

GNSS

N-U1

The N-U1 is a compact, high-performance GPS module powered by the u-blox M9N. It delivers fast, reliable performance with a time-to-first-fix (TTFF) under 25 seconds and maintains a strong lock even in challenging environments.

The N-U1 offers professional-grade accuracy at an accessible hobby-level price and is PX4/ArduPilot compatible via UART/I2C. Just mount, connect, and you're ready to go.



Key Features

- Multi-GNSS: 1.5m accuracy, 4-system lock
- Integrated Sensors: Magnetometer + barometer
- Rugged Build: IP67, 4.7–5.2V, 200mA @ 5V
- Easy Integration: MAVLink-ready, anti-interference

Use Cases

- Drones/UAVs: Surveying, agriculture, search & rescue
- Robotics: Rovers, ROVs, waypoint navigation
- FPV/Cinematography: Smooth flight, precise footage
- R&D: Prototyping autonomous systems

Specifications

GNSS Receiver	Standard Model: U-blox NEO-M9N Module (non-RTK)
Number of Concurrent GNSS	Up to 4 GNSS, BeiDou, Galileo, GLONASS, GPS/QZSS
Frequency Band	GPS L1, Galileo E1, GLONASS L1, BeiDou B1, SBAS L1, QZSS L1
Barometer	DPS368 (default is NC)
Compass	IST8310 or RM3100
LEDs	Safety x1, GPS Fix x1, Status x1
Buzzer	Supported
Safety Switch	Supported
Supported Protocol	UBX, NMEA 4.10, RTCM 3.3
Accuracy	1.5 m CEP (with SBAS)
Nav. Update Rate	Up to 25 Hz (4 concurrent GNSS)
GNSS Augmentation System	• SBAS: EGNOS, GAGAN, MSAS and WAAS • QZSS: L1S
Default Baud Rate	115200
Input Voltage	4.7-5.2V
Connector Type	• JST-GH-10pin • JST-GH-6pin (optional)
Antenna	25 x 25 x 4 mm ceramic patch antenna
Antenna Gain	1.6dBi
Antenna LNA Gain	22dB (Min.)
Power Consumption	< 200mA @ 5V
Operating Temperature	-20~60 °C
Housing	With mounting screw hole
Dimension	Ø69.3 x 16.3 mm (Ø60.0 x 16 mm for PCBA only)
Weight	71.2 g
IP Rating	IP67
Cable Length	26 cm