



OS-500 NextG/Satellite Series

Satellite/Cellular Communications Terminal



Orbit Satellite Vehicle Tracking Solution



Satellite-cellular terminal for tracking vehicles, vessels and more

OS-500 series is the first dual satellite-cellular communications terminal that supports the two-way IsatData Pro satellite data service to manage mobile assets travelling in and out of remote areas.

Fleet managers can benefit from cost savings and guaranteed communication when tracking and communicating with vehicles, vessels and more by using cellular coverage in urban centres and satellite in distant regions.

Fully customizable and environmentally sealed, IsatData Pro terminals are specifically designed to provide visibility and communications with people and equipment even in the world's harshest environments. IsatData Pro offers enhanced reliability and the ability to deliver up to 37 times more data in seconds – more than other satellite-based machine-to-machine (M2M) services in the market.

With Usat's competitive hardware and airtime pricing packages, businesses can accurately budget communication costs without roaming charges, and equip fleet and asset management groups regardless of location.

SAMPLE APPLICATIONS

- **Transport Vehicles:** Gain complete visibility of vehicles moving in/out of cellular coverage, for complete tracking, text messaging, e-forms and vehicle/cargo monitoring.
- **Vessels:** Leverage lower cost cellular for near-shore communications, and satellite for guaranteed/back-up offshore communications.
- **Oil & Gas Vehicles & Fixed Equipment:** Track utility vehicles travelling in/out of remote areas to ensure timely delivery of goods and services.
- **Mining:** Track vehicle fleets travelling to/from remote mine sites, protect valuable heavy equipment and keep drivers safe with advanced behaviour monitoring features.
- **SCADA Monitoring & Control:** Use the IDP-780 terminal as a back-up for oil & gas fixed equipment.

Five Reasons To Choose OS-500 Series

1. TWO-WAY COMMUNICATION

Using the global Inmarsat constellation, with lifetime beyond 2023, IsatData Pro provides messaging capabilities to/from terminal.

2. BACK-UP BATTERY

The OS-500 series features a backup battery option to send GPS information when no vehicle power is available.

3. SAVE ON AIRTIME

Efficiently switch between cellular coverage in urban areas and satellite communication in remote areas for significant cost savings.

4. FEATURE RICH

Programming capabilities, panic button, text messaging, accelerometer and sensor ports for fuel, temperature and more allow for a robust tracking and monitoring solution.

5. VALUABLE ADD-ONS

Device-level applications for extracting valuable J1939/CAN bus information and using off-the-shelf Garmin personal navigation devices for dispatch, text messaging and much more.



SATELLITE COMMUNICATION

- **Satellite Service:** Two-way, Global, IsatData Pro
- **From-Mobile Message:** 6,400 bytes
- **To-Mobile Message:** 10,000 bytes
- **Typical Latency:** <15 sec, 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

CELLULAR COMMUNICATION (GPRS)

- **Frequency:** 850/900/1800/1900 MHz
- **SIM:** 3.3V/1.8V SIM
- **Security:** GPRS jamming detection

GPS

- **Acquisition Time:** Hot: 1s; Cold: 27s
- **Accuracy:** 2.5m CEP-Horizontal
- **Sensitivity:** Acquisition: -147 dBm; Tracking: -159 dBm
- **Security:** GPS signal jamming detection

CERTIFICATION

- **Regulatory:** CE (R&TTE, RoHS 2), FCC, IC,
- **Others:** Inmarsat Type Approval, IP67

EXTERNAL INTERFACES

- **Inputs/Outputs:** 4 x Config. Analog/Digital Inputs; 7 x Digital Inputs (active low); 1 X Ignition Detect Input; 5 x Digital Outputs (sink-ground)
- **Serial:** 2 x RS-232; 1 x RS-485; 1-CAN bus
- **Accelerometer:** 3 Axis

ELECTRICAL

- **Input Voltage:** 9 to 48V; Load dump protection: +150V; SAE J1455 (Sec. 4.13);
- **Battery backup:** >2.5 hrs. operating time @ 1 GPS report/min

CHARGING

- **Current:** 1.33 A (at 12V)

MASS

- **With batteries:** 1.3 Kg (with integrated antenna)

ENVIRONMENTAL

- **Operating Temperature:** Transceiver: -25°C to +85°C; Satellite antenna: -40°C to +85°C;
- **Dust & Water Ingress:** Transceiver: IP54 (optional cable shroud); Satellite Antenna: IP67

PROGRAMMING

Lua scripting engine with core services. SDK with GUI development tools available. Lua software application upgradable over the air (SOTA).

- **Geofencing:** 128 Polygons
- **Data Logger:** 50,000 Position Reports; Auto-upload in cellular coverage
- **Optional, Configurable Device-Level Applications:** Analytics Agent - Notifications and reports for driver behaviour and vehicle/asset performance.

AVL Agent - Facilitates integration of IDP terminals into fleet management solutions.

Garmin Dispatch Agent - Tracking, navigation, driver communication and dispatch using Garmin devices.

J1939 Agent - Vehicle CAN bus connectivity for monitoring driver behaviour and vehicle/asset performance.

