

## Specifications

### GNSS Characteristics<sup>(1)</sup>

Channels	220
GPS	L1 C/A, L2C, L2E, L5
GLONASS	L1 C/A, L1P, L2 C/A, L2P
Galileo	L1 BOC, E5A, E5B, E5AltBOC
BeiDou	B1, B2
SBAS	L1 C/A, L5
QZSS	L1 C/A, L1 SAIF, L2C, L5

### GNSS Accuracies<sup>(2)</sup>

<b>Real time kinematics (RTK)</b>	Horizontal: 8 mm + 1 ppm RMS
	Vertical: 15 mm + 1 ppm RMS
	Initialization Time: < 5 s
	Initialization Reliability: > 99.9%
<b>High-precision Static</b>	Horizontal: 3.0 mm + 0.1 ppm RMS
	Vertical: 3.0 mm + 0.4 ppm RMS
<b>Code differential</b>	Horizontal: 0.25 m + 1 ppm RMS
	Vertical: 0.5 m + 1 ppm RMS
<b>SBAS</b>	Horizontal: 0.5 m RMS
	Vertical: 0.85 m RMS

### Hardware

<b>Size (H x W)</b>	135 mm x 116 mm (5.3 in x 4.6 in)
<b>Weight</b>	1.1 kg (2.4 lb)
<b>Environment</b>	Operating: -40°C to +65 °C (-40°F to +149°F)
	Storage: -40°C to +85°C (-40°F to +185°F)
<b>Humidity</b>	100% condensation
<b>Ingress protection</b>	IP67 waterproof and dustproof, protected from temporary immersion to depth of 1 m
<b>Shock</b>	Survive a 2-meter pole drop
<b>LCD</b>	128 x 64 dpi sunlight readable with function/power buttons
<b>Tilt sensor</b>	EBubble leveling

### Certifications and Calibrations

CE Mark; C-Tick; Bluetooth EPL; IGS & NGS Antenna Calibration; MIL-STD-810G, Method 514.7

### Communications and Data Recording

<b>Network modem</b>	Integrated 3.75G modem
	HSPA+ 21 Mbps (download), 5.76 Mbps (upload)
	WCDMA 850/900/1700/1900/2100
	EDGE/GPRS/GSM 850/900/1800/1900
<b>Wi-Fi</b>	b/g/n, access point mode
<b>Bluetooth®</b>	V4.1
<b>Ports</b>	1 x 7-pin LEMO port (external power, RS-232)
	1 x USB 2.0 port (data download, firmware update)
	1 x UHF antenna port (TNC female)
<b>UHF radio</b>	-Standard Internal Rx/Tx: 410 MHz to 470 MHz
	Transmit Power: 0.5 W to 2 W
	Protocol: CHC, Transparent, TT450
	Range: 5 km optimal conditions
	-FCC Certified Internal Rx/Tx: 403 MHz to 473 MHz
	Transmit power: 0.1 W to 1 W
	Protocols Trimble, Satel, Pacific Crest
	Range: 5 km optimal conditions

**Data formats** CMR, CMR+, SCMRX input and output  
RTCM 2.x, RTCM 3.x input and output  
NMEA 0183 output  
HCN, HRC and RINEX static formats  
NTRIP Client, NTRIP Caster

**Data storage** 32 GB high-speed memory

### Electrical

<b>Power consumption</b>	3.8 W (depending on receiver configuration)
<b>Li-ion</b>	
<b>battery capacity</b>	2 x 3400 mAh, 7.4 V
<b>Operating time on internal battery<sup>(3)</sup></b>	UHF receive/transmit (0.5 W): Up to 6 h
	Cellular receive only: Up to 9 h
	Static: Up to 10 h
<b>External power</b>	9 V DC to 36 V DC

\*Specifications are subject to change without notice.

(1) Subject to availability of BDS ICD and Galileo commercial service definition. GLONASS L3, BDS B3 and Galileo E6 will be provided through future firmware upgrade.

(2) Accuracy and reliability are determined under clear unobstructed conditions, multipath, satellite geometry and atmospheric conditions. Performances assume minimum of 5 satellites, follow up of recommended general GPS practices.

(3) Battery life may vary depending on operating temperature.



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# CHCNAV

## i70

## Survey & Engineering



Make your work more efficient

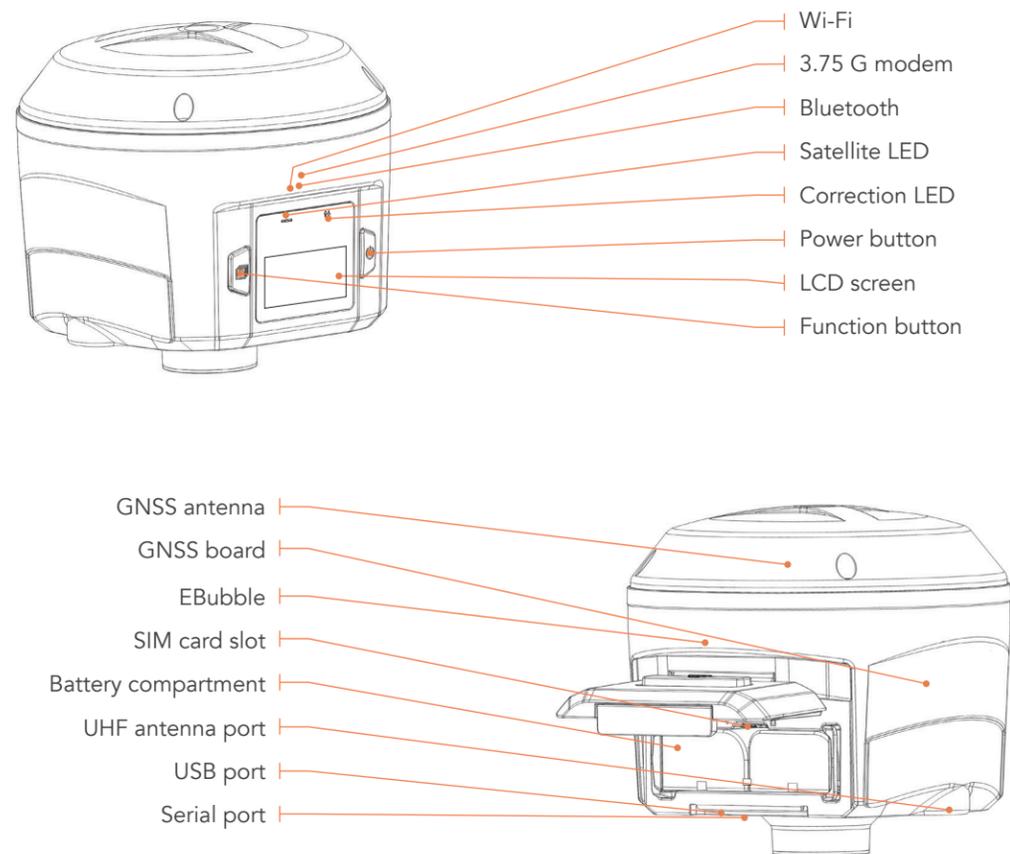
# Hardware Description

## i70 GNSS RTK Receiver

Leveraging the latest GNSS technologies, the i70 is a smart receiver of the next generation. The proven and outstanding performance and reliability make it the preferred choice of surveyors and construction professionals.

The i70 benefits from a compact ergonomic and rugged design with integrated sensors (3.75G network modem, UHF Radio, Wi-Fi, Bluetooth and e-bubble).

Supporting a high-resolution LCD, the operating status of the receiver is available at a glance.



# Core Technology

## 220 channels - Full GNSS

High-precision tracking of GPS, GLONASS, Galileo, BeiDou and SBAS.



## 128 x 64 dpi sunlight readable LCD panel

128 x 64 dpi sunlight readable with function/power buttons. This liquid crystal display enables user to view the basic information and current configuration settings of the receiver.

## Internal 3.75G network modem

Embedded 3.75G modem for stable network RTK connections. The i70 can also be set as Wi-Fi hotspot for the controller to access the Internet.



## Integrated UHF modem

i70 integrated UHF modem can be set at frequencies between 410 MHz - 470 MHz with up to 5 km working range.

## Rugged design

The rugged and durable design meets the IP67 environmental standard for water and dust. The i70 can survive a 2 m drop onto concrete.



## Applications

