

## Reliable DGNSS for Dynamic Positioning (DP) Applications

Fugro SeaSTAR DP service provides a reliable source of Differential Global Navigation Satellite Systems (DGNSS) corrections for Dynamic Positioning (DP) applications all around the world. The corrections are broadcast on dual independent delivery channels in all Inmarsat ocean regions.

### Onboard equipment

Reception is either via a small dedicated omni-directional antenna or alternatively a connection is made to a compatible existing Inmarsat system. This connection has no impact on use for normal two-way communications, and does not affect equipment approvals.

Seastar DP is designed for Dynamic Positioning applications operating world-wide, users include:

- Offshore Support vessels
- Drilling Ships and Rigs
- Floating Production Units
- Tankers
- Service Vessels
- Cruise-Ships
- Offshore Loading



Photo: Navion Norvegia



Photo: Skandi Navica & Carla by Harald M. Valderhaug



Photo: Transocean no. 8 by Harald M. Valderhaug

Reception of DGNSS corrections is either via an L Band receiver/decoder, such as the SeaSTAR 3510LR, for data transfer to a separate GNSS positioning system, or direct to an integrated DGNSS receiver with integral GNSS (GPS/GLONASS) sensor.

A choice of services are provided, ranging from the SeaSTAR VBS metre level, GPS only, single frequency service to the SeaSTAR G2 decimetre level, integrated GPS/GLONASS, dual frequency service.

### System Features

- World-wide coverage, excluding polar regions, using a small omni-directional antenna or Inmarsat terminal.
- Highest levels of signal reliability to ensure continuous signal reception.
- Dual redundant services in all ocean regions.
- Metre level, sub-metre and decimetre level accuracy services.
- Global Navigation Satellite Systems (GNSS) capability using GPS and GLONASS
- SeaSTAR DP format with quality indicator (0-9) for DP operations.
- Compatible with Kongsberg Seatex DPS/DARPS systems and DSNP 203 receiver.
- Advanced receiver design will work with no user action required

## Fugro SeaSTAR Products and Services

Receivers	Fugro SeaSTAR Positioning Services					
	SeaSTAR VBS	SeaSTAR DGNSS	SeaSTAR HP	SeaSTAR XP	SeaSTAR SGG	SeaSTAR G2
9200-G2	X		X	X		X
3510LR	X	X	X	X		
DPS 112					X	
DPS 116	X					
DPS 132	X		X	X		
DPS 200	X	X				
DPS 232	X	X	X	X		X
DPS700	X	X	X	X		

### RECEIVERS:

- 9200-G2:** DGNSS receiver with built in GPS L1/ L2 sensor. Both code and phase based positioning, including display. GLONASS L1/L2 option.
- 3510LR:** No GPS sensor. This is a DGPS receiver only. Ability to output standard RTCM, iono and GLONASS corrections.
- DPS 112:** GPS and GLONASS L1/L2 sensor with built in DGNSS corrections receiver and user display. 4 x RTCM inputs. For use with SeaSTAR SGG service.
- DPS 116:** GPS L1 sensor, 4 RTCM inputs, with display and extended QC capabilities including graphs.
- DPS 132:** GPS L1/ L2 sensor, 4 RTCM inputs, with display and extended QC capabilities, including graphs. Both code and phase based positioning.
- DPS 200:** GPS and GLONASS L1 sensor, 4 RTCM inputs, with display and extended QC capabilities including graphs.
- DPS 232:** GPS and GLONASS L1/L2 sensor, 4 RTCM inputs, with display and extended QC capabilities including graphs.
- DPS 700:** Combination of DPS 132/232. DPS 700 also includes VHF and HF IALA Receivers.

### SERVICES:

- SeaSTAR VBS:** Metre level code based service based on GPS L1 frequency.
- SeaSTAR DGNSS:** Metre level code based service based on GPS and GLONASS L1 frequency
- SeaSTAR HP:** Decimetre level phase based service based on GPS L1 and L2 frequencies
- SeaSTAR XP:** Decimetre level phase based service, using orbit/clock data valid world wide, based on GPS L1 and L2 frequencies
- SeaSTAR SGG:** Integrated DGPS/DGLONASS, sub metre level, code based service, using orbit/clock data, based on GPS and GLONASS L1 and L2 frequencies.
- SeaSTAR G2:** Integrated DGPS/DGLONASS, decimetre level phase based service, using orbit/clock data valid world wide, based on GPS and GLONASS L1 and L2 frequencies

#### Further information

Complete technical information on a specific model type or peripheral hardware can be obtained from Fugro Seastar AS:



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