

StarTrack – Precise, Wireless Gunfloat and Tailbuoy Tracking System



The StarTrack fulfills the market requirements for a flexible and easily maintainable tracking system, utilizing wireless telemetry and high positioning accuracy

StarTrack System

The StarTrack system consists of up to 35 tracking units for gunfloats and tailbuoys and a vessel control unit. The system is designed to operate and survive under the extreme conditions typical for seismic operations: shocks, water submerging, extreme temperatures and icing.

Features

- Centimeter accuracy with GPS and GLONASS systems
- Precise relative baseline calculation with ambiguity fixing between the vessel unit and the tracking units
- Absolute positioning of each tracking unit with Best Position solution – weighted combination of Fugro’s SkyFix G2, Starfix G2, SkyFix XP and Starfix EPlus positioning solutions
- Radio telemetry with range up to 12km

Tracking Units for Gunfloats and Tailbuoys

- Integrated antenna with excellent GNSS tracking performance at low elevations
- Temperature, shock and power monitoring
- Integrated WiFi access point and a web interface for easy wireless maintenance
- Primary and redundant backup receiver

Vessel Control Unit

- System status, configuration and quality control through the web interface
- Telemetry link management
- Standard 2U high 19” rack-mount



StarTrack Tracking Unit



StarTrack Vessel Control Unit

StarTrack – Precise, Wireless Gunfloat and Tailbuoy Tracking System



Technical Specifications

Tracking Units for Gunfloats and Tailbuoys

Positioning Accuracy

3D relative: 3 cm, 1 sigma
3D absolute: 10 cm, 1 sigma

GNSS Hardware

Primary: NovAtel OEM628, L1/L2/L2C GPS, L1/L2
GLONASS
Secondary: Hemisphere L1 GPS Integrated antenna optimized for low elevation tracking

Communication

Satel M3TR1 radio modem
11 TDMA slots per sec per frequency
Update rate 0.5 or 2 Hz
Proprietary UHF antenna with performance similar to ½ whip
802.11 WiFi access point

Temperature, Humidity and Shock

Operational: -15 to +40 °C
Storage: -20 to +85 °C
Humidity up to 100%
IP 68 to 10m depth
Shock up to 50 g 10ms

Size and Weight

ø15cm, 88cm length, 8 kg

Power Input Requirements

Input voltage: 9-36VDC
Reverse polarity protection
Overcurrent protection
Power surge mitigation
Sleep-mode 3.75W
Receive mode 16.6W
Peak transmit mode 21.7W

Environmental

ROHS and IEC60945 CE compliant

StarTrack Vessel Control Unit

GNSS

- External Alison AD492/493 antenna
- Primary: NovAtel OEM628, L1/L2/L2C GPS, L1/L2
GLONASS, L-Band
- Secondary: Hemisphere L1 GPS

Communication

- Up to 8 Satel M3TR1 radio modems
- Maximum 4 simultaneous frequencies
- Omni and directional UHF antenna (simultaneous operation)
- RJ45 connector for Ethernet
- USB 2.0 type A
- Four configurable COM ports

Operational temperature: -15 to +50 °C

Storage temperature: -20 to +85 °C

Size: 2U high 19" rack-mount

Weight: 8 kg depending on configuration

Fugro Survey AS

Nygaardsviken 1, Laksevaag
Bergen, N-5165
Norway
Telephone : +47 55 34 94 00
E-mail : p.kjenner@fugro.no
www.starfix.com