

CENTER FOR REMOTE SENSING, INC.

Real Time Signal Intercept, Analysis, and Countermeasure

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The Real Time Signal Intercept, Analysis and Countermeasure system provides an integrated system to capture wide band RF signals, perform real time analysis of the signal, and if necessary, take effective countermeasure. It performs most cognitive radio functions necessary for communication, navigation and radar surveillance, intercept, analysis, and countermeasure.

It provides wide band spectrum monitoring with very large (up to 1 GHz) instantaneous bandwidth and with large dynamic range. Various options for trading instantaneous bandwidth with dynamic range is available. Dynamic range of > 100 dB with instantaneous bandwidth of 1 MHz is provided with available ADCs and DACs.

Digitally tuned high-performance front ends are used to cover frequency band from 1 MHz to 10 GHz.

State of the art digitizers and processors consisting most modern FPGAs, DSPs, and GPPs are used to

digitize and perform various signal analysis and processing. All the data are also logged into built in RAID devices with throughputs up to several GBPS. A novel software toolset allows user interaction and reconfiguration of the processing, analysis, and countermeasure actions.

Various countermeasure options depending on the user-band and user applications are available. They include both passive and active systems including direction finding and beam pointing to avoid interferences, jammers, and spoofers of various types including false target and false signature generation. The integrated software and high performance processors provide the data necessary to generate such countermeasure signals with extreme precision. Back-end RF units are used to re-radiate the counter measure signals.

FEATURES:

- Continuous coverage of RF spectrum
- Collect all wide band emitters
- User selectable front-ends
- Multiple front end channels allow DF, beamforming
- High instantaneous bandwidth and large dynamic range
- Flexible user interface allows user interaction during intercept, analysis, and countermeasure
- Various countermeasure options
- Communications, navigation (all GNSS signal types), radar including SAR
- Jamming, spoofing, false target generation
- Very high fidelity
- Integrated, ruggedized, automatic, and semi-automatic including remote operation.

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Advancing Technology

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