

GATEWAY

J1939 protocol converter

The J1939 Gateway from Monico (USA) is a plug-and-play data concentrator and protocol converter. It converts any standard or proprietary PGN into about 80 protocols over four usable ports, including both Serial and Ethernet.



Operating temperature of the product is 0 °C to +50 °C (Photo: Monico)

THE STANDARDIZED PROTOCOL J1939 operates on CAN networks. It is used extensively by industrial engines because it is capable of high-speed communication and is very fault tolerant. According to Monico, their J1939 Gateway is the first J1939 protocol converter to be both pre-configured and simple to modify.

Most J1939 protocol converters on the market fall into two distinct categories. One category of converters is very easy to use; pre-configured, but with very limited in functionality. The second is capable of converting any standard PGN, but is very difficult to program because users must have detailed knowledge of the protocol specifications.

The company says, the gateway can convert any standard or proprietary PGN into about 80 protocols over four usable ports including both Serial and Ethernet. With pre-configured versions for Modbus, [Bacnet](#), [Allen Bradley SLC](#), [Allen Bradley Control Logix](#), and Siemens PLC's, users can find a version to meet their needs. The product comes with a built-in USB user interface which shows all available parameters on a specific installation. Additionally it features an automatic engine detection and configuration. Each gateway is pre-configured for the data mapping of common data parameters, and set up is plug-and-play for any qualified technician with basic computer skills.

J1939 and CAN protocol converter

As Monico's work in the industrial marketplace has become more in-depth, they have become proficient with SAE J1939 and their acts as both a J1939 protocol converter and CAN protocol converter.

The J1939 card used in Monico gateways has the CAN network built into it along with the ability to communicate over the J1939 protocol. This makes it compatible to pull information from any equipment using this protocol. However, for the communicated data to be usable, it also needs to be converted into the protocol users are using in their overall monitoring system. This is where the company's gateway becomes invaluable; it pulls the J1939 data in through its built-in J1939 card, translates that data and outputs it in the protocol users need for communication throughout their system.

Compatible engines and controls are: Caterpillar EMCP3 and 4 Series Gensets, Detroit Diesel, Perkins 1300 EDI, Cummins, John Deere, and Deutz-EMR. All J1939 gateways accommodate the following optional input/output modules which allow users to input bearing temperatures, winding temperatures, fuel level, and digital inputs from ancillary equipment. The analog digital outputs allow for remote start/stop on generators and provide analog signals to other control equipment.

- Eight digital inputs and six digital outputs
- Eight thermocouple inputs-any type
- Six RTD Input—100 ohm platinum
- Eight analog voltage inputs—0 V to 10 V
- Eight analog current inputs—0 mA to 20 mA
- Four analog outputs—voltage or current