OMC-IEM Iridium Edge modem

Application of the OMC-IEM in the OMC-7006 data buoy

Datasheet

OMC-IEM Iridium Edge™ Modem

This compact Iridium modem offers an integrated antenna and a digital serial output. It is easy to install and use. The housing is IP67 rated and can be used directly on data buoys or other exposed locations.

The integrated antenna avoids the signal losses normally introduced by an antenna cable with coaxial connectors. This assures an optimal communication channel, while only a non-critical cable (for power and RS232) is needed.

The modem is suitable for applications in OMC-70xx data buoys and other applications in combination with the OMC-048 data logger.

* Iridium Edge is a trademark of Iridium Satellite LLC and its affiliates

Features

- Compact module with integrated antenna
- IP67 housing
- RS232 AT Command Interface
- Short Burst Data (SBD) Transceiver
- Operating Temperature Range: -40 °C to +85 °C
- Compatible with OMC-048 data logger
- Compatible with OMC-Data-Online
- Easy mounting on OMC-70xx data buoys

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The Iridium Edge™ modem allows a data logger to transfer its data to a computer through the Iridium network of satellites. With over 60 satellites in orbit, the Iridium network provides excellent coverage of the whole earth, including the oceans and the polar regions.

The Iridium Edge modem sends data packets from a data logger to the nearest satellite. The satellite transfers the data to a ground station, possibly through the use of inter-satellite links. From the ground station, the data is sent to its destination by email. Dashboard software like our OMC-Data-Online can read the data from the mail messages and further process the data as desired.

A typical use of the Iridium modem, is on one of our OMC-70xx data buoys. The data logger in the buoy collects meteorological and hydrological data from the connected sensors and uses the modem to transfer this data to a computer anywhere on the internet. Using OMC-Data-Online, the data presented on a web-based dashboard.

To be able to use the modem, you need a subscription with an Iridium provider. This is similar to needing a subscription with a provider for your mobile phone. Data transfer by Iridium is more costly than by mobile phone, but the big advantage is that you can use it anywhere on earth, without depending on any infrastructure.

The OMC-IEM can simply be interfaced with the OMC-048 data logger.

Complementary products:
- OMC-IEM-C1; cable for connection to a data logger.
- OMC-048; data logger.
- OMC-Data-Online; web-based dashboard software.

Power
- Supply voltage: 9V to 32V
- Peak current during power-on: 0.5 A
- Peak current during normal operation: 0.3 A
- Idle current: 200 µA

Interface
- RS232 Rx and Tx, 19200Bd, 8N1
- Pigtail cable (25 cm) with M12 – 8 Pin Male connector

Environmental
- Temperature: -40 ... +85 °C.
- Humidity: 10 - 90%

Dimensions
- Width x depth x height: 123.2 x 78.4 x 30.3 mm.
- Weight: 205 g.
- Package dimensions: t.b.d.
- Package weight: t.b.d.

The OMC-IEM with its pigtail. Shown here mounted on a bracket.

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