Multi-Sensor RTK/PPP Module

**With ANavS Sensor Fusion Framework**

- **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

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

**Features**

- **High rate solution output**
- **Accurate position and attitude**
- **Overcomes signal outages**

**Benefits**

- **Breakthrough price**
- **Easy System Integration**
**SENSOR FUSION PERFORMANCE**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
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</table>
| **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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**GNSS FEATURES**

**GNSS Constellations:**
Galileo, GPS, Glonass, Beidou, SBAS

**GNSS Const. concurrent:**
All

**GNSS-Bands:**
GPS L1C/A L2C, GLO L1OF L2OF, GAL E1B/C E5b, BDS B1I B2I, QZSS L1C/A L2C

**Channels:**
184

**GNSS data rate:**
20 Hz

**Jamming detection:**
Yes

**Timepulse-Output:**
Yes

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**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)

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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-OS

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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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**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 |