SOKKIA™

GSR2300

GPS SYSTEM

Sokkia's new GSR2300 GPS System is an integrated, compact system for high accuracy post-processed and real-time GPS surveying.

The GSR2300 is a small, light-weight and affordable GPS system. But don't let its size fool you; the GSR2300 provides all the power and flexibility you need for topographic mapping, stake-out, control and photogrammetry surveys. Short observation times, even over long baselines, enable a one-person crew to survey many more points per day than are possible using traditional survey instruments.

Combining a 12-channel, dual-frequency GPS receiver, battery, removable PCMCIA card for memory storage, and an optional internal radio datalink into one small unit, the GSR2300 is a portable system that allows centimeter accurate surveying. All this in a small unit that weighs less than four pounds!

Surveying Productivity and Reliability

Use your GSR2300 for real-time kinematic or postprocessed static, rapid static and kinematic positioning. The two-button, eight-character display controls the unit; or, for even greater flexibility, you may choose to add a separate hand-held survey controller such as Sokkia's new SDR®33 GPS/RTK Controller.

For real-time kinematic surveying (RTK), the standard GSR2300 can be used in base station or rover mode. The system offers speed, reliability and productivity because of its combined Z-Tracking and advanced algorithms that provide unprecedented performance. When it comes to speed, the GSR2300 excels with instantaneous, precise centimeter positions in real-time. It even calculates positions up to 10 times a second. And the dual-frequency reception solves for ionospheric refractions, so baseline measurements are consistently accurate.

Z-Tracking improves satellite tracking under noisy electromagnetic conditions, such as near power lines, transmission towers and airports—even with short observation times for post-processed surveys. Centimeter-accurate measurements over baselines of one mile can typically be made with one-minute observations, increasing your productivity because you can make more measurements in less time.

Integration and Flexibility

The GSR2300's integration makes it extremely easy to use; all the components are in one compact package, so you don't have to worry about cumbersome connections or compatibility. The system offers significantly reduced power consumption compared to other GPS surveying receivers; you can survey up to 4.5 hours on a single internal battery! (You can also use external batteries when necessary.)

The GSR2300 offers flexible memory options with its PC-card (PCMCIA) slot for removable data storage. This allows you to configure memory from 2 to 85Mb using PCMCIA cards. And data transfer is easy; just remove the memory card and insert it into your computer. Or, connect the GSR2300 directly to your computer using one of the four RS232 serial ports.

Another convenient benefit of the GSR2300 is its optional internal spread-spectrum radio used as a data link for real-time centimeter processing (RTK). The integrated radio makes the real-time link much easier and more reliable, because there are fewer connections and less equipment to carry and maintain. Or, if you prefer, you may also use your GSR2300 with other external UHF and spread-spectrum radios.

GSR2300 Specifications

Survey Performance

Static, Rapid Static	5 mm + 1 ppm
Post-processed kinematic and Pseudo-Kinematic Survey	1 cm + 1 ppm
Real-time Differential Position	<1 m (PDOP <4)
Real-time Z Kinematic Position	
Static (rms)	Horizontal 1 cm Vertical 1.7cm
Static occupation time	2 seconds (typ.)
Sub-centimeter accuracy with longer occupation time.	
While moving (rms)	Horizontal 3cm Vertical 5cm
Azimuth	0.15 + 1.5/baseline length in km

Standard Features

- 12 Channel "all-in-view" operation
- Full wavelength carrier on L1 and L2
- Z-Tracking
- Real-time kinematic (base and rover) for cm-accuracy
- Removable PCMCIA memory card slot
- Internal, replaceable battery slot for 4.5 hr. operation
- Integrated 8-character LED display w/ 2-button control receiver interface
- Audible alarm for low power and battery power level
- Selectable update rate from 1 to 2Hz
- Real-time data outputs
- Real-time differential RTCM 2.1 input
- NMEA 0183 output
- 1 PPS timing signal
- Remote monitoring
- Session programming
- 7.5 Watt power consumption
- External 10 - 28 VDC power input
- 4 RS232 ports (115,200 baud max)

Standard Accessories

- Communications software
- Internal battery
- International dual battery charger
- RS232 data cable (Z-format)
- Receiver operating manual
- Field Quick Reference card
- Shoulder carrying strap

Receiver Communication Software

Quickly and easily configure the GSR2300 GPS receiver for a variety of surveying applications. Using the standard Windows™ interface, you can select serial port commands and set the required receiver parameters. Commander runs on Microsoft Windows™3.11, Windows™NT, and Windows™95.

Environmental

Water resistant; meets MIL-STD 810E (wind-driven rain)

Temperature Ranges

GSR2300 Receiver	Operating	-20° to +50°C
	Storage	-30° to +75°C
Antenna	Operating	-40° to +65°C
	Storage	-55° to +75°C
Humidity	95%	

Physical Characteristics

Weight	Receiver 3.75 lbs Antenna 3.75 lbs
Dimensions	3"H x 7.3"W x 8.25"D

Optional Features

- Internal spread-spectrum radio for RTK surveying
- 2, 4, 8, 10 and 20, 85Mb PCMCIA memory cards
- Real-time differential GPS RTCM output
- External frequency standard input 1 to 20 MHz in 10KHz steps
- Event marker
- Fast data output (10Hz)

Optional Accessories

- Geodetic antenna kit
- Kinematic antenna kit
- Backpack Kit
- Survey Tribrach and adapter
- Kinematic bipod and pole
- 3, 10, 30-meter antenna cable (expandable to 150 meters with line amps)
- External battery
- GSPRO2000 Post-Processing Software Package
- Choke Ring Antenna
- Aircraft antenna kit
- AC power cable
- UHF radio kit
- External spread-spectrum radio kit

Design and specifications are subject to change without notice.

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