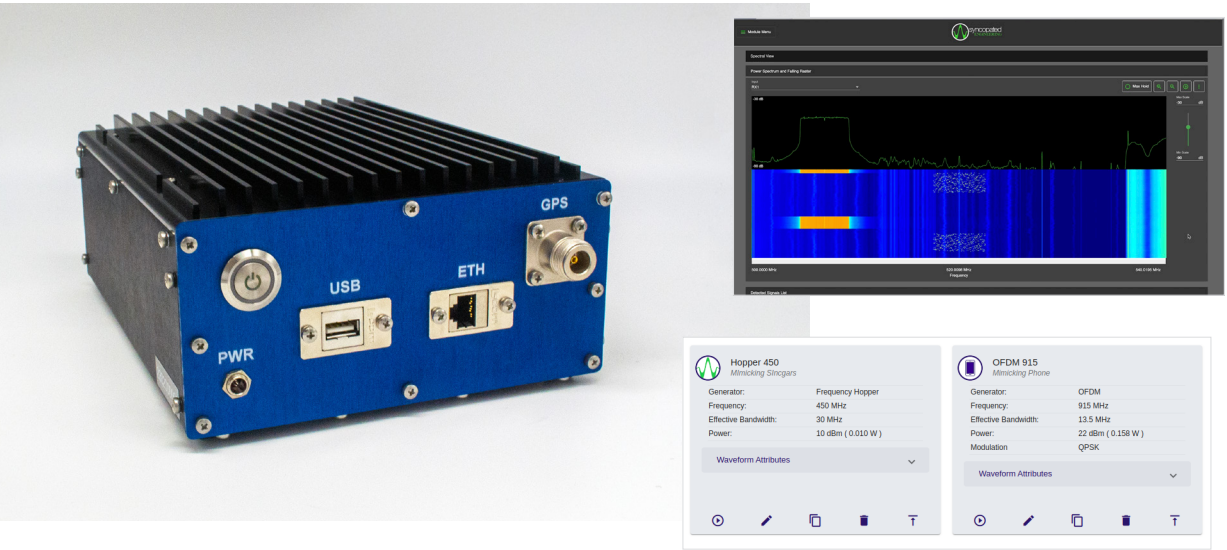
CIELO™ Mockingbird RF Test System

PRODUCT OVERVIEW

As a RF signal processing and test engineer, you need a RF test system that enables agile test-driven development at the pace of your development. Mockingbird provides RF signal generation, spectral analysis and signal capture in a compact, rugged, software defined RF test system that enables rapid testing and verification of RF systems in the lab and in the field. Verify wireless data links, signal detectors and demodulators, and complex spectral sensing algorithms throughout your development cycle from design prototypes to outdoor Over-the-Air (OTA) testing. The simple and intuitive web interface enables collaborative testing and remote monitoring applications, and Mockingbird integrates with the tools you use today like Matlab and GNURadio.



KEY FEATURES

FEATURE	BENEFIT
Waveform Toolkits	Direct emulation of specific signals “radio personalities” using configurable built-in waveform generators • CW Test Signals: Tone, Two-Tone, Stepped Freq, Sweep • Analog Modulation: AM, FM • Digital Modulation: • FSK (MFSK, GFSK, MSK, GMSK) • PSK (MPSK, OQPSK, PI/4 QPSK, DPSK) • QAM (QAM16, QAM64) • Frequency Hopper • OFDM
Arbitrary Waveform Generation	Import custom baseband I/Q waveforms from MATLAB and GNU Radio.
RF Scene Creation	Create realistic traffic patterns and mixtures of RF signals to create sophisticated RF scenes (i.e. emulated RF environments).
Spectrum Analyzer	Wideband dual-channel spectrum analyzer including Power Spectrum, and time-frequency falling raster with typical spectral analysis functions such as max hold, dual markers and peak search.
Spectrum Monitoring	Disjoint multi-band spectrum monitoring (e.g. 915 MHz ISM band and 2.4 GHz WiFi). Ability to create user configurable frequency scan lists.

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CIELO PRODUCT FAMILY

COGNITIVE RADIO

FEATURE	BENEFIT
Signal Capture	Capture narrowband and wideband signals up to 40 MHz BW, and 50 million complex baseband I/Q samples for detailed signal processing and analysis.
Network Attached Software Defined Instrument	Ethernet attached device with simple and intuitive web interface. No software installation required. Configure for your network and start testing immediately. Create multiple system deployments, for more sophisticated testing scenarios or multi-user access. Supports remote operation.

SPECIFICATIONS

RF Frequency Range	50 MHz to 6 GHz (standard) (Lower and higher frequency options are available)
RF Channel Spacing	2.4 Hz frequency tuning steps
Instantaneous Bandwidth	Up to 40 MHz
Transmit Power	-70 dBm to 20 dBm (gain steps of 0.25 dB)
Receiver Sensitivity	-105 dBm (typical)
Receiver Gain	0 to 72 dB (gain steps of 1 dB)
Receiver Noise Figure	< 6 dB
RF Interfaces	2x2 and 4x4 MIMO configurations N-type connectors (other options are available)
GPS Receiver	Internal commercial GPS N-type connector (other options are available)
Data Interfaces	Ethernet (10/100/1000) USB
Power Input	24 VDC (External AC/DC power converter)
Dimensions	6.75” x 8.5” x 3.5” (benchtop system) (multiple system rack mount configurations are available)
Weight	4.35lbs

ABOUT SYNCOPATED

Syncopated is a creative provider of custom products and solutions for cognitive radio and edge analytic acceleration. Our solutions enable you to start further down the development path, reducing time-to-market and allowing you to focus on your innovative solution. Unlike most vendors, customization of our products for your specific needs is embraced not discouraged.

For Sales, please contact: Sales@SyncopatedProducts.com

For Support, please contact: Info@SyncopatedProducts.com