

VMNA-7250-9 Lab Brick® 9 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-7250-9 Mesh Network Attenuator System is a rack-mounted 9 port crossbar test instrument. The VMNA-7250-9 provides 110 dB of attenuation control range from 700 to 7250 MHz with a step size of 0.1 dB on all 36 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.

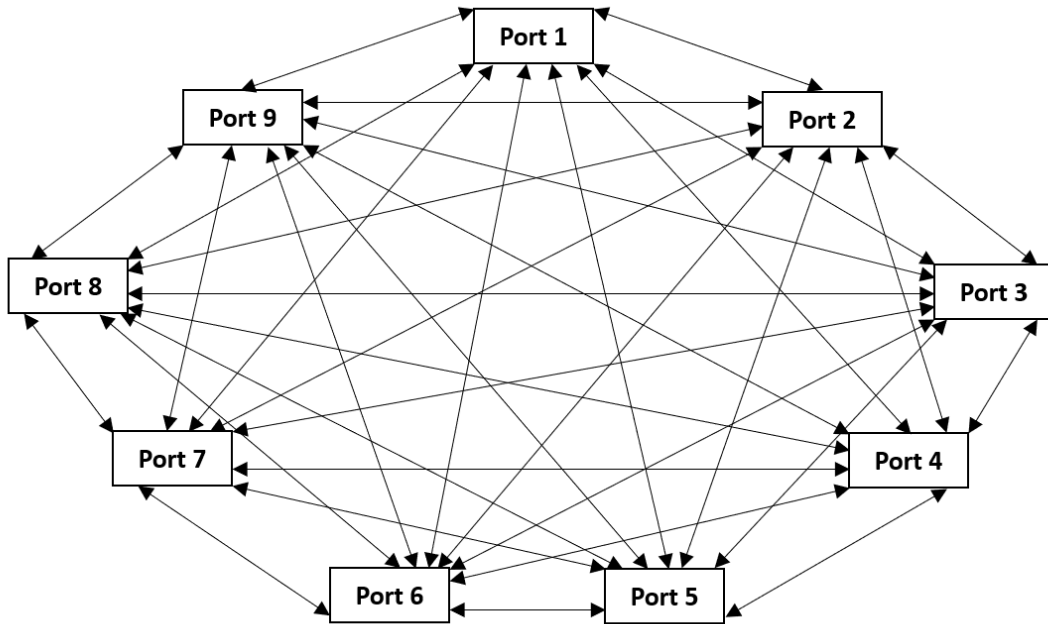
The VMNA-7250-9 is powered from the USB port and controlled through either the USB or Ethernet interface on the rear of the system. All RF ports are located on the front of the unit.

VMNA-7250-9 Specifications

Parameter	Test Conditions	Min	Typ	Max
Frequency Range (MHz)		700		7250
Impedance (Ω)			50	
Channel Inputs/Outputs		9		
Attenuation Range (dB)		110	120	
Step Size (dB)		0.1		
Insertion Loss (dB) (Includes theoretical loss of power dividers)	< 2 GHz		26	
	< 4 GHz		30	
	< 7.25 GHz		34	
Attenuation Accuracy (dB)	<30 dB		1	
	<60 dB		2	
	<90 dB		3	
	<110 dB		4	
Switching Speed (μ s)			2	
Maximum Input Level (dBm)			33	
Input IP3 (dBm)		38	45	
VSWR			1.5:1	

Parameter	Test Conditions/Notes	
Power Requirements		+5V (USB) - 550 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 Swept Attenuation – uni/bi directional – one time/repeat Profile	
Mechanical	Size (3RU)	17.0 x 13 x 15.25 inches 431.8 x 330.2 x 133.4 millimeters
	Weight	20 lbs 4.5 kg

VMNA-7250-9 Functional Diagram



VMNA-7250-9 Channel Map

VMNA-7250-9 Attenuator Channel Mapping

Path	Attenuator Channel
Port 1 to Port 2	1
Port 1 to Port 3	2
Port 1 to Port 4	3
Port 1 to Port 5	4
Port 1 to Port 6	5
Port 1 to Port 7	6
Port 1 to Port 8	7
Port 1 to Port 9	8
Port 2 to Port 3	9
Port 2 to Port 4	10
Port 2 to Port 5	11
Port 2 to Port 6	12
Port 2 to Port 7	13
Port 2 to Port 8	14
Port 2 to Port 9	15
Port 3 to Port 4	16
Port 3 to Port 5	17
Port 3 to Port 6	18

Path	Attenuator Channel
Port 3 to Port 7	19
Port 3 to Port 8	20
Port 3 to Port 9	21
Port 4 to Port 5	22
Port 4 to Port 6	23
Port 4 to Port 7	24
Port 4 to Port 8	25
Port 4 to Port 9	26
Port 5 to Port 6	27
Port 5 to Port 7	28
Port 5 to Port 8	29
Port 5 to Port 9	30
Port 6 to Port 7	31
Port 6 to Port 8	32
Port 6 to Port 9	33
Port 7 to Port 8	34
Port 7 to Port 9	35
Port 8 to Port 9	36

VMNA-7250-9 Ordering Information

Part Number	Description
VMNA-7250-9	Mesh Network Attenuator, 9 Port, 700 - 7250 MHz