



# Radian IS

## L1/L2 Integrated System

### The Radian IS System

- Fully integrated receiver, antenna, memory and batteries into one system
- SDR8100 data collector and SDR® Level 5 for Windows® CE data collection software
- Spectrum Survey Suite® V3 processing and adjustment software
- Rugged, field-ready carrying case
- PDL RTK radio data link

### Static Applications

- Boundary surveys
- Control densification
- Establish station pairs for total station survey
- Position aerial photo panels
- Position aerial towers
- Section corner surveys

### Kinematic Applications

- As-built mapping
- Construction stakeout
- Map utility lines, cables and piping
- Natural resource mapping
- Plan haul roads
- Road construction surveys



# Radian IS Receiver Specifications

<b>Position Accuracy<sup>a</sup></b>	
RTK <sup>b</sup>	1.0 cm + 1 ppm (horizontal)—2.0 cm + 1 ppm (vertical)
Static, Rapid Static <sup>c</sup>	0.5 cm + 1ppm (horizontal)—1.0 cm + 1 ppm (vertical)
Kinematic, Stop-and-Go	1.0 mm + 1 ppm (horizontal)—2.0 cm + 1.0 ppm (vertical)
Differential GPS (DGPS)	0.45m CEP
<b>Channels</b>	12 x L1 and 12 x L2 with full code and carrier
<b>Time to First Fix</b>	
Cold Start	50 sec
Signal Reacquisition	0.5 sec L1, 6 sec L2
Data Rates	10 HZ
<b>Operation</b>	Single button operation (power, receiver reset and clear memory)
<b>Display</b>	LED display status indicators
<b>Status Indicators</b>	Power, battery life, satellites tracked, RTK transmission, available memory and occupation timer
<b>Memory</b>	Internal, removable Compact-Flash memory card (8MB card provided)
<b>Integrated Antenna<sup>d</sup></b>	Internal GPS antenna ( L1/L2) with Pinwheel Technology, <1mm phase center offset and multipath rejection equivalent to choke ring antenna
<b>Physical Characters</b>	
Weight	1.6 kg (3.5 lb)
Size (max. d. x h.)	23 cm x 15 cm (9 in x 5.9 in)
<b>Environmental</b>	
Operating Temperature	-40 °C to +55 °C (-40 °F to +131 °F)
Operating Temperature with batteries	-20 °C to +55 °C (-4 °F to +131 °F)
Storage Temperature	-40 °C to +85 °C (-40 °F to +185 °F)
Water Resistance	RTCA/DO-160 Sec. 10 Cat. R, (equivalent to IPX4)
Shock	2m pole drop/1m stand alone
<b>Power Requirements</b>	
Power Input	+9 to +18 Volts DC
Logging	4 W (typical)
Sleep Mode	0.25 W
Batteries	4 x BDC46 batteries provided (1.3 Ah, 7.2 VDC, Li-ion)
Operating Time	4.5 hours for 2 internal batteries (no peripheral output)
<b>External Ports</b>	2 x R232, 1 x external power port,
<b>Standard Input/Output Formats</b>	RTCA, RTCM, CMR, NMEA-0183 out, PPS out, Mark out

a. Accuracy depends on the number of satellites used, obstructions, satellite geometry (DOP), occupation time, multipath effects, atmospheric conditions, baseline length, survey procedures and data quality

b. 1 sigma

c. 95% confidence level

d. GPS antenna calibration performed using US NGS

Design and specifications are subject to change without notice

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