

## GSR2700 ISX Specifications

Positioning <sup>1</sup>		
Static <sup>2</sup>	H: 3.0 mm + 0.5 ppm	V: 10.0 mm + 0.5 ppm
Rapid Static <sup>2</sup>	H: 5.0 mm + 1.0 ppm	V: 10.0 mm + 1.0 ppm
Kinematic, Stop-and-Go <sup>2</sup>	H: 10.0 mm + 1.0 ppm	V: 20.0 mm + 1.0 ppm
RTK <sup>3</sup>	H: 10.0 mm + 1.0 ppm	V: 20.0 mm + 1.0 ppm
DGPS <sup>4</sup>	25 cm RMS	
Stand-alone Position	1.5 m CEP Horizontal	
Latency	0.02 sec (typical)	
RTK Initialization <sup>5</sup>	3-10 sec (typical)	
Tracking Capability		
Channels	72 universal channels: 14 L1, 14 L2, 6 L5 GPS 12 L1, 12 L2 GLONASS 2 SBAS	
Time to First Fix- Cold Start	50 sec	
Warm Start	40 sec	
Hot Start	30 sec	
Signal Reacquisition	0.5 sec L1, 1.0 sec L2	
Receiver Technology	Pulse Aperture Correlator (PAC)	
Physical		
Enclosure	Magnesium alloy housing	
Weight (no internal radio)	1.6 kg	3.5 lb
Weight (with internal radio)	1.8 kg	3.9 lb
Size L x W	22.5 cm x 10.5 cm 8.9 in x 4.1 in	
Power Requirements		
Batteries	Internal batteries standard, external batteries available	
Consumption	< 5 W using internal radio	
Power Input	+9 VDC to +18 VDC	
Operating Time – RTK Base	9 hours	
Operating Time – RTK Rover	10 hours	
Operating Time – Static/DGPS	16 hours	

Environmental		
Operating Temperature	-40°C to +65°C	-40°F to +149°F
Storage Temperature	-40°C to +85°C	-40°F to +185°F
Humidity	100% condensing	
Dust and Waterproof	Complete protection against dust ingress. Protected against immersion up to 1.0 m (IP67).	
Shock <sup>6</sup>	2.0 m pole drop	
Vibration	RTCA/DO-160C; MIL-STD-202G	
Ports		
Communication <sup>7</sup>	2 x RS232, 1 x USB, 2 x Bluetooth	
Power	1 x power	
Interface		
Operation	Single-button operation for power, receiver reset and file management	
Display	LED display status indicators	
Status Indicators	Power, battery life, satellites tracked, available memory, occupation timer, communications status	
Audible Indicators <sup>8</sup>	Audible notifications for receiver status information; available in a variety of languages	
Data Recording and Message Formats		
Memory	64 MB standard, upgradeable to 2 GB	
Memory Life	500 hours at 10 second interval (6 SV)	
Standard Input/Output	RTCM, RTCM V3.0, RTCA, CMR, CMR+, NTRIP, NMEA-0183 out, PPS out, Mark in	
Data Rate	20 Hz	
Data Links		
Internal UHF	380-470 MHz (Tx/Rx) Selectable 10 mW to 1 W	
Internal GSM/GPRS	850/1800 MHz or 900/1900 MHz band	
External <sup>9</sup>	Yes. Fully supported.	
Antenna		
Type	Internal Pinwheel™ GNSS antenna	

1. 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.  
2. 95% confidence level.  
3. 1 sigma.  
4. With a suitable reference station. DGPS support includes WAAS and EGNOS.  
5. RTK initialization time based on unobstructed observing conditions, 7 satellites and a baseline length of less than 20km.  
6. Shock specifications based on receiver without cables attached.  
7. USB interface provides 3 (virtual) serial ports for a total of 5 concurrent serial connections.  
8. English, Spanish, Japanese, French, Chinese, Russian, Italian, Portuguese, Korean, General Tones.  
9. Supports most external data links with serial connection, such as Pacific Crest and SATEL UHF radios, and select Bluetooth devices, such as Bluetooth-enabled mobile phones.

SOKKIA

GSR2700 ISX



Fully Integrated High-Performance GNSS System

## SOKKIA Worldwide

SOKKIA TOPCON CO., LTD. Head Office, Japan Phone +81-46-248-7984 www.sokkia.co.jp ISO9001 Certified (JQA-0557)  
SOKKIA CORPORATION Head Office U.S.A. Phone +1-800-255-3913 www.sokkia.com  
SOKKIA CORPORATION Head Office Canada Phone +1-905-238-5810 www.sokkiacanada.com  
SOKKIA LATIN AMERICA Head Office Latin America Phone +1-913-928-2650 www.sokkialatinamerica.com  
SOKKIA B.V. Head Office Europe & other CIS countries Phone +31-10-751-9300 www.sokkia.net  
SOKKIA KOREA CO., LTD. Head Office Republic of Korea Phone +82-2-514-0491 www.sokkia.co.kr  
SOKKIA SINGAPORE PTE. LTD. Head Office South & Southeast Asia, Middle East, and Africa Phone +65-6479-3966 www.sokkia.com.sg  
SOKKIA SURVEYING INSTRUMENTS TRADING (SHANGHAI) CO., LTD. Shanghai Office, People's Republic of China Phone +86-21-63541844 www.sokkia.com.cn  
SOKKIA CO., LTD. Beijing Representative Office, People's Republic of China Phone +86-10-65056066 www.sokkia.com.cn

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# GSR2700 ISX

## Fully Integrated High-Performance GNSS System

The GSR2700 ISX is an advanced GNSS (Global Navigation Satellite System) receiver from SOKKIA that delivers it all. Multi-frequency GPS + Russian-based GLONASS satellite tracking capability. Long-range RTK positioning. Network RTK for rover surveying with no base required. Multiple *Bluetooth*® connections for cable-free surveying convenience. And it is the first and only receiver of its kind to offer voice messages for audible status notification in the field. We think you will agree – the GSR2700 ISX is absolutely our best GPS system yet.



## GPS + GLONASS

## Our best GPS system yet? Безумно! (Absolutely!)



### GSR2700 ISX Features

#### Fully integrated, rugged design.

- High-performance, multi-frequency GNSS receiver and antenna, *Bluetooth* wireless technology, memory, batteries and internal data link in one compact enclosure



#### GPS + GLONASS satellite tracking capability.

- 72 universal GNSS channels support all GPS and GLONASS signals
- Better satellite coverage means increased efficiency on the job
- Improved positioning in urban areas and in areas with dense tree coverage
- SBAS tracking - standard



#### AdVance™ RTK.

- Initializes within seconds for consistent centimeter-level positioning
- Extended baseline range of 40 km or more with superior accuracy and reliability
- Delivers significant performance in the most challenging environments, including urban areas and areas with dense tree foliage.



#### Equipped for GPS modernization.

- Supports GPS L2C and L5 and GLONASS L1/L2 signals



#### Network RTK Ready.

- Compatible with GNSS reference networks for centimeter-level RTK positioning
- Supports GSM dial-up connections and NTRIP GPRS connections
- Allows stand-alone RTK rover positioning - no base required

#### Easy "One Button" base setup.

- Simply mount the receiver on a tripod, press the power button, and begin transmitting RTK base corrections and collecting raw data in seconds
- No cables, external data link or data collector required

#### Convenient rover setup.

- Quick and easy setup requires only a range pole, data collector with bracket and the GSR2700 ISX receiver – no cables necessary!

#### Multiple *Bluetooth* connectivity.

- Connect to multiple *Bluetooth* wireless peripherals for cable-free convenience, outstanding range and unmatched reliability

#### Voice messages.

- The only receiver of its kind to provide audible status notification in the field
- Available in English, French, Spanish, Japanese, Italian, Russian, Portuguese, Korean, Chinese and generic tones

#### Superior LED display panel.

- Easy-to-read, informative LED display panel provides all the information you need to complete the job quickly and accurately
- Provides status indicators for satellite tracking, battery life, remaining memory, occupation time and communications

#### Environmentally sound.

- The first GNSS receiver to offer complete compliance with the European Union's RoHS directive



### The GSR2700 ISX System

- Multi-frequency GNSS receiver and antenna, *Bluetooth* wireless technology, memory, batteries and internal data link in one compact enclosure
- Allegro CX™ data collection hardware
- SDR+ data collection software
- Spectrum Survey Suite post-processing software
- Rugged, field-ready carrying case

### Data Collection



#### SDR+ data collection software.

- Use SDR+ data collection software and Allegro CX™ with SOKKIA GPS instruments, conventional and motorized Total Stations all on the same job
- Easy-to use, icon-based interface
- Customize the screen to display your most commonly used functions
- Standard Windows® pull down menus for ease of use with minimal training required
  - Fully live editable database
  - Swap between coordinate systems with the push of a button
  - Perform surveys in one coordinate system and download in any other system as required, including local systems
  - Edit errors in the field, such as Target or Antenna height errors, "on the go" and get immediate recalculation of coordinates – no need to edit after the survey
  - Use control points from any coordinate system – transformation into your current coordinate system is instantaneous
  - When working on the edge of a zone, download data in both zones as required
  - Perform ETS surveys and assign/change backsights at your convenience

#### Spectrum Survey Suite post-processing software.

(optional software / not included)

- Complete Windows®-based software package
- Supports commonly used methods of survey data collection, including static, rapid-static, kinematic and stop-and-go
- Provides all the tools you need to manage your project – from planning to processing, adjusting and analyzing GPS surveying data



(Tribrach and tribrach adapter included with base kit only.)

#### Ready for Galileo.

Our technology partner is on the cutting edge of GNSS technology. They are also the first non-European company to be accepted as a Full Member of Galileo Services.

When Galileo is ready, SOKKIA will be too.

### The SOKKIA Difference

SOKKIA has been developing advanced products for surveying professionals around the world since 1920. We are very proud of our **heritage**. It is our mission to provide you with products of the highest **quality** so you can do the job right the first time – every time. And we **support** our products long after the sale is complete. With that kind of **value**, it is no wonder surveyors everywhere count on SOKKIA for their most important projects.

