![Signal Hound logo]

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Signal Hound introduces VITA 49 functionality in the SM200A Spectrum Analyzer API

The new VRT functions in the SM200A API extend the power of the SM200A to the acquisition of VITA 49 Signal Data and Context packets for interpretation and further processing.

LA CENTER, Wash.—May 16th, 2018— Signal Hound, a developer of highly optimized solutions for RF signal test and measurement, has announced the addition of VITA 49 functionality to its SM200A 20 GHz headless RF spectrum analyzer and monitoring receiver.

Signal Hound's SM200A 20 GHz spectrum analyzer now supports VITA 49 functionality

The VME bus International Trade Association (VITA) 49 standard defines a packet-based exchange protocol for RF devices such as spectrum analyzers and SDR receivers. The standard is intended to increase interoperability within RF systems by providing a communications format that is hardware and supplier-independent. Typical applications for VITA 49 are spectral monitoring and scanning, signal intelligence, radar, electronic warfare, direction finding and geo-location.

The latest version of this standard, VITA 49.2, defines the Signal Data and Context packet types. Signal Data packets consist of variable-sized blocks of I/Q data, along with a 32-bit trailer to convey critical information about

the state of the receiver at the time the samples were obtained, such as timestamps and whether the system was being overdriven. The Context packets convey detailed information about the state and settings of the device at a given time. The Context Section is of variable size, depending on how many of the available fields are used.

The SM200A VRT functionality offers several advantages:

- Greater context for signal data including timestamps and system state change indicators
- Status indicators for calibration to external time reference, stability of time reference, and invalid data due to sample loss or over-range samples
- Knowledge of system settings including RF reference frequency, bandwidth, reference level, attenuation, sample rate, temperature, device identity, and GPS geolocation
- Increased compatibility with a wide range of RF applications

The SM200A API's capabilities include spectrum sweeping, setting record-on-event triggers, real-time analysis, I/Q data streaming, and now VITA 49 compatibility. Using a C interface, the functions are easily callable from popular language platforms such as C/C++, C#, Python, Java, and MATLAB. The SM200A API Manual and VITA 49 User Guide provide full documentation of these features, and the SDK includes in-depth examples of usage in compilable C++ code, including a demo parser.

"The SM200A plays a critical role in diverse systems—we want to make sure that, no matter the architecture of that system, the SM200A speaks the language," says Roger Rush, the Signal Hound software engineer responsible for the new program feature. Using the new VRT functions in the SM200A API, VITA 49 Signal Data packets and Context packets help generalize data for integration in complex RF systems. This complements the SM200A hardware features including 100 kHz to 20 GHz span, 160 MHz real-time bandwidth, 110 dB dynamic range, 1 THz/s sustained sweep speed and low phase noise, all in a cost-effective package.

Availability

The SM200A VRT functionality is available immediately, at no cost, as part of the Signal Hound software development kit as a download from the Signal Hound Website at https://signalhound.com/software/signal-hound-software-development-kit-sdk/.

About Signal Hound

Signal Hound is a manufacturer of affordable, high-performance test equipment based in La Center, WA. Starting out as Test Equipment Plus in 1996 and offering used test equipment and repair services, Signal Hound expanded its offerings in 2010 with the introduction of the USB-SA44 USB-powered spectrum analyzer. Signal Hound has since added several award-winning RF spectrum analyzers and signal generators, now sold globally.