

# Monitoring System 1030/1090 MHz



# SIMON

## Overview

- SIMON (SSR Interrogations and Replies MONitor) – designed for monitoring of activity in 1030/1090 MHz band
- Interrogations and replies together with anomalies are continuously evaluated and results stored for future off-line inspections
- Dedicated system developed for ATC safety
- SIMON Ground Station can serve as a generic basic building element of international network for acquired data sharing

## Main features

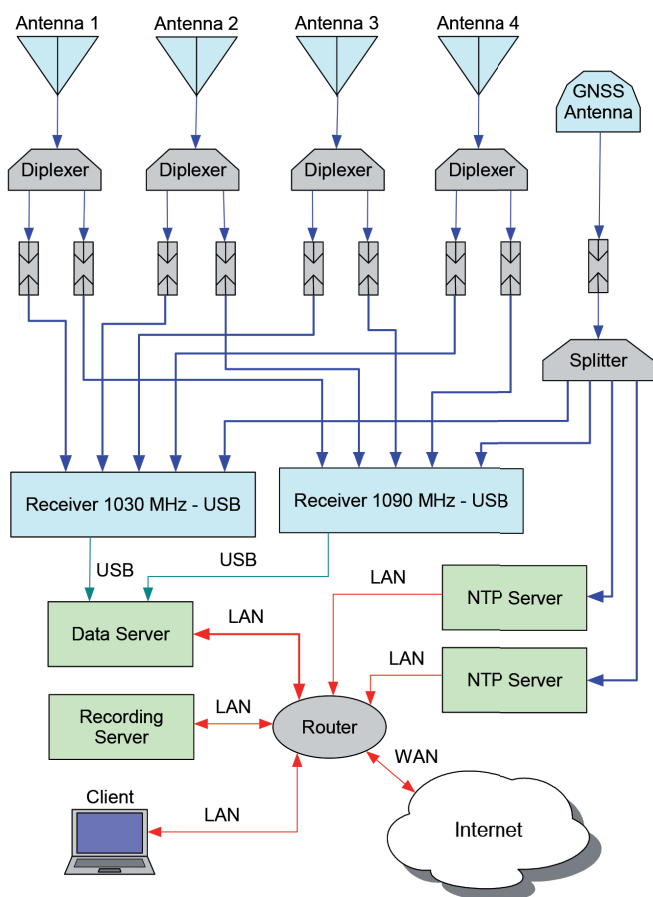
- Online monitoring the 1030/1090 MHz interrogations and replies from SSR, MLAT, ADS-B, ACAS and IFF using ground stations
- Detecting and evaluating of any abnormal situation
- Identification and localization of sources polluting RF band
- Provision of reports, trend analysis and alerts

## FGS Architecture

- SIMON Fixed Ground Station (FGS) consists of the following structurally separated elements:
  - Antenna subsystem
    - 1030/1090 MHz 90° sector antennas, GNSS antenna, signal splitters
  - Receiving units
    - 1030 MHz Receiving unit
    - 1090 MHz Receiving unit
  - Data processing server & clients
    - COTS computers with data processing software and graphical user interface

## FGS Key technical parameters

Instrumental range	256 NM
Frequency	1030/1090 MHz
Sensitivity	min. -92 dBm
Dynamic range	min. 90 dB
Bandwidth	10 MHz
Power consumption	25 W
Operating temperature	0 to +40 °C



Block diagram of FGS (Fixed Ground Station)



