

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

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		UM980
	GPS	L1 (L1C/A, L1C), L2 (L2P, L2C), L5
	GLONASS	L1, L1C/A, L2 (L2 C/A, L2P), L3
	BEIDOU	B1 (B1I, B1C), B2 (B2I, B2a, B2b), B3 (B3I)
	Galileo	E1 (E1BC), E5a, E5b, E6, AltBOC*1
	QZSS	L1 C/A, L1C, L2C, L5, L6*1
	SBAS	L1 C/A(WAAS, EGNOS, GAGAN, MSAS)
	NavIC (IRNSS)	L5, L1 *1
	PPP	B2b,E6
Position Accuracy		Horizontal / Vertical
	SBAS (WAAS, GAGAN etc.)	0.5 m / 0.7 m (RMS)
	DGPS	0.4 m / 0.8 m (RMS)
RTK Performance	Horizontal Accuracy	8 mm + 0.5 ppm*2 (RMS)
	Vertical Accuracy	15 mm + 0.5 ppm*2 (RMS)
	Horizontal Accuracy (Network RTK)	8 mm + 1 ppm (RMS)
	Vertical Accuracy (Network RTK)	15 mm + 1 ppm (RMS)
	Average Time to Work	Typ. < 10 sec.
	Availability/Initialization Reliability	> 99.9%
Static Performance	Horizontal Accuracy (Long time observation) *3	3 mm + 0.1 ppm *3
	Vertical Accuracy (Long time observation) *3	3.5 mm + 0.4 ppm *3
	Horizontal Accuracy	2.5 mm + 0.5 ppm
	Vertical Accuracy	5 mm + 0.5 ppm
PPP (Precision Point Positioning)		Horizontal: 5 cm / Vertical: 10 cm
Ports		Lemo 7-pin, external radio and power supply
Internal Radio Modem	Frequency	410 Mhz - 470 Mhz
	Output Power	0.5 W / 1 W / 1.5 W
Cell Modem	Modem	
	Frequency Bands	LTE FDD: B1/B3/B5/B8 LTE TDD: B38/B39/B40/B41 TD-SCDMA: B34/B39 CDMA: BC0 WCDMA: B1/B8 GSM: 900/1800 MHz
	Network Protocol	NTRIP, HTTP, FTP, TCP, UDP
Power	Internal Battery	9600 mAh / 3.7 V
	Battery Running Time	Rover 16 hours / Base (internal 1.5 Watt radio) 5 hours Support power bank (type C) or battery pole (Lemo)
Weight		≤ 0.75 kg
Dimensions		∅ 147.9 mm x H 68 mm
Environmental Specifications	Operating Temperature	-20 °C to +60 °C
	Storage Temperature	-40 °C to +85 °C
	Shock/Drop	Withstand 1.5 m pole drop
Velocity Accuracy	Standalone	0.03 m/sec RMS
Data Output	Raw Data output frequency	up to 5 Hz (20 Hz optional)
	NMEA Data output frequency	up to 5 Hz (20 Hz optional)
	Correction data Protocol	RTCM 2.X, RTCM 3.X
		CMR, RTD
Time to First Fix	Cold Start	< 30 sec
	Warm Start	< 20 sec
	Reacquisition	< 5 sec
WiFi		802.11 a/b/g/n/ac
IMU	Electric Bubble	NA
	Tilt compensated	60°
	Tilt accuracy	< 2 cm (within 60°)
Bluetooth		V2.1 + EDR / V4.0 dual mode
Memory		32GB
Waterproofing		IP 68
Certification		CE
Standard Accessories		USB Type A/Type C Cable with USB 5 V/2 A Adapter
		UFH Antenna
		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/

Your Official Pentax Dealer

TI Asahi Co., Ltd.
International Sales Department
 4-3-4 Ueno Iwatsuki-Ku, Saitama-Shi
 Saitama, 339-0073 Japan
 Tel.: +81-48-793-0118
 Fax: +81-48-793-0128
 E-mail: International@tiasahi.com



ISO 9001:2015 Certified



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



Japan Surveying Instruments Manufacturers' Association

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