

Using GPS to Synchronize Data Loggers While Monitoring Oil Pipelines

Delphin DAQ Use GPS to Synchronize Clocks Across Expansive Distances



A Spanish energy integrator named Sumelco Technologies recently proposed a data acquisition system for remote data collection and alarming on oil & gas pipelines as part of the ongoing effort to minimize ecological impacts of fossil fuel consumption.

The team at Sumelco Technologies is comprised of experts in the fields of automation, IT, smart grids, and smart metering of utilities and fuel delivery systems and has determined that since most oil & gas pipelines are actually systems comprised of multiple components that can be hundreds of kilometers apart. Due to the architecture of these systems a data acquisition system is needed that can synchronize time stamps so pressure drops or other abnormalities can be pinpointed and repair crews can be dispatched as quickly as possible.

CAS Data Loggers and Sumelco determined that the Delphin LogMessage series of data loggers is the right fit for a couple reasons. The LogMessage units are high speed data acquisition with universal inputs that can be used for 3rd party sensors built to industry standards. They have a large internal memory for storing data and stand-alone operation without a PC interface after configuration. They have low-pass filter capabilities and most important they have GPS clock update capabilities to synchronize the time of hundreds of loggers if need be.

Once configured, the Delphin LogMessage can operate standalone and requires no PC support. Configuration and data readout takes place via a network interface. LogMessage's two serial ports enable connection of a modem for remote access, or for other hardware to be connected for data transfer purposes. Alarm notifications and text messages may also be transmitted using a GSM modem. By operating the LogMessage device within a network, measurement data can be transmitted online and processed using the ProfiSignal Go software.

Software

LogMessage devices are supplied with the powerful ProfiSignal Go software. ProfiSignal Go is professional PC software for the online and offline monitoring and analysis of measurement data. If you already use other measurement technology software, the full service package includes LabVIEW™ and DASyLab™ drivers, Modbus TCP and OPC Server.