OG2 AND OGi MODEMS

Satellite modems for OEM systems integrators

Our satellite modems deliver connectivity over the ORBCOMM and Inmarsat satellite networks and are designed for easy integration into M2M solutions.

Our suite of satellite modems includes the OG2-M and OG2-GPS modems, which deliver connectivity over the ORBCOMM VHF network, as well as the OGi modem, which enables communications over the Inmarsat L-band network. ORBCOMM's satellite modems are designed for easy integration into hardware solutions that enable asset tracking and monitoring applications within the marine, heavy equipment, transportation markets and more.

ORBCOMM's OG2 and OGi modems share the same electrical and application interfaces. This allows for seamless plug-and-play satellite connectivity over either network with no additional time or resources spent on development and integration.

Small form factor

With a footprint smaller than a credit card, ORBCOMM's modems can fit small, inconspicuous hardware solutions.

Feature-rich

The OG2 modem supports low power consumption for improved longetivity in battery-powered applications. The GPS version includes a built-in accelerometer and GPS. OG2 modems don't require a fixed line of sight with the satellites and are well-suited for use in mountainous terrain and dense urban areas.

For mission-critical applications that require low latency, the OGi modem delivers real-time data transmission with a latency of 15 seconds or less. OGi modems support larger messages, faster delivery speeds and global connectivity.

Get started

The ORBCOMM Developer Kit includes either the OG2 or OGi satellite modem, a modem evaluation board, a universal power supply, antennas, a USB to serial adapter as well as a Quick Start Guide and a software interface to help you get started. Additional modems can be purchased separately.

Small footprint and low profile

Wide-range single power input

Low power consumption

PCI Express Interface connector

Developer kit

Network interchangeable

Common data delivery interface

OG2 Modem specifications

Mechanical:
- 40mm × 70mm x 10.5mm
- Mini PCI Express: 52-pin edge connector, 0.8 mm pitch

Electrical usage:
- Input voltage: 2.8 VDC to 15 VDC
- Input current
  - *Transmit mode: 1.6 A*
  - *GPS on: 35 mA*
  - *Receive mode: 70 mA*
  - *Sleep mode, standby: 10 µA*
  - *Sleep mode, deep: 3 µA*

International regulatory compliance:
FCC: CFR 47, Part 25 and 15; CE: EN 301 721,
EN301 489-20, EN300 832; Industry Canada; ANATEL

Vibration:
- MIL-STD-810E, Tracked Vehicle and Aircraft
- EN 300 721 (IEC Pub. 68-2-36)
- SAE J1455, Cab Mounted & Transverse Axis

Radiated emissions:
- Applicable sections of EN 300 832 and EN 300 721

Environmental:
- Temperature: SAE J1455
  - *Operating: -40C to +85C*
  - *Storage: -50C to +125C*

Key features:
- Software: MQX v3.8 Real-Time Operating System
- Interfaces: 16b A/D (4), SD Card (1), CAN (1), GPIO (2-22), Serial (3), USB (1), SPI (2)
- Accelerometer: 3 axis, programmable (OG2-GPS)
- GPS: rapid TTF via ORBCOMM-provided ephemeris (OG2-GPS)

OGi Modem specifications

Mechanical:
- 40mm × 70mm x 10.5mm
- Mini PCI Express: 52-pin edge connector, 0.8 mm pitch

Electrical usage:
- Input voltage: 5.0 VDC to 15 VDC
- Input current:
  - *Transmit mode: 750 mA@12VDC*
  - *GPS on: ~ 70mA*
  - *Receive mode: ~ 80 mA@12VDC*

International regulatory compliance:
- FCC: CFR 47, Part 25 and Industry Canada - pending

Vibration:
- MIL-STD-810G, Tracked Vehicle and Aircraft
- SAE J1455, Cab Mounted & Transverse Axis

Environmental:
- Operating: -40C to +85C
- Storage: -40C to +85C

Key features:
- Software: MQX v4 Real-Time Operating System

LEARN MORE: Scan the QR code for additional information about our modems or visit www2.orbcomm.com/satellite-modems.

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