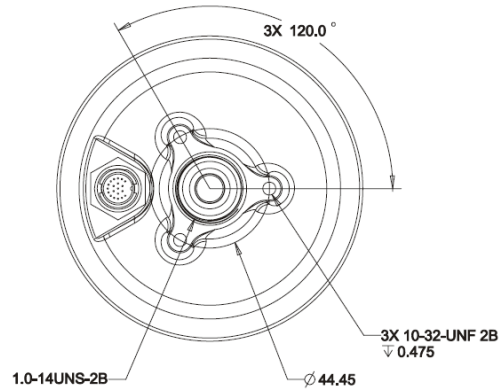


OmniSTAR 7300VBS™ DGPS Receiver



OmniSTAR 7300VBS

Introducing the OmniSTAR 7300VBS plug and play combined GPS/DGPS unit, including GPS/DGPS receiver and antenna in one compact, waterproof housing.

Designed for mobile use

OmniSTAR 7300VBS receiver is a high Performance (D)GPS receiver and antenna combined. The receiver is a compact and robust tool for navigation, data collection and data maintenance 'on the move'.

Compatibility

The OmniSTAR 7300VBS is designed to output sub-meter DGPS positions when using OmniSTAR Satellite data for either NMEA or binary data messages. This positional data interfaces with data collection software and equipment supplied by all leading manufacturers of mapping computers and data collection devices.

Demodulator

The 7300VBS can also work as demodulator generating VBS RTCM type 1 message for any other GPS receivers needing a DGPS input.

OmniSTAR DGPS Submetre service

OmniSTAR uses a network of reference stations to measure errors induced into the GPS signal by atmospheric, timing and orbital effects.

This data is then gathered at Network Control Centres, checked for integrity and reliability and then uplinked to a series of Geo-stationary satellites, which broadcast the data over their coverage area.

The 7300VBS receives and processes this correctional information from all available reference stations to provide the user with submetre positional information 24 hours a day, 7 days a week if required.

The 7300VBS unit is capable of operating at consistent submetre accuracy (1 Sigma 30 cm, 2 Sigma 80 cm) when subscribed to the OmniSTAR differential service.

Applications

- **Spraying**
- **Road mapping**
- **GIS mapping**



7300VBS Technical specifications

Signals

GPS: L1 14 Channels
OmniSTAR L-Band: 1525 MHz to 1559 MHz

Environmental

Operating Temp.: -40° to +75°C
Storage Temp.: -55° to +90°C
Waterproof: MIL-STD-810F 512.4 Procedure 1
Humidity: 95% non-condensing

Data inputs & outputs

Serial Ports: 2 RS-232 ports
300 – 230400 bps
RS-422 optional*
CAN-bus optional*

USB: 1 USB 1.1 port capable of 5 MBps
using USB to serial driver

Position: 5Hz (20Hz option)

1 Pulse per second: Special cable required

Output Messages: NMEA 3.01 format (ALM, GGA, GGARTK, GLL, GRS, GSA, GST, GSV, RMB, RMC, VTG, ZDA)
RTCM SC-104 RTCM 1&3 (VBS)
RTCM SC-104 version 3.0
RTCA DO-217

* Special cable required.

Connectors

Power/data: 18 pin connector
Com1, 2: DB 9 (male)
Virtual Com 1,2,3: USB connector

Power

Power Supply: +9 to +28 VDC
Power Consumption: 2.5 W typical

Physical Characteristics

Weight:	0.53 kg (excl. cable)
Display:	None
Size (diameter x h):	114.3 x 95.6 mm

7300VBS Technical specifications

Position Accuracy

VBS: 30 cm CEP¹ (50%)

OmniSTAR start time:

- First time: 30 min. (average)
- Subsequent: 1 min. (average)

Signal Reacquisition

VBS: 10 sec.
L1: 0.5 sec. (typical)

Dynamics

Velocity Accuracy: 3 cm/s RMS
Velocity: 180 km/h max
1800 km/h with AirSTAR license
Height: 18 km max
Vibration: 4 G (sustained tracking)

Standard Accessories

- 18-pin switchcraft to power, 2xRS232, 1xUSB cable
- 1 Inch to 5/8 Inch adapter
- Magnetic mount

Notes

1. Within OmniSTAR network at mid latitudes. Accuracy and reliability may be subject to anomalies such as multipath, obstructions, satellite geometry and atmospheric conditions. Always follow recommended practices.

Regulations

FCC Part15: Class B
EN55022: Class B
RoHS & WEEE Compliant.
CE Mark



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