Roos Instruments

RI8587 - 100 kHz to 20 GHz Receiver

Cassini Instrument Profile

Applications

- Radio Systems
- MMICs
- Multi-band Modules
- RFICs

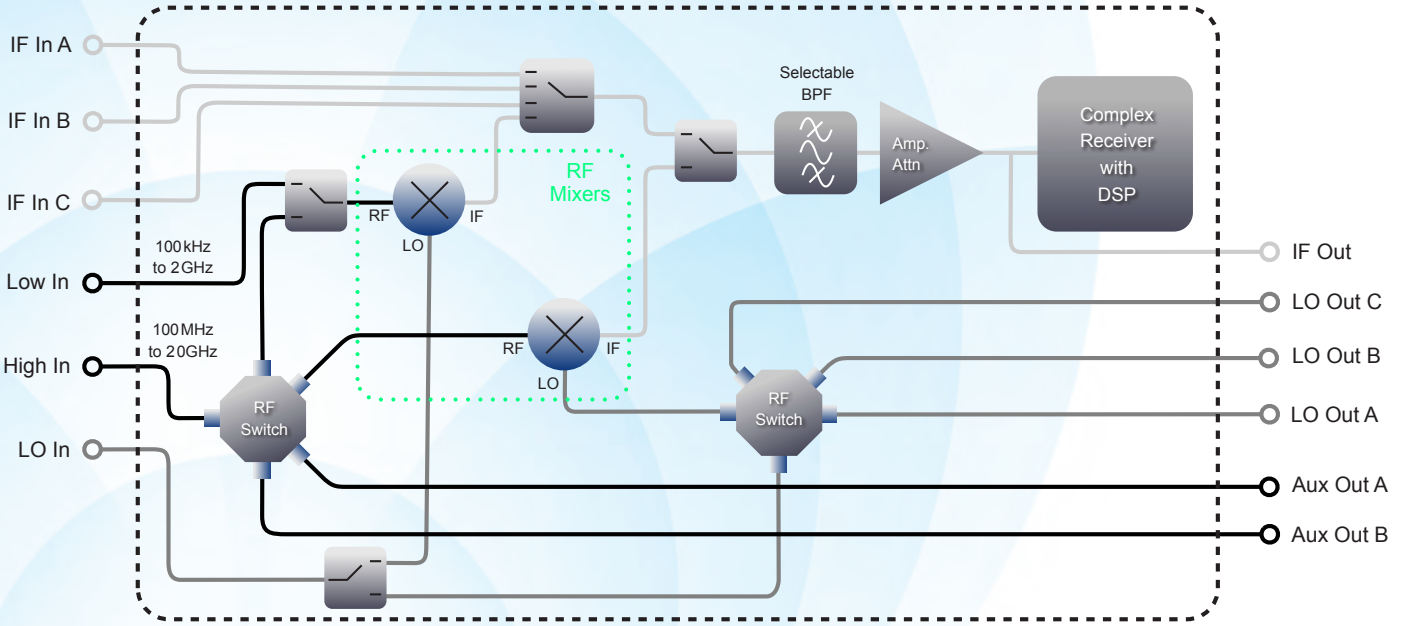
Overview

The RI8587 Receiver provides a versatile RF front-end, frequency down converter, and baseband DSP for applications in the 100 kHz to 20 GHz range. Incorporating our innovative SyRF Core technology, the RI8587 features multiple RF ports that interface with Cassini's Testset instruments to extend the frequency range of the front-end up to 90 GHz while providing a complex synchrodyne back-end for precision vector measurements. High-linearity mixers and a selectable filter bank enables up to 7 MHz of instantaneous bandwidth and signal detection down to -100 dBm. Behind dual high-speed ADCs is an embedded FPGA with real-time DSP for vector/spectral analysis, digital filtering, demodulation, and user-defined signal processing.

Key Features

- *Measure Absolute Power, Phase, Noise Figure, S-Parameters*
- *>100 dB of Dynamic Range from 100 kHz to 20 GHz*
- *Real-time DSP for PAR, ACPR, FFT, & EVM*
- *2 RF Inputs, 3 Baseband Inputs, Reference LO Input*

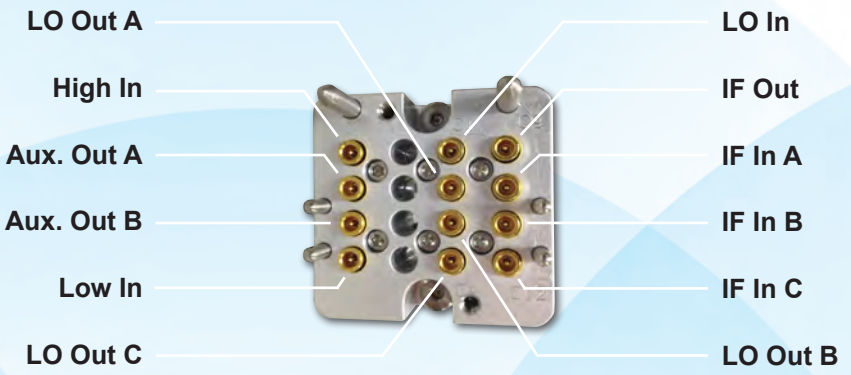
Block Diagram



Performance

RF Front-End	
Frequency Range	100 kHz to 20 GHz
Power Range	-100 dBm to +10 dBm
Frequency Lock	~100 µs
Measure	
Analog Bandwidth	7 kHz, 200 kHz, 7 MHz (selectable)
Noise Floor	-155 dBm/Hz @ 1 GHz (typical)
Sample Rate	80 Msps

Inputs/Outputs



Cassini Test Systems

A versatile, high-speed, automated test solution for analog, mixed-signal, RF, and millimeter-wave devices.

Cassini provides a modular base architecture that is fully configurable via Test Instrument Modules (TIMs) to meet the needs of any IC, wafer, or module test requirement.

Each TIM contains internally-cooled, RF-shielded measurement instrumentation, signal distribution, and blind mate interfacing to provide targeted test resources and integrate to build up a complete production test platform.

Combined with Roos Instruments' integrated test software, Cassini can be configured to any application for maximum performance, true low cost of test, and the industry's fastest test times.

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