The Trimble AP+Air GNSS-inertial system is comprised of next-generation compact, low-power hardware, featuring dual embedded survey-grade GNSS chipsets, an onboard inertial measurement unit (IMU), an external IMU, and the all-new Applanix IN-Fusion+ GNSS-aided inertial firmware.

**INTEGRATE ONCE, USE MANY**

The “Integrate once, use many” concept means a single hardware platform can be used to build a complete range of mapping payloads, from UAV to crewed aircraft, using the same design. This consistency saves costs associated with design and integration.

The Trimble AP+Air is configurable to support the Direct Georeferencing accuracy demands of everything from low-flying UAVs to high-altitude crewed platforms. Compatible with photogrammetric cameras, LiDAR, hyperspectral and multispectral cameras, Synthetic Aperture Radar and virtually any other type of airborne remote sensor, the Trimble AP+Air is a powerful, compact, and versatile solution. Easily integrated with any type of platform, AP+Air saves significant costs in all types of surveys.

**THE BEST SOLUTION JUST GOT BETTER**

The Trimble AP+Air OEM solution is fully supported by the industry-leading Applanix POSPac MMS post-processing software, featuring Post-Processed Trimble CenterPoint® RTX™ for centimeter position accuracy without base stations, making it the ultimate solution for integrators wishing to produce a highly efficient airborne mapping system. For LIDAR integrators, the Trimble AP+Air OEM is fully compatible with the POSPac MMS LiDAR QC Tools for UAV.

**Key Features**

- “Integrate once, use many” concept means a single platform can be used to build a complete range of mapping payloads, from UAV to crew operated aircraft, using the same design, which saves costs.
- Reduced SWaP
  - 54% smaller footprint, 64% lighter, 75% less power
- Next generation, survey-grade GNSS receiver
- Dual inertial support (onboard and external) for simple gimbal mount support
- Two antenna heading support
- Next generation IN-Fusion+ Aided-Inertial Firmware
- Completely configurable, from entry-level UAV applications, all the way up to high-accuracy solutions for high altitude LiDAR mapping
**DATASHEET**

**QZSS:** L1 C/A, L1S, L1C, L2C, L2E, L5
**GPS:** L1 C/A, L2C, L2E, L5

**Weight (kg)**
- QZSS: L1 C/A, L1S, L1C, L2C, L2E, L5
- GPS: L1 C/A, L2C, L2E, L5

**Size (L x W x H) mm**
- QZSS: L1 C/A, L1S, L1C, L2C, L2E, L5
- GPS: L1 C/A, L2C, L2E, L5
- GLONASS: L1 C/A, L2 C/A, L3
- SBAS: L1 C/A, L5

**LOGGING**
- Internal Logging
- Externally Logging

**PERFORMANCE SPECIFICATIONS**

**Airborne Application**
- SPS
- SBAS
- RTK
- Post-Processed

**Position (m)**
- 1.5 H
- 0.50 H
- 0.85 V
- 0.04 H
- 0.03 H
- 0.06 V
- 0.02 H
- 0.05 V

**Velocity (m/s)**
- 0.050
- 0.050
- 0.050
- 0.025
- 0.025

**Roll & Pitch (deg)**
- 0.040
- 0.035
- 0.030
- 0.025
- 0.025

**True Heading (deg)**
- 0.350
- 0.130
- 0.100
- 0.080
- 0.080

**PHYSICAL CHARACTERISTICS**

**Size**
- 100 x 60 x 21 mm

**Weight**
- 300 g

**Power**
- 7 W max, 8-34 V DC or 3.3 V DC

**Connectors**
- Samtec LSHM-340-030-L-DV-A-N

**Antenna Port**
- 2 x MMCX receptacle

**Output Voltage**
- Primary: 7.5 VDC
- Secondary: 5 VDC
- Maximum Current: 400 mA
- Minimum Input Signal Strength: 32 dB (>35 dB recommended)

**ENVIRONMENTAL CHARACTERISTICS**

**Temperature**
- -40°C to +75°C (Operational)
- -55°C to +85°C (Storage)

**GNSS Operating Limit**
- 5 m/ sec, 18,000 m

**ADDITIONAL ACCESSORIES**

**Evaluation Kit**
- Includes development board, power supply, and short antenna cables (sold separately)

**INERTIAL MEASUREMENT UNITS (IMUS)**

<table>
<thead>
<tr>
<th>Type</th>
<th>Range</th>
<th>Temp °C (Operational)</th>
<th>Power</th>
<th>Size (L x W x H) mm</th>
<th>Weight (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Onboard IMU-79</td>
<td>+/- 6 g</td>
<td>-40 to +75</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

**Specifications subject to change without notice.**

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