

SPECIFICATIONS

Receiver Part

Measurements

General Info

- 220 channels, by advanced Pacific Crest Maxwell 6 Custom Survey GNSS technology
- High precision multiple correlator for GNSS pseudo range measurements
- Unfiltered, unsmoothed pseudo range measurements data for low noise, low multipath error, low time domain correlation and high dynamic response
- Very low noise GNSS carrier phase measurements with 1mm precision in a 1Hz bandwidth
- Signal-to-Noise ratios reported in dB-Hz
- Proven Pacific Crest low elevation tracking technology

Satellite signals tracked simultaneously

- GPS: Simultaneous L1 C/A, L2E, L2C, L5
- GLONASS: Simultaneous L1 C/A, L1 P, L2 C/A (GLONASS M Only), L2 P
- SBAS: Simultaneous L1 C/A, L5
- Galileo: Simultaneous L1 BOC, E5A, E5B, E5AltBOC
- BDS: B1, B2
- QZSS: L1 C/A, L1 SAIF, L2C, L5

Code differential GNSS positioning

- Horizontal: 25cm+1ppm RMS
- Vertical: 50cm+1ppm RMS
- SBAS differential positioning accuracy: typically <5m 3DRMS

Static and FastStatic GNSS surveying

- Horizontal: 3mm+0.5ppm RMS
- Vertical: 5mm+0.5ppm RMS

Realtime Kinematic surveying

- Horizontal: 8mm+1ppm RMS
- Vertical: 15mm+1ppm RMS
- Initialization time: typically <8s
- Initialization reliability: typically >99.9%

Hardware

Physical

- Dimension (L x W x H): 184mm x 184mm x 96mm (7.2in x 7.2in x 3.8in)
- Weight: 1.2kg (2.64 lb) with internal battery, internal radio

Temperature

- Operating: -40°C ~ +75°C (-49F ~ +167F)
- Storage: -55°C ~ +85°C (-67F ~ +185F)
- Humidity: 100%, condensing
- Water/Dustproof: tested to IP67 standard, protected from temporary immersion to depth of 1m (3.28ft)
- Shock and vibration: Designed to survive a 2m (6.6ft) pole drop onto concrete

Electrical

- Power 12-15V DC external power input
- Rechargeable, removable 7.4V, 2.5Ah Lithium-Ion battery in internal battery compartment
- Battery life: 6-10 hours for 2 batteries from standard supply (varies with temperature and working mode)

Communications and Data Storage

- Standard USB2.0 port
- RS-232 port: Baud rates up to 115200
- Stollmann's BlueMod+B20 is used inside for Bluetooth function
- Fully sealed and integrated 2.4GHz communication Bluetooth port
- UHF receiving antenna port and GPRS/GSM signal antenna port
- Fully sealed and integrated excellent receiver/transmitter option
- Optional frequency: 410-430 MHz, 430-450 MHz, 450-470 MHz
- Radio RTK performance:
 - High performance external radio transmitter with Advanced Data Link (ADL) technology for remote communications, OEM particularly for SOUTH by Pacific Crest, 0.1-2.0/4.0 configurable transmit power, environmentally sealed to IP67 standard and ideal for EMI resistance
 - Integrated radio transmitter only: 1-2km (varies with terrain and temperature)
- Fully sealed and integrated internal SIEMENS Mc75. GPRS/GSM module
- External cellphone support for GPRS/GSM module for network RTK (CORS) operations
- Network RTK (via CORS) performance (varies with temperature and GPRS data rate): 20-50km
- Data storage: internal memory 4GB
- Update rate: 1Hz, 2Hz, 5Hz, 10Hz, 20Hz & 50Hz positioning outputs (depends on installed option, default 1Hz)
- Reference outputs: CMR, CMR+, RTCM 2.1, RTCM 2.2, RTCM 2.3, RTCM 3.0, RTCM 3.1, RTCM3.2

Controller Part (Getac PS336 Lite)

Operating system

- Windows Mobile 6.5

Microprocessor

- TI AM3715 1GB

Memory

- 512MB MDDR

Storage

- 256MB NAND Flash and 8GB Inand

Expansion Slot

- FlexiConn expansion module
- Micro SDHC(up to 32GB)

Display

- 3.5" VGA(480x640 pixel)
- 600 nits sunlight readable display
- Pressure sensitive touchscreen

Keypad

- Nuance XT9 Soft input panel (SIP)
- Transcriber handwriting recognition
- Alpha/numeric keypad

Communications

- WLAN 802.11 b/g/n
- Bluetooth(v2.1 +EDR Class 2)

Power

- Battery type:3.7V, 5600mAh
- Li-Ion battery pack

Physical

- Dimensions(L x W x H): 178x89x30mm
- Weight: 530g

Temperature

- Operating temp: -22° F to 140° F (-30° C to 60° C)
- Storage temp: -40° F to 158° F (-40° C to 70° C)
- 95% RH, non-condensing

I/O Interfaces

- DC
- USB OTG
- RS232
- Office docking port
- FlexiConn™ port

Ruggedness

- MIL-STD 810G certified
- IP68 certified
- Drop resistant (26 drops from 6ft/1.82m)
- Tumble resistant(1000 cycles; 0.5m/1.6ft)
- Optional ATEX zone 2/22

Remarks

Measurement accuracy and operation range might vary due to atmospheric conditions, signal multipath, obstructions, observation time, temperature, signal geometry and number of tracked satellites. Refer to separate brochure for more details of optional controller models, S10/PS336 Premium. Specifications subject to change without prior notice.



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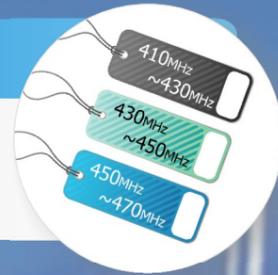
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KEY FEATURES

Customized Radio Frequency Options

The integrated excellent radio module allows to customize the frequency range (410-430MHz, 430-450MHz and 450-470MHz) and is able to be compatible with current popular radio communication protocols on the market



Built-in Transmitting Radio Module

0.5-2W, independent of external radio while working within short range, eg. 1-2km (in good condition).



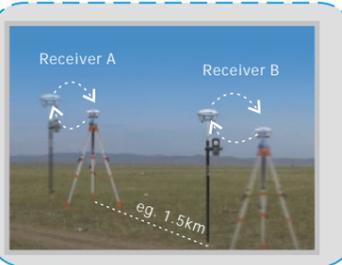
Huge Internal Memory

The 4G internal memory capacity of S82V allows mass storage of measured data for long time collection, which brings great convenience to your static work.



Separated Module Packs

Advanced data link with both UHF receiving radio and GPRS/GSM modules built in, switchable for radio/network RTK modes. 2 modules are separately installed for reducing interference, yet just a very small receiver.



With the outstanding built-in radio transmitter feature and interchangeability capability, base and rover can be switched very easily by just moving the tripod and controller or even preparing another set of tripod, carbon fiber pole and controller for fast and simple setup. It brings you more convenience than most of other regular RTK receivers cannot.

Compact Housing
Solid, yet handy housing with ABS+PC material at industrial level, nice-looking and long-lasting.



BD970 Motherboard Equipped
Proven Pacific Crest Maxwell 6 technology delivers demonstrated performance, outstanding efficiency.



Dual Bluetooth Integrated
Helps the receiver to communicate with controller and mobile device for realtime data transfer.



Control Panel
Imported PLC control circuit with 2 buttons & 6 indicating lights to view status and mode, easy to use.

Wide Applications



SOFTWARE



SOUTH EGStar 3.0 (Default)



Carlson SurvCE (Optional)



MicroSurvey FieldGenius (Optional)

CONTROLLER



WIRELESS REMOTE SOLUTION

HX-U202 is an IP67 (NEMA6) classified UHF radio modem with a high power(35W) transmitter and wide tuning range. It was designed for easy mobile use in demanding field conditions. According to the IP67 standard, the casing and connectors of the U202 are waterproof secured against dust.

In addition to the high output power and wide tuning range, the channel spacing is also selectable to be 12.5 or 25 kHz. U202 is equipped with a digital tube, four LED and three keystrokes, used to indicate the current operating status, as well as for changing the operating channel and power level of the radio modem.



- 1 Channel switch key
- 2 Channel screen
- 3 Power switch key
- 4 High-power indicator
- 5 Low-power indicator
- 6 Transmitting indicator
- 7 Turn on indicator
- 8 ON/OFF key