

## EVO-CLM (Rev B)

### Compact Spectrum Analyzer

#### Features:

- Monitoring & Control (M&C) via Multiple Interfaces
- L-Band and Extended Frequency Band Options
- Compact Benchtop Spectrum Analyzer



The EVO-CLM is a compact 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 benchtop or space limited 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](mailto:salesrfq@avcomofva.com).

## EVO-CLM (Rev B)

### TECHNICAL SPECIFICATIONS

| RF SPECIFICATIONS                    |                                                       |                      |           |
|--------------------------------------|-------------------------------------------------------|----------------------|-----------|
| INPUT CONNECTORS:                    | SMA, BNC, or F                                        |                      |           |
| NOMINAL INPUT IMPEDANCE:             | 50 $\Omega$ (SMA, BNC)<br>75 $\Omega$ (F)             |                      |           |
| MAX DC INPUT VOLTAGE:                | 25 V                                                  |                      |           |
| INPUT FREQUENCY RANGE:               | MODEL                                                 | MIN (MHz)            | MAX (MHz) |
|                                      | 2290                                                  | 900                  | 2200      |
|                                      | 3040                                                  | 400                  | 3000      |
| 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-CLM (Rev B)**  
**TECHNICAL SPECIFICATIONS - CONTINUED**

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

| <b>M &amp; C</b> |         |                        |         |
|------------------|---------|------------------------|---------|
|                  | EVO GUI | POSIX-C API<br>SBS2API | WEB-GUI |
| ETHERNET:        | Yes     | Yes                    | Yes     |
| USB:             | Yes     | Yes                    | N/A     |

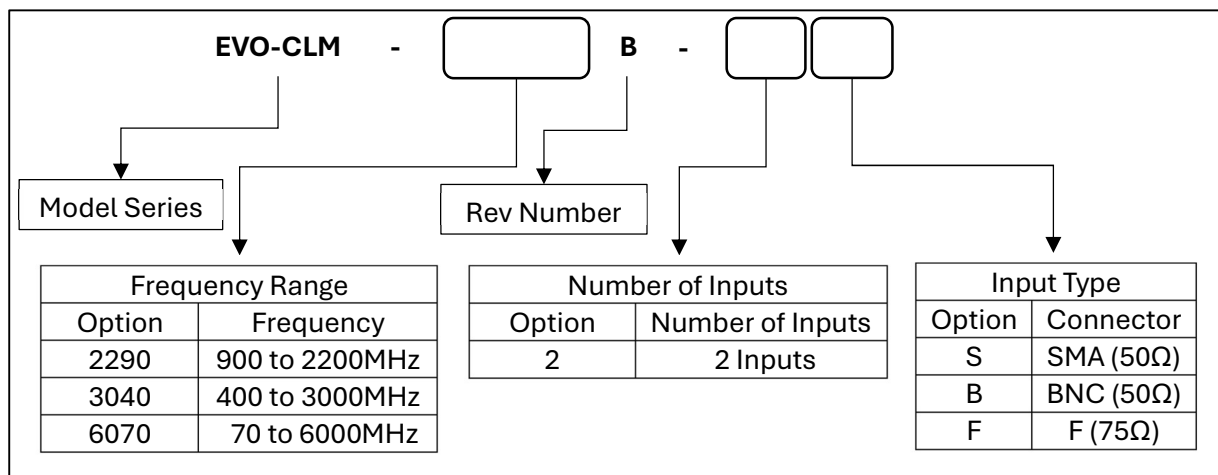
| <b>POWER</b>  |                             |
|---------------|-----------------------------|
| CONNECTOR:    | Power Barrel Connector Jack |
| POWER SUPPLY: | 15 VDC, 0.5A                |

| <b>PHYSICAL</b> |                                                                |
|-----------------|----------------------------------------------------------------|
| DIMENSIONS:     | 1.9 in. x 5.63 in. x 8.3 in.<br>4.826 cm x 14.29 cm x 21.08 cm |
| WEIGHT:         | 1.6 lbs, 0.71 kg                                               |

| <b>ENVIRONMENTAL</b>    |                          |
|-------------------------|--------------------------|
| 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      |

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**TECHNICAL SPECIFICATIONS – CONTINUED**

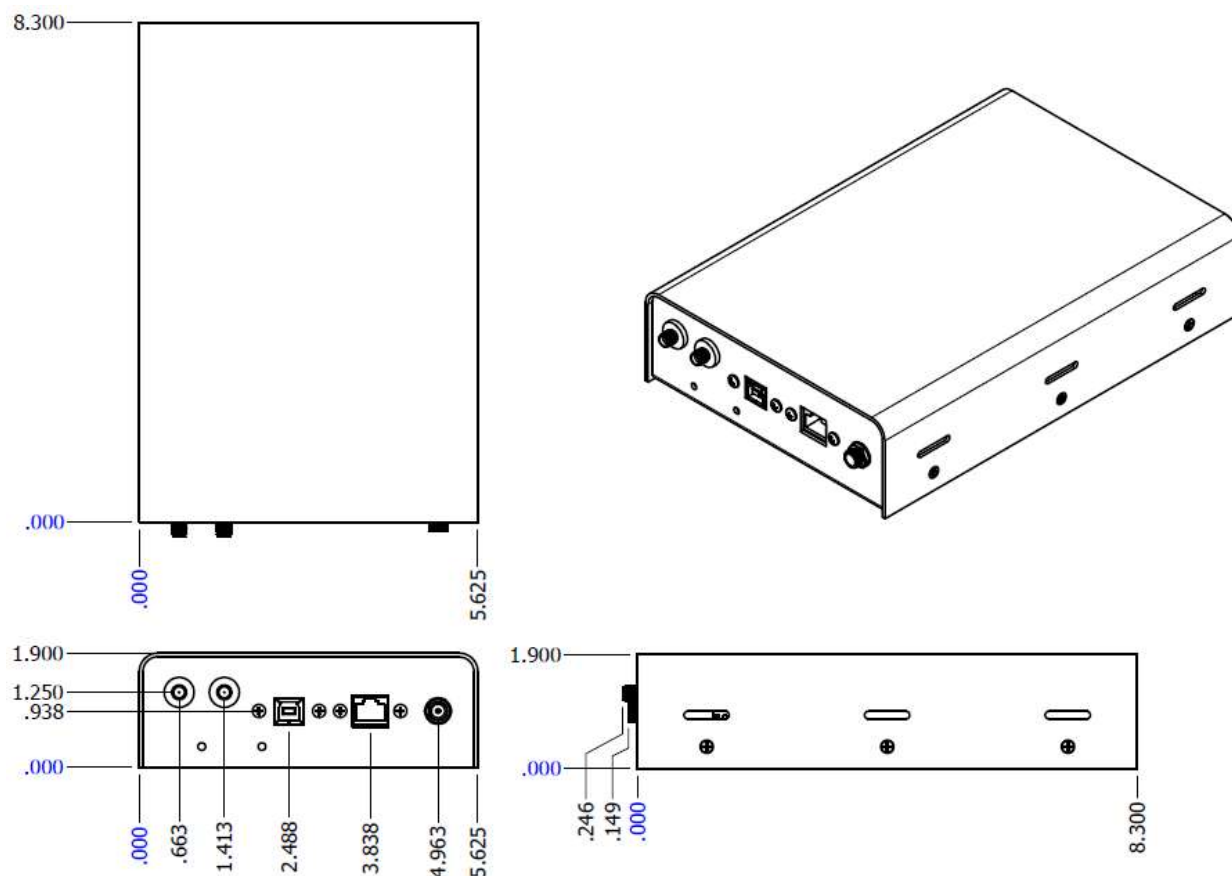
**MODEL IDENTIFICATION**



**FULL MODEL NAME LIST**

| Connector | Number of Inputs | Frequency         |                  |
|-----------|------------------|-------------------|------------------|
|           |                  | 900 to 2200MHz    | 400 to 3000MHz   |
| SMA (50Ω) | 2                | EVO-CLM-2290B-2S  | EVO-CLM-3040B-2S |
| BNC (50Ω) | 2                | EVO-CLM-2290B-2B  | EVO-CLM-3040B-2B |
| F (75Ω)   | 2                | EVO-CLM -2290B-2F | EVO-CLM-3040B-2F |

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



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NOTES:

1. REFER TO CAD MODEL FOR UNLISTED DIMENSIONS

UNLESS OTHERWISE STATED:  
DIMENSIONS ARE IN INCHES

TOLERANCES:

$$.XX = \pm 0.01$$

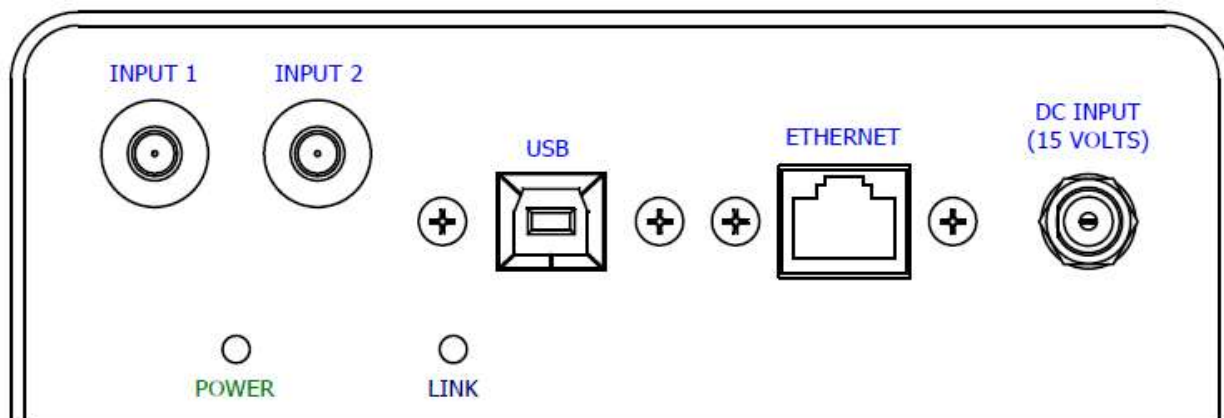
.XXX =  $\pm 0.005$

$$.XXXX = \pm 0.0002$$

ANGLES =  $\pm 0.5^\circ$

**EVO-CLM (Rev B)**  
**PIN POSITIONS AND DESCRIPTIONS**

**FRONT OF CHASSIS**



**SMA CONNECTOR OPTIONS:**

**NOTE: BNC, AND F CONNECTORS ARE NOT SHOWN BUT FOLLOW A SIMILAR LAYOUT**

| 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-CLM (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<br>Part number: PS 00010<br>Barrel Connector:<br>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<br>(Unused Pins not connected) | Ethernet 10/100                       | Galvanically Isolated. Magnetics on unit. (Unused Pins not connected)                 |
| USB            | ALL        | STANDARD USB      | Communications I/O<br>(USB 5V Unused)             | USB 2.0<br>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     | 5/28/2025    | <ul style="list-style-type: none"> <li>Initial Release</li> </ul> |