

GNSS

N-UM9110 / N-UM9106

The N-UM9110 and N-UM9106 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 24 seconds and maintains a strong lock even in challenging environments.

The N-UM9110 and N-UM9106 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: 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: GPS, GLONASS, Galileo, and BeiDou
Frequency Band	GPS/QZSS L1, GLONASS L1, Galileo E1, BeiDou B1, SBAS L1
Barometer	DPS368 (Default is NC)
Compass	IST8310 or RM3100
LEDs	Safety x1, GNSS Fix x1, Flight Status x1
Buzzer	Supported
Safety Switch	Supported
Supported Protocol	UBX, NMEA 4.10, RTCM 3.3
Position Accuracy	1.5 m CEP (with SBAS)
Nav. Update Rate	Up to 25 Hz (Max.)
GNSS Augmentation System	<ul style="list-style-type: none">• SBAS: EGNOS, GAGAN, MSAS and WAAS• QZSS: L1S
Default Baud Rate	115200
Input Voltage	4.7-5.2V
Connector Type	<ul style="list-style-type: none">• JST-GH-10pin (N-UM9110)• JST-GH-6pin (N-UM9106)
Antenna	25 x 25 x 6 mm ceramic patch antenna
Antenna Gain	1.59dBi
Power Consumption	< 200mA @ 5V
Operating Temperature	-20~+80 °C
Dimension	Ø53.5 x 16.5 mm
Weight	46 g
IP Rating	IP55
Cable Length	26 cm