DATA SHEET

Supported bands	Dual-band monitoring: - GPS L1 / Galileo E1 - Glonass L1 - GPS L5 / Galileo E5a - GPS L2 - Galileo E5b
Bandwidth	Up to 40MHz Typically 20MHz
Spectrum resolution	Configurable Recommended 600Hz
Supported standards	ICAO Annex 10 & doc. 8071 (recommendations for permanent monitoring of interferences)
Operating modes	Monitoring Network: - real-time detection - post-processing analyses
Supported analyses	Interference characterization: - Continuous Wave (CW) - Band Limited Noise Like - Pulsed Interferences
Outputs	Interference Power Central frequency Bandwidth Power Spectral Density (PSD) Timetag
Reports	Daily/Weekly reports PDF and HTML

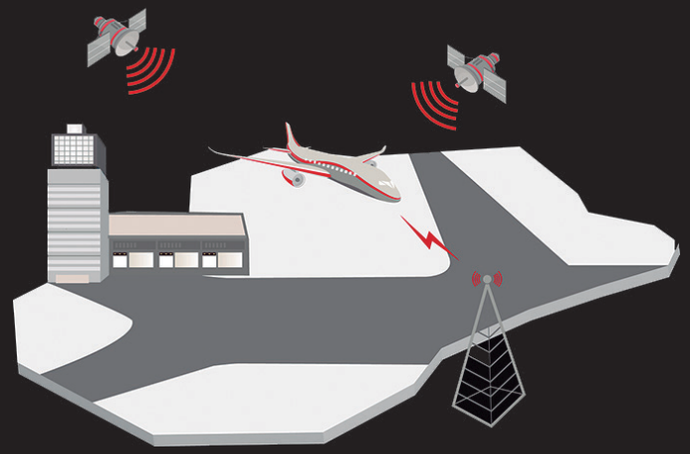
CHECK ALSO

srx-10 info website:
http://www.gmv.com/en/Products/srx-10i/

CONTACT

srx-10i@gmv.com

For more info:
http://www.gmv.com/en/Products/srx-10i/



srx-10i

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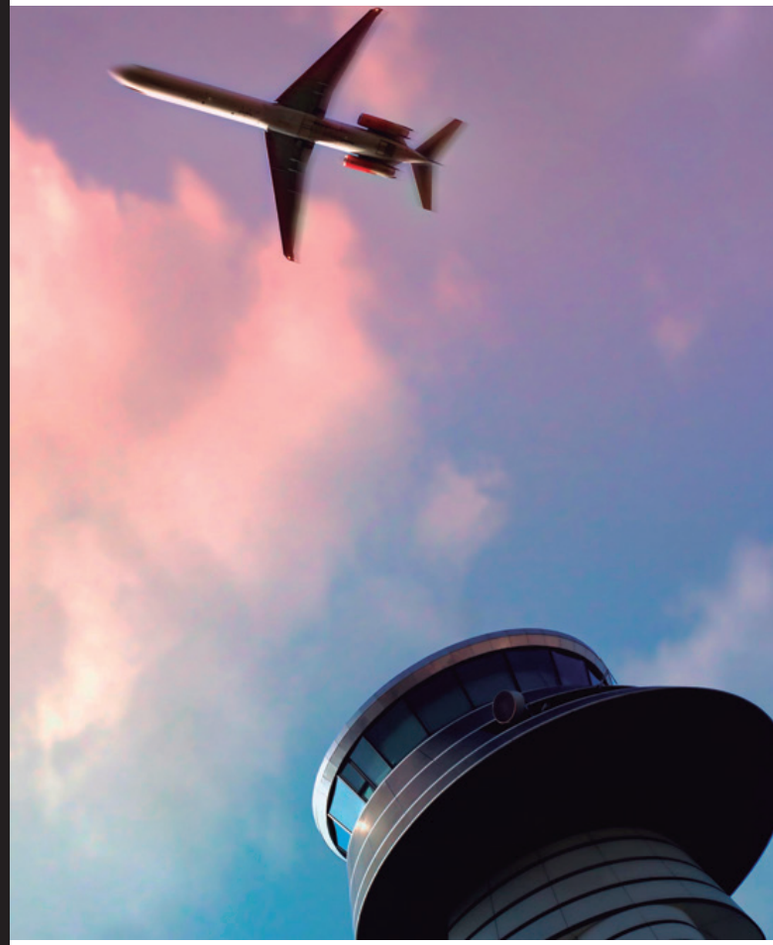
REAL TIME DUAL-BAND MONITORING SYSTEM

GNSS INTERFERENCE DETECTION



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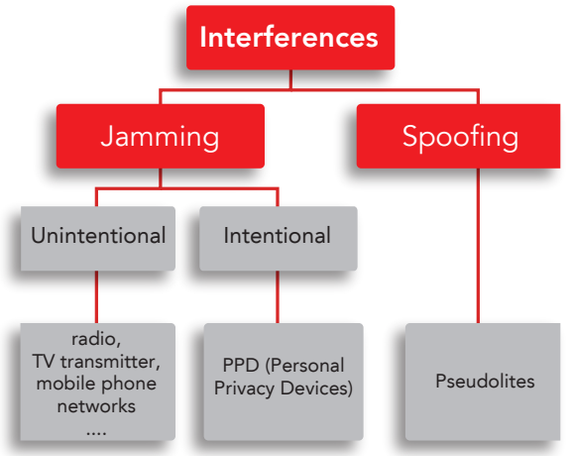
MOTIVATION

GNSS signal is very vulnerable to Radio Frequency Interferences (RFI), which may significantly degrade or disrupt the GNSS-based services.

"GNSS signals from satellites are very weak at the receiver antenna, so are vulnerable..."ICAO Doc 9849



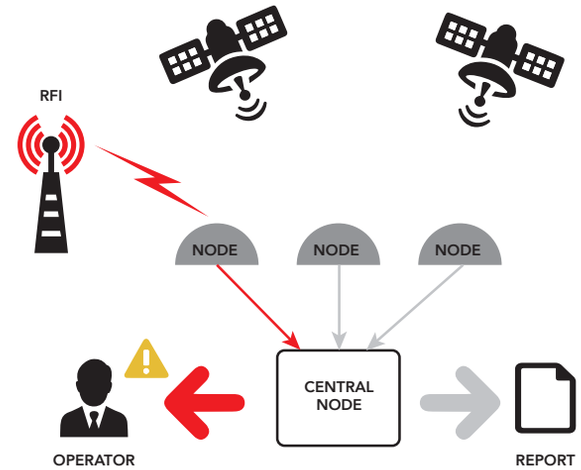
WHAT IS SRX-10i?

srx-10i system enables a cost-effetive automatic real-time detection of interferences in multiple GNSS bands, in compliance with ICAO specifications.

HOW DOES SRX-10i WORK?

Permanent RFI Monitoring Network

srx-10i can be deployed standalone or be easily integrated in already existing GNSS monitoring networks (e.g. GPS or SBAS monitoring systems) to form a permanent RFI Monitoring Network.
This RFI Monitoring Network enables an early detection, ensuring an interference-free area to provide any service based on GNSS without disruption.



System Architecture

srx-10i is a turn-key modular system, and comprises the following elements:

- Network of RFI Monitoring Nodes:
  - Front-end HW and real-time SW.
- Central Node of Analyses:
  - Real-time alerts generation.
  - RFI Analysis.
  - Post-processing and reports generation.

Users

srx-10i fulfils the need of spectrum monitoring for GPS, Galileo and GLONASS.

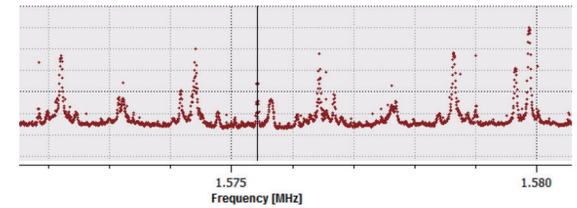
Sectors relying on GNSS Positioning and Timing:

- Aviation: specially ANSPs publishing RNP and/or Precision approaches based on GNSS.
- Telecommunications.
- Transport.
- Energy.

srx-10i has been deployed in 11 Spanish airports by ENAIRE (Spanish ANSP).

MAIN FEATURES

- Turnkey Modular System.
- Real-Time, Standalone & Autonomous data processing.
- Simultaneous dual-band monitoring.
- Continuous interference monitoring (24/7 every second).
- Detection using ICAO Annex 10 thresholds or using configurable threshold mask.
- Local recording of raw data for further analyses.



Interference Analyses

srx-10i system includes a built-in analysis tool that allows the operator to plot the spectrum of detected interferences, and to obtain quantitative information:

- Power Spectral Density (PSD)
- Interference characteristics:
  - Central frequency.
  - Bandwidth.
  - Power.
  - Timetag.
- Comparison and correlation of multiple interferences spectrums.

Reports

Automatic generation of periodic reports:

- Summary of interferences detected.
- Node where an interference occurred.
- Features of the interferences.

SANT: 2016-04-28 15:00:01

Plotted Station Report

Station	Frequency [Mhz]	Max. Interference Power [dBm]	BandWidth [Khz]	Total power [dBm]	Date/Time	Associated Files
SANT	1577.57	-100.5	4.73	-96.8	2016-04-28 from 15:00:01 to 15:00:05	C:\DINTEL_CAF\outputFiles\plot_2016_214_15_1_17.pdf C:\DINTEL_CAF\outputFiles\plot_2016_214_15_1_17.png

Peaks values

Frequency [Mhz]	Peak Power [dBm]	BandWidth [Khz]
1577.57	-100.5	4.73
1573.27	-100.7	4.73
1581.86	-109.1	10.19
1568.98	-109.9	10.19
1567.64	-115.7	12.32
1579.71	-116.4	6.18
1583.2	-116.6	12.33
1571.13	-116.8	6.18
1569.78	-117.6	14.59