



# GPS/Galileo RF Front-End IC

## Features

- Fully integrated Galileo/GPS L1/E5a Receiver
- VCC = 1.5V with 3.3V digital interface, Low power consumption
- Pure CMOS technology
- Very low BOM
- All-purpose applications, works with active and passive antennas
- 2 bit ADC on chip
- Supports Ref Clocks from 13-70 MHz in L1 mode and 62.7-66.188 MHz in E5a mode
- Operating temperature range: -40 – +85 °C

## General Description

IMST's Galileo/GPS RF-IC receiver solution is a fully integrated, low cost satellite navigation Front-end capable of receiving GPS L1 as well as Galileo L1/E5a OS signals. Nearly all the external components are integrated, except an SAW filter, a reference clock source

(TCXO) and a simple 3-element PLL loop filter.

Designed as a general purpose device, the Front-end works both with active and passive antennas and can be adopted for the most important applications like car navigation and location based services.

The receiver is designed to have a nominal power consumption below 40mW and a supply voltage of 1.5V.

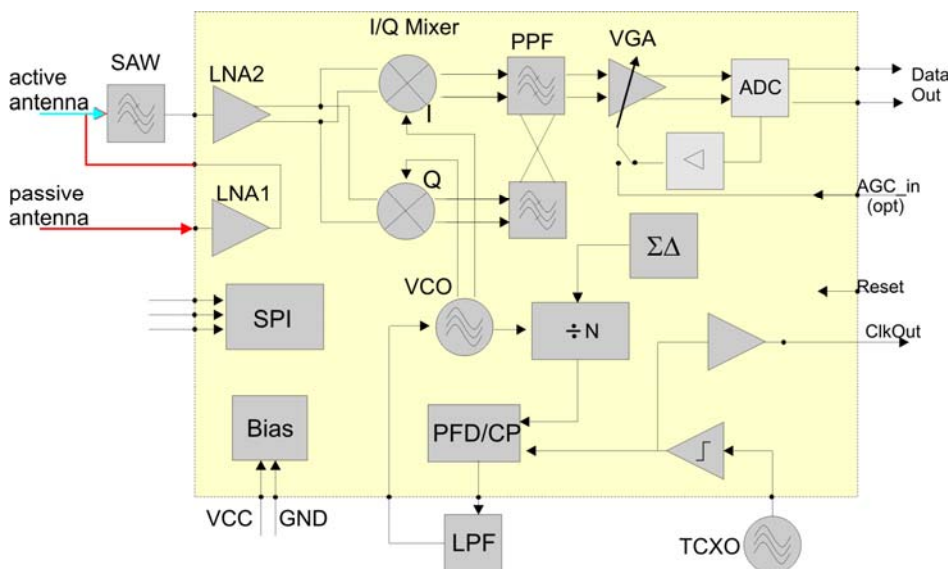
The receiver is using a Low-IF architecture and a poly phase filter (PPF) for image suppression. The signal is sampled by an 2 Bit ADC. An internal AGC controls the input level at the ADC.

The synthesizer architecture is based on a  $\Delta\Sigma$  PLL in order to support different clock sources.

The receiver front-end is controlled by an SPI controller interface.

The radio Front-end is designed to work with a modern 1.5V CMOS technology.

Package Type: QFN 32 EP



Block diagram