RF-AD-RX Digital to Analog Receiver

This wireless RF analog receiver subassembly is used in conjunction with the RF-AD-TX analog transmitter module. The RF-AD-RX is a receiver that converts the digital data received from the RF-AD-TX analog transmitter module to an analog voltage signal, replicating the corresponding input signal at the transmitter side. It has four analog outputs and may have any number of those four outputs active at once. When valid data is received from the RF-AD-TX, it is decoded and stored until the data from all active channels is received. Once all the data is received, all of the active channel outputs are updated simultaneously. The number of channels that are active is determined by the transmitter. This is part of the encoded data that is transmitted by the RF-AD-TX analog to digital transmitter subassembly. The D/A process uses an 8 bit converter and has a range from 0-5V and 4-20mA with the optional IXP expansion board.

Features

D/A

- 8 bit conversion
- 19.531mV step size
- Four output channels
- 0-5V analog outputs
- 4-20mA analog outputs available with optional expansion board (IXP)
- Simultaneous update of outputs
- Refresh rate of 4.5*n ms (where n is the number of outputs enabled on the transmitter)
- I/O lines: DB9 connector (standard), or screw terminals via adaptor board

Receiver (TX and RX Dimensions are the same)

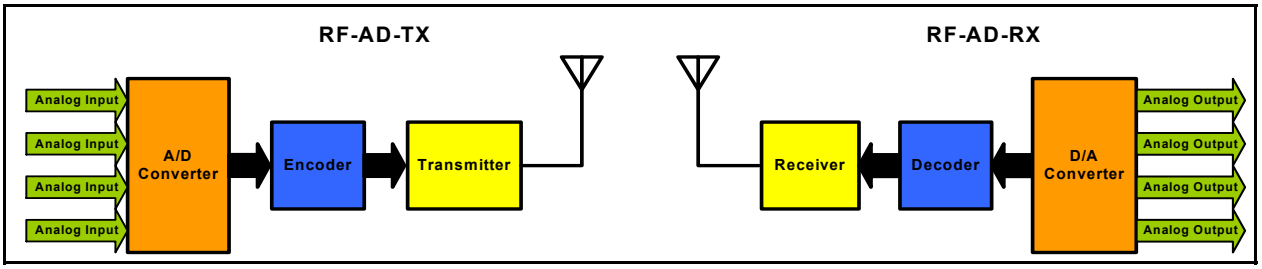
- -102dBm sensitivity
- Superhet Architecture
- PLL Controlled
- Selective SAW Filter Front End
- 433.92, 868 or 914.5MHz versions
- 12-24Vdc operation, 43mA
- PCB Dimensions: 2” x 3.15” x 0.5”
- Packaged Dim: 2.26” x 3.38” x 1”
- Adaptor Board: 2” x 0.87”

Typical Applications

- Replacement of long hard wired links
- Remote sensor implementation
- Wireless analog bridge
- Data acquisition
- Pulse counting
- Industrial Process Control

Adaptor Board

Available in a package version. Custom marking service available. Call for details.



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Connections

Connections can be made via a DB9 connector or via an optional adaptor board (part # ADB) which plugs into the RF-AD-RX's DB9 connector. Using the adaptor board will allow for the connection of wires to a screw terminal rather than using a DB9 terminated cable. The pin designation for the DB9 connector and for the optional adaptor board are given below:

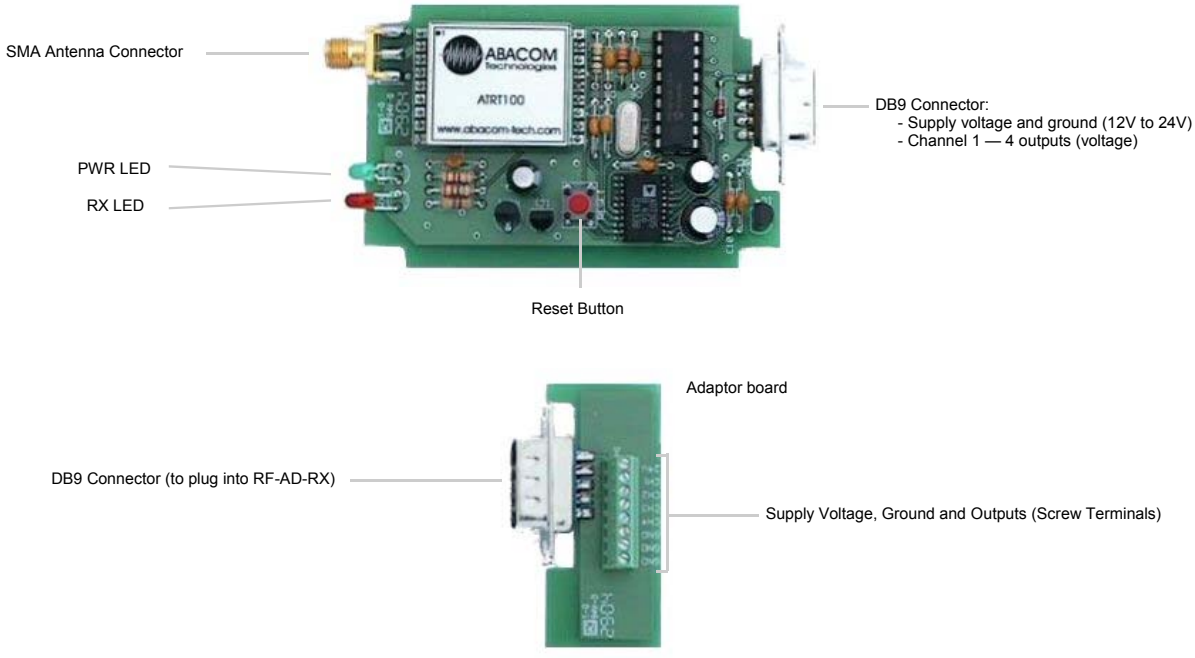
PIN	DB9	ADAPTOR BOARD
1	PWR	PWR
2	GND	CH1 OUT
3	GND	CH2 OUT
4	GND	CH3 OUT
5	GND	CH4 OUT
6	CH1 OUT	GND
7	CH2 OUT	GND
8	CH3 OUT	GND
9	CH4 OUT	

Pin Descriptions

PWR — Positive voltage input and will accept 12-24V

GND — Ground

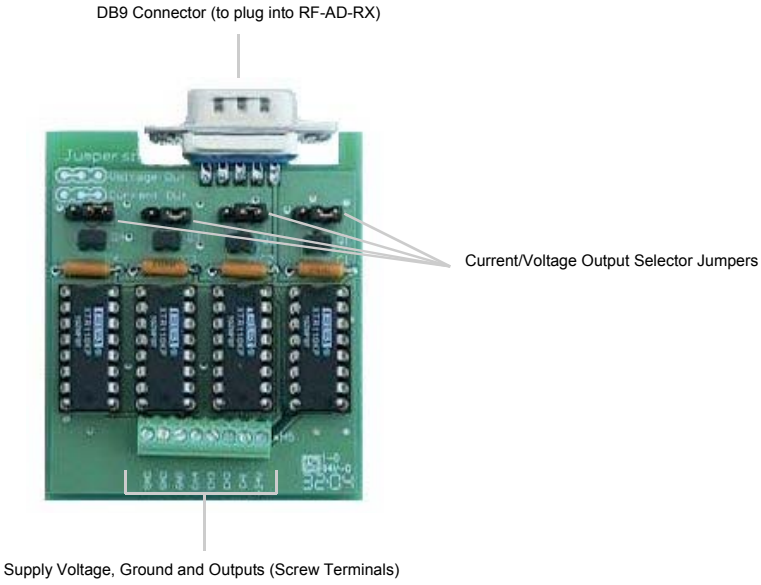
CH*X* OUT — Voltage outputs which can source ±3mA



Expansion Board for 4-20mA Outputs — (part # IXP)

The optional IXP expansion board is used to provide 4-20mA (or 0-20mA) outputs for any or all of the channels. Jumpers located on the circuit board can be configured to allow for either current output or voltage output on each individual channel. The IXP expansion board is available with either 1,2,3 or 4 4-20mA (0-20ma) outputs enabled. The channels that are not enabled for current output will default as 1-5V (0-5V) voltage outputs.

PIN	EXPANSION BOARD
1	PWR
2	CH1 OUT
3	CH2 OUT
4	CH3 OUT
5	CH4 OUT
6	GND
7	GND
8	GND



To provide for varied application requirements, the IXP expansion boards may be ordered with 1,2,3 or 4 channels enabled as 4-20mA outputs. The part numbering for the IXP expansion boards are as follows:

IXP-1…….one 4-20mA channel / three 0-5V channels
IXP-2…….two 4-20mA channels / two 0-5V channels
IXP-3…….three 4-20mA channels / one 0-5V channel
IXP-4…….four 4-20mA channels