

CHCNAV RS30 Handheld Scanner





Specifications

General System Performance	
Absolute accuracy	H: < 5 cm RMS V: < 5 cm RMS
Relative accuracy	<1 cm
Power supply mode	Lithium battery, supports hot-swapping and portable charger
Working time from a single battery	1h
Data storage	512 GB
Field of view	360° x 270°
Weight	1.9 kg (including RTK and battery)
Loop-free data acquisition	Yes
Real-time accuracy assessment	Yes
Laser Scanner	
Laser product classification	Class 1 Eye Safe
Range	0.05 to 120 m
Channel	16
Point cloud thickness	2cm
Range capability	80 m @10% reflectivity (Channels 5 to 12) 50 m @10% (Channels 1 to 4, 13 to 16)

FOV (Horizontal)	360°
Horizontal angle resolution	0.18° (10 Hz)
FOV (Vertical)	30° (-15° to +15°)
Max. effective measurement rate	320,000 points/sec
Selectable scan speed	10 Hz
Max. Number of return pulses	2
Wavelength	905 nm
GNSS Performance	
Channels	1408 channels with iStar2.0
GPS	L1C/A, L2C, L2P(Y), L5
GLONASS	L1, L2, L3
Galileo	E1, E5a, E5b, E6*
BeiDou	B1I, B2I, B3I, B1C, B2a, B2b
QZSS	L1C/A, L1C, L2C, L5, L6*
NavIC/IRNSS	L5*
PPP	B2b-PPP
SBAS	EGNOS (L1, L5)
GNSS Accuracies	
Real time kinematic (RTK)	H: 8 mm + 1 ppm RMS V: 15 mm + 1 ppm RMS Initialization time: <10 s Initialization reliability: >99.9%
Post-processing kinematic(PPK)	H: 3 mm + 1 ppm RMS V: 5 mm + 1 ppm RMS
PPP	H: 10 cm V: 20 cm
High-precision static	H: 2.5 mm + 0.1 ppm RMS V: 3.5 mm + 0.4 ppm RMS
Static and rapid static	H: 2.5 mm + 0.5 ppm RMS V: 5 mm + 0.5 ppm RMS
Code differential	H: 0.4 m RMS V: 0.8 m RMS
Visual-assisted positioning	Yes
IMU	
IMU update rate	200 Hz
Auto initialization	Yes
Attitude accuracy after post-processing	0.005° RMS pitch/roll, 0.010° RMS heading
Position accuracy after post-processing	0.010 m RMS horizontal, 0.020 m RMS vertical
Camera	
Number of cameras	3
Resolution	15 MP (5 MP*3)
Sensor size	2592 (H) × 1944 (V)
Pixel size	2.0 µm
FOV	210° × 170°

Environments	
Operating temperature	-20°C to +50°C
Storage temperature	-20°C to +60°C
Ingress protection	IP64(5) (according to IEC 60529)
Humidity (operating)	80%, non-condensing
Electrical	
Input voltage	9 - 20 V DC
Power consumption	<30 W
Battery capacity	24.48 Wh
Equipped Software	
SmartGo software	Data acquisition control, real-time point cloud display, etc
CoPre intelligent processing software	POS process, Adjust & Refine, Generate point cloud, modeling, etc
CoProcess efficient feature extraction software	Building feature extraction, road feature extraction, volume calculation, etc
LandStar Field Survey APP	Topographic survey, Point stakeout, Line stakeout, Elevation check, Facade survey