CAN Newsletter Online

MARINE

Wireless CAN bridge replaces CAN cables

Kvaser has introduced the configuration-free Kvaser Air Bridge Light HS M12, a wireless CAN bridge with dust and water-resistant M12 connectors. It replaces CAN cables in marine and other extreme environments.

The wireless CAN bridge achieves predictable CAN communication in situations where wired CAN connection is challenging (Source: Kvaser)

Comprising a preconfigured pair of wireless units with integrated antennas and rugged housings, the bridge exchanges raw CAN data between two networks when a wired CAN connection is challenging. Released originally with 9-pin D-SUB connectors, this variant meets the increasing demand from environmentally-challenged applications, such as those requiring an optical cable replacement or an alternative to CAN cables that experience high abrasion, explained the company.

The product facilitates the job of the system integrator in situations that make wired connection unsuitable or challenging, such as when two moving parts are connected by CAN. Employing a proprietary 2,4-GHz radio and frequency hopping mechanism, the bridge controls the data rate, radio packet format, output power, and pairing method to achieve predictable latencies without sacrificing stability or range. This configuration makes the product effective in infrastructure and control applications, where accurate message delivery times are essential. The transmission range is as much as 70 m, with a maximum data rate of 1 200 messages per second and a packet latency of 4,8 ms.

The bridge is the second model in Kvaser's Air Bridge product line. This model offers a 5-pin National Marine Electronics Association (NMEA) compatible CAN connector replacing the 9-pin D-SUB connector on the Kvaser Air Bridge Light HS. Please note that this product is not an NMEA 2000-certified product that complies with the NMEA's current test procedures. NMEA in this context refers simply to the type of CAN connector used. Improvements have been made to the firmware to further enhance the bridge's wireless performance, with increased interference immunity and enhanced coexistence mechanisms to increase the co-location capacity of Air Bridge pairs.

The product has achieved regulatory compliance and is optimized for use in the European Union (01141-0) and the United States (01148-9), explained the company. Both models share the same functionality yet have different radio transmission schemes to address regulatory differences.

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