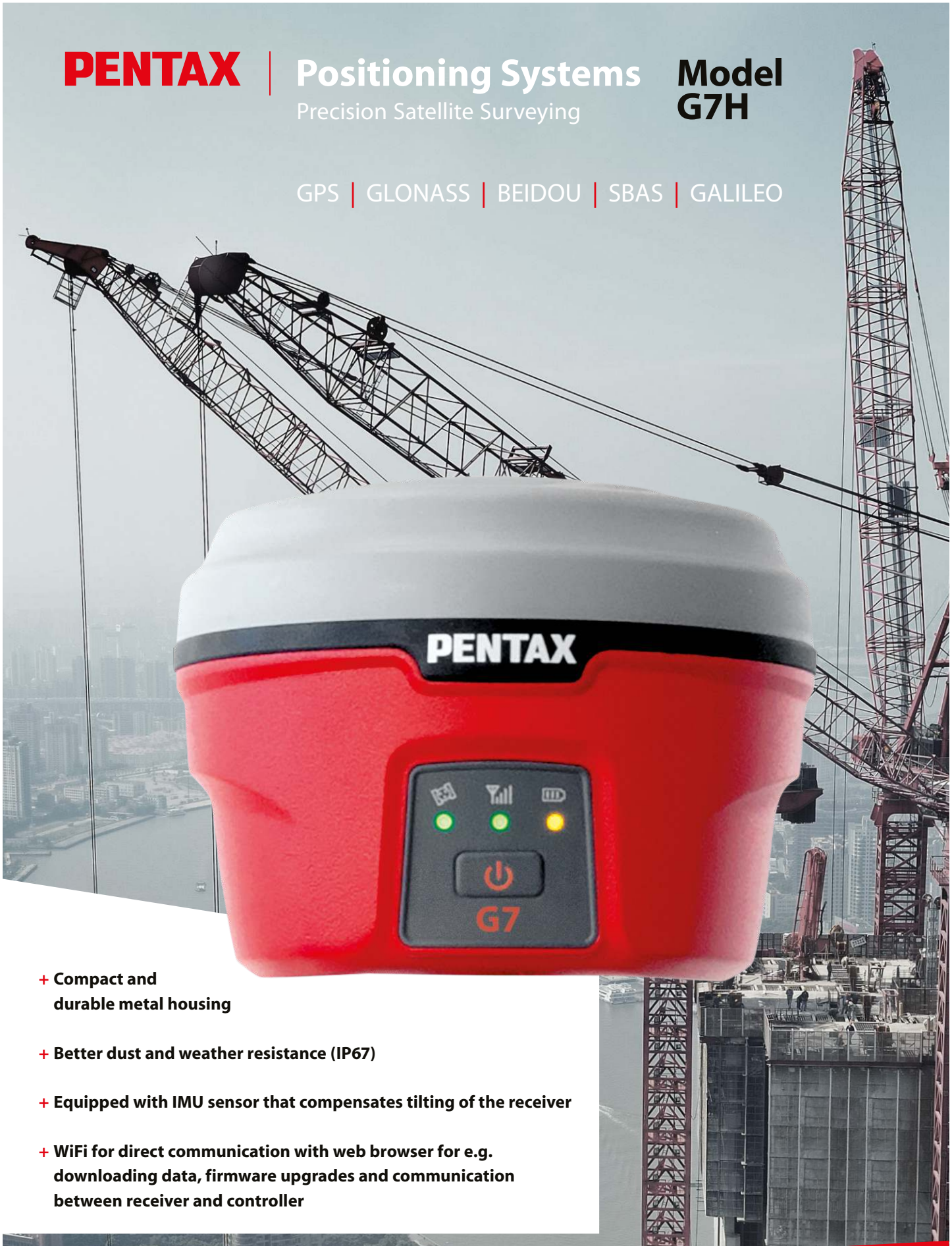
PENTAX | Positioning Systems

Precision Satellite Surveying

Model G7H

GPS | GLONASS | BEIDOU | SBAS | GALILEO



+ **Compact and durable metal housing**

+ **Better dust and weather resistance (IP67)**

+ **Equipped with IMU sensor that compensates tilting of the receiver**

+ **WiFi for direct communication with web browser for e.g. downloading data, firmware upgrades and communication between receiver and controller**

TI Asahi Co.,Ltd

Focusing on true performance

GNSS SPECIFICATIONS

Model		G7H
Channel Configuration		800 channels
		Multi-Frequency GPS, GLONASS
		Beidou, Galileo, QZSS and Atlas
Receiver Board		P20
Signal Tracking	GPS	L1 (L1C/A, L1P, L1C), L2 (L2P, L2C), L5
	GLONASS	L1, L2 (L2 C/A, L2P), L3
	BEIDOU	B1 (B1i, B1C), B2 (B2i, B2a, B2b), B3 (B3i), ACEBOC
	Galileo	E1 (E1BC), E5a, E5b, E5ab (AltBOC), E6
	QZSS	L1 C/A, L1C, L2C, L5, LEX
	SBAS	L1 C/A, L5
	NavIC (IRNSS) *1	L5
	L-Band	Atlas
Position Accuracy		Horizontal / Vertical
	SBAS (WAAS, GAGAN etc.)	0.3 m / 0.5 m
	DGPS	0.3 m / 0.5 m
RTK Performance	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%
Static Performance	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
PPP (Precision Point Positioning)		With Atlas Basic (Optional) 0.50 m
		With Atlas H30 (Optional) 0.25 m
		With Atlas H10 (Optional) 0.04m
Ports		Lemo 5-pin, external radio and power supply
		Lemo 7-pin, serial port and USB
Internal Radio Modem	Frequency	410 Mhz - 470 Mhz
	Output Power	0.5 W / 1 W
Cell Modem	Modem	Worldwide LTE
	Frequency Bands	UMTS/HSPA+/GSM/GPRS/EDGE
	Network Protocol	NTRIP, HTTP, FTP
Power	Internal Battery	3,350 mAh / 7.4 V x2
	Current Drain	0.35 A / 12 V
		1.25 A / 12 V max.
	Battery Running Time	Approx. 12 hr: Rover, 10 hr: Base with 2 Batteries hot swappable Hot swappable between internal batteries and external power source (Cable for external power source is optional)
Weight		1.1 kg with 2 batteries
Dimensions		Ø 130 mm x H 100 mm
Environmental Specifications	Operating Temperature	-30 °C to +65 °C
	Storage Temperature	-30 °C to +65 °C
	Shock/Drop	2 m
	Humidity	100% condensing
Velocity Accuracy	Standalone	0.007 m/sec, 0.020 m/sec
Data Output	Raw Data output frequency	up to 10 Hz (20 Hz optional)
	NMEA Data output frequency	up to 10 Hz (20 Hz optional)
	Correction data Protocol	RTCM Ver 2.1, 2.2, 2.3, 3.0, 3.1, 3.2
		CMR, CMR+, sCMRx
Time to First Fix	Cold Start	< 60 sec
	Warm Start	< 10 sec
	Reacquisition	< 1 sec
WiFi		IEEE 802.11b/g
IMU	Electric Bubble	Yes
	Tilt compensated	Tilt range up to 60°
	Tilt accuracy	10 mm + 0.4 mm/° (up to 30°)
	Reliability	Magnetism interference free
Bluetooth		Class 2
Memory		Internal 8 GB and MicroSD 8 GB
RoHS		Complied
Waterproofing		IP67
Certification		CE
Standard Accessories		2 x Li-Ion rechargeable battery pack
		Battery charger + AC Adapter
		5/8 inch screw adapter
		Lemo 7-pin communication cable
		CD (contains manual and data conversion software)

*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.

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

ISO 9001: 2015 Certified

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