

WSA5000

Wireless Signal and Spectrum Analysis Platform

ThinkRF provides the most cost-effective wireless signal and spectrum analysis platform to acquire, process and analyze any RF signals. This enables a wide range of R&D, OEM and government applications. The compact and powerful WSA5000 is a full featured, RF receiver/digitizer/analyzer that easily integrates your applications.

ThinkRF has a patented software-defined RF receiver that provides the performance of high-end lab spectrum analyzers and data acquisition systems at a low cost that enables large-scale deployment.

Highest Performance, Lowest Cost

Real-time search and loss-less capture of signals of interest from 100 kHz to 20 GHz with 100 MHz IBW and 75 GHz/s scan rate. Supporting stand-alone, remote and/or distributed deployment.

Ready For Your Applications

Support for wireless R&D including cognitive radio, dynamic spectrum allocation and 4G; RF test and measurement, wideband data acquisition, spectrum monitoring, signals intelligence; and wireless network optimization, troubleshooting and interference mitigation.

Open Application Development

Application development support via the standard SCPI/VRT network protocols, PyRF Python framework and MATLAB® development environments with open-source examples, libraries, source and application programming interfaces.



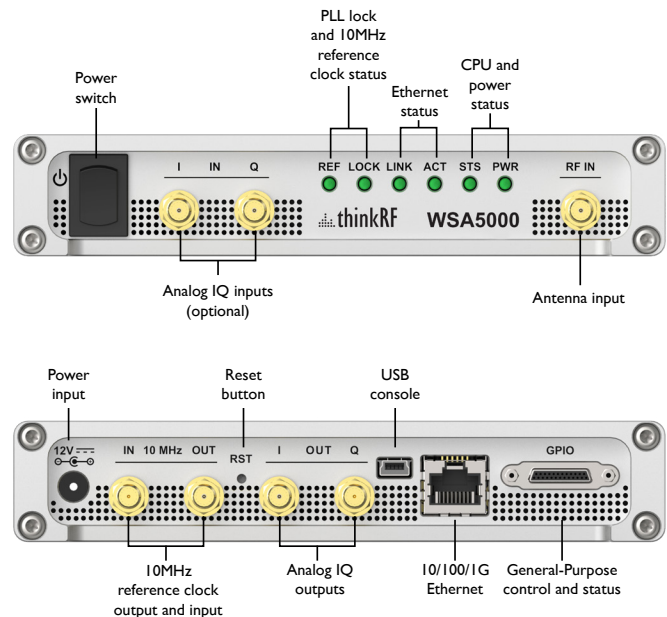
The ThinkRF Wireless Signal and Spectrum Analysis Platform

The ThinkRF WSA5000 has an industry leading combination of wide instantaneous bandwidth, sensitivity, tuning range, deep fast real-time caching and sophisticated capture control. The WSA5000 can reliably capture entire 100 MHz wide communications bands anywhere within the wireless frequency range of 100 kHz to 20 GHz.

Specifications

Frequency range 100 kHz to 20 GHz
Max. Instantaneous bandwidth 10 MHz; 40 MHz; 100 MHz
Max. Dynamic Range 100 dB
Noise Figure < 15 dB
Absolute Max. RF input power +10 dBm
Max. RF gain 40 dB
Max. IF gain 30 dB
Gain control 30 dB; 0.5 dB steps
RF PLL phase noise (2 GHz) -100 dBc @ 100 kHz offset
Spectrum scan rate 75 GHz/s @ 122 kHz RBW
RF PLL lock time < 100 μ s
Power Supply +12VDC
Power Consumption 18 W
Operating Temperature Range 0°C to +50°C
Enclosure dimensions 9.8 (L) x 6.5 (W) x 1.2 (H) inches

Front and Back Panels



Features

- 10 MHz in/out for multi-channel synchronization*
- Multi-channel ADC sample synchronization option
- Analog I,Q inputs for modulation and time-domain analysis*
- Analog I,Q outputs for higher sampling rate digitization*
- Time triggering, PPS and other GPIO access for external peripheral control
- Gigabit Ethernet based control, data acquisition and streaming
- Open source PyRF Python, MATLAB®, C and SCPI/VRT APIs

Ordering Information

Order Number	Frequency Range	Instantaneous BW
WSA5000-108	100 kHz to 8 GHz	10 MHz
WSA5000-208	100 kHz to 8 GHz	100 MHz
WSA5000-220	100 kHz to 20 GHz	100 MHz

*WSA5000-108 does not include Analog IQ inputs, Analog IQ outputs or 10 MHz reference clock output.

There is simply no better way to go from concept to real-world, real-time field-deployable applications than to use the PyRF framework and easily integrate them onto the ThinkRF Platform. It's the fast, affordable and powerful wireless signal analysis solution.

Contact us today for more information on ThinkRF products, or the WSA5000 Wireless Signal and Spectrum Analysis Platform.

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