

VMA-Q64X16SE Lab Brick® 64x16 Matrix Attenuator

500 – 6000 MHz Frequency | 90 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
- Ethernet Control
- Industry leading size - 15 rack units

Applications

- WiFi 6, WiFi,
- LTE, 5G, 6G
- MIMO, Multipoint Radio Fading Simulators
- Semiconductor Test and Qualification Labs
- Automated Test Equipment (ATE)



The Vaunix Digital Attenuator Matrix Systems are easily customized, bidirectional, non-blocking test instruments. Attenuation matrixes are ideal instruments for mobile operators, Wi-Fi chip manufacturers and radio development teams testing handover and MIMO performance in research labs, product verification and development environments. The matrix attenuator allows the user to direct multiple input signals to multiple outputs while controlling the signal power on all paths.

The VMA-Q64X16SE Attenuator Matrix System is a rack mounted 64 input x 16 output non-blocking test instrument. The VMA-Q64X16SE provides 90 dB of attenuation control range from 500 to 6000 MHz with a step size of 0.1 dB on all 512 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 VMA-Q64X16SE is AC powered and controlled through a single Ethernet port on the rear of the chassis. All input and output signals are available on the front panel with SMA or optional N Type connectors.

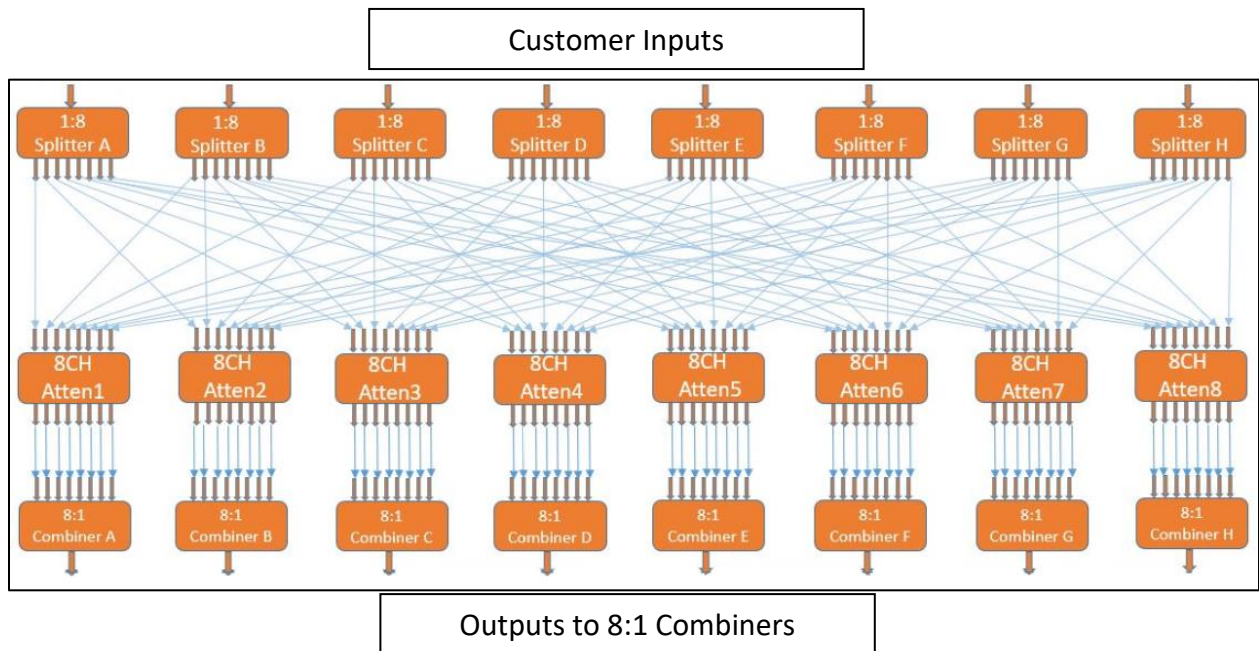
VMA-Q64X16SE Specifications

Parameter	Test Conditions	Min	Typ	Max
Frequency Range (MHz)		500		6000
Impedance (Ω)			50	
Channel Inputs/Outputs		64x16 - Bidirectional		
Attenuation Range (dB)		90		
Step Size (dB)		0.1		
Insertion Loss (dB) (Include theoretical loss of all power dividers)	< 2 GHz		36	
	< 4 GHz		39	
	< 6 GHz		43	
Attenuation Accuracy (dB)	<30 dB		1	
	<60 dB		2	
	<90 dB		3	
Switching Speed (μ s)			2	
Maximum Input Level (dBm)	Input Connectors		33	
	Output Connectors		20	
Input IP3 (dBm)		38	45	
VSWR			1.5:1	

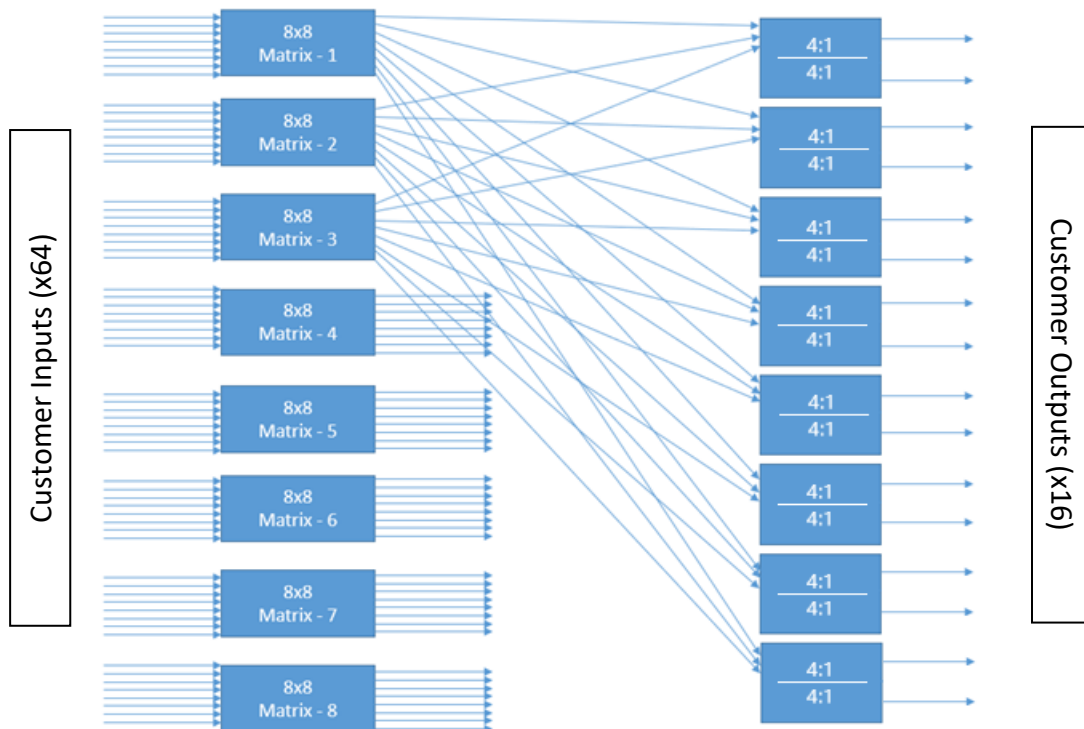
Parameter	Test Conditions/Notes	
Power Requirements	110/220 VAC	110 Watts
Environmental	Operating Temperature	0 °C to +40 °C
	Relative Humidity (non-condensing)	<95%
Physical Connections	Power Connector	IEC-60320-C13
	Control	Ethernet
	RF Connectors	SMA – female N - female (Optional)
Operating Modes	Manual Attenuation Control Swept Attenuation – uni/bi directional – one time/repeat Profile	
Mechanical	Size (15RU)	17.0 x 13 x 26.25 inches 431.8 x 330.2 x 666.8 millimeters
	Weight	125 lbs 56.8 kg

VMA-Q64X16SE Functional Diagram

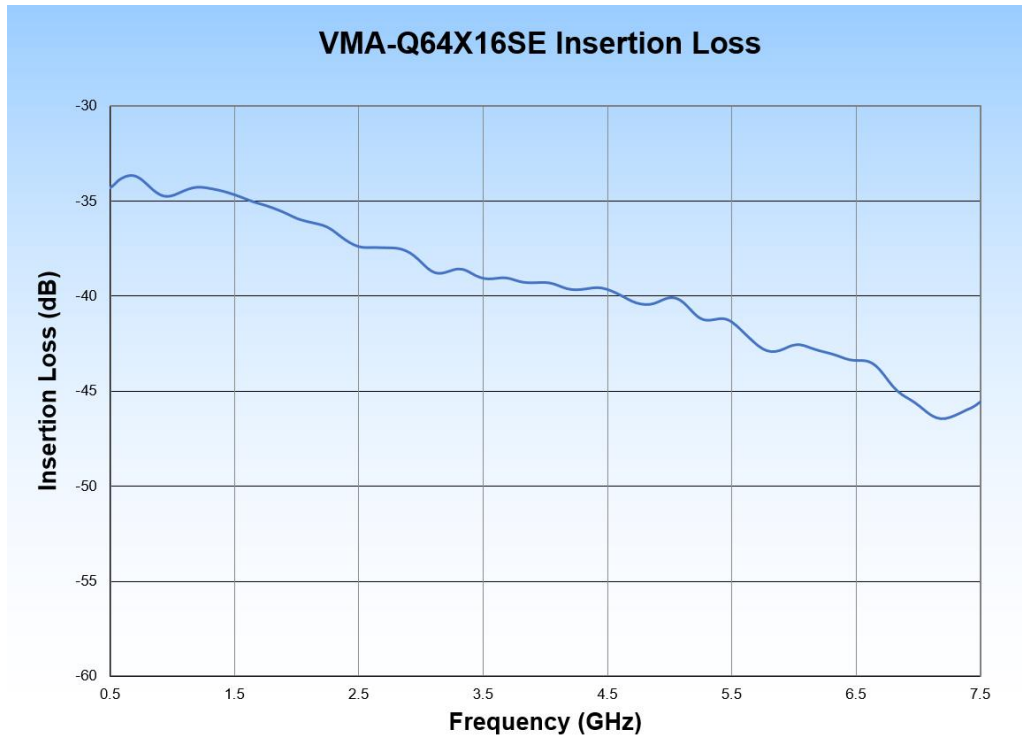
8x8 Matrix



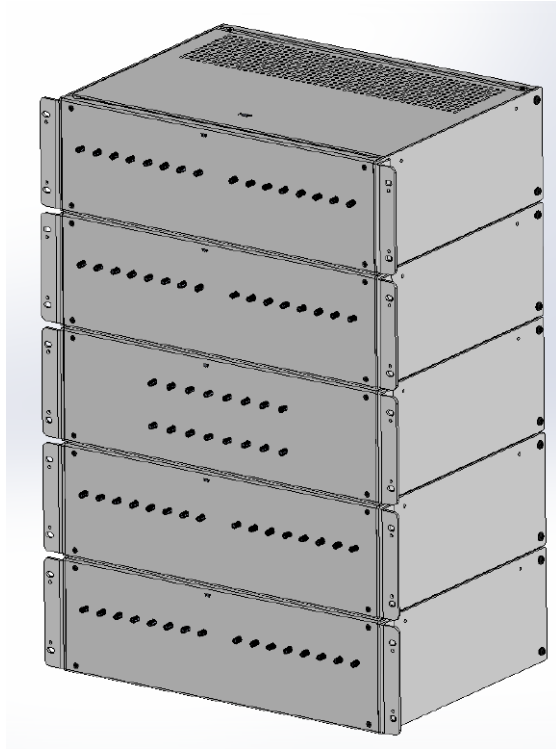
64x16 Matrix



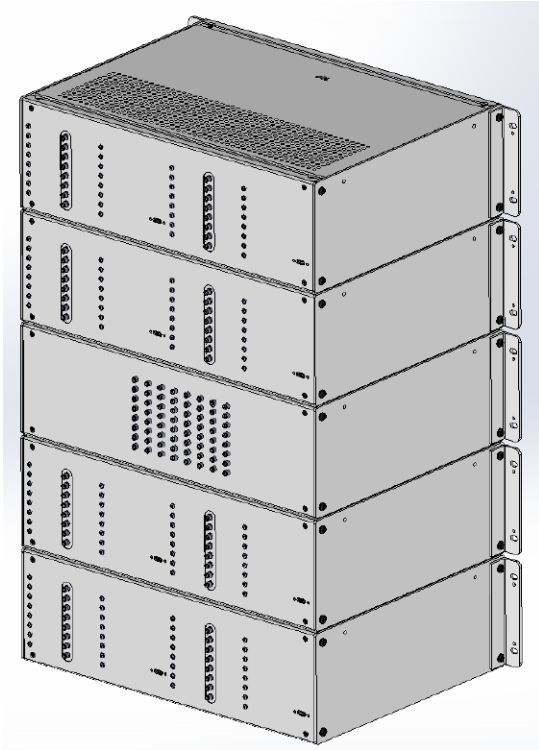
Performance Plots



VMA-Q64X16SE Mechanical Outline



Front View



Rear View