

# VMNA-7250-4 Lab Brick® 4 Port Mesh Network Attenuator

700 – 7250 MHz Frequency | 110 dB Attenuation Range | 0.1 Step Size

## Features/Benefits

- Reliable and Repeatable solid state digital attenuation
- Includes Windows and Linux SDK
- Single shot or repeating programmable attenuation ramps
- Programmable fading profiles
- Single Rack Unit Package



## Applications

- Mesh Network Radio Testing
- WiFi 6, WiFi,
- LTE, 5G, 6G
- MIMO, Multipoint Radio Fading Simulators
- Automated Test Equipment (ATE)

The Vaunix Mesh Network Attenuator Systems are easily customized, bidirectional, non-blocking test instruments. Mesh system attenuators allow simple control of the signal levels between each port.

The VMNA-7250-4 Mesh Network Attenuator System is a rack mounted 4 port crossbar test instrument. The VMNA-752-4 provides 110 dB of attenuation control range from 700 to 7250 MHz with a step size of 0.1 dB on all 6 possible path combinations. The attenuators are easily programmable for fixed attenuation, swept attenuation ramps and fading profiles using our highly developed Windows API DLL files and Linux platforms.

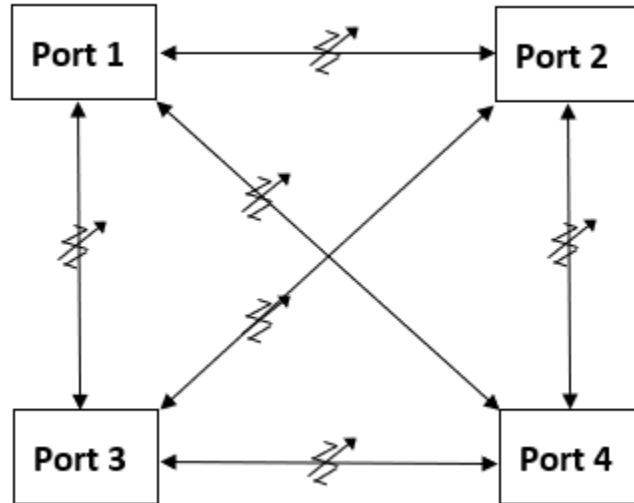
The VMNA-7250-4 is powered from the USB port and controlled through either the USB or Ethernet interface on the rear of the system. All RF ports are located on the front to the unit.

## VMNA-7250-4 Specifications

| Parameter  | Test Conditions  | Min   | Typ   | Max  |
|--|--|---|-------|------|
| Frequency Range (MHz)  |  | 700   |       | 7250 |
| Impedance ( $\Omega$ )   |  |   | 50    |      |
| Channel Inputs/Outputs   |  | 4   |       |      |
| Attenuation Range (dB)   |  | 100   | 110   |      |
| Step Size (dB)   |  | 0.1   |       |      |
| Insertion Loss (dB)<br>(Includes theoretical loss of power dividers) | < 2 GHz  |   | 21    |      |
|  | < 4 GHz  |   | 24    |      |
|  | < 7.25 GHz   |   | 28    |      |
| Attenuation Accuracy (dB)  | <30 dB   |   | 1     |      |
|  | <60 dB   |   | 2     |      |
|  | <90 dB   |   | 3     |      |
|  | <100 dB  |   | 5     |      |
| Switching Speed ( $\mu$ s)   |  |   | 2     |      |
| Maximum Input Level (dBm)  |  |   | 33    |      |
| Input IP3 (dBm)  |  | 38  | 45    |      |
| VSWR   |  |   | 1.5:1 |      |
| Parameter  | Test Conditions/Notes  |   |       |      |
| Power Requirements   | +5V (USB) - 110 mA   |   |       |      |
| Environmental  | Operating Temperature  | -30 °C to +50 °C  |       |      |
|  | Relative Humidity (non-condensing)   | <95%  |       |      |
| Physical Connections   | Power Connector  | USB Type C  |       |      |
|  | Control  | USB/Ethernet  |       |      |
|  | RF Connectors  | SMA – female  |       |      |
| Operating Modes  | Manual Attenuation Control<br>Swept Attenuation – uni/bi directional<br>– one time/repeat<br>Profile |   |       |      |
| Mechanical   | Size (1RU)   | 17.0 x 13 x 1.75 inches<br>431.8 x 330.2 x 44.5 millimeters |       |      |
|  | Weight   | 10 lbs<br>4.5 kg  |       |      |

## VMNA-7250-4 Functional Diagram

---



## VMNA-7250-4 Attenuator Map

---

| Path             | Attenuator Channel No. |
|------------------|------------------------|
| Port 1 to Port 2 | Channel 1              |
| Port 1 to Port 3 | Channel 2              |
| Port 1 to Port 4 | Channel 3              |
| Port 2 to Port 3 | Channel 4              |
| Port 2 to Port 4 | Channel 5              |
| Port 3 to Port 4 | Channel 6              |

## VMNA-7250-4 Ordering Information

---

| Part Number | Description                                     |
|-------------|---|
| VMNA-7250-4 | Mesh Network Attenuator, 4 Port, 700 - 7250 MHz |