

ORBCOMM ST 6000 M2M And IoT Satellite Terminal User Manual

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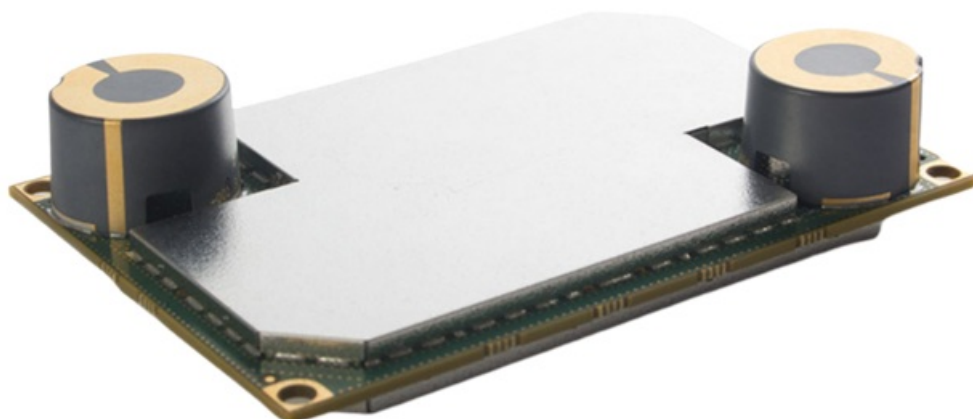


ST 6000 M2M And IoT Satellite Terminal User Manual

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ST 6000 M2M And IoT Satellite Terminal



ST 6000

The next generation unpackaged satellite terminal—more powerful, more versatile, more coverage.

Reliably track, monitor and control assets in some of the world's most isolated regions.

ORBCOMM's ST 6000 satellite terminal delivers complete visibility and control of industrial assets operating in remote areas. Designed with OEM customers in mind, the ST 6000 features a small footprint with integrated antennas and extensive tools to facilitate integration into larger systems. The ST 6000 can be embedded into a solution used to track mobile assets such as light-and heavy-duty commercial vehicles, railcars, fishing vessels, marine buoys, heavy equipment and more. And with two-way satellite connectivity, the ST 6000 is ideal for remotely monitoring and controlling fixed and portable assets used in SCADA applications such as those in the energy sector, where access may be restricted by geography, including pipelines, flow meters, pumps, generators and tanks.

Fully programmable Comprehensive integration resources for quick deployment Two-way satellite communications Versatile satellite terminal for OEMs

Easy integration

ORBCOMM makes it easy to bring IoT solutions to market. The fully programmable ST 6000 includes comprehensive resources to facilitate integration into a wide range of custom solutions, including development, testing and production environments, documentation, code samples, device-level configurable applications and free technical support.

Global satellite connectivity

The ST 6000 delivers reliable global communications over the Insatiate Pro satellite service for uninterrupted visibility of operations and access to business critical field data in even some of the world's most remote locations. And because of its two-way connectivity, users can remotely control field equipment.



Comprehensive feature set

ORBCOMM's next generation ST 6000 leverages the latest technology advancements to offer enhanced functionality at great value. The integrated antennas feature exceptional low elevation angle performance, allowing one device to support both terrestrial and maritime applications. The unpackaged terminal also features a built-in accelerometer, expanded memory capacity, and enhanced support for global navigation systems—GPS, Glonass and Galileo.

Satellite communication

- Satellite service: two-way, Global, Insatiate Pro or OGx
- Maximum message size:
 - » Isat Data Pro: From-mobile 6.4 kB, to-mobile 10 kB
 - » OGx: From-mobile 1 MB, to-mobile 1 MB
- Typical latency: <15 sec, 100 bytes
- Elevation angle: 0° to +90°
- Frequencies:
 - » IsatData Pro: Rx 1525.0 to 1559.0 MHz;
Tx 1626.5 to 1660.5 MHz
 - » OGx: Rx 1525.0 to 1559.0 MHz;
Tx 1626.5 to 1660.5 MHz

- EIRP: <7.0 dBW

Certification

- Regulatory
 - » ST 6000: CE (R&TTE, RoHS 2, RED), FCC, IC, Anatol
 - » ST 6001: CE., FCC, IC, Anatol
 - » ST 6002: CE. Pending: FCC, IC, Anatol
- Others: Inmarsat Type Approval

Electrical

- Input voltage: VAUX: 3.5VDC (Min) to 6VDC (Max),
VIN: 5.8VDC $\pm 3\%$
- Power consumption @ 5.8V and 25C
(Typical Average):
- IDP Receive: 125 mA;
- GPS/Glonass/Badious Receive: 41 mA;
- Transmit: 1.1 A;
- Sleep: <150 μ A

Dimensions

- 6.9 x 10.1 x 2.1 cm

External interfaces

- Inputs/outputs: 4 analog or digital in/out
- Serial: console, auxiliary, and RS485 Ports – all 3.3V TTL

Environmental

- Operating temperature: -40°C to +85°C
- Vibration: SAE J1455 (Sec 4.9.4.2 fig 6-8); MIL-STD-810G (Sec 14.6)
- Shock: MIL-STD-810G (Sec 516.6)
- Altitude: SAEJ1455 (Sec 4.9.3)
- UV Exposure: 1334 hr exposure per ASTM G154

Programming

- Lua scripting engine with core services. SDK with GUI development tools available. Lua software application upgradable over the air (SOTA).
- Core services: Geofence, data logger, position reporting, accelerometer events, serial communications.
- Optional configurable device-level applications, including:

- Analytics app: Notifications and reports for driver behavior and vehicle/asset performance.
- AVL app: Facilitates integration of ST 6000 terminals into fleet management solutions.
- Garmin Dispatch app: Tracking, navigation, driver communication and dispatch using Garmin devices.
- Garmin FMI app: Fleet management support for two-way text messaging, stops, driver ID, hours of service, file-transfer, custom forms, and speeding alerts.

Accelerometer

- 3-axis accelerometer

Memory

- Lua Code RAM: 4MB
- Lua Code NVM: 8MB

Ordering codes/related products

ST6000-2XX ST 6000 terminal

ST6001-2XX ST 6001 terminal

ST6002-2XX ST 6002 terminal

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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VISIT: WWW.ORBCOMM.COM

ORBCOMM is a pioneer in IoT technology, empowering customers with insight to make data-driven decisions that help them optimize their operations, maximize profitability and build a more sustainable future. With 30 years of experience and the most comprehensive solution portfolio in the industry, ORBCOMM enables the management of over a million assets worldwide for a diverse customer base spanning transportation, supply chain, heavy equipment, maritime, natural resources and government. For more information about how ORBCOMM is driving the evolution of industry through the power of data, visit www.orbcomm.com.



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WHERE DATA DRIVES DECISIONS

Documents / Resources



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ST 6000 M2M And IoT Satellite Terminal, ST 6000, M2M And IoT Satellite Terminal, IoT Satellite Terminal, Satellite Terminal, Terminal

References

- [ORBCOMM Industrial IoT and M2M Tracking, Monitoring and Control Solutions | ORBCOMM](#)
- [User Manual](#)