

# 2M



AUTOMATION LTD

# Quality & Performance Improvement at a Zambian Mine

Zambia

## Project Brief

**First Quantum Minerals Ltd.** is a growing mining and metals company whose principal activities include mineral exploration, development, and mining in Africa. The Company produces LME grade "A" copper cathode, copper in concentrate, gold and sulphuric acid.



one of B&R's industrial PCs to ensure they met with the requirements of First Quantum for dual screen display, remote accessibility, and the ability to withstand the harsh environment.

The mine has a process monitoring system that is installed on several client PCs distributed around the plant. This is useful as it gives the operators the current status of the process.



However, the main problems they faced with these PCs was high failure rates due to the following environmental factors:

This unit has been successfully installed at their Bwana Mkubwa Acid Plant in Ndola, Zambia to fully test the harsh environment.

First Quantum's common shares are listed for trading on the Toronto Stock Exchange in Canada (symbol "FM"), and the London Stock Exchange (symbol "FQM") in the United Kingdom.

- Sulphuric Acid fumes in the atmosphere &
- High temperatures

2M Automation, with their partners B&R Automation, carried out some tests using

2M is now involved in Supplying First Quantum with various control equipment to keep their processes running smoothly.

## Key 2M Services Supplied

- Plant Process Analysis
- SCADA simulation with remote access
- Server Client Communication
- Dual Screen Display
- Thin Client Applications
- PLC component replacement



## Key Customer Benefits

- Embedded PC means that there is no hard drive which is the most affected component in the harsh environment
- The latest technology that will improve quality and performance
- The modular design of the APC620 means that they can also use the same platform for thin client application

## Design Philosophy

B&R Automation's APC620 was considered the perfect product for this application.

on reliability and longevity.

The product life span of a B&R Industrial PC series is 10 years and over. Furthermore, the use of B&R industrial PCs in tough production environments places special demands

The elimination of cable connections for PC components, stable fitting of circuit boards and the optional use of mass memory without rotating parts (CompactFlash) together with a very robust



mechanical construction accounts for a high level of protection against breakdowns. The unit can also connect to several automation panels each showing different content and not necessarily of the same type.

