HYDRAULIC FRACTURING PROCESS MONITORING

Fracking, otherwise known as hydraulic fracturing, has become a word well-known with the recent expansion of oil exploration. As fracking helps to release natural substances (in this case, oil) from the earth’s rock for extraction, monitoring sensors directly at the site provide data and supervisory control for engineers and personnel controlling the fracking process.

The fracturing process, in order to be profitable, must be truly mobile. Thus, many pressure pumping companies located in both the United States and Canada have created mobile command centers inside vehicles to control the fracturing operation directly from the field. These vehicles, often termed “data vans,” house important monitoring equipment. Sensors used directly at the fracturing site such as pressure meters, flow meters and engine and pump monitoring sensors transmit data in various different protocols such as CAN bus, RS-232 and RS-485. Converting all of this data to a common medium - Ethernet - is necessary for the SCADA system to ensure the fracturing process is safe and efficient.

Comtrol’s DeviceMaster RTS 16-Port serial to Ethernet gateway is included in data vans as the center of communication with the field. As seen below, the data from the sensors is either converted from CAN bus to RS-232, or travels directly via RS-485 to the DeviceMaster. The DeviceMaster then relays that information via TCP/IP (Ethernet) to the SCADA system. The DeviceMaster provides great flexibility with software selectable RS-232/422/485 support, along with being reliable, rugged and tolerating use in a mobile environment for extended periods of time.

The Comtrol DeviceMaster RTS 16-Port rack mount is a 16-port device server designed for network-enabling serial communications devices. The DeviceMaster RTS family of serial device servers enables browser-based remote port/device monitoring and configuration and provides an application software platform for local processing. The DeviceMaster RTS product is a network-attached solid-state embedded device server network serial port that delivers exceptional price, performance and reliability.
DeviceMaster® RTS 16-Port RJ45 Rack Mount

Part Number: 99455-8

KEY FEATURES AND BENEFITS

- RoHS 2 compliant under CE
- No serial cable distance limitations enables communication between a host PC and serial devices located anywhere across an Ethernet network
- RS-232, RS-422 or RS-485 software selectable
- Application compatibility supports native COM, TTY, or TCP/IP socket communication modes
- 120/240 VAC power supply with US and Euro power cords
- Web-based configuration makes setup and management changes quick and easy
- Real-time e-mail event notification alerts administrator of potential connection and security issues
- 1U rack mountable
- Wide operating temperature of -37° to 74°C
- PortVision® Plus remote monitoring and management software
- Software developer kit available for users interested in writing custom applications to run on the DeviceMaster platform
- SSL & SSH management, SSL serial data stream encryption

PRODUCT DESCRIPTION

The Comtrol DeviceMaster RTS 16-Port Rack Mount is a 16-port device server designed for network-enabling serial communications devices. When used with the included NS-Link™ driver software and a host PC, the DeviceMaster RTS enables placement of COM or TTY ports anywhere on an Ethernet network or across the Internet. In applications where connecting legacy serial devices to a PC without software changes is a requirement, a pair of DeviceMaster RTS units can be used to create a point-to-point serial tunnel across the network that seamlessly transfers serial data via TCP or UDP socket connections.