

Class-1 Division-2 Wireless Fuel Tank Gauging

Industry: Petroleum, Oil and Gas
Product: 900MHz Long Range Radio Modem

• The Challenge

As world fuel consumption increases, oil and gas companies are trying to make the supply chain as efficient as possible. One of the simplest applications to automate is tank gauging processes at fuel terminals. In many cases, technicians end up shuttling between tank sites, weathering the weather and manually gauging tank levels for inventory purposes. This gauging includes numerous safety procedures and, more importantly, costs time! Another challenge is that any equipment that can be installed at fuel tank sites needs to meet Class 1 Division 2 approvals.

• The Solution

A pair of long range wireless radio modems is a perfect fit for this application. These radios are Class 1, Div 2 certified and suitable for the environment. The customer needs to install a level sensor with a serial interface at every tank to be monitored and connect them to a local radio modem. At the Control/Monitoring Station, a master radio modem will gather the tank level from all remote radios and enable the information to the central SCADA or PLC. This wireless technology, with off-the-shelf components, helps solve tank gauging problems and help the personnel spare their valuable time for more productive tasks while effectively monitoring multiple tanks in one glance. Fully programmed wireless solution kits, including HMI, are also available.

• Why B&B Electronics?

- Ability to tie multiple tank level sensors to a central SCADA/PLC through license free proprietary RF radio modems
- Ability to survive harsh seasonal weather because of its -40 to 85°C wide temperature ratings
- Class 1, Div 2 hazardous location certification is a must for this application
- Data available in user friendly Modbus format
- The 256-bit AES encryption ensures data integrity and network protection

• 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