

PENTAX

Positioning Systems Model

G2U

Precision Satellite Surveying
with Wireless Communications

GPS | GLONASS | BEIDOU | SBAS | GALILEO



- + Powerful GNSS engine
- + Compact, light-weighted and robust housing
- + High dust and water resistance (IP68)
- + Fast satellite acquisition for RTK

GSM-only special version

TI Asahi Co.,Ltd
Focusing on true performance

GNSS SPECIFICATIONS

Model		G2U
Channel Configuration		1408 channels
Receiver Board		Multi-Frequency GPS, GLONASS, Galileo, Beidou and QZSS
Signal Tracking	GPS	UM980
	GLONASS	L1 (L1C/A, L1C), L2 (L2P, L2C), L5
	BEIDOU	L1, L1C/A, L2 (L2 C/A, L2P), L3
	Galileo	B1 (B1I, B1C), B2 (B2I, B2a, B2b), B3 (B3I)
	QZSS	E1 (E1BC), E5a, E5b, E6, AltBOC*1
	SBAS	L1 C/A, L1C, L2C, L5, L6*1
	NavIC (IRNSS)	L1 C/A(WAAS, EGNOS, GAGAN, MSAS)
	PPP	L5, L1 *1
Position Accuracy		B2b,E6
	SBAS (WAAS, GAGAN etc.)	Horizontal / Vertical
	DGPS	0.5 m / 0.7 m (RMS)
RTK Performance	Horizontal Accuracy	0.4 m / 0.8 m (RMS)
	Vertical Accuracy	8 mm + 0.5 ppm*2 (RMS)
	Horizontal Accuracy (Network RTK)	15 mm + 0.5 ppm*2 (RMS)
	Vertical Accuracy (Network RTK)	8 mm + 1 ppm (RMS)
	Average Time to Work	15 mm + 1 ppm (RMS)
	Availability/Initialization Reliability	Typ. < 10 sec.
Static Performance	Horizontal Accuracy (Long time observation) *3	> 99.9%
	Vertical Accuracy (Long time observation) *3	3 mm + 0.1 ppm *3
	Horizontal Accuracy	3.5 mm + 0.4 ppm *3
	Vertical Accuracy	2.5 mm + 0.5 ppm
PPP (Precision Point Positioning)		5 mm + 0.5 ppm
Ports		Horizontal: 5 cm / Vertical: 10 cm
Cell Modem	Modem	Lemo 7-pin power supply
	Frequency Bands	USB, power supply
	Network Protocol	LTE FDD: B1/B3/B5/B8 LTE TDD: B38/B39/B40/B41
Power	Internal Battery	TD-SCDMA: B34/B39 CDMA: BC0 WCDMA: B1/B8
	Battery Running Time	GSM: 900/1800 MHz
		NTRIP, HTTP, FTP, TCP, UDP
Weight		9600 mAh / 3.7 V
Dimensions		Rover 16 hours
Environmental Specifications	Operating Temperature	Support power bank (type C) or battery pole (Lemo)
	Storage Temperature	≤ 0.75 kg
	Shock/Drop	Ø 147.9 mm x H 68 mm
Velocity Accuracy	Standalone	-20 °C to +60 °C
Data Output	Raw Data output frequency	-40 °C to +85 °C
	NMEA Data output frequency	Withstand 1.5 m pole drop
	Correction data Protocol	0.03 m/sec RMS
Time to First Fix	Cold Start	up to 5 Hz (20 Hz optional)
	Warm Start	up to 5 Hz (20 Hz optional)
	Reacquisition	RTCM 2.X, RTCM 3.X
WiFi		CMR, RTD
IMU	Electric Bubble	< 30 sec
	Tilt compensated	< 20 sec
	Tilt accuracy	< 5 sec
Bluetooth		802.11 a/b/g/n/ac
Memory		NA
Waterproofing		60°
Certification		< 2 cm (within 60°)
Standard Accessories		V2.1 + EDR / V4.0 dual mode
		32GB
		IP 68
		CE
		USB Type A/Type C Cable with USB 5 V/2 A Adapter
		5/8 inch screw adapter
		25 cm pole
		Measuring plate

*1 Hardware ready.

*2 Network RTK ppm values are referenced to the closest physical base station and depends on the network performances.

*3 Performance, Accuracy and Reliability are dependent upon various factors including satellite geometry, number of satellites, ionospheric conditions, atmospheric conditions and multipath.

PENTAX Positioning System is dedicated to providing customers with first class positioning system products and freedom of choice. We have carefully designed high-quality products to meet the needs of today's surveyors based on the experience of many years involved in instrument design and construction. Our engineers have been involved in Survey products since the beginning of the Satellite Surveying Era. We are committed to ease of use, a low cost of ownership and flexibility to accommodate different working environments. Our close partners are carefully chosen and are committed to these values as we are.

www.pentaxsurveying.com/en/

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ISO 9001: 2015 Certified



The CE marking assures that this product complies with the requirements of the EC directive for safety.

JSIMA
Japan Surveying Instruments Manufacturers' Association

Member symbol of the Japan Surveying Instruments Manufacturers' Association representing the high quality surveying products.

Designs and specifications are subject to change without notice, configuration is subject to changes per country, please contact your local dealer