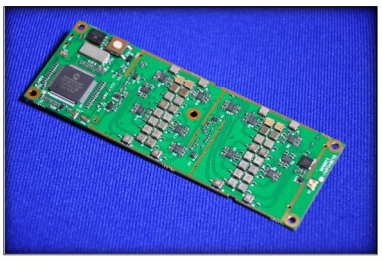
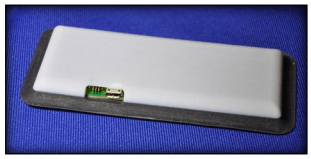


Microwave Arf
Miniature
Wireless Detector

FEATURES

- Detects wireless transmissions from repeaters, microwave uplinks, over frequency range up to 10 GHz
- Multiple configurations: OEM board, Integrated into Android phone, body worn sensor, UAV payload, unattended ground sensor, and as part of an integrated sensor network.
  Exceptionally low false detection rate using specialized filtering
- Internal non-volatile logging function to log all signal activity on 10 frequency bands with time stamp and GPS locations (when integrated into Android phone) .
- Integrated automatic reporting option to central facility.
- Miniature size allows concealment/embedding.
- Ideal for use with micro UAVs.



Embedded Arf Board

DESCRIPTION

The ***Microwave Arf*** cell detector provides the ability to detect wireless signals over a wide frequency range up to 10 GHz. The ***Microwave Arf*** uses an innovative design to scan and identify the signal activity in 10 independent frequency bands with individual attenuation and threshold settings allowing the user to customize the usage to the environment. Selectivity is set by a bank of switched miniature filters. The filter bank may be customized with a user-specified cascade of highpass, lowpass, bandstop\ and/or bandpass filters. The direct detection scheme has no image or spurious signals to cause false alarms. Specialized software is built-in to automatically determine the threshold settings and attenuation level for each frequency band, allowing for easy installation. This auto-calibration routine determines the background spectrum statistics and sets the detection thresholds accordingly. Coupled with selective filters with exceptionally high out of band frequency rejection, these statistics, assure a low false alarm rate. Sweep speed, dwell time, sweep delay, and active channels may all be set via software commands.

The ***Microwave Arf*** logs up to 512 Mbytes of data to internal nonvolatile memory (band, power, time/date, optional GPS location). The log and control/alarm functions may also be accessed via built-in USB or serial port, or by use of a wireless data link with one of those ports. Additionally, an optional modem provides the ability to provide power and serial transport data riding on standard Power-Over-Ethernet (POE) using the extra four conductors of a standard Ethernet cable with RJ45 connectors. The Arf POE connections may be "inserted" in series with an uncooperative Cat 5 cable, fed with a dedicated cable carrying only the POE function, or "daisy-chained" with a dedicated or uncooperative Cat 5 cable. The software commands, remote ports, and optional POE modem are common with the ***UHF Arf***.

Specifications subject to change without notice as we improve our products.

For further information contact: Wireless Innovations Inc., Tel. 443-979-3016
Email: info@wirelessinnov.com, www.wirelessinnov.com

APPLICATIONS

- Detection of microwave communication links and radar/military emanations
- Perimeter security and force protection
- Detecting and locating higher frequency wireless exploitation attacks
- Wireless monitoring and automatic reporting in secure conference rooms and facilities
- Site survey of signals present in remote areas
- Determination of wireless activity utilized for military or law enforcement mission planning (micro UAV deployed)
- Detection of potential interference sources
- Integrated into other platforms for signals situational awareness
- Integrated into large network of sensors (body worn, UAV payload, vehicle mounted, unattended ground sensors) for detection and precision geolocation of suspect emitters

SPECIFICATIONS

RECEIVER PARAMETERS

Frequency range……0-10 GHz
Bands……10 bands, factory configurable
Standard filter set: …… 0-1,1-2,2-3,3-4,4-5,5-6.5, 6.5-8, 8-10 GHz
Selectivity……Approx -50 db @ ±25% out of band rejection
Sensitivity……-70 dBm noise floor (typical)
Dynamic range……60 db @ 0-6 GHz, 42 db @ 10 GHz
AGC range……20 dB
Scan speed……Selectable 1/2/5/10/20/50/100 channels/second max
Input Impedance……50 ohms
Antenna……User-supplied, Optional integrated antenna for frequency bands from MHz-10 GHz
External power…… vdc, 75 ma MAX, via solder terminals or mini-USB connector (stand. +5V USB power), inc. cell phone USB power
Weight……approximately 2 ounces (uncased)
Size……approximately 1.25x5.2x0.3 inches
Connectors……SMA (antenna), Micro-USB, RS232 header
Operating temperature range……-20 to +55°C
Non-operating temperature range……-40 to +70°C
Operating humidity……10 to 90% non-condensing

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