

Multi-Sensor RTK/PPP Module

WITH ANAVS SENSOR FUSION FRAMEWORK

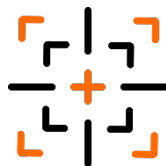
ALL-IN-VIEW GNSS Satellite tracking: multi-constellation, multi-frequency
for fast convergence time

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

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



**High rate
solution output**



**Accurate position
and attitude**



**Overcomes
signal outages**



**Breakthrough
price**



**Easy System
Integration**

SENSOR FUSION PERFORMANCE

Accurate RTK Positioning * (1σ):

Horizontal accuracy: 0.006 m + 1 ppm
Vertical accuracy: 0.010 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 μ s RMS

Solution Output-Rate: up to 120 Hz

RTK Initialization *:

Initialization Time: < 7 sec

PPP Initialization *:

Initialization Time: < 15 min

* Depends on Environment and used GNSS-Antenna

GNSS FEATURES

GNSS Constellations:

Galileo, GPS, Glonass,
Beidou, SBAS (Egnos, WAAS, GAGAN)

GNSS Const. concurrent:

All

GNSS-Bands:

GPS: L1C/A, L1C, L1PY, L2C, L2P, L5
GLO: L1CA, L2CA, L2P, L3
GAL: E1, E5a, E5b, E5 AltBoc, E6
BDS: B1I, B1C, B2a, B2I, B3
QZSS: L1C/A, L1C, L2C, L5, L6

Channels: 448

GNSS data rate: max 100 Hz

Jamming detection: Yes

Timepulse-Output: Yes

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/ \sqrt{h}

Bias stability:

3 degree/ hour (typical)

PROCESSOR PERFORMANCE

CPU: ARM 64Bit Quad-Core with 1.2 GHz

RAM: 1 Gbyte LPDDR2 RAM

Flash: 16 Gbyte

OS: Linux-OS

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

ODOMETRIE 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: -40°C to +85°C
Display: No



INDUSTRIAL CASING

Dimension: 227 x 169 x 56 mm
Weight: 1200 g
Operating Temperature: -40°C to +85°C
Display: Yes



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Solutions

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