

What does NMEA2000[®] CERTIFIED mean?

NMEA 2000[®] Certified means that the product has been tested to meet specific critical safety criteria and to correctly implement network management and messaging. A product is not certified until NMEA verifies the test results. Certification involves a suite of more than 100 tests that a product must pass, including but not limited to;

- Priority Messaging, so the highest priority message always gets through
- Auto Addressing, plug and unplug products without network interference
- Product Information, understanding of products on the network
- EMI and Noise Immunity Requirements,
- Electrical Isolation, assures that products do not disrupt the network

Why is certification important? It provides the dealer and end user a level of assurance that NMEA 2000 Certified products will all integrate (behave) together on an NMEA 2000 network. NMEA 2000 Certified products are listed on the NMEA website.

NMEA does not test for data. That means we do not test whether or not product ABC will actually see data from product XYZ. The testing verifies that they will work together, what they will actually transmit or receive in terms of data is up to the manufacturers.

NMEA 2000 messages are called Parameter Groups. Parameter Groups are listed on the NMEA website along with a Parameter Group Number (PGN) used to identify it on the backbone. Beginning in January 2010, manufacturers will be required to publish the Parameter Groups supported by each product in their product documentation and on their websites.



NMEA 2000 is THE OPEN Industry Standard; it is not a proprietary system. Look for this logo:

What does NMEA2000 compatible or compliant mean?

It means the product has not been tested and probably does not meet the stringent SAFETY requirements designed into the NMEA 2000 specification. Without the testing and verification, there is no guarantee that the products will work in harmony and be safe.

NMEA 2000 is based on the CAN-Bus protocol originally designed in 1986 for the automotive industry. CAN stands for Controller Area Network. While CAN-Bus devices may be “compatible”, “designed to”, “work with” or is “compliant” to the NMEA 2000 standard does not mean that you would want any of these products to be connected to the same network that controls your engines or relying on the navigational data. These have not been tested and verified.

“NMEA 2000 Approved” cables and connectors

There are a number of cables and connectors in the marketplace that are NMEA 2000 knock-offs. Supported by the NMEA, the Marine Electronics Industry spent a good time researching and developing a strong specification for NMEA 2000 cables and connectors. The cable and connector specification contains many requirements that were adopted from the rigorous factory robotic and automation industry. Cables and connectors have been developed to provide ROBUST and SAFE transport of NMEA 2000 messages and the connectors inter-connect for easy and simple “plug and play” of products.

The specification calls out for three main test areas; electrical, visual and mechanical, and interoperability.

The testing requirements include but are not limited to:

- impedance, propagation, attenuation
- shielding
- water and oil resistance
- fire protection.

Just as with the functional requirements addressed by product Certification, NMEA 2000 Approved Cables and Connectors are tested to meet specific critical safety criteria, and the NMEA has verified the test results. Would you have your house wired with inferior cable?

There is a list of NMEA 2000 Approved Cables and Connectors on the NMEA website.

Ask your NMEA dealer for Only NMEA2000 Certified products and NMEA 2000 Approved cables and connectors to ensure the highest level of reliability, interconnection, forward compatibility, and SAFETY!