CAN Newsletter Online

Converts to multiple protocols

The MGate 5118 device by Moxa converts J1939 messages to several other protocols such as Modbus-TCP, Profinet, and EthernetIP. A conversion to Modbus-RTU is also possible.

The multi-protocol converter feaures a MicroSD card for configuration back-up and event logging (Photo: Moxa)

A diesel generator might have a lot of J1939 Parameter Group Number (PGN) commands, which, depending on the diesel generator, the engineer may need to key in manually. This is a time-consuming operation prone to human error. The MGate 5118 series provides a command-learning mechanism. All you need to do is to set a J1939 command on the Autolearn button through a web console. The user interface will show you how many J1939 devices are connected to the CAN network. It also displays the J1939 input commands of each electronic control unit (ECU) and reduces human error by cutting back on the time spent manually keying in all the J1939 commands.

Field engineers are often unfamiliar with protocol gateways, which to them are essentially third-party devices. They tend to struggle to connect the gateway to diesel generator monitoring systems (DGMSs) or programmable logic control systems (PLCs) correctly, because they do not know enough about the communication protocols. The CAN and the Ethernet interfaces provide a 2-kV isolation. The product is specified for a temperature range from -40 °C to +75 °C.

The launched gateway series has a built-in traffic monitor function that monitors J1939-protocol traffic, allowing users to monitor the status of connected CAN devices, including error count, packet count, and bus-offline. The traffic monitor function can also be used to troubleshoot ECUs. This diagnostics tool helps users check ECU settings and indicates the availability of CAN devices by reading the J1939 network address. In addition, the gateway has a built-in Live List function two monitor two or more J1939-supported devices connected to the CAN network. This function shows the PGNs and addresses of packets transmitted from each device, giving users the ability to gauge the loading of the CAN network.

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