

EVO-RSA (Rev B)

Rackmount Spectrum Analyzer



Features:

- Monitoring & Control (M&C) via Multiple Interfaces
- Up to 12 Inputs Available
- L-Band and Extended Frequency Band Options

The EVO-RSA is a spectrum analyzer designed on a completely new platform to meet today's system challenges. Avcom's newest analyzer technology provides excellent performance by employing high-performance DSP, and FPGAs. This robust product features many capabilities to provide reliable operation and monitoring in rackmount applications.

The spectrum analyzer can be connected via ethernet, or USB, and supports communication with a WEB-GUI, POSIX-C API, and Avcom's EVO GUI. This wide range of options makes the unit ideal for integrating with custom M&C systems or easy setups using existing Avcom applications.

For more information and support, please contact salesrfq@avcomofva.com.

EVO-RSA (Rev B)

TECHNICAL SPECIFICATIONS

RF SPECIFICATIONS			
INPUT CONNECTORS:	SMA, BNC, F, and/or N		
NOMINAL INPUT IMPEDANCE:	50 Ω (SMA, BNC, N) 75 Ω (F)		
MAX DC INPUT VOLTAGE:	25 V		
INPUT FREQUENCY RANGE:	MODEL	MIN (MHz)	MAX (MHz)
	2290	900	2200
	3040	400	3000
	6070	70	6000
MAX SPAN WIDTH:	1300 MHz		
MIN TUNING STEP SIZE:	1 kHz		
RESOLUTION BANDWIDTH:	1 kHz, 3 kHz, 10 kHz, 30 kHz, 100 kHz, 300 kHz, 1 MHz		
REFERENCE LEVELS:	-40 dBm, -30 dBm, -20 dBm, -10 dBm		
MAXIMUM INPUT POWER LEVEL:	-10 dBm		
RF SENSITIVITY (-40 REF LVL):	-100 dBm		
SPUR FREE DYNAMIC RANGE (3kHz RBW):	60 dB		
NOISE FLOOR (-40 REF LVL, 3kHz RBW):	-100 dBm, -134 dB/Hz		
NOISE FLOOR (-10 REF LVL, 3kHz RBW):	-70 dBm, -104 dB/Hz		
ISOLATION BETWEEN INPUTS:	>40 dB typical		
AMPLITUDE ACCURACY:	+/- 1 dB typical		
FREQUENCY ACCURACY:	+/- 1 kHz typical		
PHASE NOISE (2 GHz):	OFFSET FREQUENCY	PHASE NOISE (dBc/Hz)	
	10 kHz	-100	
	100 kHz	-100	
	1 MHz	-109	

EVO-RSA (Rev B)

TECHNICAL SPECIFICATIONS - CONTINUED

COMMUNICATION INTERFACE	
ETHERNET:	10/100, DHCP or Static, RJ45
USB:	115200 8n1, USB-B

M & C			
	EVO GUI	POSIX-C API SBS2API	WEB-GUI
ETHERNET:	Yes	Yes	Yes
USB:	Yes	Yes	N/A

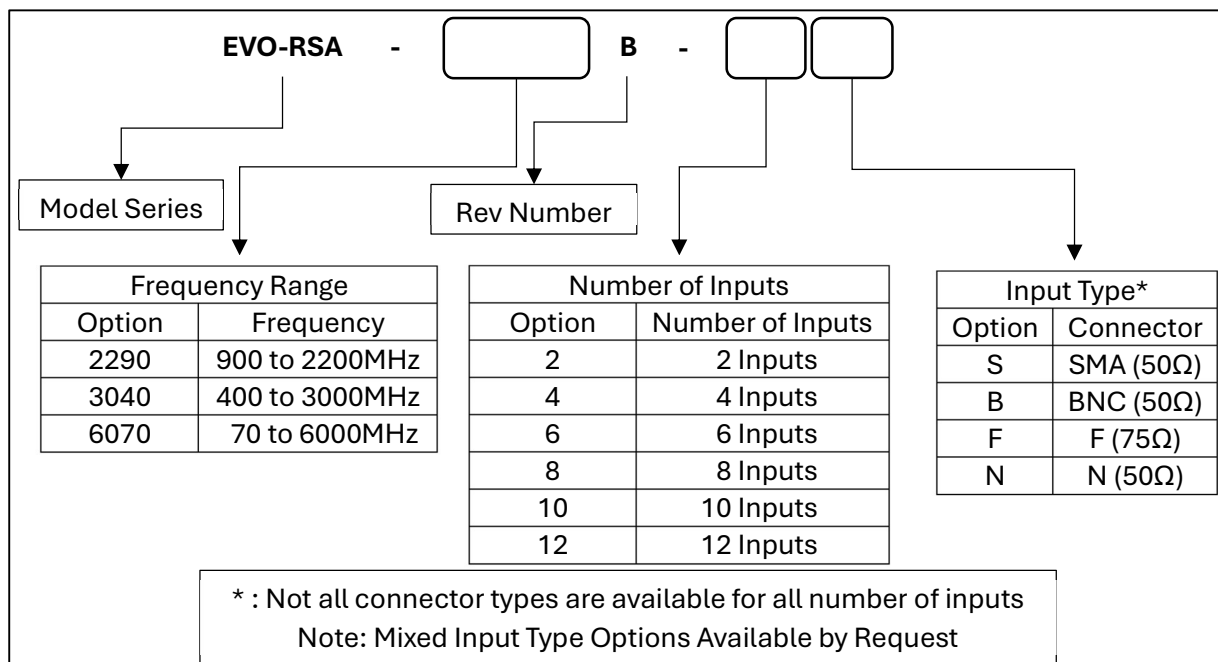
POWER	
CONNECTOR:	Power Barrel Connector Jack
POWER SUPPLY:	15 VDC, 0.5A

PHYSICAL	
DIMENSIONS:	1 RU, 19 in. x 18.13 in. x 1.72 in. 48.26 cm x 46.04 cm x 4.37 cm
WEIGHT:	7.2 lbs, 3.27 kg

ENVIRONMENTAL	
OPERATING TEMPERATURE:	0°C to 50°C
STORAGE TEMPERATURE:	-40°C to 85°C
HUMIDITY:	0 to 95%, non-condensing
MAX OPERATING ALTITUDE:	40,000 ft; 12,000 m

EVO-RSA (Rev B) TECHNICAL SPECIFICATIONS – CONTINUED

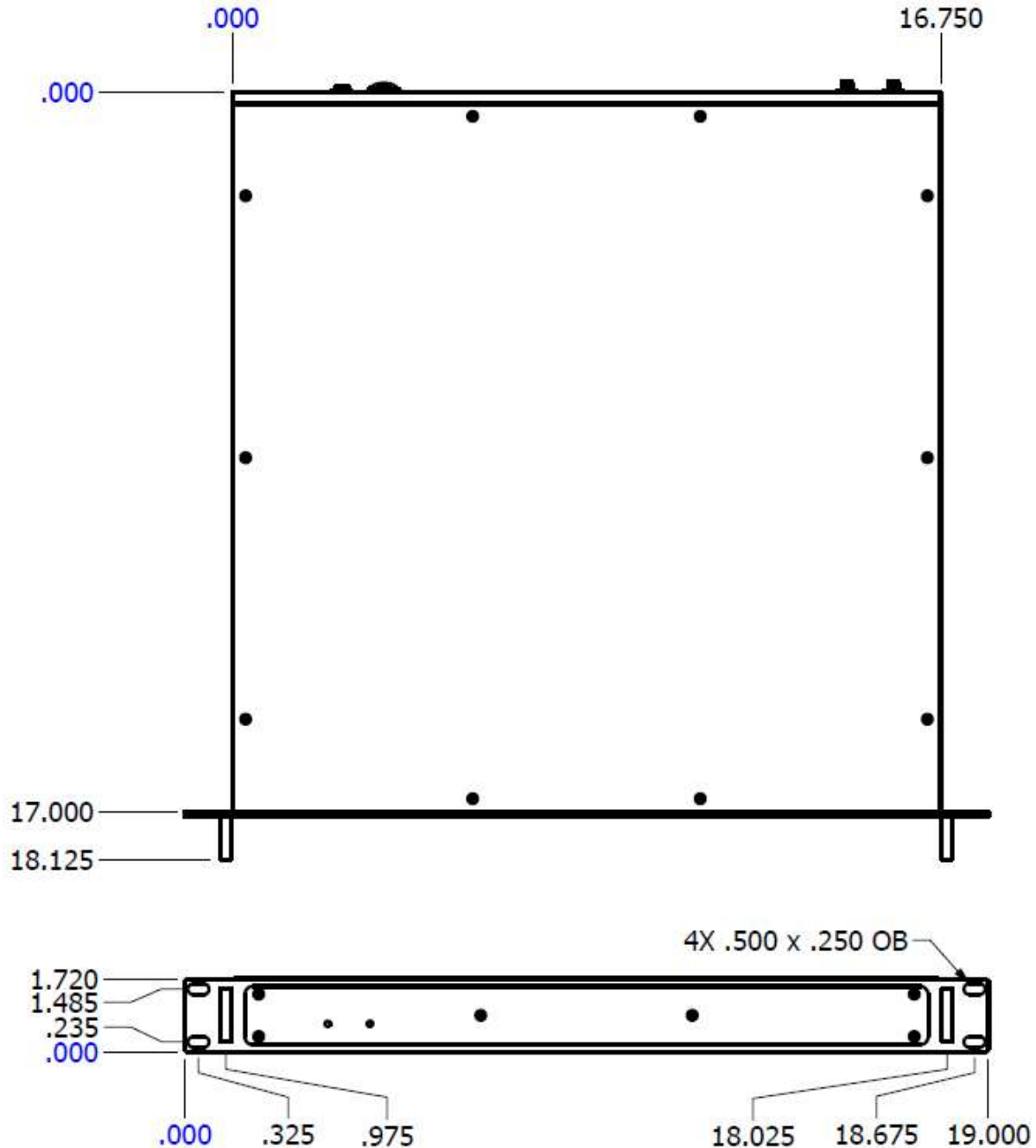
MODEL IDENTIFICATION



FULL MODEL NAME LIST

Connector	Number of Inputs	Frequency		
		900 to 2200MHz	400 to 3000MHz	70 to 6000MHz
SMA (50Ω)	2	EVO-RSA-2290B-2S	EVO-RSA-3040B-2S	EVO-RSA-6070B-2S
	4	EVO-RSA-2290B-4S	EVO-RSA-3040B-4S	EVO-RSA-6070B-4S
	6	EVO-RSA-2290B-6S	EVO-RSA-3040B-6S	EVO-RSA-6070B-6S
	8	EVO-RSA-2290B-8S	EVO-RSA-3040B-8S	EVO-RSA-6070B-8S
	10	EVO-RSA-2290B-10S	EVO-RSA-3040B-10S	N/A
	12	EVO-RSA-2290B-12S	EVO-RSA-3040B-12S	
BNC (50Ω)	2	EVO-RSA-2290B-2B	EVO-RSA-3040B-2B	N/A
	4	EVO-RSA-2290B-4B	EVO-RSA-3040B-4B	
	6	EVO-RSA-2290B-6B	EVO-RSA-3040B-6B	
	8	EVO-RSA-2290B-8B	EVO-RSA-3040B-8B	
F (75Ω)	2	EVO-RSA-2290B-2F	EVO-RSA-3040B-2F	N/A
	4	EVO-RSA-2290B-4F	EVO-RSA-3040B-4F	
	6	EVO-RSA-2290B-6F	EVO-RSA-3040B-6F	
	8	EVO-RSA-2290B-8F	EVO-RSA-3040B-8F	
N (50Ω)	2	EVO-RSA-2290B-2N	EVO-RSA-3040B-2N	EVO-RSA-6070B-2N
	4	EVO-RSA-2290B-4N	EVO-RSA-3040B-4N	EVO-RSA-6070B-4N
	6	EVO-RSA-2290B-6N	EVO-RSA-3040B-6N	EVO-RSA-6070B-6N

**EVO-RSA (Rev B)
PHYSICAL DIMENSIONS**



NOTES:

1. REFER TO CAD MODEL FOR UNLISTED DIMENSIONS

UNLESS OTHERWISE STATED:
DIMENSIONS ARE IN INCHES

TOLERANCES:

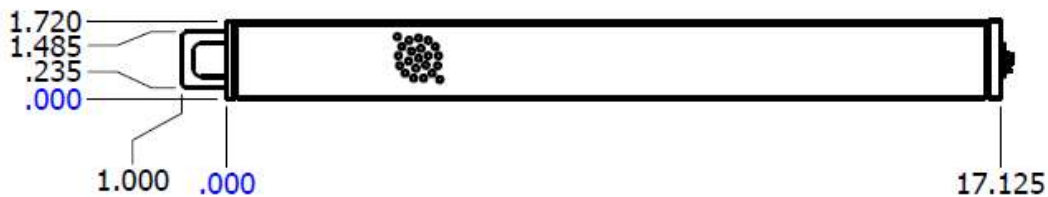
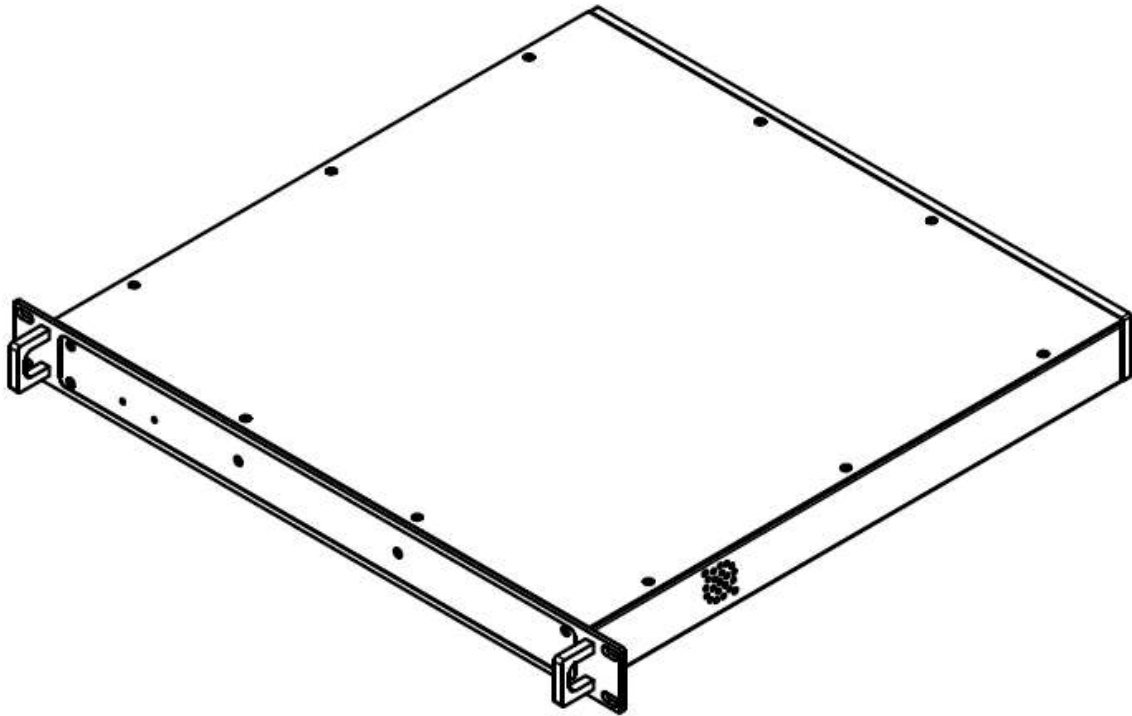
.XX = ± 0.01

.XXX = ± 0.005

.XXXX = ± 0.0002

ANGLES = $\pm 0.5^\circ$

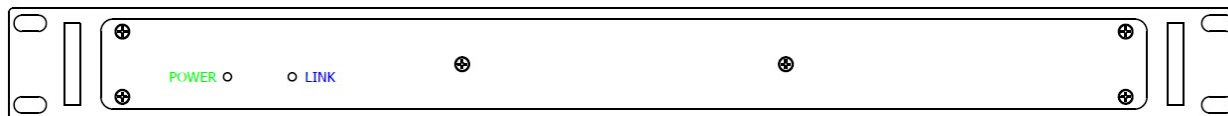
EVO-RSA (Rev B)
PHYSICAL DIMENSIONS - CONTINUED



NOTES: REFER TO CAD MODEL FOR UNLISTED DIMENSIONS	UNLESS OTHERWISE STATED: DIMENSIONS ARE IN INCHES TOLERANCES: .XX = ± 0.01 .XXX = ± 0.005 .XXXX = ± 0.0002 - ANGLES = $\pm 0.5^\circ$
--	--

EVO-RSA (Rev B)
PIN POSITIONS AND DESCRIPTIONS

FRONT OF CHASSIS



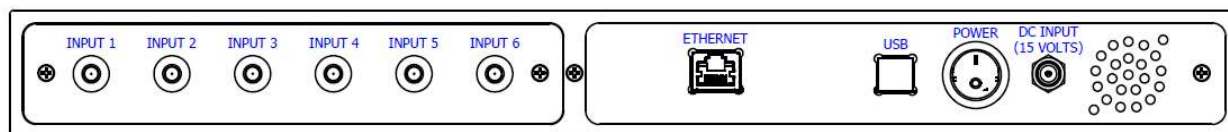
BACK OF CHASSIS

SMA CONNECTOR OPTIONS:

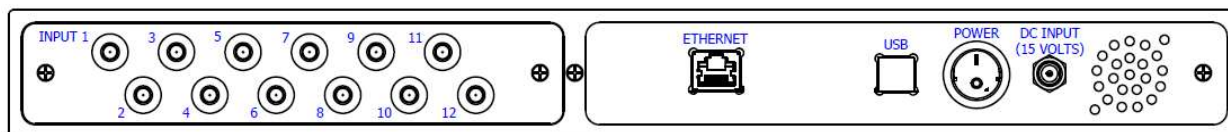
NOTE1: INPUTS ABOVE ORDERED NUMBER WILL NOT BE POPULATED

NOTE2: BNC, F AND N CONNECTORS ARE NOT SHOWN BUT FOLLOW A SIMILAR LAYOUT

2, 4, AND 6 INPUT MODELS:



8, 10, and 12 INPUT MODELS:



ETHERNET
STANDARD 10/100 PINOUT

USB
STANDARD USB-B PINOUT

POWER
UNIT ON/OFF ROCKER SWITCH

DC INPUT	
PIN	FUNCTION
INNER	POWER IN
OUTER	GND

EVO-RSA (Rev B) PIN INTERFACE

MATING CONNECTORS		
Connector Name	Description	Manufacturer Part Number
ETHERNET	RJ45	Standard Cable
USB	USB-B	Standard Cable
DC INPUT	Power Barrel Connector Jack	AVCOM Power Supply Part number: PS 00010 Barrel Connector: Switchcraft INC: S761K

Connector Name	Pin Number	Function Name	I/O Type	Recommended Interface Circuit/Voltage	Limiting Voltages and Protection Notes
ETHERNET	ALL	STANDARD ETHERNET	Communications I/O (Unused Pins not connected)	Ethernet 10/100	Galvanically Isolated. Magnetics on unit. (Unused Pins not connected)
USB	ALL	STANDARD USB	Communications I/O (USB 5V Unused)	USB 2.0 0 V to 5 V	0 V Min. 5 V Max. Limited by USB ESD steering diode array and power rails for USB IC.
DC INPUT	INNER	POWER IN	Power Supply Input	15 V DC Power	0.5 A, recommended to use AVCOM provided Power Supply
	OUTER	GND	Power Supply Ground	0V	

REVISION NOTES

VERSION	RELEASE DATE	CHANGES
1.0	4/15/2025	Initial Release
1.1	5/28/2025	- Add Additional RF Specifications - Fix Full Model Name List Frequency Description - Update Summary - Add Revision Notes