

**PENTAX**

# Positioning Systems Model

# G2H

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		G2H
<b>Channel Configuration</b>		800 channels
		Multi-Frequency GPS, GLONASS, Beidou, Galileo, QZSS and Atlas
<b>Receiver Board</b>		P20
<b>Signal Tracking</b>	GPS	L1 (L1C/A, L1P, L1C*1), L2 (L2P, L2C), L5
	GLONASS	L1, L2 (L2C/A, L2P), L3*1
	BEIDOU	B1 (B1I, B1C), B2 (B2I, B2a, B2b), B3 (B3I), ACEBOC*1
	Galileo	E1 (E1BC), E5a, E5b, E5ab (AltBoc), E6
	QZSS	L1C/A, L1C, L2C, L5, LEX*1
	SBAS	L1, L5*1
	NavIC (IRNSS)	L5*1
	L-Band	Atlas (optional)
<b>Position Accuracy</b>		Horizontal / Vertical
	SBAS (WAAS, GAGAN etc.)	0.3 m / 0.5 m
	DGPS	0.3 m / 0.5 m
<b>RTK Performance</b>	Horizontal Accuracy	8 mm + 1 ppm
	Vertical Accuracy	15 mm + 1 ppm
	Horizontal Accuracy (Network RTK)	8 mm + 0.5 ppm
	Vertical Accuracy (Network RTK)	15 mm + 0.5 ppm
	Average Time to Work	Typ. < 10 sec.
	Availability/Initialization Reliability	> 99.9%
<b>Static Performance</b>	Horizontal Accuracy(Long time observation) *2	3 mm + 0.1 ppm
	Vertical Accuracy(Long time observation) *2	3.5 mm +0.4 ppm
	Horizontal Accuracy	3 mm + 0.5 ppm
	Vertical Accuracy	5 mm + 0.5 ppm
<b>PPP (Precision Point Positioning)</b>		With Atlas Basic (optional) 0.30 m
		With Atlas H30 (optional) 0.15 m
		With Atlas H10 (optional) 0.04 m
<b>Ports</b>		Lemo 7-pin, external radio and power supply
<b>Internal Radio Modem</b>	Frequency	410 Mhz - 470 Mhz
	Output Power	0.5 W / 1 W / 1.5 W
<b>Cell Modem</b>	Frequency Bands	LTE FDD: B1/B3/B5/B8 LTE TDD: B38/B39/B40/B41 TD-SCDMA: B34/B39 CDMA: BC0 WCDMA: B1/B8
	Network Protocol	GSM: 900/1800MHz NTRIP, HTTP, FTP, TCP, UDP
<b>Power</b>	Internal Battery	9600 mAh / 3.7 V
	Battery Running Time	Static mode: 10 hours / RTK Rover 9 hours / RTK Base 3 hours
<b>Weight</b>		≤ 0.75 kg
<b>Dimensions</b>		∅ 147.9 mm x H 68 mm
<b>Environmental Specifications</b>	Operating Temperature	-20 °C to +60 °C
	Storage Temperature	-40 °C to +85 °C
	Shock/Drop	Withstand 1.5 m pole drop
<b>Velocity Accuracy</b>	Standalone	0.03 m/sec RMS
<b>Data Output</b>	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
<b>Time to First Fix</b>	Cold Start	< 60 sec
	Warm Start	< 10 sec
<b>WiFi</b>		802.11 a/b/g/n/ac
<b>IMU</b>	Electric Bubble	NA
	Tilt compensated	60°
	Tilt accuracy	< 2 cm (within 60° Horizontally)
<b>Bluetooth</b>		V2.1 + EDR / V4.0 dual mode
<b>Memory</b>		32GB
<b>Waterproofing</b>		IP 68
<b>Certification</b>		CE
<b>Standard Accessories</b>		USB Power adapter, USB A to Type C
		UFH Antenna
		5/8 inch screw adapter
		25 cm pole Measuring plate

\*1 Hardware ready

\*2 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/](http://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

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