# Pernika

# ST 6100

## Track, monitor and control in isolated regions.

The ST 6100 satellite terminal delivers complete visibility and control of industrial assets operating in remote areas. The versatile, environmentally sealed ST 6100 can be installed on mobile assets such as light-and heavy-duty commercial vehicles, railcars, fishing vessels, heavy equipment and more. With two-way satellite connectivity, it's ideal for remotely monitoring and controlling SCADA applications including pipelines, flow meters, pumps, generators and tanks.

### Easy integration
The fully programmable ST 6100 includes comprehensive resources to facilitate integration into a wide range of solutions. These include development, testing and production environments, documentation, code samples, device- level configurable applications and free technical support.

### Global satellite connectivity
The ST 6100 communicates over the OGx and IDP satellite services for uninterrupted visibility of operations and field data virtually anywhere.

### Comprehensive feature set
The ST 6100 offers enhanced functionality at great value. The internal antenna features exceptional low elevation angle performance, allowing one device to support both terrestrial and maritime applications. The ST 6100 also features a built-in accelerometer, expanded memory capacity and enhanced support for GPS, Glonass and Beidou.

### More Information

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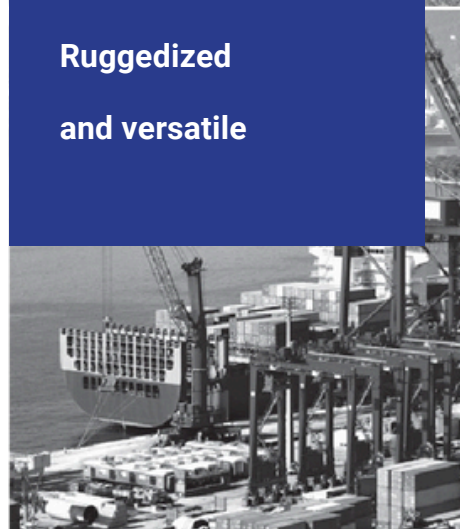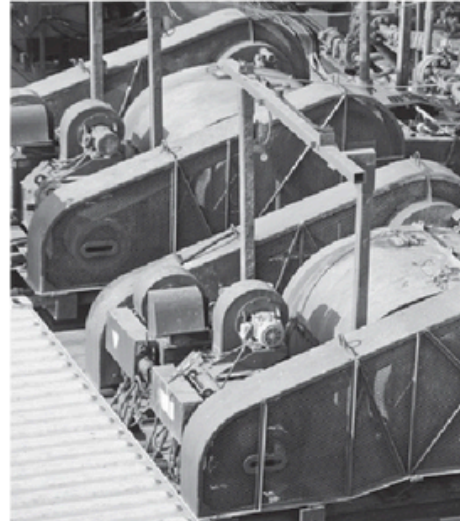
**Fully programmable**

**Comprehensive integration resources for quick deployment**

**Two-way satellite communications**

**Ruggedized and versatile**

# Specifications

## Satellite communication
- Satellite service: two-way, Global, OGx or IsatData Pro
- Maximum message size:
  - OGx: From-mobile 1 MB, to-mobile 1 MB
  - IsatData Pro: From-mobile 6.4 kB, to-mobile 10 kB
- Typical latency: <15 sec, 100 bytes
- Elevation angle: 0° to +90°
- Frequencies:
  - OGx: Rx 1525.0 to 1559.0 MHz; Tx 1626.5 to 1660.5 MHz
  - IsatData Pro: Rx 1525.0 to 1559.0 MHz; Tx 1626.5 to 1660.5 MHz
- EIRP: <7.0 dBW

## Dimensions
- 12.6cm x 12.6cm x 4.9 cm

## Accelerometer
- 3-axis accelerometer

## GPS/Glonass/Beidou/Galileo
- Acquisition time: Hot:1 second; Cold: 29/30/36/29 seconds
- Accuracy: 2.0m CEP
- Sensitivity:
  - Acquisition: -148 dBm
  - Tracking: -163 dBm

## Certification
- ST6100 Regulatory: CE, FCC, IC, Anatel, RCM Mark, IEC 60945, C1D2, SRRC, IFT, ICASA, FFA
- ST 6101 Regulatory: CE; Pending: FCC, IC, Anatel, RCM Mark, IEC 60945, C1D2, SRRC, IFT, ICASA, FFA
- Others: Inmarsat Type Approval, IP67

## Electrical
- Input voltage: 9 to 32V; Load dump protection: +150V; SAE J1455 (Sec. 4.13)
- Power consumption (typical average @12V DC, 22°C):
  - IDP Receive: 65 mA;
  - GPS/Glonass/Beidou Receive: 22 mA;
  - Transmit: 0.65 A;
  - Sleep: 100 µA

## External interfaces
- Inputs/outputs: 4 analog or digital in/out
- Serial: RS-232; RS-485

## Environmental
- Operating temperature: -40°C to +85°C
- Dust and water ingress: IP67
- Vibration: SAE J1455 (Sec 4.9.4.2 fig 6-8); MIL-STD-810G (Sec 514.6)
- Shock: MIL-STD-810G (Sec 516.6)

## Programming
- Lua scripting engine with core services. SDK with GUI development tools available. Lua software application and firmware upgradable over the air (SOTA, FOTA)
- Core services: Geofence, data logger, position reporting, accelerometer events, serial communications
- AES 256 encryption-capable
- Optional, configurable terminal apps:
  - *Analytics:* Notifications and reports for driver behaviour and vehicle/asset performance.
  - *Garmin FMI:* Support for text messaging, stops, driver ID, hours of service, file-transfer, custom forms, and speeding alerts.
  - *AVL:* Supports ST 6100 integration into fleet management solutions.
  - *Garmin Dispatch app:* Tracking, navigation, driver communication and dispatch using Garmin devices.
  - *Sensors:* Generates reports, alarms and histograms from connected sensors and devices.
  - *Modbus:* Enables data processing and alarms from Modbus device data.
    - *Vessel Monitoring System:* Location tracking, status monitoring and behavior monitoring.

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

## Options
- Side or bottom connector variants

## Order codes
- **ST6100-SXX** ST 6100 Terminal, Side Connector
- **ST6100-BXX** ST 6100 Terminal, Bottom Connector
- **ST6100-BXXC** ST 6100 Terminal, Bottom Connector, C1D2
- **ST6101-SXX** ST 6101 Terminal, Side Connector
- **ST6101-BXX** ST 6101 Terminal, Bottom Connector
- **ST100968-001** ST 6100 Development Kit
- **ST100030-001** Mating Cable Connector Kit with Solder Cups
- **ST301005-001** ST 6100 Blunt cut cable, 5m
- **ST101192-001** ST 6100 Starter Kit
- **ST101193-001** ST 6100 Field cable