

iRF is dedicated to the SIGINT and Electronic Warfare community. You may have once known us as M/A COM, Tyco, or Cobham. While iRF still sells and supports the company's legacy products, the latest chapter of our organization is marked by innovative, ground breaking technologies like our SMART (Scalable Modular Architecture for Receive/Transmit applications) product lines. All of our actions and decisions are rooted in better enabling the global INTEL mission. Unlike many larger suppliers we are agile, responsive, and easy to engage with so we can help solve the problem at hand. Our RF hardware solutions deliver high reliability in the field while customers depend upon us to provide exceptional service and support that always meets the mission.

SMART Solutions

SMART solutions from iRF rethink the traditional industry approach to custom product development and interface management. SMART products are transportable to multiple platforms including VME, VPX, CD-ROM, brick, and standalone. Each SMART solution provides full down conversion and up conversion capabilities in the same package. SMART features the best SWaP profile of any modular architecture in the industry.



RF SMART Deck



The RF Deck is the heart of SMART. It enables superior SWaP reductions, better RF performance, and cross platform portability including WideRail, VME/VPX and non-standard form factors. The brick is also available as a standalone product. Coupled with our state of the art SMART iDSP Processor, iRF offers an RF to 10 GigE Software Defined Radio.

- Tuning range 0.45 to 26.5 GHz
- 1GHz IF with 500 MHz BW and 160 MHz or w140 MHz IF with 100 MHz BW
- > 65 SFDR
- Modular brick housing
- 15 watts total power
- Supports independent and phase coherent operation

iWR-6910 Miniature Wideband Microwave Tuner Brick



The iWR-6910 is a by-product of the RF SMART Deck. This RF brick provides Ethernet control and runs off 12V DC power. The product includes a command and control GUI for remote survey operation.

- Tuning range 0.45 to 26.5 GHz.
- 1GHz IF with 500 MHz BW and 140 MHz IF with 100 MHz BW
- Ethernet control
- +12 V DC Input; 25 watts total power

iWR-6800 Single Channel 0.5 to 18 GHz Microwave Tuner



The iWR-6800 provides a fully synthesized 0.45 - 26.5 GHz microwave tuner on a 3U VPX card. The unit requires less than 20 watts while maintaining superior Spur Free Dynamic Range (>65 dB).

- 1 GHz and 160 MHz IF outputs
- 500MHz and 100 MHz signal bandwidths
- Low phase noise $\lt; 0.4^\circ$ RMS

TU-6410 Single Channel Microwave VME Tuner



The TU-6410 VME tuner functions for both single and multi-channel (frequency coherent) systems which makes the TU-6410 the tuner of choice for beamforming and direction finding systems, and for a wide range of scanning/acquisition ELINT and/or EW applications.

- Tuning range 0.45 to 26.5 GHz
- $\lt; 15$ dB noise figure
- Single slot configuration

iWR-6500 Wideband Microwave Digital Receiver



The iWR-6500 offers superior spur free dynamic range (>65 dB single-tone) in the microwave frequency range while maintaining low power consumption. The pre-detected IF outputs of 1 GHz (500 MHz BW) and either 160 or 140 MHz (100 MHz) are provided to interface with existing post processing architectures.

- Tuning range 0.45 to 26.5 GHz
- Integrated digitizer provides digital output over VITA-49, 10 GigE interface
- Configured to support single or multichannel phase coherent operations

iUC-6500 Miniature Microwave Up Converter



The iUC-6500 Up Converter provides a compact and networked means to translate up to 500MHz of signal bandwidth to RF/Microwave frequencies. Low phase noise, low group delay distortion and low amplitude ripple provide maximum converted signal fidelity.

- 0.5 to 26.5GHz RF output frequency
- Low phase noise $\lt; 0.45^\circ$ RMS
- >60 dB output spurious rejection
- Low SWaP profile, $\lt; 25$ W, 3.5 lbs

LITERAIL Digitizing Down Converters

The tradition of delivering maximum value in microwave surveillance receivers continues with the introduction of the LITERAIL family of miniature digitizing microwave converters.

SMR-7522 Miniature Microwave Digitizing Down Converter



The flagship model SMR-7522 provides frequency coverage from 800 MHz to 26.5 GHz with the performance and reliability that customers expect from iRF. In addition to significant size and power reductions versus conventional set-on receivers, the SMR-7522 integrates signal digitization capability.

- Low phase noise
- Reduced size, weight, and power
- VITA-49 output data format over 10 Gbps Ethernet
- Time stamping of digital data via external GPS time reference

SMR-7512 Miniature Microwave Digitizing Down Converter

The model SMR-7512 provides the same advanced capabilities of our flagship LITERAIL product, the SMR-7522, but the SMR-7512 supports frequency coverage from 800 MHz to 9.6 GHz. Like the 7522, the 7512 provides low phase noise, 10 Gbps digital network output, and time stamping of digital data via external GPS time reference.

Microwave Receivers

iRF continues to sell and support the legacy products of our predecessors. While we support and service all previously sold hardware, we can also ship new product to keep existing solutions operational.

SMR-3822A Wideband Microwave Receiving System



The SMR-3822A Receiver functions as a high performance spectrum analyzer. The receiver covers 0.1 to 20 GHz while providing excellent signal fidelity and extremely low phase noise. Extension of the tuning range to millimeter wave frequencies is possible using the FE-3820 Frequency Extender. An internal Spectrum Display Generator (SDG) generates data that can

be used to develop RF Sweep and IF Pan spectrum displays on a remote workstation or laptop.

- IF outputs at 1 GHz, 160 MHz, and 70 MHz
- Eight IF bandwidths: 250 kHz to 100 MHz
- 1GHz IF output, 500 MHz bandwidth
- AM, FM, and log detectors

SMR-5550i Low Cost Microwave Receiver



The SMR-5550i meets the need for a low cost, high performance microwave receiver. The receiver offers all the necessary features for high data rate PCM/TDM reception while maintaining high pulse fidelity for RADAR interception.

- 0.5 to 20 GHz tuning range
- Compatible with 40 GHz frequency extender
- Synthesized tuning in 1 kHz steps
- 1.0 GHz IF output, 100 MHz bandwidth

DRX-5571 Digital Microwave Receiver



DRX-5571 combines the RF to IF performance of the SMR-5550i receiver with FPGA-based demodulation and radio demultiplexing capability to fully process signals with complex modulation and encoding schemes down to the underlying radio payload. The combination provides a completely integrated solution for performing capture, analysis, survey, and collection

of wideband digital radio RF signals.

- Combines microwave tuner, demodulator, and radio demultiplexer in a single integrated 1U unit
- Tunes 0.5 to 20 GHz (1 kHz tuning resolution)
- Demodulator uses 140 MHz IF up to 57 MHz bandwidth