

BM900 TECHNICAL FEATURES

RECEIVER	
Satellite signals tracked	GPS: L1 C/A, L1C, L2P, L2C, L5
	GLONASS: L1, L2, L3 ¹
	BEIDOU: B1I, B2I, B3I, B1C, B2a, B2b
	GALILEO: E1, E5a, E5b, E6
	QZSS: L1, L2, L5
	IRNSS: L5 ¹
	SBAS
PPP	B2b PPP ¹ , HAS ¹
Channels	1408
Position Rate	Up to 20Hz
Signal Reacquisition	< 1 s
RTK Signal Initialization ²	2 to 4 seconds
Hot Start	Typically < 15 s
Initialization Reliability	> 99.9 %
Internal Memory	8 GB
OS	Linux
Micro SD Card	Expansion slot up to 32 GB
Tilt sensor	IMU and E-bubble (optional) ³
POSITIONING ⁴	
STATIC GNSS SURVEYING	
High Precision Static Horizontal	2.5 mm + 0.1 ppm RMS
High Precision Static Vertical	3.5 mm + 0.4 ppm RMS
Static and Fast Static Horizontal	3 mm + 0.5 ppm RMS
Static and Fast Static Vertical	5 mm + 0.5 ppm RMS
CODE DIFFERENTIAL POSITIONING	
Accuracy	0.40 m RMS
SBAS POSITIONING ⁵	
Accuracy	0.60 m RMS
REAL TIME KINEMATIC (< 30 Km) – NETWORK RTK ⁶	
Fixed RTK Horizontal	5 mm + 0.5 ppm RMS
Fixed RTK Vertical	10 mm + 0.5 ppm RMS
INTEGRATED GNSS ANTENNA	
High accuracy multi-constellation antenna, zero phase center, with internal multipath suppressive board	
INTERNAL RADIO (optional) ³	
Type	Tx – Rx
Frequency Range	410 - 470 MHz 902.4 – 928 MHz ⁷
Channel Spacing	12.5 KHz / 25 KHz
Range	3-4 Km in urban environment Up to 10 Km with optimal conditions ²

1. Available with future firmware update.
2. Varies with the operating environment and with electromagnetic pollution.
3. Optional, can be activated via activation code.
4. Accuracy and reliability are generally subject to satellite geometry (DOPs), multipath, atmospheric conditions and obstructions. In static mode they are subject even to occupation times: the longer is the Baseline, the longer must be the occupation time.
5. Depends on SBAS system performance.
6. Network RTK precision depends on the network performances and are referenced to the closest physical base station.
7. On request when ordering.

Illustrations, descriptions and technical specifications are not binding and may change

INTERNAL MODEM	
Band	LTE FDD:
	B1/B2/B3/B4/B5/B7/B8/B12/
	B13/B18/B19/B20/B25/B26/B28
	LTE TDD: B38/B39/B40/B41
	UMTS: B1/B2/B4/B5/B6/B8/B19
	GSM: B2/B3/B5/B8
	Nano SIM card
COMMUNICATION	
I/O Connectors	7-pin Lemo and 5-pin Lemo interfaces.
	Multifunction cable with USB interface for PC connection
Bluetooth	2.1 + EDR, V5.0
Wi-Fi	802.11 b/g/n
Web UI	To upgrade the software, manage the status and settings, data download, etc. via smartphone, tablet or other electronic device with Wi-Fi capability
Reference outputs	RTCM2.3, RTCM3.0, RTCM3.2 MSM, CMR, CMR+, DGPS
Navigation outputs	NMEA 0183
POWER SUPPLY	
Battery	2 rechargeable and replaceable
	7.2 V – 3.400 mAh
	Intelligent lithium batteries
Voltage	9 to 28 V DC external power input with over-voltage protection (5-pin Lemo)
Working Time	Up to 12 hours (2 batteries hot swap)
Charge Time	Typically 4 hours
PHYSICAL SPECIFICATION	
Dimensions	Ø 157 mm x 76 mm
Weight	1.19 Kg (with one battery)
	1.30 Kg (with two batteries)
Operating Temperature	-30°C to 65°C (-22°F to 149°F)
Storage Temperature	-40°C to 80°C (-40°F to 176°F)
Waterproof/Dustproof	IP67
Shock Resistance	Designed to endure to a 2 m pole drop on hardwood floor with no damage
Vibration	Vibration resistant



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BM900+ GNSS Receiver

Powerful Precision
Performance



UNI EN ISO 9001:2015 - S9001 - JANUARY 2023 - VER02 - REV-01