

# Communications Solutions for Mining

Excellence is at the core of every mining operation, whether maximising the efficiency and output from the mine to reducing the time between ore extraction and customer delivery.

Mining companies also have an important responsibility to ensure workers' safety has the highest priority.

We understand your communications system is vitally important to achieving these goals. Without the ability to communicate across your business over a secure, robust network, your organisation grinds to a halt, affecting profits, customer confidence and staff safety.



**sepura**

Going further in critical communications



## Mining Users Key Challenges

- Keep staff safe
- Keep operations moving
- Ensure loud, clear audio
- Ensure communications solution is scalable
- Robust devices to minimise downtime

Our specialist communication solutions provide mining companies with powerful voice and data that can automate and streamline essential processes and provide accurate and consistent real-time data, while still ensuring mission critical voice calls always reach their target.

Critically, our radios provide loud, clear audio to individuals, teams and vehicles, ensuring your message is heard when it needs to be – first time, every time.

Our radio solutions protect workers and enhance efficiency across the mining environment, from lone or remote workers, to blast areas, heavy haul roads, pit operations and transport infrastructure.

## References



SIMEC Mining use Sepura SC Series radio to power their communication across iron ore mines in South Australia. These are dangerous sites, with large machinery, limited visibility and many users working in isolation. The extreme heat and dust are also a constant risk to machinery and technical equipment on site.

The comms team upgraded to Sepura's TETRA solution because the superior coverage significantly outperformed previous solutions. The use of mobile base stations and gateways ensured remote works would be covered quickly and easily, and all staff could be instantly contacted in an emergency.

Audio is loud and clear and GPS positioning means team leaders can locate and manage their resources quickly and safely. The radios benefit from protection from dirt, dust and water ingress and continue to operate even in extremely high temperatures, meaning the solution is reliable. Thanks to the use of OTAP, radios can be wirelessly programmed to support operations at the start of every shift.



A VHF TETRA solution is a game changer for remote or underground mines, providing users with extended coverage to protect staff and maintain efficient operations.

TETRA systems are proven as mission critical and can support the demanding requirements of mining where critical functions are depended on to reduce down time and increase operational awareness.

Sepura's solution combines UHF and VHF TETRA solutions, supporting every customer need. VHF provides superior coverage in remote, expansive, open pits, while the Remote Operations Centre and busy hubs of activities can benefit from Sepura's existing UHF solutions.

### Murray Wales

Principal Consultant and Solution Architect  
DXC Technology – Connect

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# SC Series TETRA Radios

Sepura radios are highly robust, designed with mining operations in mind; thoroughly tested, they ensure reliable use in some of the harshest conditions on earth, without compromising functionality or usability.

Our radios have unique innovations designed to support mining users; a Sepura radio can clean itself of dirt and dust blockages, maintain clear audio even during torrential downpours through our water porting capability and has a large 2.4" screen enables operational messages and alerts to be clearly seen, no matter the weather.

A common user interface across all devices reduces confusion or the need for additional training, whilst a comprehensive suite of ergonomically designed audio

and carrying accessories support the user, whatever their working role.

SC radios are capable of running smart applications enabling you to save money and reduce downtime on your radio fleet. The SC20 handheld is a resilient durable communications tool for miners above and below ground and has become the standard device for the world's largest mining companies.

Combined with the SCG22 mobile radio, either fitted to vehicles where it can also act as a gateway to extend coverage, or in control rooms to support resource allocation, the SC Series provides an outstanding solution to all user groups.

## Power and Audio Accessories

Designed in conjunction with users, Sepura's accessories are designed to perform again and again in harsh environments:

- Long lasting batteries maintain service across long shifts and can be charged repeatedly without performance degradation
- Audio accessories provide loud, clear audio and environmental protection in harsh environments
- Charging accessories are flexible around users needs, with desk and vehicle-based options along with mass charging facilities
- Vehicle accessories provide an identical user interface to hand portable radios, supporting users on the move

- AutoMate: enable automated actions on the radio through geofencing and situational triggers. Examples include access into restricted areas, warning alerts or changes of talkgroup
- SmartView: locate team members indoors, outdoors, or underground. Improve resource allocation and aid emergency response
- Man Down: share alerts to nearby colleagues or a control room if a lone worker is hurt or incapacitated

## Smart Applications

Sepura's AppSPACE applications environment allows organisations to upgrade radios with smart applications based around their workflows. Applications are designed to connect people, devices and systems to deliver critical information to the right people, at the right time.

## Flexible Programming Solutions

SC radios can make use of Over the Air Programming, enabling fleet administrators to update or personalise any radio connected to an approved, secure Wi-Fi network.

This minimises operational problems caused by staggered upgrades and reduces the need for radios or vehicles to be out of service while being programmed.

Update software, or remotely download radios configurations, applications, license files or other critical updates.

# Your choice of frequencies

Sepura can provide radios that operate in both VHF or UHF frequency bands, providing users with the choice that best suits their operations, or the ability to run hybrid networks if required.

UHF frequency bands are ideal for use above ground at the centre of operations where the network needs to reach the far corners of buildings and to every vehicle on site. VHF frequency waves are longer and provide exceptional coverage in remote sites, or in underground locations.

Sepura's experienced team can help support organisations to find the solution that best suits them.



## Why use TETRA?

- Resilient and secure: TETRA offers a complete communications solution for voice, messaging and data that you can rely on in any safety-critical situation
- Feature rich: TETRA supports a wide range of communication modes including direct (DMO), trunked (TMO) and gateway operation
- Proven technology: formally defined as an ETSI standard in 1995, TETRA has over 25 years of dedicated development, support and interoperability



## DAMM VHF TETRA Infrastructure

DAMM's proven outdoor base station provides users with a simple to deploy, rugged infrastructure solution, ideal for use in even the harshest outdoor environments.

The rugged and compact design enables installation almost anywhere - in narrow tunnels, directly on buildings or on top of a mast. It can endure metal dust, high humidity and extreme temperatures, removing the need for expensive air-conditioned shelters.

DAMM infrastructure provides extended coverage, cost-efficient design and low deployment costs, which, coupled with a low power consumption, makes the solution ideal for mining users who need a reliable, proven solution that works in all climates.



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