Serial to WiFi (802.11) for Ship Board Communications

Industry: Marine/Transportation
Product: WiFi Serial Server

• The Challenge

A worldwide contractor provides oceanic engineering, survey, project risk and construction support services for oil and gas field development. Depending on a project's needs, various configurations of data collection and processing equipment must be installed on vessels – in this case, for surface and underwater positioning. Access to the data of this equipment is through RS-232 and 485 ports. This equipment typically requires the installation of hundreds of feet of cabling to collect and transfer data around the vessel. This is expensive to route to all the need locations, especially on a ship and cabling is inflexible to the changing communication needs and the mobility of the equipment.

• The Solution

Wireless communications were chosen to provide connectivity of the data collection and processing equipment. It was also decided to take advantage of the existing Ethernet WiFi network already installed on the ship greatly reducing installation cost and time. The B&B ESR414W Ethernet serial server provides 4 serial ports with RS-232, 422 and 485 connectivity giving it the flexibility to connect to the needed equipment no matter what serial port existed. The WiFi connectivity was quickly and easily set up and communicating to the existing WiFi network on board in no time. The wireless communication gave the added benefit of flexibility, as the equipment could be set up anywhere and still be easily connected to the network.

• Why B&B Electronics?

- The multi-interface capability of RS-232, 422 and 485 provide the flexibility to work with various data collection equipment
- The WiFi (802.11) connectivity allows the customer to use its existing wireless network to get up and running quickly and without the added cost of cabling
- The strong security protocols protect their data signals and the network from unwanted intrusion

• The Product

Vlinx™ Model ESR414W – 4 Port WiFi Serial to Ethernet Serial Server
- RS-232, 422 and 485 on each port
- 802.11 b/g Ethernet WiFi
- WEP/WPA/WPA2 Security and TKIP/AES Encryption
- Data rates: Upto 921.6 Kbps
- Protocols: TCP, UDP, IP, ARP, ICMP, HTTP, HTTPS, Telnet, SSH, DHCP, SMTP, DDNS, SNTP, SMTP, UDP Multicast
- Communication Modes: VCOM< Straight IP, Paired, TCP Server, TCP Client, UDP
- Operating Systems: Windows 2000, 2003 Server, XP, Vista

Model ESR414W

B&B electronics MANUFACTURING COMPANY

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