

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
- Compass: 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 MDS Series receiver/transmitter option:
 - Optional frequency:
 - MDA module: 410-430 MHz
 - MDB module: 430-450 MHz
 - MDC module: 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

Controller Part (Psion)

Platform

- PXA270 624 MHz processor
- 1 GB Flash ROM
- 256 MB RAM

Operating System

- Windows® CE 5 (standard supply)
- Windows Mobile® 6 Classic, Professional (optional)

User Interface

- Color screen / Touch display
- 3.7 in (9.398 cm)
- Full VGA 480 x 640 Resolution
- Transflective, portrait mode TFT
- Sunlight readable (for outdoor use)
- High-reliability adjustable LED
- Backlight featuring a bright 165 cd/m2 output
- Touchscreen (standard)
- Passive stylus or finger operation
- Signature capture
- Full Alphanumeric keyboard
- Backlit, high durability hard-capped keys

Power Management

- Optional 3.7V, 2700mAh standard capacity battery
- Advanced smart battery with gauge
- Built-in charger
- Rechargeable, user replaceable backup battery pack

Environmental

- Withstands multiple drops from 6 ft (1.8 m) or 26 drops (on 12 edges, 6 corners, 8 faces) from 5 ft (1.5 m) to concrete while powered on
- Waterproof/Dustproof: IP65, IEC 60529
- Operating temperature: -4°F to 122°F (-20°C to + 50°C)
- 5%-95% RH non-condensing
- Storage temperature: -40°F to 140°F (-40°C to + 60°C)
- ESD: +/- 8kVdc air discharge, +/-4kVdc contacts

Physical

- Dimensions (L x W x H): 223mm x 100mm x 42mm (8.78in x 3.94in x 1.65in)
- Weight: 0.5kg (excluding battery)

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/PS236. Specifications subject to change without prior notice.



Dealer info

SOUTH
Target your success



STAR S82^V

**Intergrated RTK GNSS
Surveying System**

Your Versatile Intelligent

Package for RTK solution!



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KEY FEATURES

Customized Radio Frequency Options

The integrated MDS series receiving radio modules include 3, MDA (410-430MHz), MDB (430-450MHz), and MDC (450-470MHz) for options. It allows the receiver to be compatible with popular radio transmitters on the market.



Built-in Transmitting Radio Module

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



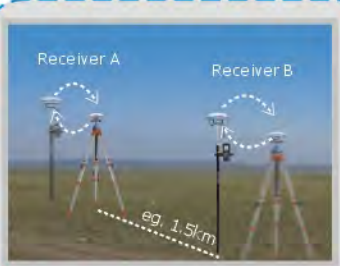
Huge Internal Memory

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.

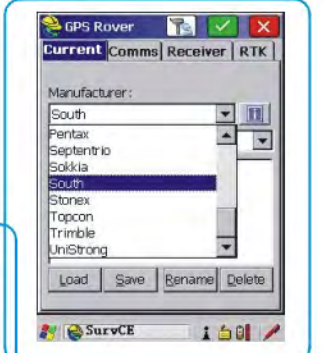
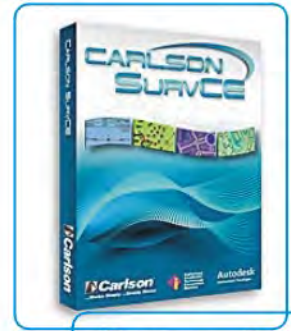


PSION Controller (Default supply)

PSION Workabout Pro 3, from internationally reputed brand TEKLOGIX, a flexible, expandable, rugged device.



(More controller options)



Powerful PCC external radio transmitter



OEM by Pacific Crest, the unit is an advanced, high speed, wireless data link built to survive the rigors of precise positioning and environmental monitoring applications. With such a high performance Advanced-Data-Link (ADL) device, S82V is enabled to be compatible with the major popular RTK receiver products available in the global market, which brings you more flexibility and convenience at work.

3 options:

- ADL-A, to match S82V with MDA module for 410-430MHz
- ADL-B, to match S82V with MDB module for 430-450MHz
- ADL-C, to match S82V with MDC module for 450-470MHz

