

GPS ||| MOSAIC
H

KEY FEATURES

- Dual antenna support for sub-degree heading & pitch or heading & roll angles
- All-in-view satellite tracking: multi-constellation, multi-frequency
- Best-in-class RTK performance
- OSNMA Support
- AIM+ industry-leading anti-jamming, anti-spoofing technology



GNSS technology	448 hardware channels for simultaneous track of all visible supported satellite signals: • GPS : L1, L2 • Galileo : E1, E5b • GLONASS : L1, L2 • Beidou : B1, B2, B3 • QZSS: L1C/A, L1C/B, L2 • SBAS: Egnos, WAAS, GAGAN, MSAS, SSDCM [L1]
Septentrio's patented GNSS+ technologies	AIM+ industry leading anti-jamming, anti-spoofing interference monitoring & mitigation technology IONO+ advanced scintillation mitigation APME+ a posteriori multipath estimator for code and phase multipath mitigation LOCK+ superior tracking robustness under heavy mechanical shocks or vibrations 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	
OTHER POSITIONING MODE ACCURACY [open sky conditions, RMS levels]		
Standalone SBAS DGNSS	Horizontal	Vertical
	1.2 m	1.9 m
	0.6 m	0.8 m
	0.4 m	0.7 m
VELOCITY ACCURACY [open sky conditions, ,RMS Levels]	3 cm/s	
MAXIMUM UPDATE RATE		
Position	100 Hz	
Measurements only	100 Hz	
LATENCY (99.9%)	<10 ms	
TIME PRECISION		
xPPS out (Incl. Software compensation of sawtooth effect)	5 ns	
Event Accuracy	< 20 ns	
TIME TO FIRST FIX		
Cold Start	< 45 s	
Warm Start	< 20 s	
Re-acquisition	1 s	
TRACKING PERFORMANCE [C/NO threshold]		
Tracking	20 dB-Hz	
Acquisition	33 dB-Hz	
FIRMWARE	Free product lifetime upgrades	

FEATURES	
PROTOCOLS	Septentrio Binary Format (SBF) NMEA 0183, V2.3, v3.03, V4.0 RINEX v2.x, v3.x RTCM v2.x, v3.x (MSM included) CMR v2.0 (out/in), CMR+ (input only)
INTERFACES	2 UART (LVTTTL, up to 4 Mbps) USB device (2.0, HS) PPS0 User configurable LEDs
PHYSICAL AND ENVIRONMENTAL	
PACKAGE	
Size	48x50x4 mm / 1.89x1.96x0.16 in
Weight	22.4 g / 0.79 oz
ELECTRICAL	
Antenna connection	SMA
Antenna pre amplification range	15–50 dB
Antenna bias voltage	3.0–5.5 V
	Build-in current limit (150 ma)
Input voltage	3.3 VDC
Power Consumption	0.6 W type 1.1 W 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)	MIL-STD-810G
Certification	RoHS, WEEE, CE, FCC

