



WHAT IS IT?

Mine Net™ Mesh (MNM) builds upon the success of AMR's Mine Net™ to provide reliable communications and tracking for harsh underground environments, surface mining operations, and industrial facilities. Featuring real-time IEEE 802.11b/g data connectivity, MNM is a comprehensive wireless platform, which provides voice and text communications, personnel and vehicle tracking, and environmental monitoring. The system offers mining and industrial operations an emergency communications network, expedited personnel location, and critical aid for search and rescue efforts. However, MNM does much more by greatly increasing productivity during normal day-to-day operations.

WHAT IT DOES

The MN-6400 Access Points (AP's) communicate together as the system's infrastructure through a combination of wireless and wired connections. AP's can be optionally connected to existing data mediums such as Fiber Optic, Ethernet, or 802.11 Wi-Fi to easily and cost-effectively implement a comprehensive network throughout the mine, both above and below the ground. Used as Wi-Fi "Hot Spots," or as a continuous communications backbone when combined with AMR VoIP telephones or Wi-Fi tracking Tags, the AP's support all standard 802.11b/g security protocols. The MN-6400's further have multiple power options including intrinsically safe ratings for hazardous environments.

AP Power Options:

- Individual AC power supplies
- Down Line DC power distribution
- 96 Hour up to 15 Day Battery Packs
- Two battery packs for 30 Day operation

As a tracking solution, the system provides continuous or zonal location, with accuracy and precision customized to the customer's needs. AMR PEMCO knows every mine has different requirements and different regulations to meet, therefore the Mine Net™ Mesh System is implemented to meet the owner's specifications. The system can be used for productivity tracking, as an emergency location tool, or provide both services on a continuous schedule by tracking the IP-based Tags through the wireless Access Points.

All Tags, whether on personnel or mobile equipment, are continuously monitored. Increased accuracy in key locations is achieved by the Zone Acquisition Device (ZAD). The ZAD unit provides detailed location data within 3-6 FT (1-2 meters) in critical or controlled areas.

TOTAL SOLUTION

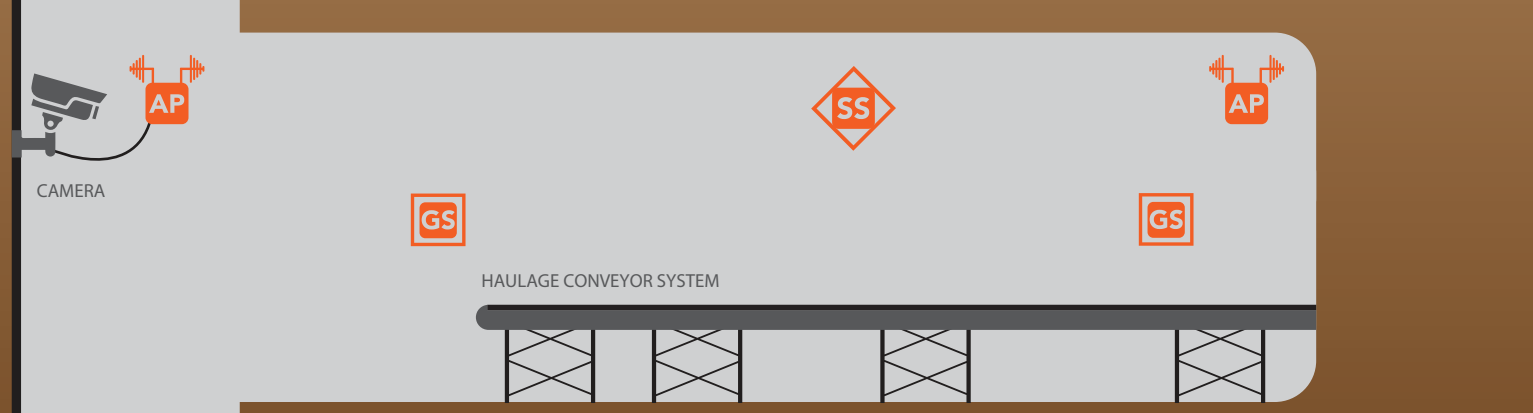
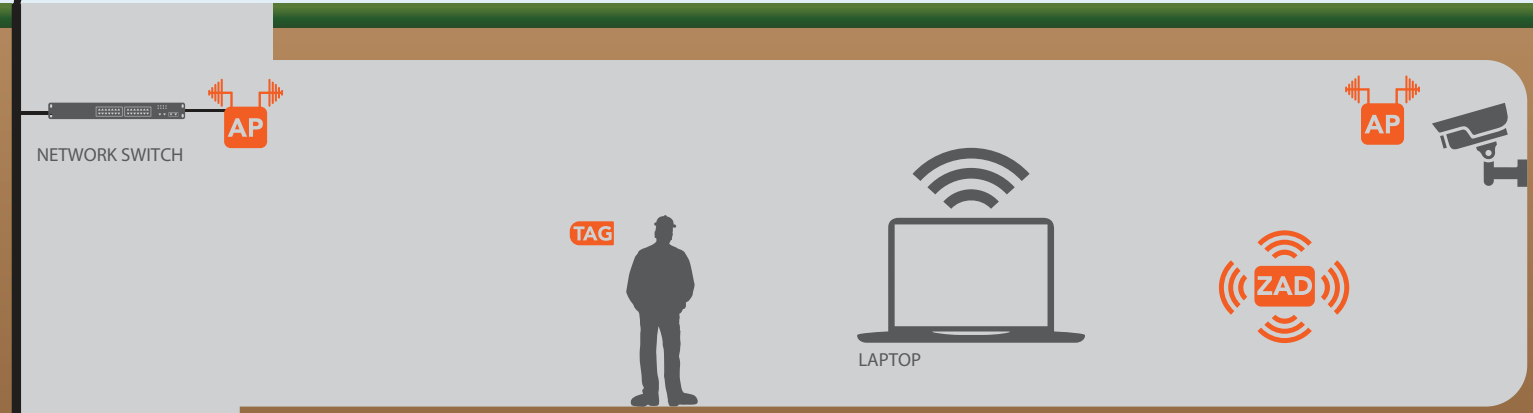
AMR PEMCO's MineWeb software suite operates in any standard web browser for a complete tracking solution. MineWeb provides detailed reports, user-defined information on vehicles or personnel, and real time placement of all assets on the mine map. The mine map is imported as a graphic file from engineering CAD drawings to display all assets in their proper locations inside the mine supplying the system operator accurate knowledge at all times.

MineWeb may also be combined with the AMR WinMac software suite for mine-wide environmental monitoring and controls or integrated with other systems for ventilation optimization, traffic management and future technology.

KEY POINTS

- Utilized for personnel and asset tracking, texting and VoIP communications, Wi-Fi "Hot Spots," video monitoring, environmental monitoring or any combination of applications.
- The server computer uses MineWeb, a web browser-based software application for tracking, reporting and mine map options, and Microsoft Windows applications for call processing.
- Voice over Internet Protocol (VoIP) for voice communication. High speed data access with any 802.11b/g enabled device such as laptops, tablets and Smart Phones.
- Supports all IEEE 802.11b/g network security methods.
- U.S. Mine Safety and Health Administration (MSHA) intrinsic safety approval. MINER Act Compliant and PA - Approved.
- South Africa Explolabs approved. Additional international approvals pending.
- Capable of a total wireless network up to 25 "hops" or networked via Ethernet and Fiber Optic cables for unlimited coverage.
- Multiple power configurations: AC with optional battery backup, DC voltage, or battery only.
- Preset or custom text messages to single recipient, group, all users, or system operator.
- Push-To-Talk (PTT) licenses available for broadcast and system wide announcements.
- IP-addressable Tags allowing thousands of Tags per system.





ZONE ACQUISITION DEVICE



PERSONNEL TAG



Mine Net™ Mesh NODE
Wireless or Wired



Mine Net™ VOIP PHONE



WIRELESS GAS SENSOR



WIRELESS SMOKE SENSOR



Mine Net™ Mesh VOIP PHONE



Mine Net™ Mesh NODE
(Wireless or Wired)



PERSONNEL TAG



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WIRELESS SMOKE SENSOR



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