

GNSS Receiver WGM-303 Series

The WGM-303 Series is a high sensitive GNSS receiver with an internal antenna. It incorporates the 72-Channel High Performance u-blox M8 engine, supports message integrity protection, anti-jamming, and anti-spoofing, providing reliable positioning in difficult environmental, meet even the most stringent requirements in versatile industrial and consumer applications, such as UAVs, vehicles and assets tracking. The USB (PS / 2) connector enables the connection with a notebook, PC, car PC or other electronic devices.

- 72-Channel High Performance u-blox M8 engine
- -167 dBm sensitivity for reliable positioning in challenging Conditions
- Extremely fast TTFF (Time To First Fix) at low signal level
- Support NMEA0183, RTCM2.0 (input only) protocol



General

GNSS Receiver Type	72-channel u-blox M8 engine, GPS/QZSS L1 C / A, GLONASS L10F, BeiDou B1I Galileo E1B / C, SBAS L1 C / A: WAAS / EGNOS / MSAS / GAGAN
Sensitivity	Tracking & Navigation: -167 dBm, Reacquisition: -160 dBm, Hot Start: -157 dBm, Cold Start: -148 dBm
Antenna Type	Built in Patch Antenna
Protocol / Interface	NMEA0183, RTCM2.0(input only), USB / RS-232 / UART
Accuracy	2.0m CEP (GPS / SBAS / QZSS+GLONASS)
Update Rate	Single GNSS Up to 18 Hz, 2 Concurrent GNSS Up to 10 Hz

Acquisition Time

Cold Start	26 sec. (average)
Aided Starts	2 sec. (average)
Reacquisition	1 sec. (average)

Dynamic Conditions

Altitude	50,000 meters max
Velocity	500 meters / second max
Acceleration	Less than 4g

Power

Main Power Input	WGM-303U: 5V (From USB), WGM-303P: 5V, WGM-303PW: 5~36V
Power Consumption	Acquisition 50 mA @5V, Tracking 45 mA @5V

Physical Characteristics

Dimension (L x W x H)	40 x 37 x 11 mm
Cable Length	1.7 M
Operating Temperature	-40°C ~ +85°C