



Radio IP MTG™

Connectionware for Wireless Networks



- Mobile VPN
- Application Session Persistence
- Multi-Network Interoperability & Roaming
- Network Performance Improvement



Radio IP
SOFTWARE

make the connection

Make the Connection

Seamlessly integrate your mobile workforce

Radio IP MTG™ is the connectionware solution that brings your critical Public Safety wireless data communications to a higher level of security, reliability, integrity and user capacity. But it is not always easy - seamless mobile integration is often restricted by the multitude of incompatible technologies and protocols: private and public networks, diverse devices and a host of field-based and corporate applications.

Radio IP MTG connectionware solves this state of disharmony by introducing true interoperability amongst all these disparate mobile assets, all the while maintaining essential communications reliability, security and speed.



The easy solution

The Radio IP MTG client-server based virtual network card provides wireless network communications solutions for public and private wireless data networks, alone or in combination.

Radio IP MTG is a software solution that looks like hardware to your network. No application modifications are needed. LAN, WAN, Intranet, Internet, main-frame, AS400 or any off-the-shelf product work immediately. Radio IP MTG is easy to install and seamless to the mobile officers. It simply gets them the critical data they need, when they need it without concern for incompatible technologies.

By supporting all public and private networks, mobile officers have access to communications regardless of their location. We integrate satellite to private networks, or public networks to 802.11 hotspots. Mobile units will avoid downtime due to coverage lapses.

Optimize Communications

Fast, reliable communications are essential to a public safety department's mission. Whether an officer is

issuing citations, supporting victims or pursuing criminals, speed and quality of information is key. Radio IP MTG keeps your personnel connected by optimizing and integrating your current communications investment while providing a clear migration path to the next generation of technology. Ensure the reli-

ability, speed and security of your wireless data transmissions. Give your public service workforce the communication tools they need to protect the citizens and themselves! With Radio IP MTG, troopers, firefighters, EMS workers or other mobile officers get up-to-date information when they are on the road.

Increase Officer Productivity by:

- Secure transmission of citizen data
- Increasing speed of existing network
- Reliable availability regardless of patrol location or network coverage
- Adding more mobiles by optimized throughput

Supported Wireless Data Networks

- Cellular CDMA (1xRTT, EVDO, EVDO-Rev.A)
- Cellular GSM (GPRS, EDGE, UMTS, HSDPA)
- Broadband (WiFi, Mesh, WiMAX)
- Motorola (DataTAC, ASTRO 25 IV&D, HPD)
- Tyco M/A-COM (EDACS, OpenSky, P25-IP)
- IP MobileNet (IP Series, XpressNet)
- GE MDS (iNET, entraNET, Mercury)
- Terrestrial Trunked Radio (TETRA)
- Dataradio (GeminiG2, GeminiG3 & CiPHR)
- L-3 Communications (NovaRoam)
- ESTeem Wireless Modems
- MSV Satellite (PDT-100)
- Alvarion

“ Radio IP MTG has given us a larger network coverage area. Areas where we would lose coverage before, now maintain communication. ”

Rodney Spell
Network Engineer
North Carolina
State Highway Patrol

Mobile VPN

Even at a routine traffic stop, important driver license and vehicle registration information is transmitted over a wireless network. The Radio IP Mobile VPN ensures this data is secure. In fact, it meets and exceeds state and federal (FBI/CJIS) encryption mandates for public safety organizations. Additionally, the entire mobile fleet experiences the robust security of a virtual private network through user authentication, data encryption and encapsulation.

Be confident that private citizen data, criminal history or medical records are safe and secure.

Ensure the identity of your officers with multiple levels of advanced authentication

Our Mobile VPN ensures positive identification of troopers accessing the network through multiple levels of advanced authentication. In addition to standard username-password authentication, Radio IP MTG provides secure, two-factor authentication

for additional layers of security. Optional certificate authentication further validates your devices and protects your system from intrusions.

By using static IP addresses, Radio IP MTG lets you switch networks without having to re-authenticate, fulfilling the requirements for querying many secure law enforcement databases.

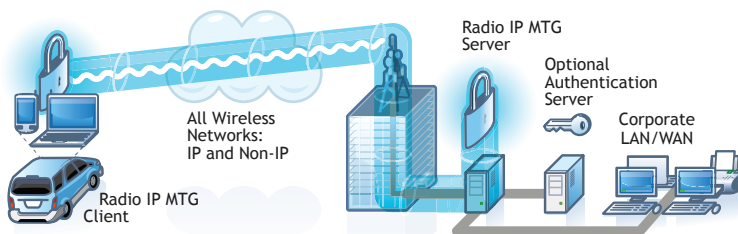
Ensure your data is transmitted securely with high level encryption

Since a public safety department's wireless network signals are broadcast and can be intercepted, we offer the highest encryption standards assuring all data is transferred securely between the officer and dispatch. Your data will be encrypted with either AES (256-bit) or Triple DES (168-bit) methodologies, using FIPS 140-2 certified technology.

Mobile VPN

© 2006 RADIO IP SOFTWARE INC. / 200-00000236-0003

End to End Secure Data Tunnel Using Radio IP MTG



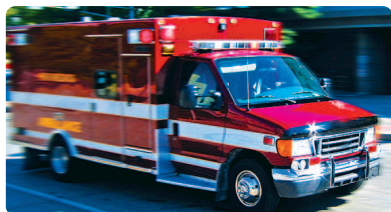
Application & Session Persistence

Staying connected on a wireless network can be challenging.

Radio IP MTG provides you with continuous wireless connectivity - giving you the ability to add multiple users to your network without bottlenecks, without time-outs, without re-tries and without network collapse.

Say goodbye to connection frustration with Automatic Network Reconnect

When pursuing a suspect in a vehicle, a police officer does not choose the



topography of the pursuit. Troopers often encounter frequent signal interruption caused by geography, physical obstacles like tunnels and buildings and the distance of a mobile computing device from a transmission tower. These signal interruptions and dropped connections can result in lost productivity and frustration as officers must reconnect to the network manually, keeping them from focusing on their job.

Radio IP MTG ensures continuous connectivity by automatically and seamlessly reconnecting your mobile devices to your network when signal interruptions occur.

“Always on” Reliability

Keep your applications running fast and smoothly, even during coverage

gaps with Application & Session Persistence. Some public safety applications will shut down if they lose their network connectivity. But Radio IP MTG maintains an open socket connection to the network, giving you session persistence and keeping your application running smoothly and continuously.

We guarantee data delivery

If a dispatched police vehicle wanders into an area of poor network coverage, application data will be accumulated, or buffered, until the vehicle returns to a viable network connection where data transmission can seamlessly resume. With data buffering, mobile patrols traveling through fringe areas benefit from expanded network coverage.

Multi-Network Interoperability & Roaming

Many public safety organizations take advantage of existing high-speed public communications networks or 802.11 hotspots, either to leverage the faster speeds of these systems or to serve as back-up to their primary network. Because troopers may at times venture out of their primary network's coverage area, RadioRoam® lets them automatically roam, seamlessly and

efficiently, between an unlimited number of disparate wireless networks without losing their connection to dispatch.

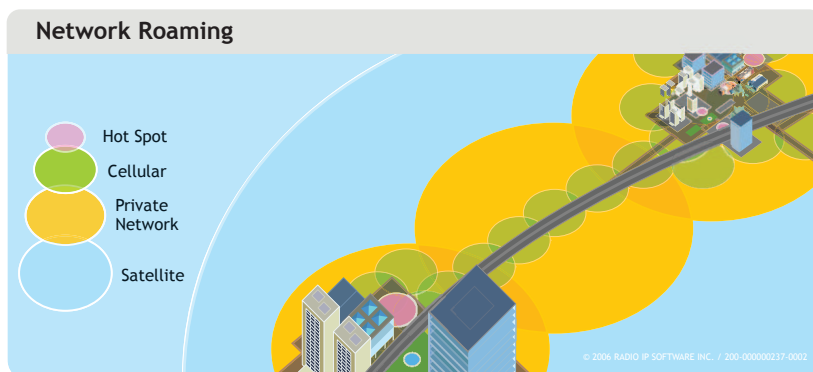
RadioRoam Supported Network Types:

- Private Networks
- Public Cellular Networks
- 802.11 Hotspots
- Satellite
- and more...

Control using “Forward & Filtering”

Packet forward and filtering is a feature that is designed to help control the type of data that will be allowed to pass on specific wireless networks resulting in better use of network resources. A set of rules can be defined to determine how the data is transferred and over which networks. Radio IP MTG provides a set of predefined rules and conditions to be used. The administrator can also modify and add new rules and conditions, permitting even more control over your data and network performance.

For the best user experience ensure applications are well matched with the network resources otherwise it could have a negative impact on your operations.



Network Performance Improvement

Radio IP MTG increases the throughput and performance of your wireless network by applying multiple optimization methods. The approach can typically double or triple the throughput and performance of many wireless networks. What this means is faster response times in critical situations and capacity enhancements by giving you the ability to add more mobile users on the system. Radio IP Software's patented technology is more efficient for wireless ap-

plications compared to the standard TCP/IP or UDP/IP protocols.

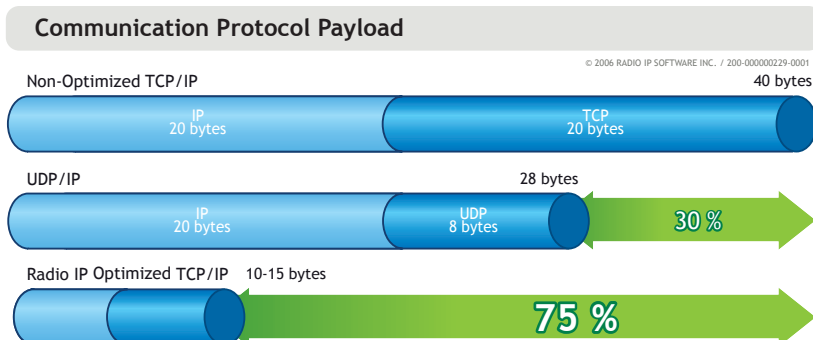
Supercharge your wireless networks with our patented Optimized TCP/IP protocol

Radio IP MTG transforms the performance of your wireless networks by introducing data compression and reducing data overhead. Our Optimized TCP/IP compression drastically reduces the amount of data transmitted, thereby significantly

improving file transfer time to ensure an efficient use of the wireless pipe. Optimized TCP/IP removes the “chattiness” associated with standard TCP/IP and reduces TCP/IP packet size by 75%.

A Clear Technology Roadmap

Technology will continue to evolve whether for dispatch applications, in-vehicle devices, networks or GPS-based handhelds. In addition, with the introduction of Homeland Security requirements, satisfying state and federal public safety technology standards is mandatory. With change being inevitable as technology advances, the interoperability introduced by Radio IP MTG protects your investments and ensures your migration to new technologies will be seamless and painless. The result eliminates downtime and reduces the risk of new technology integration.



Network Management Tools

Radio IP Software is the industry expert on wireless interoperability. As the connectionware between diverse networks, applications and technologies, we have a thorough understanding of the challenges and opportunities in creating a seamless, interoperable environment.

To assist network administrators, we have developed tools to help them more effectively manage and control how their networks perform.

Control your application data for tailored wireless routing

The Forward and Filtering feature of Radio IP MTG allows network administrators to tailor their wireless routing within a public safety department's network. Administrators can determine over which networks and under which condi-

tions an application may transmit data for unprecedented control. For example, software updates for specific applications could be restricted from transmitting over a public safety department's private network to prevent overloading.

Simplified control and central management of your fleet of IP addresses

Mobile DHCP simplifies the network administration of a public safety department's fleet of IP addresses by automatically issuing static IP addresses. Without Mobile DHCP, all IP addresses in the field equipment (e.g. laptops) would need to be set manually, a labor-intensive process for the department network administrators.

In addition, Radio IP Mobile DHCP

has optimized the standard by removing the "chattiness" associated with the DHCP protocol on wireless networks, therefore gaining all the benefits of DHCP network management without impacting a network's throughput.

Keep your wireless network alive

Radio IP MTG also uses the Microsoft® Cluster Service to provide a hot standby redundancy solution for mission-critical public safety applications. Should Radio IP MTG stop working on a public safety department's particular server, or if the server is intentionally brought offline, the communications workload is shifted automatically to another server for continuous service to and from the field.

Windows Mobile on Patrol

Whether on a motorcycle, bicycle, on foot or doing search and rescue, many police officers are not in a traditional vehicle with a laptop, but they still need full connectivity. In fact, for a great portion of their time they may be on a remote site with access only to a handheld device. With Radio IP MTG, these users share the benefits of their laptop counterparts, with full access to department applications by connecting securely to the wireless LAN or WAN.

Radio IP MTG has a reduced size client interface designed specifi-

cally for Windows Mobile, giving workers access to all wireless networks, alone or in combination.

Ultra portability for your troopers

Tap into remote databases from virtually any location, without having to go back to the vehicle. Send real-time, mission-critical messages out to the field or to the command center. Seamless, transparent and background mobile functionality gives your officers the flexibility to be where they need to be, when they need to be, with their tools right at their fingertips.

Windows Mobile, low-cost portability

Windows Mobile handheld devices are an inexpensive alternative to equip your officers with the necessary tools to perform their job.



“ Radio IP Software allows my agency to reap the longest possible return-on-investment of our existing system, but sets the stage so that we are continuously and seamlessly incorporating faster and newer generation network and application technologies as they become available. ”

Sheriff Mike Hale
Jefferson County, AL Sheriff's Office

At five to seven times the cost savings over ruggedized laptops, handheld devices are powerful, yet lightweight, and compact enough to carry on a belt. You can increase productivity and reduce errors in the field while maintaining full connectivity with Radio IP MTG.

Radio IP MTG security companion: Access Defender™

Access Defender is a product which works in conjunction with Radio IP MTG to safeguard your network from the wireless world.

The inherent nature of Internet communications on IP-based wireless networks puts IT Directors at unnecessary risk with intruders attempting to access their LAN.

While mobile communication is pivotal to public safety and utility organizations' bottom lines, ensuring high standards of emergency response and customer service, while denying unauthorized access to the system, then becomes a "must-have". A typical wireless setup requires a server and firewall that is

configured to let specific communication ports open to your mobile workers. Even though you've done everything to ensure limited access, there is always an open door from which intruders can pass through, attacking your sensitive back-office data by employing methods such as "denial of access" or "buffer overrun". Access Defender is an additional security layer that removes the vulnerability associated with using IP networks. By residing between two firewalls, Access Defender scrutinizes and quarantines all incoming communication attempts, allowing the LAN to give access to your mobiles rather than the mobiles initiating the access to the LAN.

“Guarding against denial of service attacks plays a big role in our security plan, it's our most stringent criteria in combating wireless security issues.”

Shrikant Nistane
Project Lead for mobile data,
Energy East, a Radio IP Software
customer

Doc. No.: IPS1034 02/08

Access Defender-Main Features



Intruder-proof technology keeps intruders out by closing all open doors to your LAN.



Reduce recurring costs and save money by leveraging your Internet communications to the fullest extent, bypassing the need for a dedicated line.



Real-time communications dashboard lets you view all attempted communications live, allowing you to take immediate action towards intruders and giving you an active role in defending your LAN.



Historical communications dashboard logs all communication attempts for future analysis, empowering you to pursue your perpetrators or to even view connection profiles of authorized users.



Event Notification: Receive alarms (text message, email...) triggered by pre-defined events.

For more information on Radio IP MTG or other wireless connectionware, contact us at: info@radio-ip.com



www.radio-ip.com

make the connection

Toll Free: (877) 717-2242 Tel: +1 (514) 890-6070 Fax: +1 (514) 890-1332

© 2007 Radio IP Software, Inc. All rights reserved. Radio IP, Radio IP Design, RadioRoam and Radio IP Shadoport are fully registered trademarks, and Radio IP Mobile TCP/IP Gateway, Radio IP MTG, Radio IP Xpdata, GPS Partner, GPS Director and Access Defender are trademarks of Radio IP Software, Inc. Protected by U.S. Patent 6,947,431; other U.S. and foreign patents pending.