Multi-Sensor RTK/PPP Module

WITH ANAVS SENSOR FUSION FRAMEWORK

Multi-Sensor fusion on a single board for Autonomous Vehicles, Robots, UAVs and Vessels

Dual-Frequency & Multi-Constellation GNSS for fast convergence time

High rate solution output

Accurate position and attitude

Overcomes signal outages

Interfaces to GNSS, INS, Odometry, Camera, Lidar, LPS and Barometer data

Breakthrough price

Easy System Integration
**SENSOR FUSION PERFORMANCE**

**Accurate RTK Positioning** (*1σ*):
- Horizontal accuracy: 0.010 m + 1 ppm
- Vertical accuracy: 0.020 m + 1 ppm

**Accurate PPP Positioning** (*1σ*):
- Horizontal accuracy: 0.15 m + 1 ppm
- Vertical accuracy: 0.20 m + 1 ppm

**Accurate Attitude** (*1σ*):
- Accuracy: 0.25° (1m antenna spacing)

**Velocity Accuracy**: 0.03 m/s RMS
**Time-Stamp Accuracy**: 1 µs RMS
**Solution Output-Rate**: up to 120 Hz

**RTK Initialization** *:
- Initialization Time: < 10 sec

**PPP Initialization** *:
- Initialization Time: < 15 min

* Depends on Environment and used GNSS-Antenna

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**STANDARD* IMU FEATURES**

**Linear acceleration meas. range**: +/-16 g (configurable)
**Angular rate meas. range**: +/- 4000 dps (configurable)
**Linear acceleration sensitivity**: 0.061 mg/LSB with +/-2 g range
**Angular rate sensitivity**: 4.37 mdps/LSB bei +/- 125 dps range
**Angular random walk (T=25°C)**: 0.21 deg/√h
**Bias stability**: 3 degree/ hour (typical)

**Solution Output-Rate**: up to 120 Hz

* more powerful IMUs can be chosen.

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**PROCESSOR PERFORMANCE**

**CPU**: ARM 64Bit Quad-Core with 1.2 GHz
**RAM**: 1 Gbyte LPDDR2 RAM
**Flash**: 16 Gbyte
**OS**: Linux

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**ELECTRICAL & INTERFACES**

**Power Connector**: USB-C 5V or Terminal connector up to 24V
**Power Consumption**:
- Peak: 15 W (3A)
- Average: 6.5 W (1.3 A)
**Communication Interfaces**: Ethernet, WLAN, CAN, USB, LTE
**Output format**:
- Standardized: NMEA format
- Proprietary: ANavS binary format

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**ODOMETRY FEATURES**

**Performance**:
- Depends on resolution and quality of user-based wheel/steering measurements

**Input/Output**:
- Configurable with DBC-files or according to customer specification

**Communication Interfaces**:
- CAN, Ethernet, USB
PRINTED CASING
Dimension: 118 x 119 x 55 mm
Weight: 250 g
Operating Temperature: -25°C to +75°C
Display: No

INDUSTRIAL CASING
Dimension: 227 x 169 x 56 mm
Weight: 1200 g
Operating Temperature: -25°C to +75°C
Display: Yes