

Stellar DS300

Two-way satellite communicator

The DS300 is a two-way satellite communicator for use with the ORBCOMM Low-Earth Orbit (LEO) satellite network. The DS300 is a complete hardware solution for companies using a wide variety of applications to track, monitor and communicate with their fixed and mobile assets around the globe.

The DS300 features a robust satellite modem, integrated user-programmable application processor, built-in 16 channel GPS receiver, several I/O options, power conditioning and battery charging circuitry packaged in a rugged, automotive-grade enclosure. Its built-in application development environment reduces time to market while Stellar's exclusive StelComm utility simplifies set-up and configuration. Globally competitive pricing and world-class design and performance, make the DS300 an exceptional product for the transportation, heavy equipment, marine, aeronautical as well as many other markets.



CHARACTERISTICS

- **General** Dimension: 206 x 86 x 38 mm (maximum)
Configuration: Sealed Case
- **Transmit Power** 10 Watts EIRP
- **Transmit Frequency** 148 - 150.05 MHz
- **Receive Frequency** 137 to 138 MHz
- **Dynamic Range** 40 dB minimum
- **Sensitivity** Minimum BER: E-5 @ -118 dBm
Typical BER: E-5 @ -120 dBm
- **Application Interfaces** Main Serial: RS232 (4-wire: TX, RX, CD, GND)
App RS232 Serial: (3-wire: TX, RX, GND)
App RS485 Serial: 4-wire or 2-wire
Power Out: Switchable Battery Voltage Output
Digital I/O: 4 in, 4 out; 6.8 mA max, 3V nominal
Analog Input: 4 @ 0-3 V, 10-bit A/D
- **Application Connector** Delphi Packard 100W Micro-Pack 36 Pin Connector
- **Power Requirements** 1A External Power: 9.0 to 30 VDC, current-limited to 1.3A
5A External Power(1): 9.0 to 30 VDC, current-limited to 5A
Transmit: 2.0 A max @ 12 VDC
Receive: 85 mA max @ 12 VDC (with Illuminating Indicators off)
Sleep: 50 uA nominal, 100 uA max @ 12 VDC
GPS: 22 mA nominal, 25 mA max @ 12 VDC
Transient Tolerance: 100 usec @ 100V
- **Environmental** Temperature: -40°C to +85°C (operating)
Shock & Vibration: SAE J1455
Pressure Wash: MIL 506.1
Radiated Emissions: EN 301 721
- **RF Connectors** GPS: FAKRA SMB C Code key (blue color), keyed, 50 Ω
VHF: FAKRA SMB D Code key (violet color), keyed, 50 Ω
- **Application Hosting** 128K user-written C code, 4K RAM, 4K EEPROM
- **GPS** GPS 16 Channel receiver < 10 meter accuracy
TTFF < 55 seconds with Almanac and Ephemeris



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