

# BLX-403 Lab Brick® Signal Generator

500 – 40,000 MHz Frequency

## Features/Benefits

- Reliable and Repeatable solid state signal generation
- Standard Internal/external pulse modulation
- USB/Ethernet Control
- 10 MHz external or internal reference
- 100 Hz Frequency Resolution
- Easily portable
- Sized to fit into a single rack unit for ATE applications



## Applications

- Portable LO Source
- Engineering/Production Test Labs
- Automated Test Equipment (ATE)
- Wi-Fi, Wi-Fi6E, 4G, 5G, LTE Test Systems

The Lab Brick™ series of synthesized signal generators bring affordability, functionality, and simplicity to the microwave test bench. Vaunix offers standard products with frequencies covering from .5 MHz up to 40 GHz with 100 Hz frequency resolution, +10 dBm output power with a minimum of 40 dB output level control. They offer advanced features such as frequency sweeping, internal/external 10 MHz reference and standard pulse modulation.

The BLX-403 offers both USB and Ethernet interfaces. The USB port uses a native HID interface to avoid the difficulties inherent in using older serial or IEEE-488 interfaces implemented over USB. As a result, Lab Brick™ users can get to work faster without having to install kernel level drivers, and Lab Brick™ devices can be easily used on any system that supports USB HID devices, including low-cost embedded computers using Linux or similar operating systems. The Ethernet interface is configurable for Static IP or DHCP with the ability to assign the HTTP port for extra security.

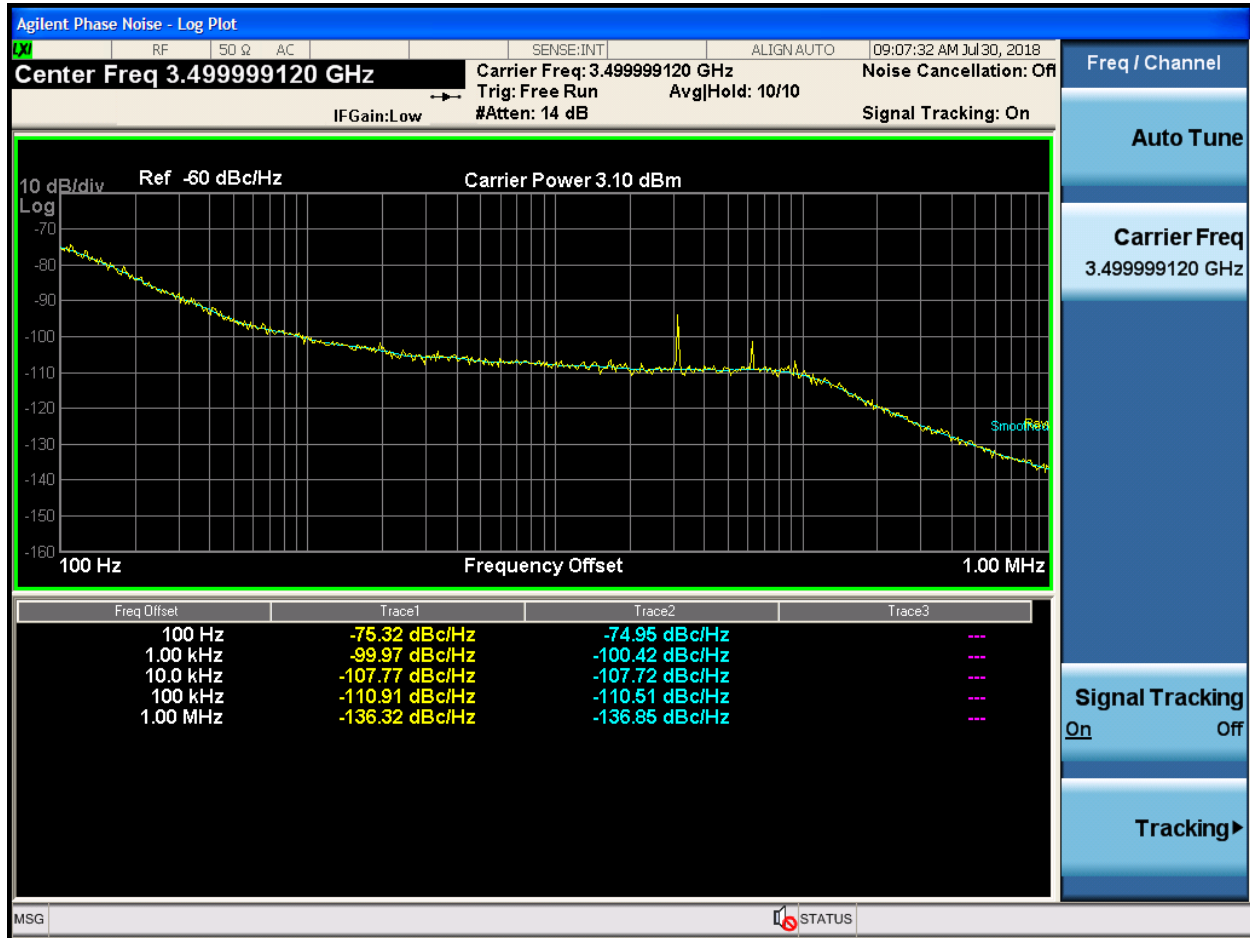
The BLX-403 is an affordable Signal Generator with low harmonic energy. The BLX-403 provides calibrated power control from 500 to 40000 MHz with a 100 Hz frequency setting resolution. The signal generator is easily programmable for fixed frequency operation, unidirectional or bidirectional frequency sweep and pulse modulation directly from the included Graphical User Interface (GUI). Alternatively, for users wishing to develop their own interface, Vaunix supplies LabVIEW drivers, Windows API DLL files, Linux drivers, Python examples and much more.

## BLX-403 Specifications

Parameter	Test Conditions	Min	Typ	Max
Frequency	Range (MHz)	500		40,000
	Step Size (Hz)	100		
	Accuracy/stability (ppm)			+/- 2.0
Phase Noise (dBc/Hz) @ 1/10/100/1000 kHz	@ 1 GHz	-95/-100/-105/-130	-105/-110/-115/-140	
	@ 10 GHz	-80/-85/-90/-120	-85/-90/-100/-130	
	@ 40 GHz	-70/-75/-80/-110	-75/-80/-90/-120	
Output Power	Standard (dBm)		+10	
	Control Range (dB)	40	45	
	Step Size (dB)		0.5	
	Accuracy (dB)	-2.5	+/-1	+2.5
Spurious	Inband (dBc)	-50	-70	
	Harmonics (dBc)		-35	
Switching Speed (ms)			5	
Internal/External Reference	Frequency (MHz)		10	
	Input Level (Vpp)	0.5	1	3
Pulse Modulation	Pulse Width (ns)	100		
	Pulse Repetition Rate (ns)	200		
	Pulse Depth (dB)	35	45	
VSWR			2.0:1	
Power Requirements		12 VDC 800 mA		
Environmental	Operating Temperature	0 °C to +50 °C		
	Relative Humidity (non-condensing)	<95%		
Physical Connections	Power	2.5mmx2.1mm		
	Control	USB/Ethernet		
	RF Connector	2.92mm – female		
	Reference	SMA – female		
	Pulse Modulation	SMA - female		
Mechanical	Size	6.5 x 3.64 x 1.0 inches 165.1 x 92.5 x 25.4 millimeters		
	Weight	1.7 pounds 0.77 kilograms		

# BLX-403 Performance Plots

## Phase Noise



# BLX-403 Mechanical Outline

