KINGFISHER RTU'S
ENTRUSTED WITH BILLION DOLLAR HIGHWAYS

KINGFISHER
AN OVARRO TECHNOLOGY

BACKGROUND

If mining is the lifeblood of an economy, then railways are its arteries. The paths from "Pit to Port" and intrastate freight lines are a billion dollar highway that relies on the free flow of ores and minerals to realise the return on major investments. Railway lines play a crucial role in this pathway and managing them is critical to financial success.

Australian railway companies provide transport solutions for mine sites in remote regions, passing through some of Australia's harshest environments. Free flowing transportation relies upon monitoring and control equipment that is resilient and highly available. Any delay of a train loaded with valuable ore represents a million dollar per day hit to a main site's profitability. Mining companies place enormous trust in railway companies to keep trains rolling and the economy booming. This burden of trust is shared with Ovarro, who provide Kingfisher Plus RTUs for railway management systems.

RESILIENCE

For over 20 years, Kingfisher RTUs have been entrusted with the remote monitoring and control for the railway industry. Railway operators need to have faith in the control system that keeps billions of dollars of value moving and to ensure the safety of staff, the public and the environment. Kingfisher RTUs were built to meet the railway industry's requirements and were provided with a Type Approval in the 1990s, a clear statement of trust placed in the control system.

Key to the Type Approval is the resilience of the RTU. The operators need to know that the RTU will survive in the most extreme environments. Kingfisher RTUs can operate from -40°C to +85°C, suitable for managing railway systems in any location. The core processor is also protected by up to 5,000V of isolation from field events, making it suitable for monitoring railway power systems and controlling switchgear. If the failure of any railway component creates a high voltage spike, the RTU will remain operational, allowing the fault to be reported and for the local site to be brought to a safe operating mode in a controlled manner.

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TRANSPORT

MONITORING & CONTROL

RTU'S

OVARRO
CONNECTING
TECHNOLOGIES

SUPPORTING OPERATIONS

Kingfisher RTU's also support multiple levels of redundancy so that even if an extreme event happens and a part of the Kingfisher RTU is damaged, railway operations are not compromised.. Dual processors, dual power supplies and multiple communications ports ensure that no single fault will stop the RTU from operating. Rail operators trust the Kingfisher RTU because they have proven themselves with decades of 24/7 operation.

> "The Kingfisher RTU is a 'Black Box' for the railway system, continuously verifying and recording site operations. They are resilient to the environment, operate 24/7, report upon and log all key events and manage all site communications. They are the device of choice for remote monitoring and control of railways."
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> Craig Abbott, Ovarro Sales Manager, Asia

TRUSTED MANAGER

At key points in the rail network, specialised signalling equipment provides local management of railway line safety. Kingfisher RTU's are utilised for the remote management and co-ordination of these single purpose safety devices. Each Kingfisher RTU maintains a timestamped log of every command sent to a signalling unit from the control room, the digital outputs from the signalling units to field equipment and the changes in status of field equipment. The logging of every event ensures that no historical data is lost, even if there is a breakdown in site communications. In addition, if an audit or post incident review is ever conducted, the log provides the information required to reconstruct the site status at a particular point in time.

Multiple devices work together in unison in railway control. In addition to signalling equipment, there are UPS systems, station lighting, arrival information systems and switchgear. Operators need to be able to monitor and control each and every device. Kingfisher RTU's provide a single, reliable interface to these systems. The RTU supports numerous data protocols to gather data from and send commands to the myriad of devices used in railway control. With over 20 communications ports available, a Kingfisher RTU can connect to every device on site and still have ports spare to provide redundant communications paths between the site and central control room.

KEY DELIVERABLES

- Type Approved and Trusted
- 24/7/365 operations
- Manage multiple site devices concurrently
- Timestamped log of events

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