



MILITARY

# SECURE Wireless Solution

## Components:

- Redline Appliances
- Non Line of Sight (NLOS) Antennas
- Fortress Security Gateways (FIPS 140-2)

## How it works:

- Redline provides high speed point-to-point or point-to-multi-point NLOS wireless communication (capable of speeds in excess of 50Mbps of real throughput over 50 miles)
- Fortress provides end-to-end FIPS 140-2 AES 256 Layer 2 privacy security overlay for Redline appliances.

## Benefits:

- Provides high-speed long-range broadband wireless communications with high assurance (FIPS 140-2) AES 256 Layer 2 security (See Figure 1).
- Cost effective solution that works in multiple environments; tactical, base and metro area applications (voice and data)

Because Fortress is a protocol-independent security overlay it can be “snapped in” behind Redline appliances. The combined solution has been tested in the lab and shows no degradation in performance.

The Marine Corps has deployed the Fortress/Redline solution for high-speed tactical communications in the Middle East. This facilitates situational awareness in the battlefield, ultimately saving lives.

## Introduction

Fixed wireless technology is fast extending network reach by providing convenient and inexpensive access in many locations, including those which are difficult or cost-prohibitive to wire. As networks expand beyond their previous boundaries, administrators are struggling to keep control over network usage and privacy.

Filling the gap between wireless LANs and wide area networks, WiMAX systems provide the ability to establish high-speed connectivity over large distances. The emergence of the 802.16 family of standards is spurring widespread use of WiMAX, providing economies of scale.

The ongoing evolution of 802.16 will expand the standard to address mobile applications, enabling broadband access directly to WiMAX-enabled portable devices ranging from smartphones and PDAs to notebooks and laptop computers.

## Bringing Secure Wireless Connectivity to Any Network

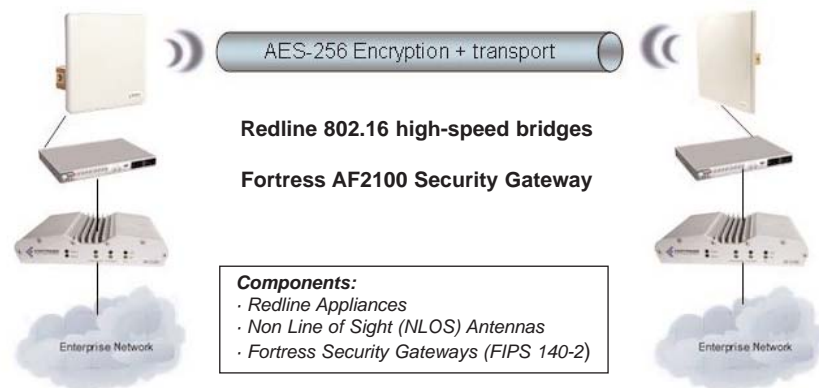
Now, wireless networks can be deployed with the features demanded by both competitive IT and rigorous security requirements resulting in greater productivity, mobility and lower total cost of ownership. Industry leaders Redline and Fortress have combined their product offerings to combine best in class security and wireless technology for high security applications.

Redline has been working with industry leaders like Intel to help speed availability of WiMAX-based solutions. Being the first company in the world with a WiMAX Forum™ Certified WiMAX system, city and nation-wide deployments underway in several countries around the world, Redline is at the very forefront of WiMAX development.

Being an overlay solution, Fortress Security Gateways can be easily deployed in any network regardless of topology, infrastructure vendor or wireless technology being used. Whether protecting traditional WLAN users, or 802.16 deployments, Fortress has models suitable for your specific requirements.

Redline offers an extensive range of 802.16-based products both in the license exempt 5 GHz band as well as licensed solutions in the 3.5 GHz band, which is reserved for military use in the US.

Figure 1 – Fortress-Redline Solution

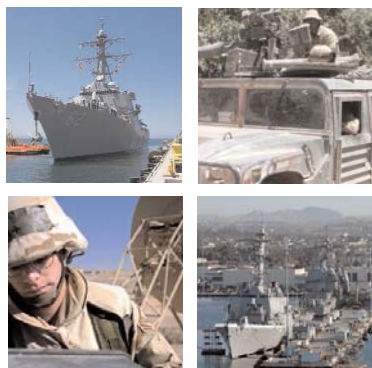


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## Applications

- **Campus Building-to-Building**
- **Metro area secure communications**
- **Ship-to-Ship**
- **Ship-to-Shore**
- **Shore-to-Basin**
- **Vehicle-to-Vehicle (Tactical)**
- **Portable networks**



## CORPORATE HEADQUARTERS

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## Redline features

Redline Communications leads the broadband wireless industry in performance, ease of installation and support, providing customers with a cost-effective solution for backhaul, access and private network applications.

Using industry-leading OFDM technology, Redline's award-winning products provide unmatched high capacity, non-line-of-sight capabilities with proven performance, reliability and security. Ideal for a variety of applications, Redline products are meeting the needs of carriers, service providers and enterprises worldwide.

## Redline's key features:

- **Up to 48 Mbps of real Ethernet throughput (70+ Mbps over the air)**
- **Point-to-point and point-to-multipoint operation**
- **Dynamic Adaptive Modulation**
- **OFDM-based PHY for LOS, OLOS, NLOS operation**
- **Dynamic Time Division Duplex**
- **Quality of Service and VLAN support**
- **Industry's lowest latency for optimized voice transport**
- **Committed bandwidth (CIR)**

Redline's platforms are plug-and-play and can extend networks up to 60 miles and provide up to 48Mbps of real Ethernet throughput. Redline is a principal member of the WiMAX Forum™, and was first in the world to market an 802.16-compliant product. Redline has over 20,000 installations in 80 countries across 5 continents through a global distribution network of 80+ partners.

## Fortress features

The Fortress Security System leverages a combination of advanced security technology and robust processing architecture to deliver security services, networking services, policy management and monitoring in a single solution. Providing comprehensive, layered security at the user, device and network level, Fortress products shield the network from every significant external and internal threat. The products are easy to use, highly scalable and seamlessly integrate with wired and multi-protocol wireless environments.

## Fortress key features

- **End-to-End FIPS 140-2 Validation**
- **Layer-2 Security**
- **Fast (LZRW3) Compression**
- **Integrates with Microsoft's Active Directory, RADIUS or LDAP**
- **Strong AES (128, 192, 256) Encryption**
- **Protects WLANS, Point-to-Point, Multipoint, Peer-to-Peer**
- **Simple Deployment**
- **Proven Performance**



Because minimal configuration is required, the Fortress Security Gateway offers true plug-and-play deployment. The browser-based management application affords convenient administration, and multiple Security Gateways can be centrally managed using Fortress Management and Policy Server (MaPS). With a robust security infrastructure that encrypts at Layer 2, Fortress products eliminate the opportunity for hackers to intercept important network data, view internal network addresses, or interrupt availability through denial-of-service attacks. By securing the device, data and network, Fortress is the strongest commercially available security platform for wireless networks. Anywhere secure and manageable wireless networks are required; Fortress Security Gateways provide exceptional value.

## Conclusion

There is a growing movement within the military and government space to use commercial off-the-shelf technology (COTS) to leverage the market momentum created by the private sector. WiMAX, which follows the 802.16 family of standards, will create a series of interoperable products which will drive economies of scale and technology innovation. The addition of an overlay solution like Fortress allows military customers to achieve the security required while leveraging the best of COTS technology advances. Fortress High Assurance Wireless Security combined with Redline's WiMAX solution provides simple and field-proven high-speed communications for both tactical and base level applications.