

OmniSTAR

3500LR DGPS Receiver



OmniSTAR 3500LR combines the reception of high performance differential corrections with a compact, lightweight and robust design, ideally suited for backpack or Belt system applications.

The OmniSTAR 3500LR is a fully functional differential corrections receiver, designed to be used with an external GPS receiver. Its design is based on proven OmniSTAR OEM technology.

The 3500LR has an LED front panel and is controlled through an external toolkit application. The rear panel has two serial ports for RTCM output and Command/Raw Data.

Features

- Compact, light weight portable receiver
- Robust design with high quality components
- Minimal power requirements
- Real time status indicators
- Output RTCM 104
- Remote access facility (via satellite link)
- Compatible with most common antenna systems

OmniSTAR DGPS services

OmniSTAR transmits differential GPS data world wide using a global network of reference stations to measure errors in the GPS system and generate corrections. This reference data is gathered at a network control centre where it is checked for integrity and reliability and is up-linked to a series of geo-stationary satellites, which distribute the data worldwide. The OmniSTAR service is available by subscription.

The Network Control Centre also provides free of charge, 24-hour technical support to OmniSTAR users, should they require it.

VBS - Virtual Base Station

OmniSTAR's Virtual Base Station (VBS) Service is a unique worldwide high precision service with submetre accuracy throughout the coverage area (subject to the quality of the GPS receiver used).

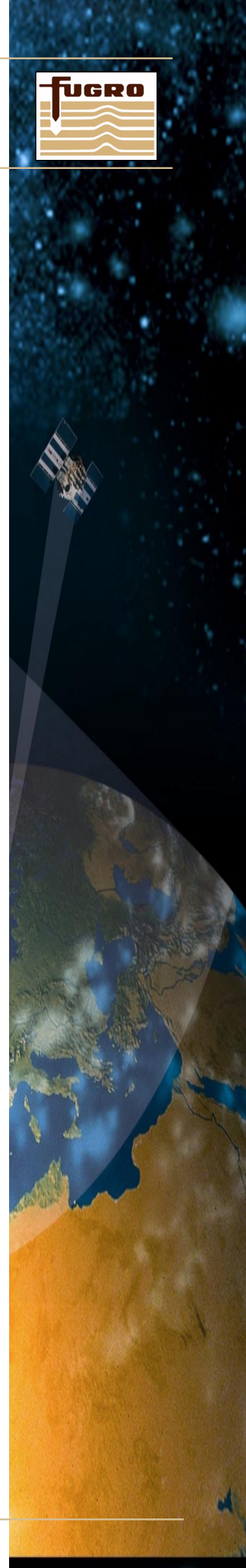
The high level of accuracy is made possible by processing all available reference data into a set of corrections, optimised for the users actual location. This provides the end-user with a consistent and high accuracy optimal solution over a large area.

OmniSTAR's differential corrections service

OmniSTAR differential corrections are highly reliable because they are not dependent on any single reference station. There are no position jumps due to switching from one reference station to another. All reference stations have dual data connections to their network control centre. The European service uses multiple up-links (primary and backup). The European continent is covered by two satellite services.

OmniSTAR Applications

- Airborne geophysics
- Mapping & boundary marking
- Precision Farming
- Aerial Applications
- Navigation
- Environmental Monitoring
- GIS data acquisition
- Defense applications
- Aviation
- Photogrammetry
- Surveying
- Coastal and inland dredging
- Auto docking of ships
- Crane guidance
- Satellite Tracking



Technical specifications 3500LR

Receive Frequency: 1525 – 1559MHz
 Uplink Selection: Automatic or Manual
 Symbol Rates: 1219, 2438, 4676bps
 Demodulation: Filtered Binary Shift Keying (F-PBSK)
 Sensitivity: -120dBm for <10 -3 BER

Environmental

Operating temp.: 0° to 50° C
 Non-Operating: -40° to 85° C
 Humidity: 95% non-condensing
 Vibration: 60Hz at 4G

Data Inputs and outputs

Serial ports: NMEA position in/RTCM corrections out
 Electrical interface: RS232
 Data rates: 300 - 38400 Baud fixed at 8, none, 1 *
 Data Outputs: VBS
 Message type: RTCM SC 104, Version 2.0

* Depends on configuration and receiver type

Power

Power Supply: 3W typical, 9-32VDC
 Power consumption: 350 mA @ 12V
 LNA Power: 5V, 60 mA

Connectors

RF input to receiver: TNC
 Power: 2 x DB9-F
 OmniSTAR standard 3 pin power (Switchcraft EN3C3M)

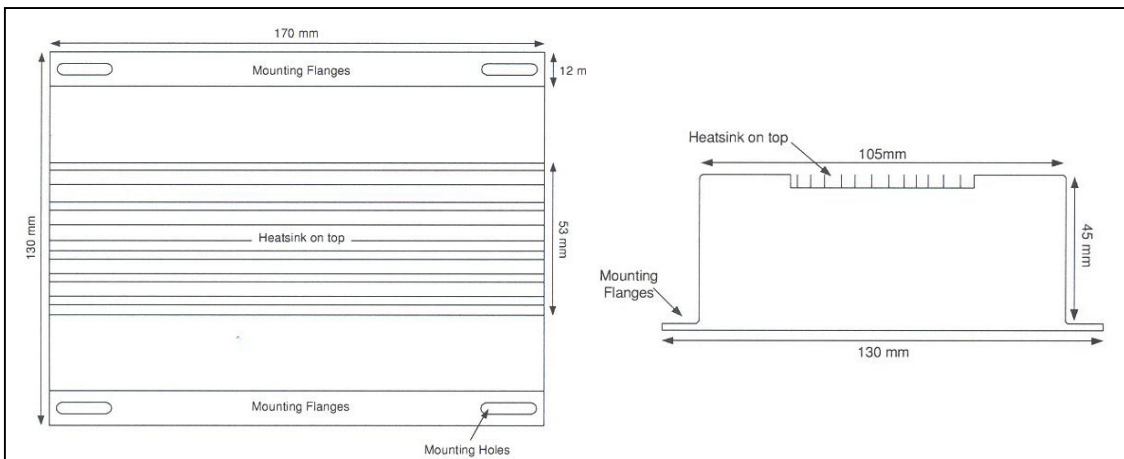
Antenna Options

Dynamic Range: 45dB
 Adjacent Channel rejection: >25dBc at typical receiver level of -115 dBm for 50KHz spacing; >60dBc for 1MHz spacing
 Antenna type: Dual band L1 GPS or DGPS (50-Ohm impedance, TNC connector)
 Supply Voltage: 5V, LNA current 60mA

Physical Characteristics

Housing: Low profile black aluminium case with mounting flanges
 Weight (g) (approx.): 600g
 Size (mm): 175 x 130 x 45 (L x W x H)
 Display: 2 x LED (Power, Signal Lock)
 Control: Power switch, Command Port

Mechanical Details



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OmniSTAR B.V. is a member of the Fugro Group, with offices throughout the world.

