

ENABLING MINING TECHNOLOGY



The first metal mines in Australia started back in the 1840's, and by 1850 exports earned more than Australia's combined exports of wool and wheat. Today mining in Western Australia, together with the petroleum industry, accounts for over 40% of Australia's income from ALL exports. Iron ore is the most important commodity, accounting for over half of sales in the state's mineral and petroleum sector.

THE CHALLENGE

With mining commodity prices fluctuating, there is pressure on companies to make savings. One significant way is to increase the automation of the mining vehicles. In order to achieve this, a leading iron ore extractor in Western Australia needed to build a completely new control room, from which to allow their supply chain to work together, 24 hours a day, seven days a week, to deliver improved safety, reliability, efficiency and commercial outcomes.

Fortunately, a floor in their office building became vacant, which they quickly occupied, and the planning for the control room began.

After running an initial pilot, and upon examination of Compuroom's track record, the mining company appointed the infrastructure specialist to undertake the work under the head contractor.

CUSTOMER PROFILE

COMPANY

Compuroom Service Pty Ltd,
Australia

INDUSTRY

Mining

PRODUCT NAME

The Molex Cat6A solution includes KSJ-00062 shielded jacks, PID-00217 patch panels, CAA-0322 cable, and patch cords.

SOLUTION FEATURES

Molex's PowerCat solutions have been developed with the highest performing capabilities in mind, the Molex Cat 6A supports high speed data network applications such as 10-Gigabit Ethernet (10GBASE-T). Additionally, it minimizes cross talk, provides excellent electromagnetic interference protection.

THE SOLUTION

64KM OF CABLING

The plans embraced technology and innovation to truly integrate the entire supply chain in one location, namely planning, operations, shipping, marketing and business.

To achieve this, there were challenges to be overcome, because the infrastructure was dense and the timescales demanding. Stewart Nicholson, General Manager at Compuroom, takes up the story: "It's a 2,300m² floorspace, into which we would eventually put 64km of cabling and 1,500 access points. These were needed to support 162 Control and Associated Workstations and 996 monitors. We started work in late December 2019, and the new control centre went live on a phased schedule starting March 2020.

"We chose Molex Cat 6A shielded cabling and patch panels, because we had used them before, and they were always reliable. Molex is well priced, easy to install and the local support is great. We needed shielded cabling because of the sheer number of cables in a relatively small space – bundles of 24 cables, mostly in the floor, with some in the ceiling.

"The cabling serviced not only the control center itself, but also functions such as access control, CCTV and AV".

THE BENEFITS

Stewart continued, "The control center allows the company to move to what is really a whole new generation of mining. They are no longer so reliant on human control of the vehicles on site, as they direct their movement and actions from up to 1,500km away in Perth. This makes the operation itself much more productive and efficient.

"It also diminishes the cost of expensive shift workers, many of whom have retrained to work in the control room. With fewer people in the mines, there are obvious health and safety advantages. Quite apart from avoiding the inherent dangers of the actual mine environment, such a move hugely reduces this pattern of working, which is physically fatiguing and known to endanger employees' mental health.

"And such comprehensive control and monitoring cuts down on vehicle breakdowns and their unplanned maintenance, because now their condition – tyre pressures, engine state, load amounts – is monitored and remedied as required."



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