## RI8508 - 100kHz to 6GHz Source

Cassini Instrument Profile

### **Applications**

- Precision Timebases
- · Microwave References

PLLs

VCOs

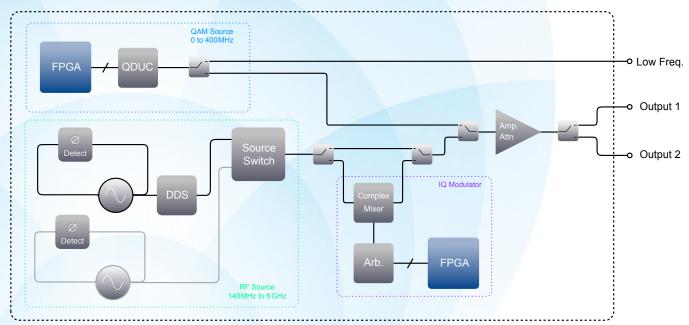
### Overview

The RI8508B RF Source provides two dedicated frequency bands of modulated signal generation for applications in the 100 kHz - 400 MHz band. The instrument features a precision Quadrature Digital Upconverter (QDUC) that delivers over 100 dB of dynamic range for high-perfromance I/Q modulation. The 400 MHz to 6 GHz band supports CW tone generation, frequency hopping, and I/Q modulation up to 80 Msps with 14 bits of precision. With built in RF switching and calibrated signal paths, the RI8508 delivers power-corrected signals to the device pin and seamless modulation across the entire 100 kHz - 6 GHz band through two output ports and a dedicated baseband output for maximum application flexibility.



- 100 dB Dynamic Signal Range
- 10 Msample/Symbol Rate Modulation
- Microsecond Frequency Hopping & Settling
- Modulation Pattern Import Tools

# **Block Diagram**







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#### **Performance**

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Frequency Range 140MHz to 6GHz
Power Range -100dBm to +14dBm / +20dBm (CW)

#### **QAM Source**

Frequency Range 100 kHz to 400 MHz
Power Range -100 dBm to +10 dBm
Clock Rate 80 MHz

#### IQ Modulator

Modulation Rate 80Msps
Analog Bandwidth 5MHz

### Inputs/Outputs



Output 2

**Output 1** 

Low Frequency: QAM Source

## **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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