

i80 GNSS



KEY FEATURES

- *Light weight & ultra-rugged*
- *Tilt & azimuth allow for more shots to be collected using RTK*
- *Advanced connectivity integrates into any process with nearly any hardware*
- *Common work flows without a data collector*
- *Future proof design for years of productivity*
- *Supportable CORS/VRS connection*

The i80 represents the pinnacle of productivity on today's jobsite. Leading technology with superior capabilities, the i80 has tracked all five constellations, ten frequencies, and uses every connectivity method available. The i80 is the smallest receiver on the market incorporating dual hot swappable batteries, allowing continuous uninterrupted work. All these features integrated into a small ergonomic package allows for the most productive day of surveying possible.

Intelligent Connectivity

The CHC i80 provides numerous communication methods to support varied workflows and any peripheral device. The built-in modem provides RTK corrections and serves data via 802.11 Wi-Fi to nearby devices. The hotspot feature also allows for connectivity and configuration via any browser supported device which removes the classical limitation of expensive propriety data collection devices for hardware setup. CHC's superior UHF radio technology provides users with a 25% range increase, even when mixing and matching with non-CHC radios.

True Autonomous Operation

The user-friendly LCD interface allows for numerous receiver setup tasks to be performed without an external device. Operations such as: static logging, AutoBase, AutoRover, UHF configuration, and GSM setup can be easily done via the simple Function/Accept button pair. Unique to CHC receivers is its ability to be used with APIS which allows an AutoBase receiver to automatically join a pool of online bases that rovers can automatically connect to for quick and easy "1 to 1", or "1 to many" configurations.

Reliability

CHC continues to build on its' reputation of rugged and reliable. The i80 is constructed of a cast magnesium chassis, doubled sealed gaskets, protected connectors, and vibration dampened internals. This contributes to its' outstanding field survivability of IP67 and ability to resist extended periods of high vibration to MIL-STD-810G.

Future Proof

Never will you be locked into a fixed software & hardware solution. The CHC i80 receiver is supported by multiple third party software controller programs. The i80 supports common industry standards and proprietary protocols allowing you to easily migrate your inventory to our more productive and open platform.

i80 GNSS Base Kit

Part Number	Description	Pcs	Unit Price	Qty	Discount	Total net
i80 Kit w/ Internal Tx/Rx: 403-473 MHz						
0505 140 005	i80 Kit w/ Internal Tx/Rx: 403-473 MHz	1	€ 8,990	1	55%	€ 4,046
1180020 031 121	i80 GNSS Receiver	1				
0101 060 039	Satel Internal Tx/Rx Datalink	1				
2004 020 011	UHF Whip Antenna	1				
2004 030 032	i80 USB Cable	1				
2004 030 044	i80 GPS to PC Data Cable	1				
2004 030 031	RS232 to USB converter	1				
2004 030 054	External Power Cable	1				
2004 060 004	Transport Hard Case	1				
i Series Base Accessory Kit						
0505 140 002	i Series Base Accessory Kit	1	€ 690	1	35%	€ 449
2004 030 012	Tribrach Adaptor	1				
2004 030 037	H.I. Tape	1				
2004 030 056	Tribrach w/ Optical Plummet	1				
2004 040 008	Extension Pole(30cm)	1				
2004 040 022	Auxiliary H.I. Tool	1				
2004 050 017	Lithium Battery	2				
2004 050 030	C300 Battery Charger w/Power Adapter with cord	1				
Total EXW Shanghai in EUR						€ 4,494

Additional Accessory

2004 050 017	Lithium Battery	1	€ 120	1	35%	€ 78
2004 050 030	C300 Battery Charger w/Power Adapter with cord	1	€ 290	1	35%	€ 189
2004 030 015	i80 OTG Cable	1	€ 80	1	35%	€ 52
2004 030 032	i80 USB Cable	1	€ 90	1	35%	€ 59
2004 030 044	i80 GPS to PC Data Cable	1	€ 120	1	35%	€ 78
2004 030 054	External Power Cable	1	€ 80	1	35%	€ 52
2004 030 031	RS232 to USB converter	1	€ 40	1	35%	€ 26

i80 GNSS Rover Kit (Android)

Part Number	Description	Pcs	Unit Price	Qty	Discount	Total net
i80 Kit w/ Internal Tx/Rx: 403-473 MHz						
0505 140 005	i80 Kit w/ Internal Tx/Rx: 403-473 MHz	1	€ 8,990	1	55%	€ 4,046
1180020 031 121	i80 GNSS Receiver	1				
0101 060 039	Satel Internal Tx/Rx Datalink	1				
2004 020 011	UHF Whip Antenna	1				
2004 030 032	i80 USB Cable	1				
2004 030 044	i80 GPS to PC Data Cable	1				
2004 030 031	RS232 to USB converter	1				
2004 030 054	External Power Cable	1				
2004 060 004	Transport Hard Case	1				
i Series Rover Accessory Kit						
0505 140 003	i Series Rover Accessory Kit	1	€ 690	1	35%	€ 449
2004 040 016	2M Range Pole w/ Bag	1				
2004 040 022	Auxiliary H.I. Tool	1				
2004 050 017	Lithium Battery	2				
2004 050 030	C300 Battery Charger w/Power Adapter with cord	1				
GPS/GIS Handheld Controller Kit						
0505 010 009	HCE300 GPS/GIS Handheld Controller Kit	1	€ 1,290	1	45%	€ 710
2003 030 012	HCE300 Android Data Controller	1				
2004 030 065	Data Cable (USB) for HCE300	1				
2004 040 014	Controller Bracket for Range Pole	1				
2004 050 027	Li-Ion Battery	1				
2004 050 028	Power Adapter	1				
2004 090 055	Strap	1				
0103 020 320	Stylus	1				
Data Collection Software						
1906 210 639	Landstar 7 Data Collection Software (Android)	1	€ 490	1	45%	€ 270
Total EXW Shanghai in EUR						€ 5,473

Optional Network Rover Receiver: i80 Kit w/ Internal Tx/Rx: 410-470 MHz

0505 140 004	i80 Kit w/ Internal Tx/Rx: 410-470 MHz	1	€ 8,190	1	55%	€ 3,686
1180020 035 121	i80 GNSS Receiver	1				
0101 060 059	CHC Internal Tx/Rx Datalink	1				
2004 020 011	UHF Whip Antenna	1				
2004 030 032	i80 USB Cable	1				
2004 030 044	i80 GPS to PC Data Cable	1				
2004 030 031	RS232 to USB converter	1				
2004 030 054	External Power Cable	1				
2004 060 004	Transport Hard Case	1				

Additional Accessory

2004 050 017	Lithium Battery	1	€ 120	1	35%	€ 78
2004 050 030	C300 Battery Charger w/Power Adapter with cord	1	€ 290	1	35%	€ 189
2004 030 015	i80 OTG Cable	1	€ 80	1	35%	€ 52
2004 030 032	i80 USB Cable	1	€ 90	1	35%	€ 59
2004 030 044	i80 GPS to PC Data Cable	1	€ 120	1	35%	€ 78
2004 030 054	External Power Cable	1	€ 80	1	35%	€ 52
2004 030 031	RS232 to USB converter	1	€ 40	1	35%	€ 26

i80 GNSS Rover Kit (Windows Mobile)

Part Number	Description	Pcs	Unit Price	Qty	Discount	Total net
i80 Kit w/ Internal Tx/Rx: 403-473 MHz						
0505 140 005	i80 Kit w/ Internal Tx/Rx: 403-473 MHz	1	€ 8,990	1	55%	€ 4,046
1180020 031 121	i80 GNSS Receiver	1				
0101 060 039	Satel Internal Tx/Rx Datalink	1				
2004 020 011	UHF Whip Antenna	1				
2004 030 032	i80 USB Cable	1				
2004 030 044	i80 GPS to PC Data Cable	1				
2004 030 031	RS232 to USB converter	1				
2004 030 054	External Power Cable	1				
2004 060 004	Transport Hard Case	1				
i Series Rover Accessory Kit						
0505 140 003	i Series Rover Accessory Kit	1	€ 690	1	35%	€ 449
2004 040 016	2M Range Pole w/ Bag	1				
2004 040 022	Auxiliary H.I. Tool	1				
2004 050 017	Lithium Battery	2				
2004 050 030	C300 Battery Charger w/Power Adapter with cord	1				
GPS/GIS Handheld Controller Kit						
0505 080 005	LT30TM GNSS Receiver Kit	1	€ 990	1	45%	€ 545
2103 010 012	LT30TM GNSS Receiver	1				
2104 010 010	Li-Ion Battery	1				
2104 010 016	Data Cable (USB) for LT30TM	1				
2104 010 012	Power Adapter	1				
0490 000 093	Stylus	1				
0490 000 094	Hand strap	1				
0101 080 005	8G TF Card	1				
Data Collection Software						
0408 000 008	SurvCE GPS Only Data Collection Software	1	€ 1,250	1	45%	€ 688
Total EXW Shanghai in EUR						€ 5,726

Optional Network Rover Receiver: i80 Kit w/ Internal Tx/Rx: 410-470 MHz

0505 140 004	i80 Kit w/ Internal Tx/Rx: 410-470 MHz	1	€ 8,190	1	55%	€ 3,686
1180020 035 121	i80 GNSS Receiver	1				
0101 060 059	CHC Internal Tx/Rx Datalink	1				
2004 020 011	UHF Whip Antenna	1				
2004 030 032	i80 USB Cable	1				
2004 030 044	i80 GPS to PC Data Cable	1				
2004 030 031	RS232 to USB converter	1				
2004 030 054	External Power Cable	1				
2004 060 004	Transport Hard Case	1				

Additional Accessory

2004 050 017	Lithium Battery	1	€ 120	1	35%	€ 78
2004 050 030	C300 Battery Charger w/Power Adapter with cord	1	€ 290	1	35%	€ 189
2004 030 015	i80 OTG Cable	1	€ 80	1	35%	€ 52
2004 030 032	i80 USB Cable	1	€ 90	1	35%	€ 59
2004 030 044	i80 GPS to PC Data Cable	1	€ 120	1	35%	€ 78
2004 030 054	External Power Cable	1	€ 80	1	35%	€ 52
2004 030 031	RS232 to USB converter	1	€ 40	1	35%	€ 26

Technical Specifications

GNSS Characteristics

- 220 channels with all in view simultaneously tracked satellite signals
 - GPS: L1C/A, L2C, L2E, L5
 - GLONASS: L1C/A, L1P, L2C/A, L2P, L3
 - Galileo: E1, E5A, E5B
 - BeiDou: B1, B2
 - SBAS: L1C/A, L5 (QZSS, WAAS, EGNOS, GAGAN)

GNSS Accuracies ⁽¹⁾

- SBAS differential positioning accuracy: 0.5 m RMS
- High-precision static
 - Horizontal: 2.5 mm + 0.1 ppm RMS
 - Vertical: 3.5 mm + 0.4 ppm RMS
 - Baseline Length: ≤ 300 km
- Post-Processed Kinematic (PPK)
 - Horizontal: 8 mm + 1 ppm RMS
 - Vertical: 15 mm + 1 ppm RMS
- RTK
 - Horizontal: 8 mm + 1 ppm RMS
 - Vertical: 15 mm + 1 ppm RMS
 - Initialization time < 5 s
 - Initialization reliability > 99.9%
- Network RTK
 - Horizontal: 8 mm + 0.5 ppm RMS
 - Vertical: 15 mm + 0.5 ppm RMS
 - Initialization time < 10 s
 - Initialization reliability > 99.9%

Hardware

- Dimensions (H×W): 14 cm × 12.4 cm (5.5 in × 4.9 in)
- Weight: 1.02 kg (2.2 lbs)
1.22 kg (2.69 lbs) with batteries
- Environment
 - Operating: -40 °C to +75 °C (-40°F to 167°F)
 - Storage: -55 °C to +85 °C (-67°F to 185°F)
- Humidity: 100% condensation
- Dust and Waterproof: IP67, protected from temporary immersion to depth of 1 m (unit floats)
- Shock and vibration: 2 m (6.56 ft) pole drop onto concrete, MIL-STD-810G
- LCD: 128x64dpi sunlight readable with function/accept buttons

Certifications and Calibrations

- FCC Part 15 (class B Device), FCC Part 22, 24, 90; CE Mark; C-Tick; Bluetooth EPL, IGS & NGS Antenna Calibration, MIL-STD-810G.

Communications and Data Recording

- Serial: 2 x 7pin LEMO port (external power, USB data download, USB update, RS-232)
- Cellular: Internally 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
- Bluetooth®: Internally integrated multimode system compatible with Android, Windows Mobile and Windows desktop operating systems
- WiFi: 802.11 b/g/n, access point mode
- UHF Radios ⁽²⁾: Protected TNC Female
 - Standard Internal Rx/Tx: 410 - 470 Mhz; Transmit power: 0.5 W to 2 W; Protocol CHC, Trimble, Pacific Crest; Range: 5 km optimal conditions
 - FCC Certified Internal Rx/Tx: 403- 473 Mhz; Transmit power: 0.1 W to 1 W; Protocols Trimble, Satel, Pacific Crest; Range: 5 km optimal conditions
- Protocols
 - CMR, CMR+, sCMRx input and output
 - RTCM 2.1, 2.2, 2.3, 3.0, 3.2 input and output
 - NMEA 0183 output
 - HCN and RINEX static formats
 - NTRIP Client, NTRIP Caster
- Data Storage
 - 32 GB high-speed memory

Electrical

- Power consumption: <3.2 W
- Li-ion battery capacity: 2 × 3400 mAh, 7.4 V
- Operating time:
 - RTK UHF Base: 6 h
 - Static: 12 h
- External power: 12 to 36 V DC

(1) Accuracy and reliability specifications may be affected by multipath, satellite geometry and atmospheric conditions. Performances assume minimum of 5 satellites, follow up of recommended general GPS practices. (2) UHF is an option and UHF type approvals are country specific.

Specifications are subject to change without notice.



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