

# How can I tell if an engine or engine network requires a Maretron Gateway such as the J2K100 or a Network Bridge?

Generally, marine engine CAN bus networks have one of two popular types of protocols:

- J1939
- NMEA 2000

Most outboards offered since about 2006 support NMEA 2000 natively. Maretron always recommends first contacting the engine manufacturer to determine which protocols it supports, but it can be difficult to obtain this information. Maretron offers the following rules of thumb so one can navigate through good and bad information to reach the ultimate answer of displaying engine data.

1. If the engine uses diesel fuel and is manufactured by an American company, the odds are favorable that J1939 is available for conversion.

- Using the J2K100 article <https://www.maretron.com/wp-content/phpkbv95/article.php?id=556> helps integrate engine data with many different configurations.

2. If the engine uses gasoline as a fuel source, the odds are very good J1939 is available for conversion.

- Use the J2K100 to connect the engine to the NMEA 2000 network.

3. If the engine is an outboard motor bearing the mark Yamaha Commandlink, Honda, Evinrude, or Suzuki.

- Refer to the NMEA 2000 certified products list at [https://www.nmea.org/content/nmea\\_standards/certified\\_produ.asp](https://www.nmea.org/content/nmea_standards/certified_produ.asp) to verify that the engine is NMEA 2000 certified for direct connection. to the NMEA 2000 network.

4. If the engine is part of an existing engine manufacturer's factory network complemented with gauges.

- Connect a J2K100 and view the J1939 source address list using N2KAnalyzer or a DSM150/DSM250 display to view J1939 source addresses. If an entry appears on the J1939 source address list, then the engine is transmitting J1939 data.

5. If the engine is part of an data network consisting of displays, throttles, and listed on the NMEA 2000 certified product list.

- Use the USB100 and N2KAnalyzer to scan the network to identify what nodes are outputting engine data.
- Use the NBE100 it integrate the engine's network and the NMEA2000 network.

Note: It is extremely important to have the ability to examine both a J1939 network and an NMEA 2000 network for engine data. Most cases involving single or multiple engines or networks require this crucial step. Generic interfacing by "plug and play" without first determining the presence of J1939 data is unsuccessful on 90% of the existing systems.

Online URL:

<https://www.maretron.com/wp-content/phpkbv96/article.php?id=605>