STI Engineering
Communications & Electronics Engineers

incorporating RFInnovations
Leaders in Wireless Data

- IoT in Underground Mining
- Ethernet Enabled and/or Serial
- Utilises existing L/F infrastructure
- VHF or UHF
- 4-level FSK for reliable communicaitons

Ethernet VHF Radios & Internet of Things

STI Engineering is collaborating with AMTech and Valmar Group in an underground mine communications IoT upgrade.

The Crescendo Radios will transfer live data from monitoring and control devices in underground mines up to the IoT platform, where information will be analysed to generate smart responses automatically.

The project is taking place in several mine sites in South America with an expansion into Oil & Gas markets to follow shortly.

AMTech is providing one of the world's most advanced IoT Platforms for the project, with Peruvian-based Valmar Group in charge of the system integration and installation.

The consortium came across STI Engineering while looking for an experienced manufacturer of RF and networking equipment to supply the most suitable solution – a solution requiring the right mix of protocol customisation, throughput and a track-record in underground mining.

The IoT connects physical "things" (in this instance, sensors, pumps, dust monitors and personnel tracking devices) to the cloud, enabling smart decisions to be made.

The radios allow transfer of long distance IP links – from the harsh conditions of underground mines, via leaky feeder systems to base stations kilometres away – and upload data into the IoT server immediately.

The Crescendo's smart polling features allows for increased communications speeds up to 64x faster than a poll/response cycle with a conventional VHF/UHF data radio.

"What you are left with is quite unique – a radio platform that not only offers the speed of radios with a much more complex modulation scheme, but also the reliability of a traditional 4-level FSK radio", says Johan Svean, Managing Director of STI Engineering. "So you are left with a last-mile solution for IoT with a lot of versatility that is also very simple to install in an existing leaky feeder network."

Backwards compatibility with RS-232 devices is also offered by the Crescendo radio modems, which is an important feature for networks being upgraded.

Contact us for more information.

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