

FM 5000

Cellular-based telematics for driver safety and fleet management applications.

Enables fleet managers to improve driver safety, enhance productivity and ensure compliance.



ORBCOMM's FM 5000 monitors driver behavior and alerts drivers and managers when actions that may compromise safety are detected. With state-of-the-art coaching technology, the FM 5000 talks to drivers, telling them when they're speeding, driving aggressively or not wearing a seat belt, to help them develop better driving habits.

The FM 5000 connects directly to the cloud, allowing users to access data and controls from a mobile device in the field, or from an application in the back office. In addition to in-cab coaching, the solution sends data to the application, allowing managers to receive alerts and get reports to track driver performance, fleet status and productivity, as well as to ensure compliance with regulations. The FM 5000 is third-party certified for compliance with the Federal Motor Carrier Safety Administration and Transport Canada ELD rules.

Dual-mode connectivity

ORBCOMM's FM 5000 delivers connectivity over 4G LTE with 2G/3G backup. Optional satellite connectivity is available as a backup for uninterrupted communications and uncompromised driver safety where cellular is unavailable or compromised by extreme weather conditions or network congestion.

Comprehensive functionality

Loaded with rich features, the FM 5000 supports Wi-Fi connectivity as well as I/Os to facilitate integration with sensors, mobile applications and third-party systems such as driver ID, panic buttons, driver fatigue monitoring systems and more. A built-in GPS and accelerometer enable dot-on-the-map location tracking, movement-based reporting and accident detection and reconstruction.

Versatile

The FM 5000 solution supports OBDII, J1939 and J1708 connections and can be used with light to heavy-duty commercial vehicles.

Mobile app

The easy-to-use mobile app allows drivers to quickly access information on their in-cab device, including performance, compliance, weather and traffic. A comprehensive Hours of Service dashboard helps drivers track and log hours of service, change duty status, monitor miles driven and more. Drivers can also log vehicle inspections, capture fuel data, submit electronic forms and add other drivers to the vehicle.

Out-of-the box driver safety and fleet management

Comprehensive mobile and cloud-based application

Cellular communications with optional backup satellite

Light to heavy-duty vehicle support



Dimensions

- Including mounting bracket
- 14.5 x 11.3 x 3.1 cm
 - 5.69 x 4.93 x 1.23 inches

Weight

239 grams

Cellular Communication

LTE 4G, 3G/2G, EDGE, GSM, UMTS, HSPA, GPRS

Satellite Communication

(with optional satellite communication device)

- Satellite service: Two-way, Global, IsatData Pro
- From-mobile message: 6,400 bytes
- To-mobile message: 10,000 bytes
- Typical latency: <15 seconds, 100 bytes
- Elevation angle:
 - » +20° to +90° (remote antenna)
 - » -15° to +90° (low elevation antenna)
- Frequency:
 - » Rx: 1525.0 to 1559.0 MHz
 - » Tx: 1626.5 to 1660.5 MHz
- EIRP: <7.0 dBW

GPS/AGPS

72 channel multi GNSS constellation capable

Wi-Fi

802.11 b/g/n Wi-Fi hotspot mode

NFC

RFID ISO 15693, ISO 18000-3 support

External Interfaces

- 10 Inputs/outputs. Pre-configured I/Os: ignition, ignition detect, seatbelt, seatbelt cable detect, panic button, battery voltage detect, vehicle bus cable type detect
- 7 UARTS RS232. Pre-configured for satellite modem fuel sensor and trailer tracker
- 2 USB connections (USB 2.0)
- Accelerometer

Vehicle Interfaces

- CAN: 2 channels supporting SAE J1939, ISO15765 high, medium, and single-wire CAN protocols
- SAE J1708: 1 channel

- Supported vehicle connections:
 - » OBDII (J1962)
 - » Volvo J1939 16-pin connection (purple)
 - » J1939 Type II connector (green)
 - » RP1226
 - » J-Bus Deutsch 9-pin and 6-pin connectors
 - » 3-wire install (power, ground and ignition)
 - » 2-wire install (power and ground)

Electrical

- 12-36-volt DC:
 - » Average amperage draw in normal state is 150–300mA
 - » Low power mode < 1 mA typical ~500 to 750 uA
- Super Cap
 - » Allows 20 seconds of full operation at full charge
- Device Power On:
 - » Determined by vibration/movement of the device or ignition detection
- Boot up time:
 - » Typical ~ 45 seconds from vibration/movement of the device or ignition detection
- Real-Time Clock
 - » Rechargeable Lithium-ion battery

Certification

- Regulatory: CE, FCC, ISED, RCM Mark
- Others: Inmarsat Type Approval (with optional satellite modem)

Environmental

- Operating temperature: -20°C to +85°C
- Storage temperature: -40°C to +85°C
- Thermal shock: SAE J1455 (Sec 4.1.3.2)
- Dust and water ingress: IP40
- Humidity: SAE J1455 (Sec 4.2.3, fig 4A)
- Vibration: SAE J1455 (Sec 4.10.4.2 fig 6 & fig 8); MIL-STD-810G (Sec 514.8)
- Shock: MIL-STD-810H (Sec 516.8)

Although we strive to ensure accuracy in all of our published specifications, actual field performance can vary depending on a variety of environmental, installation and usage factors, as well as third-party factors such as cellular providers. The specifications listed are approximations, and do not constitute binding statements or modify the terms and conditions of purchase or lease including, but not limited to, product operational limitations and warranties. All specifications are subject to change without notice. Please check www.orbcomm.com to ensure you have the latest version of these specifications.

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