

Coal Delivery SCADA System Uses Serial Radio Modems



Industry: Mining, Power and Energy
Product: 900MHz Long Range Radio Modem

• The Challenge

A power generating plant in the north central United States uses multiple mobile platforms to convey its coal supply from the railroad delivery point to the storage lot. But the coal handling process was monitored and controlled with wired connections. As the local control systems moved on a rail, the data cables were constantly being disconnected from the SCADA system, stalling the operation and causing expensive downtime.

• The Solution

The recurring service interruptions were eliminated by replacing the cable runs with B&B's 900 MHz, serial radio modems. With their Class1 Div2 UL certifications the radio modems were more than tough enough to stand up to the task. A "master" radio modem was installed at the control center's SCADA system, and remote radio modems were connected to each PLC on the conveyor platform. As the system operates transparently, the PLCs needed no reconfiguration. The transition from wired to wireless was seamless.



• Why B&B Electronics?

- Ability to tie in serial ports of multiple PLCs to the central SCADA system with Modbus data format over license-free proprietary RF network
- Ability to survive harsh seasonal weather because of its -40 to 85°C wide temperature ratings
- Class 1, Div 2 hazardous location certification
- The 256-bit AES encryption ensures data integrity and network protection from hackers

• The Product

Zlinx® Model ZP9D-115RM-LR – 900MHz, Long Range, Industrial Grade Radio Modem

- 40 mile radio range
- Frequency: ISM band, 902 to 928 MHz
- 3dBi RPSMA male dipole, antenna included
- -40 to 85°C wide temperature - for indoor and outdoor applications
- Power supply redundancy and versatility: 10 to 48 VDC or 24 VAC
- Rugged circuitry & heavy-duty DIN mount case saves panel/cabinet space
- Class 1 Div 2, 256-bit encryption



ZLINX
Radio Modem
Model ZP9D-115RM-LR