node at its actual location and manage your entire wireless network from one screen—including outdoor access, distribution and backhaul layers. And on the indoor side, the AirDefense LiveRF module lets you view real-time performance of your entire multivendor indoor wireless network in one view.

### ENABLING STREAMLINED DEPLOYMENT

Historically, deploying a wireless network has been a time consuming effort that included unpredictable and costly field-based activities. Not any more. Portable enough to run on a laptop in the field, Motorola design tools give installers all the information they need and allow unexpected challenges to be quickly addressed by adjusting the network design on the fly. Our network design tools ensure the right coverage, capacity and performance for each device and application while reducing unplanned deployment and capital equipment costs.

### DESIGN AND DEPLOYMENT SOLUTIONS

Motorola's Network Design and Management Tools include three powerful design/deployment solutions:

- **BroadbandPlanner** is a powerful and efficient software solution that helps you propose, design, deploy and measure Point-to-Multipoint and Mesh Wide Area Network systems. The tool's advanced RF modeling engine automates the process of determining optimum equipment placement while taking into consideration the impact of the physical environment on the wireless signals. BroadbandPlanner offers integration with Google Earth and streamlined network measurement and verification. It makes designing and optimizing networks easy with signal strength heatmaps, optimal urban-canyon relay locations and terrain obstruction path profiles. Using

our One Point approach, we've made it easy to transfer BroadbandPlanner's network information into Wireless Manager.

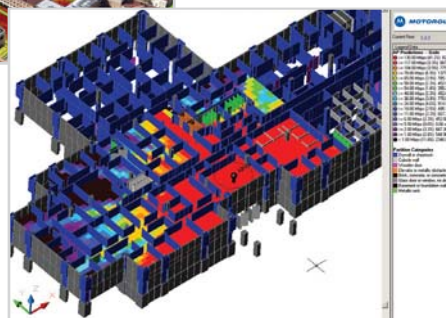
- **PTP LINKPlanner** simplifies design of Point-to-Point links by accurately predicting achievable data rates, taking into account terrain profile and obstructions between links, antenna heights and antenna type/size. Through integration with Google Earth™, PTP LINKPlanner allows for exceptional real-world link path visualization of single or multiple link designs. Additionally, you can create "what if" scenarios while determining important performance measurements such as link reliability, throughput and path loss.
- **LANPlanner** uses an intuitive 3D interface with multi-floor building coverage visualizations and an advanced RF performance modeling engine to help customers design and install 802.11 a/b/g/n wireless LANs that deliver maximum performance at minimum cost. This powerful tool can model not only signal strength and interference, but also throughput for 802.11n MIMO access points. LANPlanner makes it easy to see how a planned network will perform for applications like web surfing, file downloads, FTP file transfers, video conferencing, wireless VoIP or location based triangulation with specialized application coverage maps that integrate RSSI, AP Coverage Overlap, SINR, Utilization, and Data Rate information into an easy-to-understand good/bad heat-map view. Using our One Point approach, LANPlanner feeds building layout and construction data as well as the network information itself directly into the AirDefense Infrastructure Management and Network Assurance solutions.

### DELIVERING VALUE AND AGILITY

Motorola knows wireless, and we believe the right software makes wireless solutions deliver their full potential. With our One Point Wireless approach, we build on over 80 years of wireless expertise and the use of cutting edge visualization technology to deliver smart integrated wireless network design and management tools for indoor and outdoor deployments. With the ability to work together and share information, these industry-leading tools streamline and simplify the flow from wireless network design to operation to security and even in complex multi-vendor network deployments they help deliver solid, secure wireless solutions performance that you can trust.



BroadbandPlanner shows sophisticated Mesh and Point-to-Multipoint coverage predictions in Google Earth maps



LANPlanner calculates multi-floor 3D throughput predictions

**LANPlanner**

Design, Deploy

**AirDefense Solutions**

Manage, Secure

**BroadbandPlanner**  
**PTP LINKPlanner**

**Wireless Manager**

## TRUSTED NETWORKING: MANAGING FOR MAXIMUM RELIABILITY AND SECURITY

### Outdoor Management and Monitoring:

#### WIRELESS MANAGER

Wireless Manager is Motorola's powerful, flexible and scalable deployment and management solution. Its breakthrough map-based visualization capabilities use embedded Google maps, and combine with advanced configuration, provisioning, alerting and reporting features to empower you to holistically control your network's outdoor access layer, distribution layer and backhaul layer. Wireless Manager provides integrated management of Motorola's wireless Mesh, Point-to-Point (PTP) and Point-to-Multipoint (PMP) as well as other SNMP enabled devices.

#### WIRELESS MANAGER CAPABILITIES

Wireless Manager provides a single consolidated network view that delivers new levels of system visibility while reducing training time and costs.

- **Unified Map-based Visibility**

Wireless Manager visually shows relationships between network layers and provides detailed Google map visualizations of your network devices and connectivity on both macro and micro levels. You can instantly view estimated network coverage and real-time link performance data.

- **Automatic Discovery**

The solution automatically discovers certain installed equipment in the network and adds them to the inventory list. This functionality enables faster network deployment and setup, while helping to reduce errors and significantly lower deployment costs.

- **Template-Based Provisioning**

Wireless Manager's user-defined templates can accelerate the process for the configuration of the devices you add to your network resulting in quicker and easier deployments. The template-based functionality provides an automated way to configure large numbers of network devices with just a few mouse clicks, and can be scheduled to occur at any time via Wireless Manager's Task Scheduler.

- **Network Performance Monitoring**

Through real-time network polling, the solution determines the current status of all network elements, identifies issues and generates alerts according to customized user parameters. You can easily see the causes and effects of issues in both high-level and minute detail, from a full network overview to detailed information on individual devices. You can also just as easily troubleshoot and resolve these issues, improving network performance and enhancing user satisfaction.

- **Ultralight Thin Client**

With the growing mobile workforce it is important to have access to the status of your network at any time. Wireless Manager will now enable you to view the status and performance of your entire wireless network via a compact web interface accessible by smart phone devices.

- **High Availability Architecture Support**

Wireless Manager offers a high availability option, providing a highly reliable and redundant network management solution that ensures you always have management access to your network.

- **High Scalability**

Wireless Manager offers server scalability up to 10,000 nodes as well as support for a distributed server architecture.

### Indoor Management and Security:

#### AIRDEFENSE SOLUTIONS

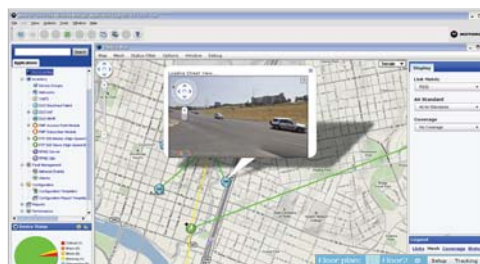
AirDefense Solutions Platform provides organizations with a cost effective and simplified way to fully customize their wireless management and monitoring solutions to meet organizational needs or industry requirements. Solutions offered under the platform include:

- **Infrastructure Management Solution**

It offers centralized management and control for the wireless enterprise – a single console for multi-vendor, multi-architecture, multi-generation and multi-version WLAN management. The solution's vendor and device agnostic UI ensures consistency in configuration, compliance with policies, while reducing device and model specific expertise required by network administrators.

### NETWORK VISUALIZATION WITH GOOGLE MAPS

Motorola Wireless Manager overlays network elements onto a sophisticated real-time embedded Google map. This allows you to visualize and analyze a wide range of crucial information including connectivity between nodes, link quality, range, and device and network availability. Graphical representations of data help you quickly determine network status, identify problems and determine the severity of impact on the network and end users. In this map-based view, you can scale and pan to view an entire city or a specific area. Satellite, terrain, roadmap or hybrid views can be selected and intuitive, context-sensitive bubbles appear over the map, which give quick access to key management functions.



Wireless Manager shows a map-based view of all network layers with realtime performance

AirDefense LiveRF module shows realtime application-specific coverage for VoIP





## THE VALUE OF ONE POINT WIRELESS SYNERGY

### • Network Assurance Solution.

It offers a unique set of tools for vendor agnostic, WLAN performance monitoring and remote troubleshooting of network problems. The solution uses dedicated network of RF sensors that continuously monitors the airwaves – intelligently scanning different frequencies over time and space to detect WLAN performance problems and policy violations.

### • Security and Compliance Solution.

It provides complete protection against wireless threats, policy compliance monitoring, robust performance monitoring, and location tracking that can scale to meet the largest global organizations' needs. Powered by the industry's most advanced intrusion detection system, the solution allows administrators to identify hackers, network attacks and vulnerabilities, and to instantly terminate the connection to any rogue device..

## TROUBLESHOOTING

The same Wi-Fi sensors that monitor the network can also be used to troubleshoot problems by simulating client devices and testing the connection from client back in to the application server. This simplifies and accelerates problem resolution at the level-one help desk stage, as well as saving time by correctly escalating larger problems to the right expert team..

Motorola One Point Wireless features some of the most powerful Network Design and Management tools in the industry. Now, through one set of innovative applications, you can easily take control of your indoor and outdoor wireless network and make sure it delivers the full value of mobility, security and reliability. One Point Wireless advantages include:

## DESIGN AND DEPLOYMENT ADVANTAGES

### • Better Design

Optimal network designs deliver high performance and QoS for data, video and voice while minimizing capital expenditures and labor costs.

### • Faster Deployment

Installation guides, verification plans and automated performance measurement tools help streamline deployment. Design tools are portable enough for use in the field and management tools can leverage designs for smoother hand-off to configuration and full operation.

## NETWORK MANAGEMENT AND SECURITY ADVANTAGES

### • Unified, Map-based View

Wireless Manager and the AirDefense Management Solution offer sophisticated map-based visualization capabilities that streamline network management by providing easy-to-understand graphical representations of your most important connectivity and performance data. You can see one view of your entire indoor/outdoor network on a map or floor plan.

### • Enhanced Security

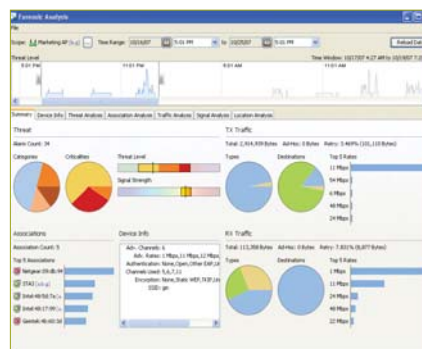
Motorola AirDefense Solutions help actively safeguard your WLAN access network from intrusion and compromise. The system also manages embedded hardware WPA2 and AES security features.

### • Complete Reporting

Wireless Manager and AirDefense Management Solution generate pre-defined and custom reports through their ability to collect and chart a wide range of statistics, allowing the viewing of a network health check at any point in time.

### • Interoperability

Outdoors, Wireless Manager works with the design tools and can plug into a 3rd party super-manager through its north-bound SNMP interface. Indoors, the AirDefense solutions work with LANPlanner and run on a common platform that performs management, troubleshooting and security.



Motorola AirDefense solution offers proactive WLAN threat detection and forensics

Motorola's comprehensive portfolio of reliable and cost-effective wireless broadband solutions together with our WLAN solutions provide and extend coverage both indoors and outdoors. The Motorola Wireless Broadband portfolio offers high-speed Point-to-Point, Point-to-Multipoint, Mesh, WiFi and WiMAX networks that support data, voice and video communications, enabling a broad range of fixed and mobile applications for public and private systems. With Motorola's innovative software solutions, customers can design, deploy and manage a broadband network, maximizing uptime and reliability while lowering installation costs.



**MOTOROLA**

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