



Icom Australia: Integrating a Communications System with Greater Reliability, Security and Flexibility.

Radio Warehouse in conjunction with Mining Vision designed a customised Radio Communications Solution for their client to improve the safety and security of workers in their harsh working environment. The existing communications were limited to a cabled network however after implementing Icom's IP100H communication system the client was able to satisfy their requirements for a system that operated on a 5Ghz wireless network, included full duplex audio and recording capabilities that would provide them with a greater level of reliability, security and flexibility.



Company: Mining Vision

Location: Coffs Harbour, NSW, Australia

Industry: Mining & Security

Business Situation: The client's existing radio communications were restricted to a cabled network which was inflexible and outdated. A new digital radio communications system was required to work on a 5Ghz wireless network and provide them with greater flexibility.

Solution: Radio Warehouse in conjunction with Mining Vision installed Icom's IP100H radio communications system to meet the new business requirements including providing full duplex audio with simultaneous real time recording. The solution offered greater reliability and was cost effective to deploy.

Features & Benefits:

- Improved Coverage
- Flexibility and licence free
- Secure Communications
- Simplex and Full Duplex Modes
- Inexpensive Deployment
- IPX7 Waterproof

BUSINESS REQUIREMENTS

Mining Vision is a systems integrator specialising in vision communications and manufacturing of plastic communications trailers which are utilized in mining and surveillance applications.

Mining Vision's client had tasked them with designing a system that would enable staff to talk to teams underground whilst simultaneously viewing and recording all audio and vision above the ground. This would assist the client in overcoming issues with the existing cabled radio communications system which was too restrictive when it came to meeting their new business requirements.

To build a customized solution for their client, Mining Vision approached Radio Warehouse to assist. The major obstacle was that the network was to be used in a sewer pipe 90m underground. The new radio communications system was also required to work on a 5Ghz wireless network and have a minimum range of 1 kilometer underground from the point of drop off.

It was also imperative that the underground team be able to communicate in real time without removing their hands during important highly focused tasks.



Image: Mining Image on location



APPLYING THE RIGHT SOLUTION

The nature of the environment that the customer faced meant that traditional radio methods were too restrictive and inflexible which is why the IP100H was chosen. The installation process was extremely complicated and restrictive due to the strict requirements of operating in such hazardous conditions.

The IP100H is a license free system that does not require a channel (no radio frequencies needed). Operating on a 5Ghz wireless network allowed the client to have their teams talk underground using the full duplex audio function through the headsets and Icom Controller unit. The full duplex mode enabled the workers to listen and respond in real-time with no delay and no risk to personal safety.

All audio was relayed through a camera to a control point which meant that all audio and vision from the cameras both under and above ground were recorded and stored for future reference when required.

The implementation was a great success and the staff are now able to hear all their team members conversations improving onsite well being and safety of the staff.

"The IP100H system offers all the benefits of an advanced digital radio network, at far better cost, and without the limitations of traditional digital radio technology. The future is now."

Ari Adar, General Manager
Radio Warehouse



WHAT THE CLIENT GAINED

By implementing Icom's IP100H communication system the client was able to satisfy their requirements for a communication system that could be integrated onto a 5Ghz wireless network with their existing communications systems.

The addition of full duplex audio and recording systems on-site to provide them with a reliable, secure and flexible system only re-enforced the selection of the IP100H system for the site.

Features & Benefits of the IP100H include:

- **Improved Coverage:** The client is no longer limited to the restrictions imposed by the environment and existing infrastructure and can expand their coverage by simply integrating additional wireless LAN access points.
- **Flexibility & Adaptability:** The IP100H is a license free system that does not require a channel. By installing additional access points, coverage can be increased where traditional radio units would not operate.
- **Secure Communications:** The communications on-site are as secure as the existing wireless network to ensure that private and confidential conversations remain that way.
- **Simplex and Full Duplex Modes:** The IP100H can be used either as a traditional radio with PTT (push-to-talk) or when paired with headphones can be converted to full duplex, allowing the user to continue working in hazardous environments and not being distracted by having to push the PTT.
- **Inexpensive Deployment:** The IP100H can be added on to existing wireless access points.
- **IPX7 Waterproof:** For outdoor work or places prone to getting wet (1m depth water for 30 minutes).