

so kkia



Sokkia's Radian system enables you to increase productivity and accomplish relevant tasks in a familiar, intuitive environment accessing high-end technology.

The Radian system is Sokkia's newest solution for high-precision, easy-to-use GPS surveying. Its ability to display precise position data with associated accuracy information in the field—in real time—is your answer to increased efficiency without sacrificing quality in the process. The Radian system combines proven GPS technology with a powerful SDR33 data collector and innovative, user-friendly reduction software. Whether you're performing a topographic survey, setting out construction or road projects or conducting precise static surveys, Radian provides reliable and repeatable data in the most challenging locations and conditions.

Radian™ Receiver

The Radian receiver uses state-of-the-art dual-frequency technology to provide centimeter-level accuracy in real-time surveys and millimeter-level in post processed surveys. Usable as a rover or base station, the data structure is conveniently formatted for real time (RTK) and post-processing applications. Front panel operation, access to the memory card and LED status indicators enables greater flexibility and ease of use.

- Radian is a GPS dual-frequency, 12 channel receiver with the future option of L1 GPS and GLONASS
- Radian's receiver features a removable PCMCIA memory card
- The receiver offers 12 channel "all-in-view" parallel tracking
- Front panel LEDs display power, position and data collection
- SLEEP mode saves power and allows for prolonged operation

Radian™
High Accuracy GPS System

SDR® Electronic Field Book™

The SDR33 Electronic Field Book is the industry standard in data collectors and has gained recognition around the world for its ruggedness and reliability. This versatile tool is your efficient and comprehensive solution to collecting, storing, computing and transferring survey data. With additional program memory and more functionality than ever, the SDR's software can be configured to work with electronic total stations, lasers, digital levels and GPS receivers.

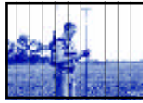
- Load the coordinate system of your choice—all are applicable to both total station and GPS/RTK data
- Roading capabilities are available for RTK survey applications
- SDR software features GPS receiver controller functionality, enabling you to set up static or kinematic data collection
- COGO functions—inverse, area, and intersections—are available for both total station and GPS systems
- GPS measurement data storage is compatible with the existing SDR measurement records. Any software that can read SDR files can also read files with both total station and GPS/RTK data

ProLINK™ Software

ProLINK™ offers a simple, accurate method of editing, reducing and transferring survey data. Serving as that vital link between the field and the office, ProLINK facilitates the exchange of information between data collectors and various CAD and mapping software applications.

Post-Processing

Increase your data collection accuracy to millimeter level by adding the optional Spectrum® Survey Suite of post-processing software. Static, rapid static and kinematic GPS data collection techniques are supported in your post-processing efforts. The suite features Spectrum Survey for processing, viewing and analyzing your GPS data. The suite also includes Spectrum Network Adjustment, which enables you to refine the data at a 95 percent confidence level. With the Spectrum Survey Suite you obtain flexible, graphical solutions for increased accuracy and reduced error.



Receiver Specifications¹

Position Accuracy²	
Standalone	
SA off	15 m CEP ⁵
SA on	40 m CEP
Differential	0.75 m CEP
	2 cm + 1 ppm (horizontal)
	3 cm + 1 ppm (vertical)
Post Processed	5 mm + 1 ppm (horizontal)
	10 mm + 1 ppm (vertical)
Time to first fix	
Cold start	70 s (typical)
Reacquisition	
Warm start	1 s L1, 10 s L2 (typical)
Data rates (Maximum)	
Measurements	10 Hz
Position	10 Hz
Time accuracy³	
SA off	50 ns RMS
SA on	250 ns RMS
Velocity accuracy	
Standalone	0.20 m/s RMS
Differential	0.03 m/s RMS
Measurement precision	
C/A code	10 cm RMS
L2 P code	40 cm RMS
L1 carrier phase	
Single channel	3 mm RMS
Differential channel	0.75 mm RMS
L2 carrier phase	
Single channel	5 mm RMS
Differential channel	4 mm RMS
Dynamics	
Acceleration	6 g
Velocity ⁴	515 m/s max.
RTK ambiguity fix	< 1 minute (typical)
Physical	
Size	233 mm x 112 mm x 57mm (9.32 in x 4.48 in x 2.28 in)
Weight	1.5 kg (3.3 lb)

Note:

1. Performance specifications are subject to GPS system characteristics and US DOD operational degradation.
2. Accuracy is dependent upon ionospheric and tropospheric conditions, satellite geometry, baseline length, occupation time, number of svcs tracked and multipath effects.
3. Time does not include biases due to antenna cables or RF delay.
4. Export licensing restricts operation to 60,000 feet maximum and 1000 nautical miles/hour maximum.
5. CEP=circular error probable

Design and specifications are subject to change without notice.

Antenna Specifications

Power Requirements	3 50 mA @ + 4.25 to + 18.0 V DC 40 mA (typical) @ 5.0 V DC
Finish	Weatherable polymer
Weight	~ 0.434 kg (0.96 lb)
Altitude	6096 m (20,000 ft)
Temperature	-40° C to +70° C (-40° F to +158° F)

SDR33 Hardware Specifications

Memory	
NVM	1mb
RAM	1mb (expandable)
Dimensions	19.8cm (L) x 8.9cm (7.8 in x 3.5 in)
Weight	0.74 kg (1.62 lb)
Environmental	Wind-driven rain and dust 1.5m (5 ft) drop to concrete
Operating temperature	-20° C to + 50° C (-4° F to + 122° F)
Humidity	Operates at 95 percent N/C
Power Source	2x standard 9-volt batteries
Length of Operation	50 hours continuous
Battery Backup	Lithium 400 hours

ProLINK™ Specifications

Minimum Hardware Configuration

Computer	Windows 95® or Windows NT® compatible computer
Memory	16 Mb of RAM
Operating Systems	Microsoft Windows 95 or higher; Windows NT Service Pack 4 or higher
Hard Disk	One hard drive with 15 Mb of available space
Display	VGA monitor and VGA adapter card
Ports	One serial port, one parallel

Recommended Hardware Configuration

Computer	Intel Pentium® class processor
Memory	24 Mb of RAM
Operating Systems	Microsoft Windows 95 or higher; Windows NT Service Pack 4 or higher
Hard Disk	One hard drive with 15 Mb of available space
Display	SVGA monitor and SVGA adapter card
Ports	One serial port, two parallel ports