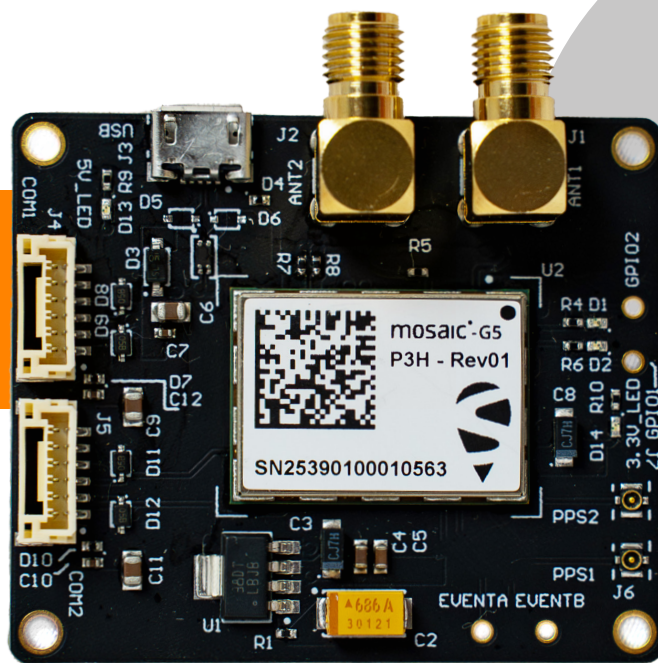


GPS ||| G5 P3H

KEY FEATURES

- Small size, advanced functionality
- All-in-view satellite tracking: multi-constellation, quad-band GNSS receiver
- Best-in-class RTK centimeter-level positioning
- Dual antenna heading with mosaic-G5 P3H
- Industry-leading ultra-low power consumption



GNSS technology	789 hardware channels for simultaneous track of all viable supported satellite signals: • GPS : L1C/A, L1C, L2C, L2PY, L5 • GLONASS : L1CA, L2CA, L2P, L3 CDMA • Beidou : B1I, B1C, B2a, B2I, B2b, B3I • Galileo : E1, E5a, E5b, E6 • QZSS : L1C/A, L1 C/B, L2C, L5, L6
Septentrio's patented GNSS+ technologies	AIM+ Advanced functionality with jamming and spoofing detection automatic interference mitigation APME+ a posteriori multi path estimator for code and phase multi path mitigation LOCK+ superior tracking robustness under heavy mechanical shocks or vibrations IONO+ advanced scintillation mitigation RAIM+ receiver autonomous integrity monitoring

PERFORMANCE

RTK PERFORMANCE

[open sky conditions, RMS levels, baseline <40km]

Horizontal Accuracy	0.6 + 0.5 ppm
Vertical Accuracy	1 cm + 1 ppm
Initialization time	7 s

OTHER POSITIONING MODE ACCURACY

[open sky conditions, RMS levels]

	Horizontal	Vertical
Standalone	1.2 m	1.9 m
DGNSS	0.4 m	0.7 m

VELOCITY ACCURACY

[open sky conditions, RMS Levels]

3 cm/s

GNSS Attitude Accuracy

Antenna Separation	Heading	Pitch/Roll
1m	0.15°	0.25°
5m	0.03°	0.05°

MAXIMUM UPDATE RATE

Position	20 Hz
Measurements only [P3 only]	20 HZ

LATENCY [99.9%]

<10 ms

TIME PRECISION

PPs resolution	1.4 ns
Event accuracy	< 3 ns

TIME TO FIRST FIX

Cold Start	< 35 s
Warm Start	< 10 s
Re-acquisition	1 s

TRACKING PERFORMANCE (C/NO THRESHOLD)

Tracking	20 dB-Hz
Acquisition	30 dB-Hz

FEATURES

PROTOCOLS

Septentrio Binary Format (SBF)
NMEA 0183, V2.3, v3.03, V4.0
RTCM v2.x, v3.x [MSM included] input

INTERFACES

2 UART (LVTTTL, up to 4 Mbps)
USB device (2.0, HS up to 480 Mbps)
2 GPIO user programmable
2 Event markers
2 Configurable PPS out

PHYSICAL AND ENVIRONMENTAL

PACKAGE

Size	42x50x2.4 mm / 1.65x1.97x0.09 in
Weight	18.18 g / 0.64 oz

ELECTRICAL

Antenna connection	SMA
Antenna pre amplification range	15–50 dB SA, 15–35 dB DA
Antenna bias voltage	3.0–5.5 V
	Build-in current limit (150 mA)
Input voltage	3.3 VDC
Power Consumption	0.44 W typ/0.57 Max
Dual Antenna	0.6 W typ/0.785 Max

ENVIRONMENTAL

Operating temp	–40 to 85° C , –40 to 185° F
Storage temp	–55 to 85° C , –67 to 185° F
Humidity	5% – 95% (non-condensing)
Vibration (chip only)	IEC 60721–3–5 Profile 5M3 MIL-STD-810H 514.8 – Category 4 MIL-STD-810H 516.8 – Procedure I
Certification	RoHS, WEEE, CE, FCC, ISED

