



## GNSS RECEIVER OS-213



**Multi-antenna GNSS receiver  
with INS \***

### WEB-SURVEY

Work with any OS (iOS, Android, etc.)

### STEADY STREAM

2SIM GSM/UHF modem

### INERTIAL GNSS\*

GNSS+INS - 2min without satellites

### STRONG EVENT

No false events

**OS-213** is a two-antenna (three-antenna \*) GNSS receiver with an optional external inertial unit GKV-10 \*. Designed for high-precision determination of the position of an object in space (coordinates and course). Ideal for hydrography, unmanned vehicles and other applications requiring high-accuracy motion vector of the object, for example, automation of drilling rigs and excavators.

### SIGNAL TRACKING

- 574 channels:
- GPS: L1 C/A, L2C, L2P, L5
- BeiDou: B1, B2, B3
- GLONASS: L1 C/A, L1P, L2 C/A, L2P
- Galileo: E1, E5a, E5b
- SBAS: WASS, EGNOS, MSAS, GAGAN

### PERFORMANCE

- Cold start: <50 s
- Warm start: <45 s
- Hot start: <15 s
- RTK Initialization time: <10 s
- Signal reacquisition: <2 s
- Initialization reliability: >99.9%
- Velocity accuracy: 0.03 m/s
- Acceleration: 4 g
- Overload: 15 g
- Time accuracy: 20 ns

### DATA FORMAT

- Correction data I/O: RTCM 2.X, 3.X, CMR(GPS only), CMR + (GPS only)
- Position data output:
  - NMEA-0183
  - ComNav protocols
- Data output rate: 1 Hz, 2 Hz, 5 Hz, 10 Hz, 20 Hz\*

### POSITIONING

#### RTK:

Horizontal: 8 mm + 1 ppm  
Vertical: 15 mm + 1 ppm

**DGPS:** < 0.4 m 3D RMS

**Standalone:** < 1.5 m 3D RMS

**SBAS:** < 1 m 3D RMS

#### Post Processing:

Horizontal: 2.5 mm + 1 ppm  
Vertical: 5 mm + 1 ppm

### HEADING

- Azimuth: (0.2/R)°
  - Roll or Pitch: (0.4/R)°
- R-range between antennas

### COMMUNICATIONS

- 2 RS232 Lemo4 (f) baud rates up to 460800 bps
- 1 RS232 IMU to PC port\* Lemo4 (f) baud rates up to 4000000 bps
- 1 Pulse Per Second (PPS) output BNC (f)
  - GNSS-master TNC (f)
  - GNSS-rover TNC (f)
- 1 Event Marker input
- Built-in UHF modem \*
  - 410-470 MHz
  - 2W
  - TRIMTALK, TRANSEOT, TRIMMK3

- UHF antenna TNC (f)
- Build-in 2SIM GSM modem
- 2G/3G: 900/2100 MHz
- GSM1 antenna TNC (f)
- GSM2 antenna TNC (f)
- Bluetooth
- Wi-Fi 802.11 (APN, client)
- Ethernet RJ-45
- 1 RS232 Lemo4 (f) doubling of GSM/UHF output
- 1 DB9 IMU communication\*
- 12 LED indicators show the working status

### PHYSICAL

- Size (L × W × H): 165 mm × 163,9 mm × 90,1 mm
- Weight: 1840 g

### ENVIRONMENTAL

- Working temperature: -40°C to +70°C
- Storage temperature: -40°C to +85°C
- Humidity: up to 100% (condensation)
- Waterproof and dustproof: IP67, protected from temporary immersion to depth of 1 m
- Shock: designed to survive a 2 m drop onto concrete

### ELECTRICAL

- Input voltage: +9.0 V ~ +28.0 VDC
- Power consumption: up to 3 W
- Memory 8 GB (32 GB\*)

\* - optional