



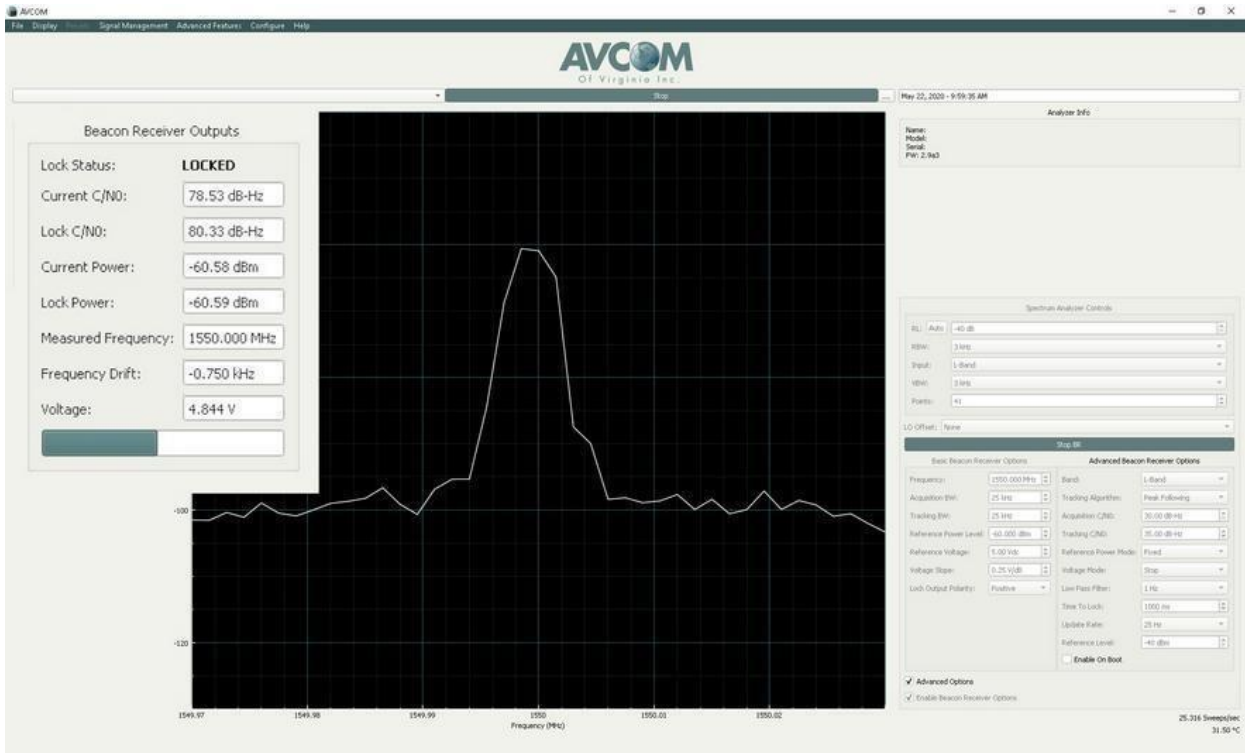
EVO-RBR-2290A1S

Rackmount L-Band Beacon Receiver



- Track L-Band CW Beacon Carrier; BPSK Carrier
- CEPT-Carrier-Edge-Power-Track for DVB Carrier
- Monitoring & Control (M&C) via Ethernet
- Integrates with Avcom’s EVO-GUI
- Comprehensive API protocol support for Easy Integration
- Extended Temperature Range

The EVO-RBR-2290A1S beacon receiver based on Avcom’s software-defined-radio technology platform designed to exceed today’s performance challenges. The receiver is intended for antenna systems applications required to operate under challenging conditions. Avcom’s newest beacon receiver technology provides excellent performance by employing high-performance DSP, and FPGAs. Integrators can now install a full-function beacon receiver into systems operating in austere and rugged environments as well as standard teleport and earth station indoor environments. Communication with the receiver is achieved via ethernet and Avcom’s Graphical User Interface, the EVO GUI software. It provides a feature-rich set of functions to lock on and provide a DC output voltage proportionate to the received satellite beacon signal. The system can also be accessed via a customer implemented POSIX-Compliant API. Source code is available from Avcom.



©2024 Avcom of Virginia, Inc. v022024

EVO-RBR-2290A1S - TECHNICAL SPECIFICATIONS DATA

PARAMETER	PERFORMANCE
RF	
INPUT CONNECTOR:	SMA, 50 Ohm
INPUT FREQUENCY RANGE:	900-2200 MHz
TUNING STEP SIZE:	1kHz
INPUT LEVEL RANGE:	-10 to -100 dBm
MAXIMUM INPUT POWER LEVEL:	- 10 dBm max
DETECTION BANDWIDTH:	10 to 750 kHz
TRACKING BANDWIDTH:	10 to 150 kHz
DETECTED BEACON LEVEL FILTERING:	Low-Pass, User-Select: 0.25 Hz, 0.5 Hz, 1.0 Hz, 2.0 Hz, 3.0 Hz
SEARCH/TRACK RATE:	User-Selectable: 10 Hz, 25Hz
ACQUISITION TIME:	<1 second typical
ADJUSTABLE DELAY BEFORE LOCK:	0 to 5000 milliseconds
ACQUISITION/TRACKING LEVEL:	Minimum C/No, 39 dB-Hz
BEACON/CARRIER TYPE:	CW, BPSK (No Demod) CEPT(Carrier-Edge-Power-Track) on DVB (No Demod)
M & C	
ETHERNET:	10/100; RJ-45, USB
IP ADDRESS:	DHCP or Static
INCLUDED CONTROL APPLICATION:	Avcom EVO-GUI (Windows)
APPLICATION PROGRAMMING INTERFACE (API):	POSIX-compliant 'C' APPLICATION PROGRAMMING INTERFACE (API): Pre-built Libraries for Windows and Linux x86 Source code available
PROTOCOL:	High-reliability closed-loop with error checking
RECEIVER OUTPUT VIA PHYSICAL OUTPUTS:	Yes
RECEIVER OUTPUT VIA M&C INTERFACE:	Yes

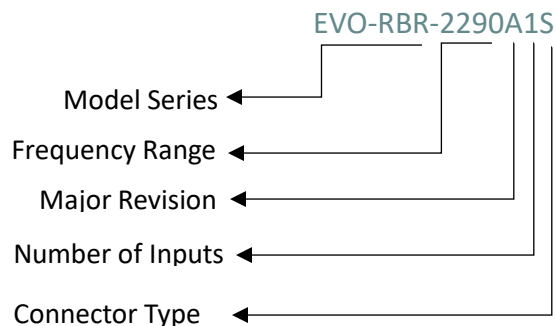
EVO-RBR-2290A1S - Technical Specification Continued

RECEIVER OUTPUTS	
CONNECTOR:	BNC and 9-pin D-sub
ANALOG SIGNAL STRENGTH INDICATOR OUTPUT:	0 to 10 VDC, 25 mA
ANALOG SLOPE:	0.1 to 3.0 Volts/dB
ANALOG SLOPE POLARITY:	Positive or Negative
ANALOG OUTPUT FILTERING:	Low-Pass, 0.5 Hz, fixed
DIGITAL LOCK INDICATOR OUTPUT:	0 - 3.3 VDC
DIGITAL LOCK INDICATOR OUTPUT POLARITY:	Adjustable (H=LOCK or L=LOCK)
POWER	
CONNECTOR	2-pin Circular Threaded
POWER SUPPLY:	15 - 24 VDC; < 3 W
PHYSICAL	
DIMENSIONS:	19" (16.75") x 18.125" (17.00) x 1.720"
WEIGHT:	2.2 kg
ENVIRONMENTAL	
OPERATING TEMPERATURE:	-40°C to 70°C
STORAGE TEMPERATURE:	-40°C to 85°C
HUMIDITY:	0 to 95%, non-condensing
OPERATING ALTITUDE:	40,000 ft; 12,000 m

OPTION AVAILABLE

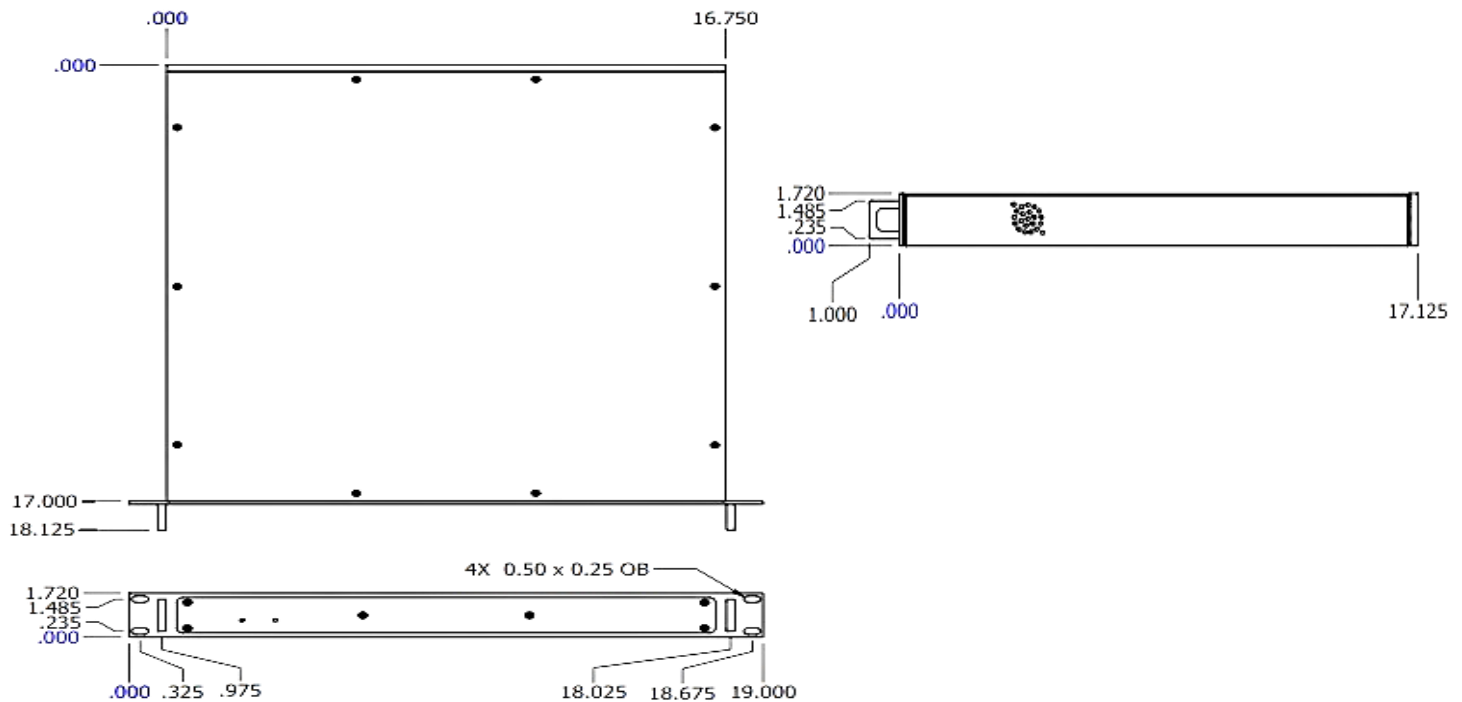
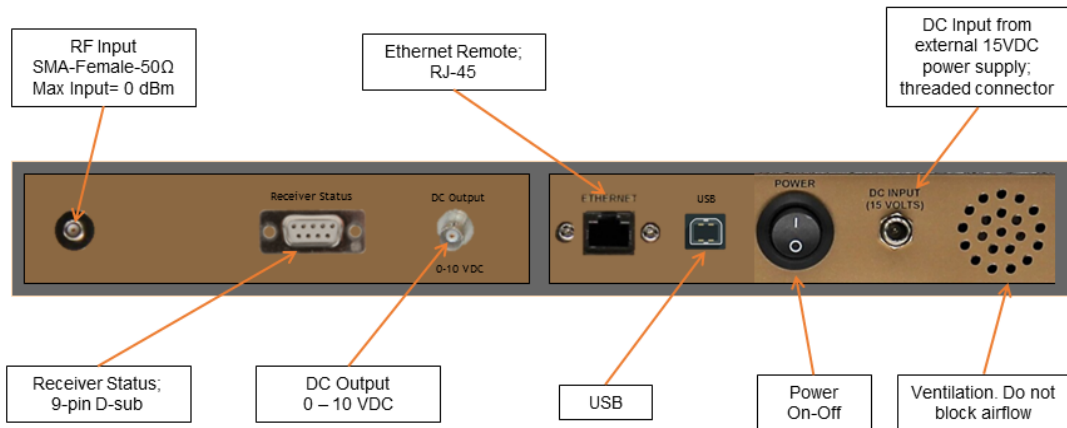
OPTION	Description	CODE
Input Connector Type (FEMALE)	BNC	B
	TNC	T
	N	N
	SMA	S
	F	F

EXAMPLE MODEL CONFIGURATION



EVO-RBR-2290A1S - Technical Specification Continued

PHYSICAL DIMENSIONS, CONNECTOR DESIGNATIONS AND USER DATA



<https://www.avcomofva.com/evo-gui-software/>