



# AUTOMATING & REMOTE MANAGING MINE EQUIPMENT ACROSS AUSTRALIA

## HIGHLIGHTS

- ✓ [TerraVision](#) is an Australian industry leader in real-time fleet management tracking, reporting, and information systems.
- ✓ Its mine equipment automation and remote management solution, the BluePipe Smart Mine system, requires robust, dependable, and customizable cellular connectivity in remote areas.  
Providing this connectivity is the RUT956 industrial cellular router of Teltonika Networks. By allowing TerraVision to install custom software on the device, RUT956 helps automate mining operations by enabling the remote management and control of on-site equipment and proactive maintenance.
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## THE CHALLENGE – MANUAL MINING IN REMOTE AREAS

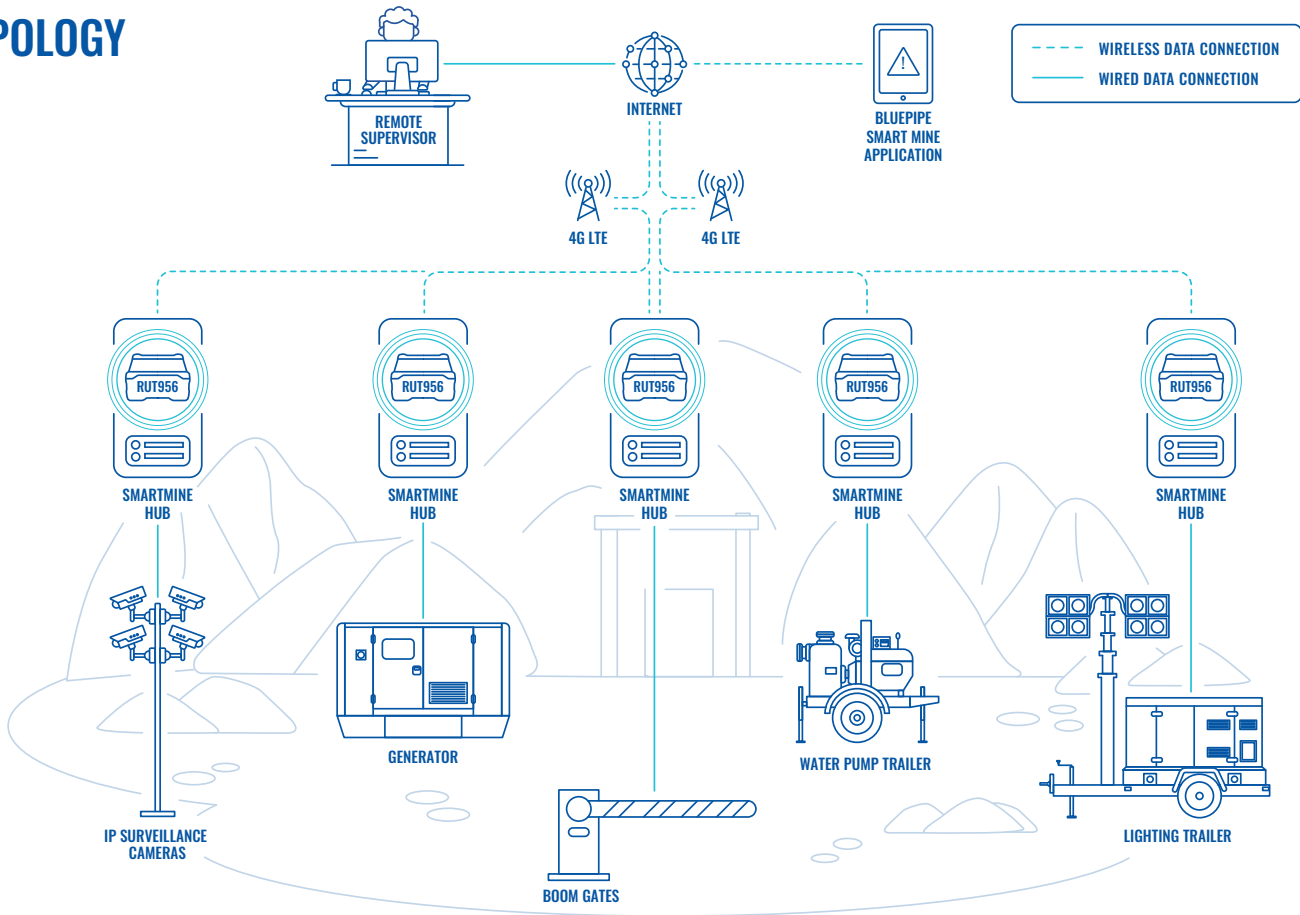
Australia is one of the world's largest mining countries, with an enormous mining industry that contributes significantly to the country's economy. The Australian Bureau of Statistics reported that the mining industry [contributed 8% of Australia's GDP in 2020-21](#).

Australia's mining operations are often in remote areas. This makes it complex and costly for mining companies to control and keep track of their equipment. In years past, operating and monitoring on-site equipment was a completely manual process. Mining staff would need to either commute or live on-site just to open and close a water pump, turn a generator on, or check water levels in the dam.

TerraVision sought to solve this problem with its BluePipe Smart Mine system. This system enables the automation and remote management and surveillance of mine equipment, such as water pumps, lighting trailers, and diesel generators. In essence, it makes basic manual operation of remote mining equipment a thing of the past.

However, for that system to work, it needs connectivity. The networking device needs to be highly customizable and capable of withstanding the adverse environmental conditions of mining environments. A reliable industrial router is, quite literally, central to this solution's success.

# TOPOLOGY



## THE SOLUTION – AUTOMATED MINING VIA REMOTE MANAGING

When building its BluePipe Smart Mine solution, TerraVision chose the RUT956 industrial cellular router by Teltonika Networks.

The device is connected to equipment such as relays, starter motors, and electrical circuits and breakers. It is used for processing logic that controls specific sequences of events upon receiving commands. For example, by installing the device in a control box called the SmartMine Hub, the RUT956 lets the system automatically start and stop diesel generators and switch lighting on and off using a combination of scheduling and environmental triggers.

The RUT956's I/Os, both digital and analog, enable the control of relays and interfaces for automation. They also allow for the remote monitoring of mine equipment, which facilitates proactive maintenance. This entails real-time telemetry, automatic reporting of operating conditions, and automatic shutdown and/or SMS alerts in case individual equipment requires maintenance or repair. This keeps personnel safe and minimizes equipment downtime.

A critical factor of the RUT956 router in this solution is its customizability. TerraVision installed on the device its own BluePipe Smart Mine application, which is built upon the software development kit (SDK) offered by Teltonika Networks. A dedicated web interface provides user-friendly configuration capabilities for the application and gives clients access to and control of their end devices.

TerraVision's BluePipe Smart Mine system makes basic manual operation a thing of the past. The RUT956 industrial router at its core allows the whole system to function with unparalleled reliability, significantly improving safety, sustainability, and operating costs in mines across Australia.

