pempek
made for mining

Pempek's Oracle RC Flameproof Radio Remote Controls and the Oracle Data Wireless Ethernet Access Points
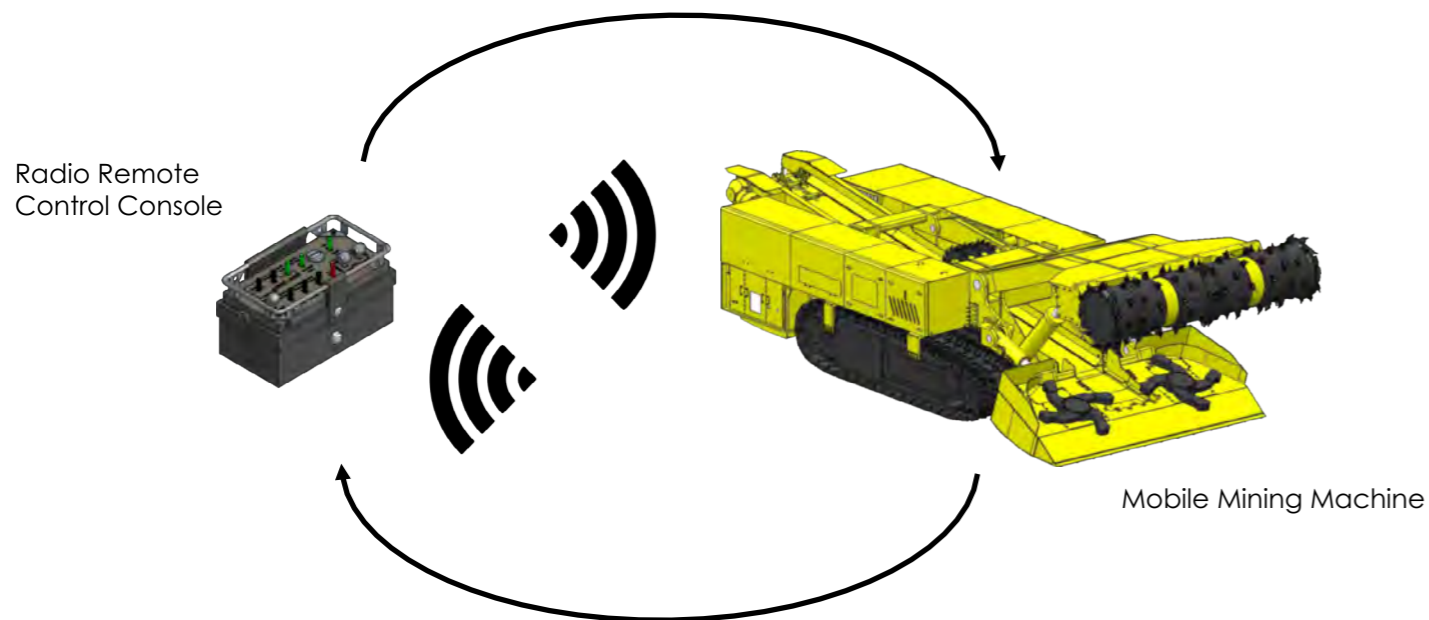
Oracle

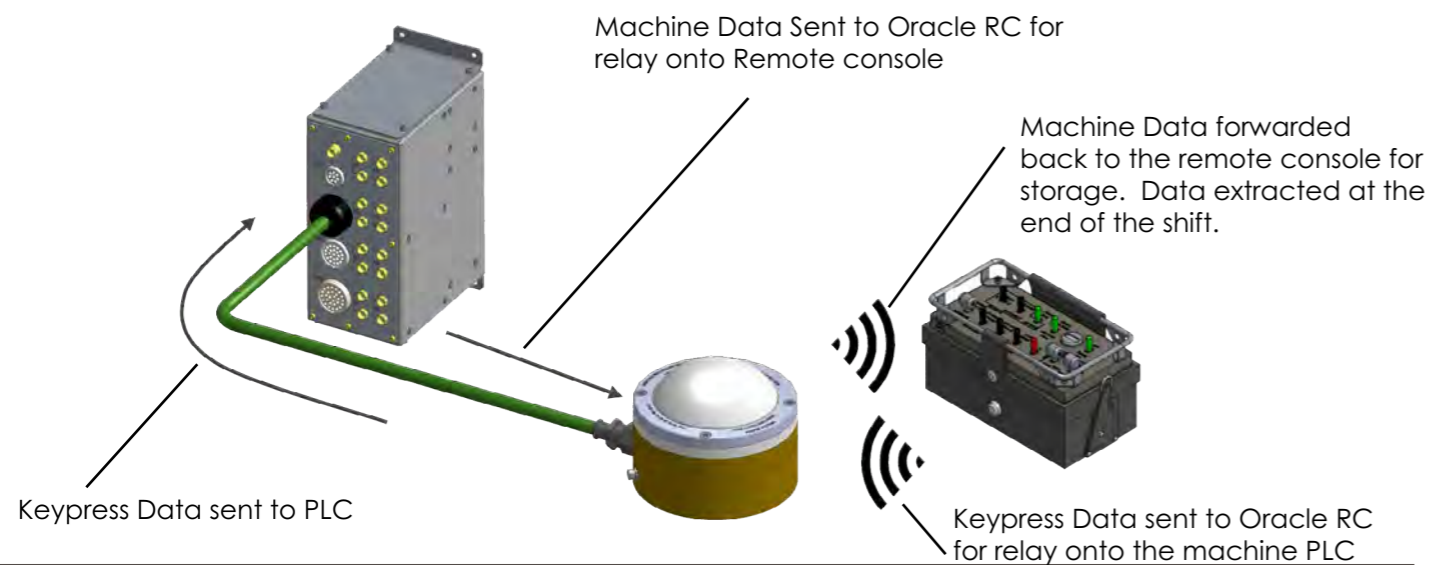# The Oracle RC is a self-contained, flameproof (Ex d) radio control data

transceiver supporting radio remote control of mobile mining machinery. The module communicates with a variety of Pempek manufactured handheld remote control consoles via a 2-way radio data stream.

The Oracle RC Pempek's **Flameproof Radio Remote Control** – Principle of Operation

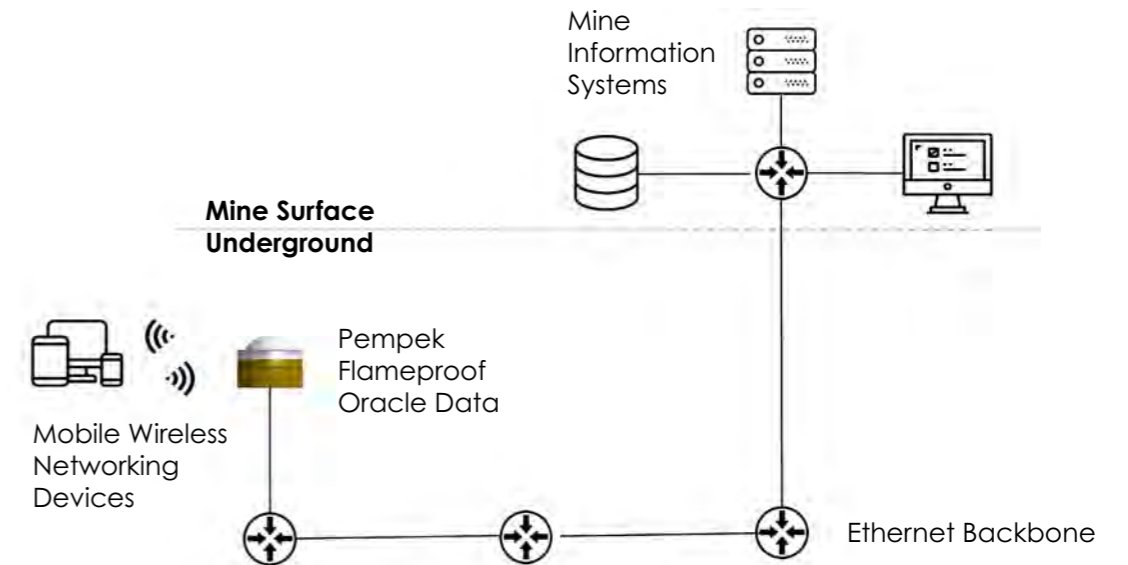**Remote console sends switch information to control machine**

Radio Remote Control Console

Mobile Mining Machine

Machine sends data logging and display information to remote console

Machine Data Sent to Oracle RC for relay onto Remote console

Machine Data forwarded back to the remote console for storage. Data extracted at the end of the shift.

Keypress Data sent to PLC

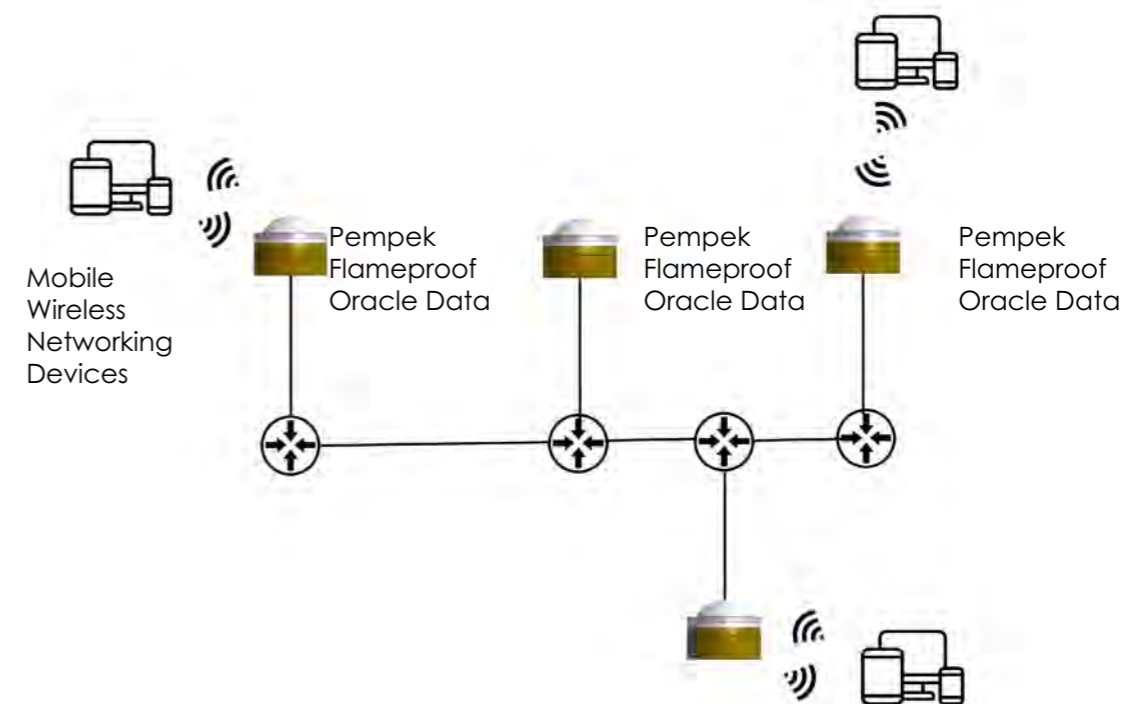Keypress Data sent to Oracle RC for relay onto the machine PLC

The Oracle Data is a Wireless Ethernet Access Points

for an industrial, flameproof (Ex d) Wireless Data Transceiver Module designed for reliable, high-speed data access in underground mining applications.

The Oracle Data Pempek's **Flameproof Wireless Radio Data** Principle of Operation Underground

Mine Information Systems

Mine Surface Underground

Mobile Wireless Networking Devices

Pempek Flameproof Oracle Data

Ethernet Backbone

The Oracle Data Pempek's Flameproof Wireless Ethernet – Principle of Operation (Wireless Mesh Networks) For Hazardous Areas

Mobile Wireless Networking Devices

Pempek Flameproof Oracle Data

Pempek Flameproof Oracle Data
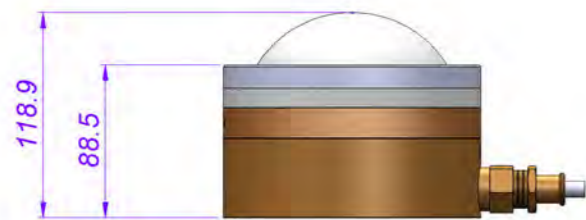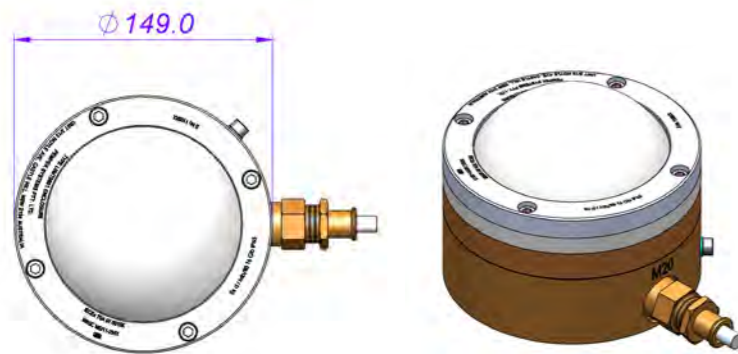
Pempek Flameproof Oracle Data

The Oracle RC supports a range of field bus options including RS-422, Ethernet and Ethernet/IP.

A host PLC communicates with the Oracle via key-press commands from the remote handset, and also send machine status and data logging information back to the handset.

The Oracle RC Flameproof Radio Control Transceiver Features & Benefits:

- Self-contained, certified, flameproof (Ex d) housing
- No external antenna cable required
- Antenna is built into the housing of the product
- Flexible power supply options (PoE or 24VDC)
- Single gland entry for power and data cable
- Built in radio control data integrity protection
- Supports PLC safety funcitons such as handset model verification and handset serial number pairing
- Simple, easy way to add remote control to any flameproof application
- Easy maintenance
- Easy configuration

Ø 149.0

118.9

88.5

Mechanical	
Dimensions	(W) 149mm x (H) 118.9mm

Specifications

- Radio Signal Strength: Less than 100 mW
- Power Supply: 24VDC
- Ambient Temperature: -10°C to +60°C
- Ingress Protection: IP 65
- Field Bus: RS-422 / Ethernet (Ethernet/IP Available, Contact Sales Representative
- Default Firmware: P0TE0001 (RS-422 / Ethernet)
- L0MT0801, L0MT0803, L0MT0804 - Radio Band: 902 to 928 MHz
- L0MT1201 Radio Band: 902 to 928 MHz
- L0MT1401 Radio Band: 868.7 to 869.2 MHz
- L0MT1001 Radio Band: 868.125 to 869.925 MHz
- L0MT1301 -Radio Band: 865.025 to 866.975 MHz

Typical Application

- Underground mining vehicles
- Continuous Miners
- Bolter Miners
- Road Headers
- Longwall Shearers
- Feeder Breakers
- Mobile Bolters
- Shuttle Cars

Ordering Information

Oracle RC Flameproof Radio Control Transceiver (915 MHz Band)
Part Number: L0MT0801

Oracle RC Flameproof Radio Control Transceiver (915 MHz Band) (5VDC)
Part Number: L0MT0803
The L0MT0803 model is only suitable for 5VDC supply.

Oracle RC Flameproof Radio Control Transceiver (915 MHz Band) (ATEX)
Part Number: L0MT0804
The L0MT0804 model is configured only applications requiring ATEX certification.

Oracle RC Flameproof Radio Control Transceiver (MSHA) (915 MHz Band)
Part Number: L0MT1001
The L0MT1001 based on the 868 MHz band.

Oracle RC Flameproof Radio Control Transceiver (866 MHz Band)
Part Number: L0MT1201
This L0MT1201 model supports data/power cable with O.D. range of 6.6 to 9.5mm
(Pempek Gland P/N: H0MT2801). A special MSHA-approved cable gland configuration is required

Oracle RC Flameproof Radio Control Transceiver (866 MHz Band)
Part Number: L0MT1301

Oracle RC Flameproof Radio Control Transceiver (Narrow 866 MHz Band)
Part Number: L0MT1401
The L0MT1401 radio frequency configuration makes it suitable for use in Russia.
Note that certification for use in Russia is pending. Contact your sales representative for more details.

The Oracle Data
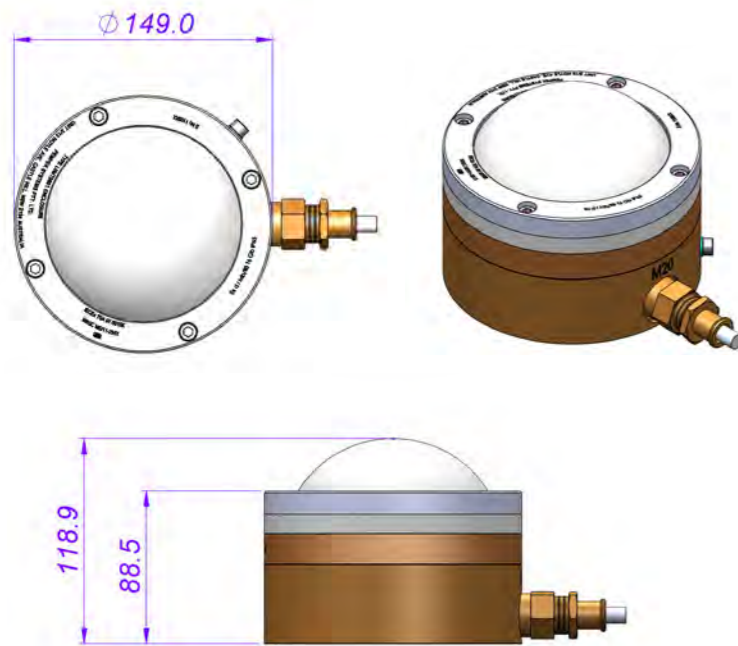## Flameproof Wireless Ethernet Access Point

The Oracle Data Flameproof Wireless Ethernet Access Points Features & Benefits:

- Deployment-ready Wireless Networking solution for underground mining
- Self-contained, certified, flameproof (Ex d) housing
- No external antenna cable required
- Antenna is built into the housing of the product
- Flexible power supply options (PoE or 24VDC)
- Single gland entry for power and data cable

- Simple way to add Wireless Networking connectivity
- Cost effective (one product solution)
- Easy maintenance
- Easy configuration

Oracle Data Flameproof Wireless Ethernet Access Point requiring MSHA Cable Gland (USA)
Part Number: L0MT0501

Oracle Data Flameproof Wireles Ethernet Access Point requiring IECEx Cable Gland
Part Number: L0MT0401and L0MT0404

Ø 149.0

118.9

88.5

Specifications

- Wireless Networking Compliance: IEEE 802.11 b/g (2.4 GHz)
- Power Supply: 24VDC or PoE (IEEE 802.3af) (5W Max)
- Ambient Temperature: -10°C to +60°C
- Ingress Protection: IP 65
- Certification IECEx TSA 07.0016X Ex d 1/IIB T6

Typical Application

- Underground mining vehicles
- Longwall face equipment
- Telemetry relay networks
- Mesh networks

Communications

- Media - Ethernet
- Port - 1x 10/100 RJ-45 LAN/WAN
- Throughout - Up to 200Mbps

Ordering Information

Oracle Data Flameproof Wireless Ethernet Access Point requiring IECEx Cable Gland 6.6mm to 9.5mm
Part Number: L0MT0401

Oracle Data Flameproof Wireless Ethernet Access Point requiring IECEx Cable Gland 9mm to 11.9mm
Part Number: L0MT0404

Oracle Data Flameproof Wireless Ethernet Access Point requiring MSHA Cable Gland
Part Number: L0MT0501

Mechanical	
Dimensions	(W) 149mm x (H) 118.9mm

pempek
made for mining

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