TACTIRON
DIGITAL COMMUNICATIONS



Every pit. Every shift. Always connected.

Tactiron One: instant, encrypted communications for mine crews, haul fleets and control rooms

Encrypted voice · Live GPS · SOS & man-down · Fleet dispatch · NFC checkpoints

Built for Open-pit mines · Underground mines · Processing plants · Remote camps

Prepared by Tactiron Digital Communications

Safer crews and a coordinated fleet in every pit

Instant communications for the moments mining operations are most at risk

A mine runs on coordination. Haul trucks, loaders and drill rigs share the same roads and benches, and a blast stops work across the pit. Underground, a crew can be out of sight of everyone else for a whole shift. The control room has to reach every person at once. Every worker needs a quick way to raise the alarm.

Where mining operations are exposed

Risk point	What goes wrong today	How Tactiron One responds
Haul road traffic	Drivers, loaders and dispatch crowded onto one channel	A talk group per fleet; dispatch calls one truck, one pit or every vehicle
Blasting	Warnings relayed crew by crew before a blast	One group call to every crew, and a geofence alert around the blast area
Lone work	Fitter or surveyor alone on a bench or in a heading	Automatic man-down alert when a worker stops moving, and one-touch SOS
Underground	No GPS and patchy radio below the surface	Works over Wi-Fi or private LTE where installed; NFC scans show the last checkpoint passed
Remote camps	Camp, mine and head office on separate phones	Camp, pit and head office on one system over cellular or satellite
Incident review	No record of what was said, when or where	Call playback, GPS history and an audit log for investigations

One channel from the pit to the control room

Handhelds, rugged phones, units in the haul truck cabs and the desktop dispatcher share encrypted talk groups. Dispatchers reach one driver, one crew or the whole site, and see every vehicle and handset on one map. Hybrid handsets with DMR keep crews talking where the mobile signal ends.



A mining shift, step by step

What the crew and control room see at each stage

Stage	Crew	Control room
01 **Shift start**	Driver checks in on the handheld; near-field communication (NFC) tag in the cab confirms driver and truck	Trucks and crews appear live on the map, grouped by pit and talk group
02 **Briefing**	Briefing by group push-to-talk (PTT); photos and the shift plan shared in chat	Supervisor briefs each crew in its own talk group
03 **Haulage**	Drivers talk hands-free through the cab unit	Live tracking of every truck; geofence alerts on restricted areas
04 **Blasting**	Crews hear the blast warning by group call and clear the area	Dispatcher calls every talk group at once and checks positions against the blast geofence
05 **Underground**	SOS and man-down active; NFC scans at headings and refuge points	Alert arrives with voice and last checkpoint; rescue team called by PTT
06 **Shift change**	Outgoing crew posts notes, photos and open faults to the group chat	Record of calls, routes and alerts for the next shift and safety review

Cellular PTT vs conventional radio on mine sites

Feature	Cellular PTT	Conventional VHF/UHF radio
Range	Works over 4G and 5G, private LTE, Wi-Fi or satellite links	Depends on terrain, pit walls and repeaters
Dispatch visibility	Live GPS map, geofencing and trip reports built in	Usually voice only
Worker safety	SOS, man-down and listen-in on every device	Varies by model
Existing radios	DMR and VHF/UHF fleets joined through a gateway	Separate systems per contractor and frequency
Resilience	A digital mobile radio (DMR) add-on lets crews talk directly to each other when there is no signal	Works without a network, but each site needs assessing first
Scaling	Add a truck, crew or pit in minutes; no masts to build	Infrastructure, licensing and support

TACTIRON

Tactiron One for every kind of mine

Configured for each type of operation

Open-pit mines

Haul, loading and drill crews on their own talk groups, with every truck on the map.

Underground mines

Voice over the mine's Wi-Fi or private LTE, with NFC checkpoints at headings.

Drilling & blasting

Blast warnings by group call and geofence alerts around the blast area.

Processing plants

Operators and maintenance on shared talk groups, with NFC checks on rounds.

Remote camps

Camps and exploration teams linked to the mine and head office over cellular or satellite.

Contractors & ore haulage

Contractor crews and ore trucks on your talk groups and on the same map.

Deployment & support

- Rollout planned around your pits, fleet and shift roster.
- Talk groups set up to match your pits, crews and contractors.
- Crew and control-room training: calling, talk groups, SOS, man-down, NFC checkpoints and dispatch.
- Hosting on your premises or in your country, with local technical and warranty support.

Why mine operators switch

- **A coordinated fleet:** dispatch reaches one truck or the whole pit in one press.
- **Help for every worker:** the alarm goes out even if the worker cannot speak.
- **Records for safety reviews:** calls, routes and alerts are kept for audit and investigation.

Devices for mine crews



RugGear RG170
Keypad phone, IP68 and IP69



RugGear RG530
Smartphone, IP68, MIL-STD 810H



Telox BN900
PoC and DMR radio, IP68, IP69K



Hytera PDC680
DMR and LTE in one radio, IP68



Telox TE320
LTE push-to-talk radio, IP68



Hytera MNC360
Vehicle unit, two LTE antenna ports

- Important

Carry only devices rated for the hazardous-area zone where they are used. Tactiron confirms the rating of each device model during the briefing. Tactiron One supports the mine's emergency procedures and works together with its gas detection and alarm systems.

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