Raven Subsystem

The benchmark RF Test Solution for 5G, Ku-band and Beyond

Productivity

- Designed to deliver high performance RF test capability for the complete spectrum of connectivity and mobility standards while offering new levels of manufacturing test efficiencies
- Extensive suite of new capabilities designed to provide the lowest cost of test without any compromise in RF test performance
- Innovative flexible architecture enables lower priced configurations without trade off in test coverage or test time

Key Features

- Configurable with 8 Universal RF ports per brick, up to 2 bricks per system
- 14.75 GHz RF modulable source and 14.75 GHz RF measure
- <1 ms RF settling time on level and frequency change
- Quad site and octal site RF source with single and dual synthesizer respectively
- Up to 4 receiver paths per brick with an analog bandwidth exceeding 1 GHz for quad site parallel RF measurements
- Industry-leading source muxing flexibility
- Latest RF synthesizer technology

Automotive

Consumer

Flat Panel Display

IoT/IoV & Optoelectronics

Industrial & Medical

Wireless/RF

Mobility

- **Fully compatible software with DragonRF Subsystem**
- **Designed to coexist with DragonRF Subsystem**
- **Compact footprint RF generators**
- **Scalable configuration extends RF performance into satellite communications band**

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Devices and Applications

Raven is designed to support the latest wireless communication standards whether it's an RF Power Amplifier or a RF SOC application. Leveraging the extensive Cohu wireless modulation and demodulation library, DragonRF supports the complete set of tools to test cellular GSM, Edge, GPRS, HSDPA, HSUPA, CDMA, LTE and connectivity devices including BT, BT EDR, BT4.0, GPS, 802.11 a/b/g/n/ac/p and other emerging standards.

Raven provides >1 GHz IF bandwidth enabling whole spectrum capture by receiver to support ever increasing bandwidth in the newer wireless communication standards. Coming the leading SNR performance and optimized algorithm, Raven achieves the fastest and accurate EVM measurement to test the comprehensive performance of the most complicated devices with lowest test time.

Universal Port with Configuration Flexibility

Raven is designed with universal vector port architecture that delivers the required level of performance with flexible configuration to match the customers' device testing needs. Each Raven can be configured with 8 or 16 universal vector ports.

Industry-leading Settling Times

DragonRF uses the latest technology in RF synthesizer and RF control circuitry in its design.The R&S SGS100 RF source is used as the synthesizer in Raven, which utilizes the latest synthesizer architecture and software.

Combined with all CMOS RF paths in the new DragonRF module, DragonRF provides fast level and frequency settling time to 0.05 dB less than 1ms, greatly enhancing the test throughput, and lowering the cost of test.

RF Auto Calibration

Raven fully automated calibration process allow greater tester up-time and reduces operator induced error and variations. The Auto Calibration kit offers a single self-contained calibration unit that provides:

- Calibration of RF source, scalar measure, noise, and S-parameter measure
- Internal R&S power sensors
- NIST traceable integrated RF power meter and noise source
- Factory calibrated RF Autocal fixture

Multisite Software

The Unison software environment provides users with fast single site program development, instantaneous multi-site testing capability, and test IP that can be transferred from device to device. Unison features cutting-edge productivity tools that accelerate development and debug time, shortening the time to high volume production for current and next generation products.

Better Yield with Dynamic Range Enhancer

Every RF receiver is equipped with real time Dynamic Range Enhancer (DRE) with embedded DSP capability. With DRE enabled, DragonRF provides more than 90 dB dynamic range, which is critical for RF parameters, especially ACPR measurement. This enables faster test time, faster correlation between ATE and bench-top instrument, and improved yield with extra margins above the noise floor.

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