UFR Haul Truck

UFR Haul Truck is an OEM agnostic robotic solution for material haulage in underground mining. Utilising UFRautonomy for autonomous and tele-remote driving and dumping, UFR Haul Truck is engineered to work with an EPIROC MT65 Haul Truck.

The Challenge

Modernising existing EPIROC MT65 haul trucks by adding UFRautonomy.

This update with the UFRautonomy package transforms the trucks to autonomously haul material, integrate with the site's safety system and also Traffic Management System (TMS).

UFR Solution

Using our proprietary UFRautonomy software and hardware package we are delivering:
- Tele-remote capability
- Autonomous truck cycle operation
- Integration with site's safety system
- Integration with Traffic Management System (TMS)
- Multi-vehicle control user interface

CUSTOMER CHALLENGES

Introduction of Autonomy - Change Management Considerations

The change management process in a mining environment remains a great challenge for many mines. Introducing autonomous driving capabilities can be an enormous undertaking for all of the stakeholders involved and there are many aspects to the change management process that must be considered.

In this particular instance, our customer has decided to introduce the autonomous haul trucks in a unique and innovative way. As a first step, the MT65 truck fleet will run autonomously during shift change. Shift change naturally creates a safe environment for the trucks to operate autonomously. Allowing an otherwise dormant fleet of trucks to keep moving material during shift change.

Safety

At UFR we go to extraordinary lengths to make sure that our machine meet and exceed all site safety requirements.

All machines are equipped with multidimensional sensors that integrate with safety software, to ensure that they meet industry safety standards. Our qualified functional safety experts conduct thorough and rigorous testing at our test facility as well as onsite.

UFRAUTONOMY

UFRautonomy works by integrating software and hardware with machines to enable them to operate autonomously or under tele-remote control.

This includes sensor, control, and communication systems that work together to enable the machine to perform a suite of tasks. UFRautonomy software allows for the creation of custom applications tailored to specific customer needs, which can be further customised to enable autonomous operation, remote operation, or a combination of both.

Multidimensional sensors and dedicated software combine to deliver a multi-layered safety system that meets the industry standards.