Q700 Product Specification

GNSS①

Satellite system	
GPS	L1C, L1C/A, L2P, L2C, L5
BDS	B1I, B1C, B2a, B2b, B2I, B3I
GLONASS	L1C/A, L2C/A
Galileo	E1C/A, E5a, E5b, E5AltBoC, E6C
QZSS	L1C, L1C/A, L2C, L5
SBAS	L1C/A, L5
IRNSS	L5
MSS L-Band	QXWZ XStar
Channels	1520
Static accuracy	Horizontal: ± (2.5+0.5×10^{-6}D)mm Vertical: ± (5+0.5×10^{-6}D)mm
RTK accuracy	Horizontal: ± (8+1×10^{-6}D)mm Vertical: ± (15+1×10^{-6}D)mm
XStar accuracy	Horizontal: ± 2.5cm Vertical: ± 10cm
Initialization reliability	99.9%

Spatix Service②

NOSR	Time initialization < 5s
NSSR	Time initialization < 6min
LSSR	L-band, Time initialization < 8min

Wireless Communication

Bluetooth/Wi-Fi	Supported
Radio mode	Built-in Rx/Tx radio
Radio type	Lora
Radio frequency band	410 MHz - 470 MHz
Radio protocol	Satel/PCC-4FSK/PCC-GMSK/TrimTalk-450s/South-9600/HITARGET-9600/HATARGET=19200/TrimMark-III/South-19200/TrimTalk-4800/GEOTALK/GEOMARK/HZSZ/Satel-ADL/PCCFST/PCCFST-ADL/PCCEOT_SATEL/LORALINK/LORA-TRANSPARENT
Number of Lenses	Supported

GNSS + IMU③

Tilt slope	0~60°
Tilt compensation accuracy	8mm+0.3mm/°tilt (accuracy < 2 cm within 30°)
IMU Rate	200Hz

User Interaction

Operating System	Linux
Buttons	Power switch
Indicators	Battery, satellite/signal integrated
Web UI	Support PC and mobile web pages

Image Stakeout

Stakeout Accuracy	10mm+(10mm/m) *Distance(m)
Bottom Lens Field of View	83.4°
Bottom Sensor Pixels	200W
Bottom Camera Focal Length	2m
Bottom Sensor Resolution	1920*1080

Physical

Size	Φ143 mm × 82 mm (with bottom nuts)
Material	Magnesium aluminum alloy
Ports	1 Type-C、1 TNC、1 SIM

Electrical

Battery	3.6V 13600mAh lithium-ion battery
Battery life	Internal Radio/ 4G RTK Rover: up to 14 h Lora RTK Base: up to 8 h Static: up to 15 h
External power supply	5V DC

Environmental

Operating temperature	-40℃~ +65℃
Storage temperature	-45℃~ +70℃
Waterproof and dustproof	IP68
Fall-resistance	Resistant to fall from a height of 2m

Handheld Data Controlor

Operating System	Android 9
CPU	8-core 2.0 GHz processor
Memory	3GB RAM + 32GB ROM
Network	4G Full Netcom
LCD	5-inch multi-touch capacitive screen
Battery	5200 mAh removable battery
Camera	13 Million Auto Focus Camera
Waterproof and dustproof	IP67

① Measurements were obtained in an open area with satisfactory distribution of satellites and inactive ionosphere and without radio interference, in strict compliance with the observation and data processing procedures for this kind of devices.

② For coverage of service, please visit our official website. You may choose the available term of service when purchasing the product.

③ Strong vibration may affect the accuracy of IMU.

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