

Cassini Instrument Profile

Applications

- Radio Systems
- MMICs

- Multi-Band Modules
- RFICs

Overview

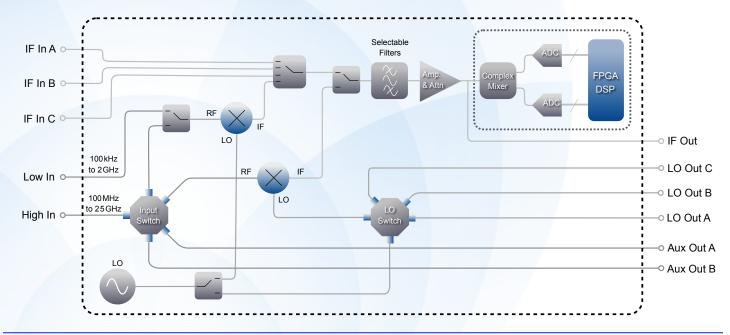
The RI8596 Receiver provides a versatile RF front-end, integrated LO, frequency down conversion, and baseband DSP for applications in the 100kHz to 25GHz range. Incorporating our innovative SyRF Core technology, the RI8596 features multiple RF ports that interface with Cassini's Test Set instruments to extend the measurement range up to 90GHz with precision vector calibration and error correction. High-linearity mixers and a selectable analog filter bank enable up to 5MHz of instantaneous bandwidth and signal detection down to -100dBm. 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 25 MHz to 25 GHz
- Real-time DSP for PAR, ACPR, FFT, & EVM
- 2 RF Inputs, 3 Baseband Inputs, 3 LO Outputs

Block Diagram





RI8596 - 100 kHz to 25 GHz Receiver

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Performance

RF	
Frequency Range	100 kHz to 25 GHz
Power Range	-100 dBm to +10 dBm
Frequency Lock	~100 µs
Baseband	
Analog Bandwidth Noise Floor	7 kHz, 200 kHz, 5MHz (selectable)
Sample Rate	-155 dBm/Hz @ 1GHz (typical) 80Msps
	801WSPS
Inputs/Outputs	
LO Out A	
High In	IF Out
Aux. Out A	IF In A
Aux. Out B	IF In B
Aux. Out C	IF In C
LO Out C	LO Out B
Cassini Test Systems	
A versatile, high-speed, automated test solution for an millimeter-wave devices.	log, mixed-signal, RF, and
Cassini provides a modular base architecture that is Instrument Modules (TIMs) to meet the needs of any requirement.	
Each TIM contains internally-cooled, RF-shielded me signal distribution, and blind mate interfacing to provid integrate to build up a complete production test platform	targeted test resources and
Combined with Roos Instruments' integrated test softwa to any application for maximum performance, true low c fastest test times.	
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