Fugro SeaSTAR®

Fugro SeaSTAR 3200LR12 DGPS Receiver System

Technical Data

The SeaSTAR Series DGPS receivers are the product of years of research and development and represent the latest technology and one of the highest levels of integration yet be seen in Satellite DGPS receivers.

The SeaSTAR 3200LR12 is a full function receiver system inside a small format field case with LED indicators and push button power on/off, Antenna input, Power & Data inputs & outputs. This model also incorporates a 12 Channel GPS Engine.

Fugro transmits differential GPS correction data to user mobile receiver units via L-band satellites worldwide. The correction data is generated by a network of ground (reference) stations located worldwide and monitored around the clock by three regional control centres. The normal operating environments for the receivers are:

- Vehicle mounting for on/off road environments.
- Vessel mounting for precise navigation.
- Airborne operations for crop-dusting and aerial surveys.
- Precision farming installations.
- Backpack versions for geologists and surveyors.

The 3200LR12 boardset provides a powerful 12-channel GPS receiver and a satellite differential receiver on the same board assembly. When using the 3200LR12 with your choice of high quality antenna, both the GPS signal and the differential corrections are available to the boardset on a single antenna cable.

The high accuracy boardset provides sub-metre position accuracies. Differential speed accuracy is better than 0.1mph/0.16 kph. The positions are computed using robust differential processing techniques that allow position tracking to begin within seconds of power up.

Satellite differential capability

The L-band satellite differential receiver utilises subscription based correction signals available from multiple vendors. This receiver permits satellite correction to be uniformly accurate over the entire satellite coverage area, avoiding the degradation in accuracy associated with increasing distance from a fixed reference station.

The L-band receiver utilises a Trimble developed, sensitive design providing robust reception across the entire satellite coverage areas.

Powerful options

The SeaSTAR 3200LR12 is available 10hz update option. Everest multipath reduction is also an available option.

Subscription Service Options

VBS This is the Virtual Base Station Service where the user is provided with optimised RTCM corrections for the users current position.

Standard Features

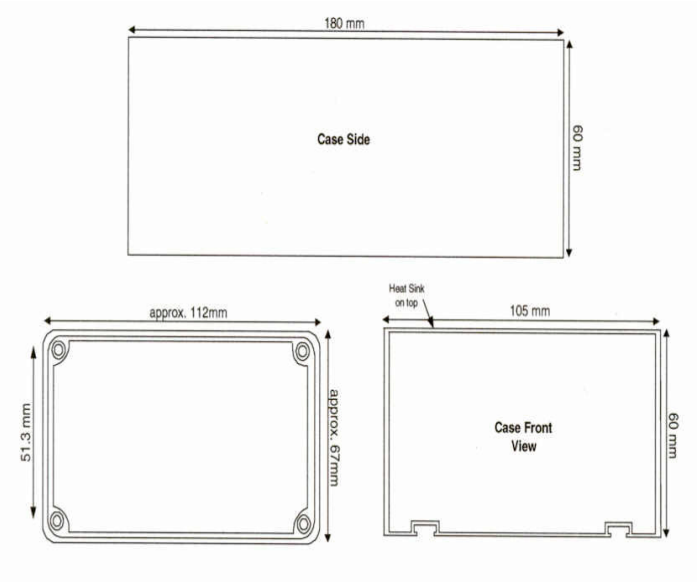
- Submetre differential GPS accuracy
- Satellite L-band differential capability
- 12 Channel, parallel tracking, L1 C/A code with carrier phase filtered measurements
- <2 second acquisition and re-acquisition time, typical
- Two programmable Rs-232 serial ports
- RTCM SC-104 input
- NMEA-0813 ouput
- TSIP Interface I/O
- J1939 network (CAN)

Inputs and Outputs

Serial Ports :	Command, Data
Electrical Interface :	RS-232-C
Data Rates :	4800, 9600, 19200, 38400
Message Rate :	Typically 1-2 seconds output
Plug Types :	DB-9 connectors
RF Input to Receiver :	TNC
Power Connector :	3 pin snaplock

Port A (DCE)		Port B (DCE)	
1	CANL_A	1	CANL_B
2	TXDA*	2	TXDB*
3	RXDA	3	RXDB*
4		4	PPS
5	GND*	5	GND*
6		6	EVENT
7	CTSA	7	CTSB/422B In
8	RTSA	8	RTSB/422B Out
9	CANH_A	9	CANH_B

Mechanical Details



Optional Features

- Everest multipath reduction.
- 10Hz update rate

Technical Specifications

General	12 parallel channels Tracks up to 12 satellites, L1 GPS L-band satellite differential correction receiver (requires subscription from independent provider) Dual channel digital MG beacon receiver
Update Rate	1Hz standard, 10Hz optional
Differential Accuracy	Less than 1 metre horizontal
RMS	Assumes at least 5 satellites,
PDOP	less than 4 and RTCM SC-104 standard format broadcast from a
Trimble 4000RS or equivalent	reference station
Time to first fix	<30 seconds, typical
NMEA messages	ALM, GGA*, GLL, GSA*, GSV, VTG*, ZDA* * Default Messages
Power	5 Watts, max @ 10 to 32VDC

Physical Characteristics

Weight (approx.)	0.75kg
Display	3 LED indicators
Control	Power switch and Command Port

Approvals

TBA

Rear Panel Layout

Further information