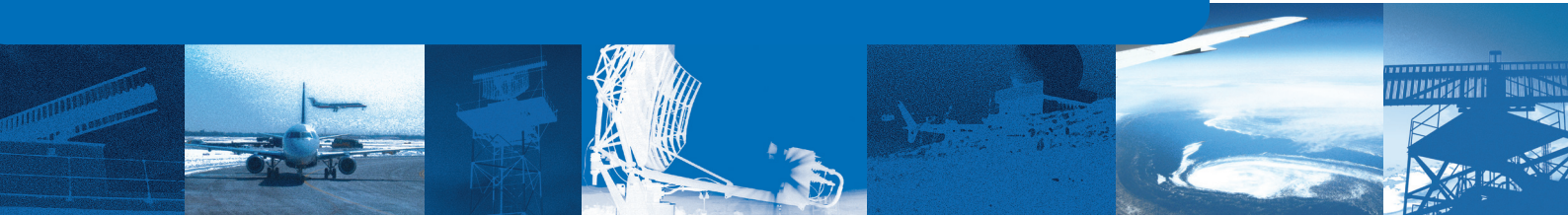


# RADAR GYROSCOPE AND INCLINOMETER RGI1193 RADAR TIMING INTERFACE RTI966



## Measuring the Mechanical Quality of Antenna Systems

The Radar Gyroscope-and-Inclinometer (RGI1193) and the Radar Timing Interface (RTI966) allow you to evaluate the mechanical and structural design of the antenna support and tower under wind-loads, temperature, etc. The RGI1193 basically has 2 co-related functions, measuring:

- *the quality of the encoder system*
- *the levelling of the platform*

The RGI1193 measures the angular velocity and planar angle of the antenna. For this purpose the device is mounted on the rotating part of the (SSR or PSR) antenna and the data is logged in the RGI1193's internal memory. Meanwhile the RTI966 will record the ACP/ARP timing signals of the encoder under test. The rotational information data combined with the encoder signal provide essential information on encoder accuracy and platform leveling. Note that deviation on the instantaneous azimuth (= encoder error) is measured, because biases (e.g. wind-load) are simultaneously recorded at encoder and antenna level. These two signals plus their difference are shown in the software.

Antenna start-up and stop are also recorded and provide information about the mechanical stiffness of the radar tower.

The analysis program allows the user to view the recorded gyro and ACP measurements on a scan by scan basis over multiple revolutions.



**RADAR GYROSCOPE AND INCLINOMETER  
RGI1193**

**INTERFACES-EXTERNAL CONNECTORS**

USB connector (Data and charging)  
Charge LED  
Recording LED  
WiFi antenna (RP-SMA)

**TECHNICAL SPECIFICATIONS**

*Gyro Module*

Max. Angular Rate	Configurable; ±60°/s ±120°/s ±240°/s ±720°/s
Resolution	16-bit
Self calibrated using radars North and time reference	

*Inclino Module*

Measuring range	±15°
Sensitivity	0.01°

*Battery*

Battery Type	Li-on
Capacity	2350mAh
Nominal Voltage	3.6V
Watt-hour rating	8Wh (acc. To UN38.3)
Weight	43g

Built in Safety Unit (over voltage, under voltage, current limit)

System runtime – WiFi disabled	15 hours
System runtime – WiFi enabled	10 hours

*WiFi*

Type	802.11bgn
Mode	Access Point
Output Power	17dBm

*Recording*

Sample Rate	Configurable up to 1000Hz, default 200Hz
Time	10 hours (at 200Hz)

**GENERAL SPECIFICATIONS**

Charge Temperature	10°C to 45°C
Operating Temperature	-20°C to 60°C
Storage Temperature	-40°C to 85°C
Size	120x120x90 mm
Weight	1240g

**RADAR TIMING INTERFACE  
RTI966**

**INTERFACES-EXTERNAL CONNECTORS**

In/Out	DB9 male - Differential Timing input
In	DB15HD female - Single Ended Timing input
RB1/2	2x DB15HD female - Timing Signals and Power
GPS	DB9 female - GPS interface for timestamping
USB	USB2.0 B female (480Mbit/s high speed)

**TECHNICAL SPECIFICATIONS**

*Differential Timing Input*

RS422/RS232  
4 inputs or 4 outputs or 2 in- and 2 outputs

*Single Ended Timing Input*

0...6 Volt, 2kΩ  
Selectable trigger level, 4 inputs

*RASS Bus:RB1/2*

Timing signals	TTL, 2kΩ
Power in/out	200mA, 15V
Connects to power supply or other RASS-M device	

**GENERAL SPECIFICATIONS**

Dimensions WxHxD (mm)	125x48x245
Weight	1.1kg
Operating temperature	0°C...+ 40 °C



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