Preliminary Product Sheet

ERISYS

RSN-500r

Real-time RF Sensor Node

The RSN-500r contains a high-performance, RSA518 Real-Time Tektronix spectrum analyzer combined with a powerful embedded computer designed for the toughest environments. The RSN-500r can continuously monitor RF spectrum and record spectral events for archiving and analysis. A powerful Intel multi-core embedded computer allows for sophisticated processing to be performed at the RF sensor node which dramatically reduces the traffic transmitted over the network.

Key Features

- Tektronix RSA518 RF front end
- Intel NUC7i5 embedded computer
- Fan-less ruggedized Enclosure
- Designed to meet IP65 specification
- GPS timing and position data logging
- Multiple RSN-500 spectrum monitoring nodes can be networked together using SpectrumVu® Server software

Input/Output Connectors

- Two USB 3.0 ports
- HDMI video port
- Ethernet GigE port
- 12-volt power connector
- SMA connectors for GPS & RF antenna

Key Performance Specs – RF Sensor

- 9 kHz to 18 GHz frequency range
- +40 to -170 dBm measurement range
- Fast sweeps over entire 18 GHz span
- Acquisition bandwidth of 40 MHz
- Amplitude accuracy ±1.0 dB Typical (-10 °C to 55°C) from 9 kHz - < 18 GHz
- ADC sample rate 112 Ms/s, 14 bits
- Maximum RF input level without damage ±40 VDC

Key Performance Specs – Computer

- Intel NUC embedded computer
- M.2 SSD Drive storage up to 2 TB
- DDR4-2133 1.2V SO-DIMM up to 32 GB
- Intel® Core™ i5-7300U Processor
- DC Voltage 12-24 volts @ 15 W typical
- Ethernet - Intel® i219-LM 10/100/1000 Mbps integrated LAN

Key Performance Specs – Enclosure

- Dimensions 18 x 16 x 8 inches (LxWxH)
- Weight approximately 32 pounds
- Weather-proof IP-24 design
- Thermostatically-controlled cooling

SignalVu-PC: Easily characterize your wideband RF signals by combining the analysis engine of the Tektronix Real-Time Signal Analyzer (RTSA) with your Tektronix oscilloscope. You get the functionality of a vector signal analyzer, pulse analyzer, WiGig or WLAN tester, spectrum analyzer and the powerful trigger capabilities of a digital oscilloscope - all in one instrument.
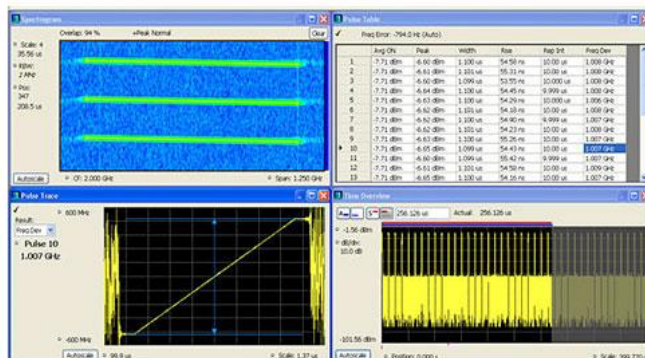
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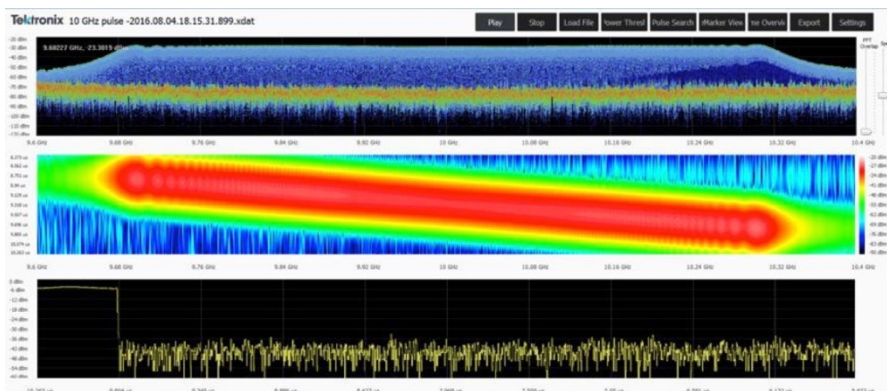
DataVu-PC: Used for recording long-term events and searching for events of interest. Recording applications are growing due to increased spectrum crowding and the need to test in real world conditions. DataVu provides record, playback, and post-capture analysis for applications including spectrum monitoring for compliance, hunting for interference, field survey or range environments during live testing, and troubleshooting infrequent events for design debug.

SpectrumVu: Provides a complete RF Spectrum monitoring solution by networking many small high-performance RF sensors operating synchronously and constantly monitoring the RF spectrum. Each RF sensor node can be programmed to constantly look for RF signals of interest and report spectral incidents to a Central Command Center. All spectral incidents are continuously logged in an SQL Database for analysis and recording.

SpectrumVu® System

1-n Node Sensors

Supports 1-n Web Connections

Indoor
Board /Secure Room to Entire Building

Network

Indoor Node

Outdoor
From Building to Campus or Ship

Cloud-Hosted Server
SpectrumVu® Server

Web Browser

Outdoor Node
SpectrumVu® Node

Key:
SVu® Software
Indicated in Blue: