RTK GNSS MODULE

AeroNav 1

CENTIMETER-LEVEL PRECISION

- Multi-Constellation GNSS
- Fast RTK Initialization
- Advanced Anti-Jamming
- **Integrated RM3100 Compass**

10 cm	1507	10 Hz
RTK ACCURACY	CHANNELS	OUTPUT RATE

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APPLICATION ECOSYSTEM

WHERE IT FLIES

01 UAV & Commercial Drones
Autonomous flight & precise navigation

02 Light Shows & Swarms
Tight formation & swarm synchronisation

03 Agriculture Drones
Accurate spraying & field mapping

04 Autonomous Robotics
Reliable guidance for AGVs & robots

05 RTK Survey & Mapping
cm-level positioning for vehicles & AGVs

06 Aerospace & R&D
Research labs & future aviation

TECHNICAL HIGHLIGHTS

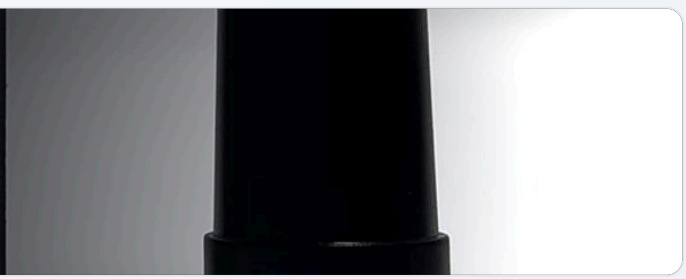
1507 CHANNELS	**10 cm** RTK + 1 PPM	**10 Hz** OUTPUT RATE
65 dBc ANTI-JAMMING	**≤ 5 s** RTK INIT	**≤ 20 ns** TIMING

WHY CHOOSE AERONAV 1

- ✓ High Precision Navigation
- ✓ Multi-Constellation Support
- ✓ Fast Position Acquisition
- ✓ Robust Anti-Jamming
- ✓ Drone & Robotics Optimized
- ✓ Industrial-Grade Reliability

SMA CONNECTOR

Compact, rugged form factor — built for integration.



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TECHNICAL SPECIFICATIONS

POSITIONING ACCURACY

Horizontal · Single Point	1.5 m (RMS)
Horizontal · RTK	1 cm + 1 ppm (RMS)
Vertical · Single Point	2.5 m (RMS)
Vertical · RTK	1.5 cm + 1 ppm (RMS)

DATA OUTPUT RATE

GNSS Observation	50 Hz
GNSS Position Results	10 Hz

TIME TO FIRST FIX

Cold Start	≤ 30 s
Hot Start	≤ 5 s
RTK Initialization	≤ 5 s
Re-acquisition Time	≤ 1 s

ACCURACY & LATENCY

Timing Accuracy	20 ns (RMS)
Velocity Accuracy	0.03 m/s (RMS)
RTK Solution Delay	≤ 50 ms

ANTI-INTERFERENCE

Model	Single-frequency · Multitone · Sweeping · Pulse · Narrowband
Interference-Signal Ratio	65 dBc

SIGNAL TRACKING

Channels (Tracking)	1507 Channels
L-Band	Supported
BDS	B1I, B2I, B3I, B1C, B2a, B2b (PPP)
GPS	L1 C/A, L1C, L2, L5
GLONASS	G1, G2
Galileo	E1, E5a, E5b, E6
QZSS	L1 C/A, L1C, L2, L5, L6 (CLAS)
NavIC (IRNSS)	L5
SBAS	L1 C/A

MECHANICAL & ELECTRICAL

Mechanical Size	45 × 45 × 12 mm
Mounting Hole	40 × 40 mm · 2 mm dia
Weight	10 g
Power Consumption	500 mW
Operating Temperature	–40°C ~ +85°C
Storage Temperature	–40°C ~ +105°C
Humidity	95% Non-condensing

INTEGRATED RM3100 COMPASS

A high-precision magnetometer built in for superior heading accuracy and stable, reliable navigation performance.

GET IN TOUCH

LET'S BUILD TOGETHER

Precision GNSS & navigation hardware, engineered in-house.
Reach our team to discuss integration, volume, or custom builds.

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