

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

- Dimensions (L x W x H): 165mm x 168mm x 122mm (6.5in x 6.6in x 4.8in)
- Weight: 1.85kg (including inbuilt battery and inbuilt radio module)

Environmental

- Operating: -45°C ~ +65°C (-49F ~ +140F)
- Storage: -55°C ~ +85°C (-67F ~ +185F)
- Humidity: 100%, condensing
- Waterproof/Dustproof: IP67 standard immersion to depth of maximum 1m (3.28ft) and against blowing rain or blowing dust
- Shock and vibration: Designed to survive a 2.5m (8.2ft) pole drop onto concrete

Electrical

- Power 12-15V DC external power input
- Rechargeable, 7.2V, 8800mAh Lithium-Ion battery units built in receiver
- Battery life: 20 hours for built-in battery (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 inside for Bluetooth function
- Fully sealed and integrated 2.4GHz communication Bluetooth port
- UHF receiving antenna port
- Fully sealed and integrated radio receiver/transmitter, 0.5-2W adjustable, 410-430/430-450/450-470MHz optional (default 0.5W, 450-470MHz)
- UHF Range (varies with terrain / temperature): 3-5km typical, 8-10km optimal
- Mini GDL5 Radio (optional): 2/5W
- UHF Range (varies with terrain / temperature): 4-6km typical, 8-10km optimal
- Standard GDL20 (optional): 25W
- UHF Range (varies with terrain / temperature): 8-10km typical, 15-20km optimal
- Fully sealed and integrated internal GPRS/GSM module
- External cellphone support for GPRS/GSM (2G default, 3G optional) module for network RTK (CORS) operations
- Network RTK (via CORS) range (varies with temperature / GPRS data rate): 20-50km
- Data storage: internal flash memory 4GB (extendable up to 32GB)
- Recording Rate: 1Hz, 2Hz, 5Hz, 10Hz, 20Hz & up to 50Hz raw measurement & 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 (Getac PS336 Lite)

Platform

- TI AM3715 1GB Microprocessor
- 1GB Flash ROM
- 512MB MDDR Memory
- 256MB NAND Flash and 8GB iNAND

Operating System

- Windows Mobile 6.5

User Interface

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

I/O Interfaces

- DC, USB OTG, RS232
- Office docking port, FlexiConnTM port

Power Management

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

Environmental

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

Physical

- Dimensions(LxWxH): 178mmx89mmx30mm (7inx3.5inx1.18in)
- Weight: 0.53kg

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, SOUTH MasterPro Mobile S10.

Specifications subject to change without prior notice.

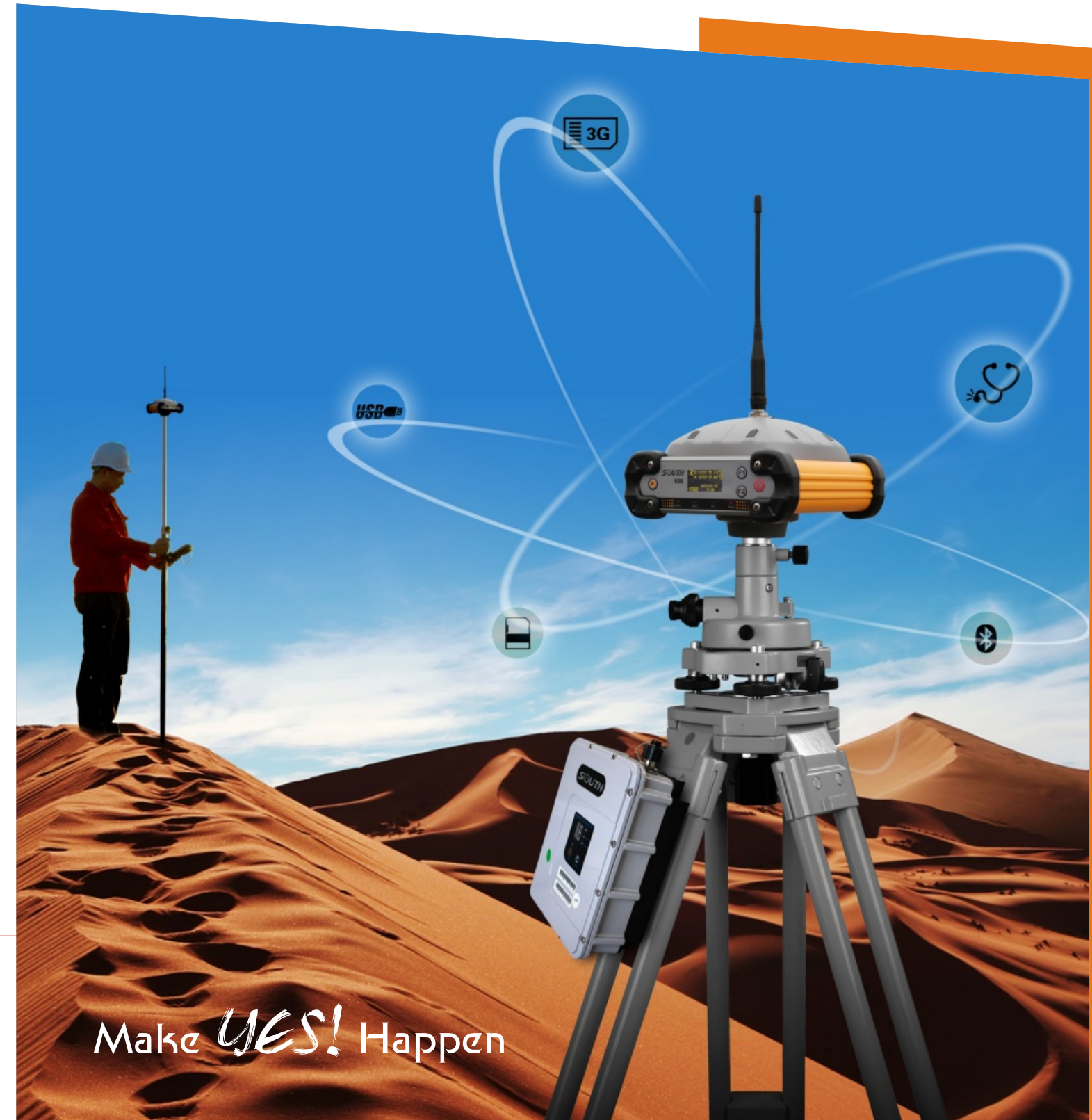


DEALER INFO

SOUTH
Target your success

S86

Integrated RTK GNSS Surveying System



SOUTH
Target your success

SOUTH SURVEYING & MAPPING INSTRUMENT CO.,LTD.

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Make YES! Happen

CONTROLLER

Optional controllers with different design, sizes and features, like SOUTH MasterPro S10 and GETAC PS336, are ready to meet diverse needs.



SOUTH MasterPro Mobile S10

Getac PS336 Lite

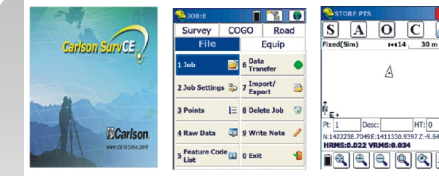
SOFTWARE

The fieldwork software includes SOUTH EGStar, Carlson SurvCE and MicroSurvey FieldGenius for a complete field-to-office solution.



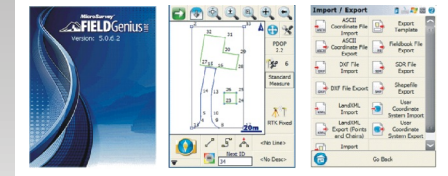
SOUTH EGStar 3.0 (Default)

This upgraded version supports all RTK survey tasks including data collection, road design, stake-out, etc. The enhanced graphic display, tab-based menu structure, standard industrial data formats, and multi-language platform help to make your work easier.



Carlson SurvCE (Optional)

To meet diverse needs, SurvCE combined advanced functionality, highly graphical and intuitive messages, ease of use, sheer capabilities of the data collection, making your RTK job more powerful.



MicroSurvey FieldGenius (Optional)

Advanced display with high definition graphic and intuitive interface, advanced roading, surfacing, slope staking, smart-points, code-free alignment and GPS support make it a good choice for the effect-oriented groups.



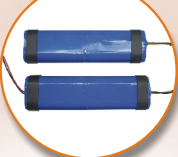
BD970 Motherboard Equipped

Market-proven Pacific Crest Maxwell 6 technology delivers demonstrated performance and outstanding efficiency.



Inbuilt GPRS/GSM Module

Such a module enables this receiver to be multifunctional. You can easily change between radio RTK mode and network RTK mode subject to practical condition. Interchangeability would definitely get you a very economical solution.



Inbuilt Double Batteries

Double batteries (8800mAh totally) that can last up to 20 hours (in full charge) are built in the rugged unit, which provides almost continuous operation in 2-3 working days. And it greatly reduces the likelihood of low power during any full-day job.



Inbuilt Radio Transmitter

The 0.5-2W (adjustable) transmitting radio module (XDL optional) equipped inside is a distinctive feature that brings you great convenience. Within the effective working range (3-5km typical, 8-10km optimal), the base and rover can be switched freely while displacing the external radio as well as the external battery is no longer necessary.

UHF Transmitting Antenna
All-direction antenna (100W, gain 7.5dBi) guarantees reliable signals in long distance.

Multi-functional receiver unit
standby, to interchange between base and rover.

Standard GDL20 Radio (default):
15/25W, 8-10km typical, 15-20km
optimal.
Mini GDL5 Radio (optional): 2/5W,
4-6km typical, 8-10km optimal.

Base Station

Advanced OLED Screen

Upgraded from the LCD screen of the former model, this receiver is installed with a more attractive one, 1.54" OLED. Mode settings and status display are easily acknowledged from the screen, yet it features largely in high brightness and low power consumption, which is just tailored to the tough fieldwork.



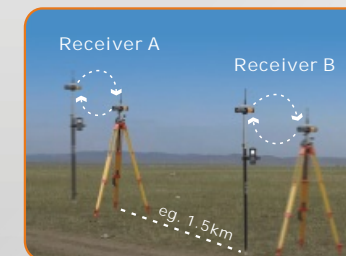
Outstanding Waterproof Capability

The compact unit is built to IP67 standard and protected from long time immersion to depth of 1m. It's ideal to work in extremely tough conditions like heavy rain, or even dropping into water for long time.



Extremely Rugged Housing

This tough receiver, well edged with hard plastics, is designed to survive a 2.5m pole drop onto the concrete, ideal for working in severe condition.



With the outstanding built-in radio transmitter feature and interchangeability, 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 that most of other regular RTK receivers cannot.

To maximize the working range, the base station is highly recommended to set up in an elevated area with little obstruction.

S86 Series Case
Quality carrying case,
rugged and durable



Rover

