



DESCRIPTION

Small / Low Power Multi-Channel VHF/UHF SDR Receiver

The DRT4411B-R unit is a ruggedized, miniature Software Defined Radio system (SDR) with a powerful digital signal processing engine to support electronic surveillance of conventional Push-to-Talk (PTT) signals. The system is available in configurations that support two (-V2) or three (-V3) RF receiving channels. The flexible internal tuner stacking enables the software configuration of tuners for independent or coherent operation. Multiple tuners allow simultaneous scan and drop channels, or direction finding. The small size and low-power operation is ideal for small air and ground vehicle applications, portable systems, as well as low-power multi-unit systems. Key features include:

- Up to three independent or coherent wideband RF Tuners each providing frequency coverage from 2 MHz to 3000 MHz.
- High-performance low-power FPGA and DSP processing engines.
- Capable of processing a variety of wireless signal standards.
- Auto-configuration mode facilitates unit setup.
- Controllable via DRT Android GUI or *Windows* PC running *Kodiak* GUI.
- Removable SD storage media.
- Collected signals information can be logged or streamed to other networked devices.
- Integrated 50-channel parallel tracking GPS receiver provides position information.
- 10 MHz/1PPS synchronization to external sources
- Supports time and frequency disciplining and timestamping of collected raw and demodulated data using internal GPS or externally supplied reference.
- 40 MHz instantaneous bandwidth supports wideband multicarrier operation
- DSP demodulation, application specific. AM, FM, CW, USB, LSB for SGPR application.
- Small size. Low weight. Quiet (no fans).

Specifications

Parameter	Value	Comments
Maximum Number of RX Channels	12	Half Duplex
Frequency Coverage	2 MHz to 3000 MHz	Degraded performance below 5 MHz
Analog IF Bandwidth	40 MHz	
RF Tuning Resolution	4 MHz	
Digital Tuning Resolution	Less than 1 Hz	Application specific
Frequency Accuracy	+/- 0.05 ppm +/- 1.0 ppm	GPS Locked GPS Unlocked
RF Input Impedance	50 Ohms	
RF Input VSWR	2.5:1	Typical
Safe input Level	+30 dBm	
Amplitude Accuracy	+/- 1.5 dB	
Spurious Free Dynamic Range	75 dB IMD3, 25 kHz BW	
LO Radiation	-100 dBm max, f < 10 GHz	
Internal Generated Spurious Coherent & Independent Tuners	-100 dBm input equivalent	
Gain Control	50 dB	
Audio Outputs	2 Channels streamed to PC	

Physical Characteristics

Dimensions	1.68 in H x 4.73 in W x 8.46 in D (4.27 cm H x 12.01 cm W x 21.49 cm D)
System Weight	V2: 2.64 lbs. (1.19 kg) V3: 2.81 lbs. (1.26 kg)
Power Input	10-30 VDC
Power Consumption	V2 using DF 12.99 W typical (without DF: 10.46 W)
Temperature	-4° F to +140° F (-20° C to +60° C) Operating -40° F to +185° F (-40° C to +85° C) Storage
Humidity	5% to 95%, non-condensing
Altitude	25,000 ft (7620 m)*
Submersion	3.28 ft (1 m) immersion for 30 min.
Rain, Salt Fog, Vibration	MIL-STD-810G



Configurations:

- V2: Dual Tuner
- V3: Triple Tuner

Power Required:

- 10-30 VDC Power Input
- 110-240 VAC (with external AC-DC Adapter)

Compatible Controlling Devices:

- PC with Windows XP, Windows 7 OS
- Android Device connected via USB

Standard system ships with:

- SDHC Flash Memory Card
- GPS Antenna
- Manuals

Options:

- Fully configured Laptop PC – including installed Ethernet card & CD-ROM Drive; Office or Ruggedized Model
- Application Programming Interface drivers and documentation
- Battery Pack
- MILSPEC AC-DC Adapter
- AC-DC Adapter
- Power/Control Cable
- LAN Cable
- Intercept Antenna Cable
- Micro USB Cable for Android Smartphone
- 10 MHz and 1PPS Breakout Cable
- DF Antenna
- Rucksack

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