i90Pro SPECIFICATIONS

GNSS Performance [1]

Channels	336 channels
GPS	L1 C/A, L2E, L2C, L5
GLONASS	L1C/A, L2 C/A, L3 CDMA
Galileo	E1, E5a, E5b, E5AltBOC, E6
BeiDou	B1, B2, B3
SBAS	L1C/A, L5
QZSS	L1 C/A, L1 SAIF, L2C, L5, LEX
IRNSS	L5
L-BAND	RTX®

GNSS Accuracies [2]

Real time kinematics (RTK)	Horizontal: 8 mm + 1 ppm RMS Vertical: 15 mm + 1 ppm RMS Initialization time: < 10 s Initialization reliability: > 99.9%
Post-processing kinematics (PPK)	Horizontal: 2.5 mm + 1 ppm RMS Vertical: 5 mm + 1 ppm RMS
Post-processing static	Horizontal: 2.5 mm + 0.5 ppm RMS Vertical: 5 mm + 0.5 ppm RMS
Code differential	Horizontal: 0.25 m RMS
Autonomous	Horizontal: 1 m RMS Vertical: 1.5 m RMS
Positioning rate	Up to 50 Hz
Time to first fix [3]	Cold start: < 45 s Hot start: < 10 s Signal re-acquisition: < 1 s
RTK tilt-compensated	Additional horizontal pole-tilt uncertainty typically less than 10 mm + 0.7 mm/° tilt

Hardware

Size (LxWxH)	159 mm x 150 mm x 110 mm (6.3 in × 5.9 in × 4.3 in)
Weight	1.26 kg (2.77 lb)
Environment	Operating: -40 °C to +65 °C (-40 °F to +149 °F) Storage: -40 °C to +85 °C (-40 °F to +185 °F)
Humidity	100%
Ingress protection	IP67 waterproof and dustproof, protected from temporary immersion to depth of 1 m
Shock	Survive a 2-meter pole drop
Tilt sensor	Calibration-free IMU for pole-tilt compensation. Immune to magnetic disturbances. EBubble leveling
Front panel	4 status LED 1.46" OLED Display

Certifications

FCC Part 15 (class B Device), FCC Part 22, 24, 90; CE Mark; NGS Antenna Calibration; MIL STD 810G, Method 514.7

Communication

Network modem	Integrated 4G modem LTE (FDD): B1,B2,B3,B4,B5,B7,B8,B20 DC-HSPA+/HSPA+/HSPA/UMTS: B1, B2, B5, B8 EDGE/GPRS/GSM 850/900/1800/1900MHz
Wi-Fi	802.11 b/g/n, access point mode
Bluetooth®	v4.1
Ports	1 x 7-pin LEMO port (external power, RS-232) 1 x USB Type-C port (data download, firmware update) 1 x UHF antenna port (TNC female)
UHF radio	Standard Internal Rx/Tx: 410 - 470 MHz Transmit Power: 0.5 W to 2 W Protocol: CHC, Transparent, TT450, SATEL3AS Link rate: 9600 bps to 19200 bps Range: 5 km under optimal conditions
Data formats	RTCM 2.x, RTCM 3.x, CMR, CMR+, SCMRX input and output HCN, HRC, RINEX 2.11, 3.02 NMEA 0183 output NTRIP Client, NTRIP Caster
Data storage	32 GB internal memory

Electrical

Power consumption	5 W (depending on user settings)
Li-ion battery capacity	2 x 3400 mAh, 7.4 V
Operating time on internal battery [4]	UHF receive/transmit (0.5 W): 5 h to 8 h Cellular receive only: up to 9 h Static: up to 10 h
External power input	9 V DC to 28 V DC

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