

STARFIX.3000LR™



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The STARFIX Virtual Base Station (VBS) provides users requiring accurate worldwide positioning with an RTCM correction message optimized for their location.

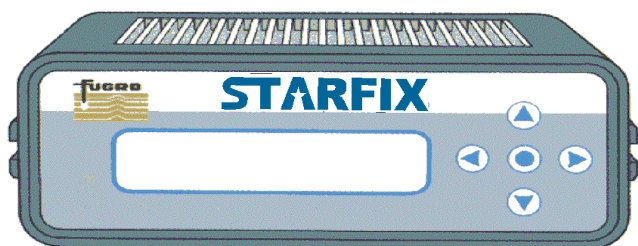
The VBS uses all reference stations in the vicinity of the receiver and computes an optimal set of RTCM corrections for the user's position in this way. The user is provided with corrections worldwide, without the need to manually select the closest reference station. It is protected from temporary failure of a reference station. The VBS also comes with an optional, integral GPS receiver providing the user with an accurate, differentially corrected position.

The STARFIX system

The Fugro STARFIX system provides differential GPS Corrections from multiple GPS reference stations via satellite communication systems.

The STARFIX system now covers most of the world with some 80 reference stations. Corrections are transmitted via all four inmarsat satellites plus numerous high powered spot beam satellites. Data from the worldwide STARFIX reference station network is available to users with an existing inmarsat terminal, a dedicated M-Dome, or a flat plate antenna. (See antennas under Technical Specifications) The STARFIX system is designed and operated to meet the exacting requirements of the offshore industry.

The accuracy of the STARFIX system is 1-2 m with 95% probability in the horizontal plane at short and medium ranges (approx. 1000 km); and 3 m with 95% probability at ranges exceeding 2000 km. User accuracy is dependent on the GPS receiver used.



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System Description

The STARFIX.3000LR DGPS receiver is the latest generation from Fugro. The satellite data receiver (demodulator) is combined with a processor and special firmware to improve the accuracy and reliability of the position solution. Various hardware configurations and options are available including a built-in GPS receiver, giving one of the most compact high performance positioning products available on the market.

Features

- Small, lightweight, ruggedly built unit
- Compatible with a variety of antenna systems
- Built-in GPS receiver (optional)
- Optimized DGPS correction messages (RTCM format) or corrected position output (user selected)
- Integrated key-pad and display
- Real-time performance indicators
- Key operating parameters may be accessed and edited via a simple menu system
- Remote access facility (via satellite link)
- Built-in messaging capability (receive only)

Technical Specifications

Physical Characteristics

Dimensions (approx.)	200 D x 150 W x 50 mm
Weight (approx.)	1.5 kg
Display	2 line backlit LCD display

Power/Environment

Power supply	10 Vdc to 32 Vdc
Power consumption	250-500 mA at 12 Vdc
Operating temp.	20° to 80°C
Humidity	95% non-condensing

Data Inputs and Outputs

Electrical interface	RS-232C via DB-9 connectors
Data rates	300-19200 baud
DGPS corrections	RTCM SC-104 Ver 2.1

Optional Internal GPS Receiver

Typical accuracy at Up to 1000 km	2-4 metres 95% with HDOP 3 Using a typical 8-channel Receiver
Data format:	NMEA-0183 Ver 2.00, include. \$GPGLL, GPGGA, GPVTG, GPGSA, GPGSV & GPZDA

Antennas

The STARFIX receiver can be connected with most types of Inmarsat Std-A, B or M Marine Earth Stations (MES) without affecting its normal operation functions.

Alternatively, in many geographic regions (see map) the STARFIX.3000LR will operate with a compact omni-directional helix antenna, which provides good gain at all elevations.

Approvals

Complies with European and USA EMI/EMC directives. For complete technical data on a specific model type, see the relevant product sheet.