VAUNIX LAB BRICK · SIGNAL GENERATORS · 0.5 MHZ – 40 GHZ

USB Signal Generators up to 40 GHz

Vaunix Lab Brick signal generators are compact RF and microwave sources controlled via USB or Ethernet for lab, production, field use and automated test systems. 36 models from 0.5 MHz to 40 GHz, in CW and sweep mode.





Three series for every application

LSG series

12 models · 20 MHz – 6 GHz

The cost-effective basis: CW and stepped sweep, fully powered via USB, also in +20 dBm versions.

LMS series

21 models · 0.5 MHz – 20 GHz

Linear phase-continuous sweep, 100 Hz resolution, 0.1 ms switching time, optional pulse modulation.

BLX series

3 models · up to 40 GHz

Broadband up to 40 GHz with USB and Ethernet, standard pulse modulation, fits a single rack unit.

Software and control

Driverless USB HID control, Windows GUI, libraries for Windows and Linux with Python, C#, C++, MATLAB and LabVIEW. The GUI controls several units at once.

Fast availability

According to Vaunix, most models ship within one week.

Flexible on special requirements

Vaunix is very flexible with customer requests and also builds custom solutions, such as multi-channel synthesizers with multiple outputs or adapted connectors. Talk to us.

Frequency ranges at a glance

ALL SERIES · LOGARITHMIC SCALE

Frequency	Coverage	Models
LSG		
20 MHz – 120 MHz		LSG-121, LSG-121-20
50 MHz – 250 MHz		LSG-251, LSG-251-20
70 MHz – 450 MHz		LSG-451, LSG-451-20
250 MHz – 1.5 GHz		LSG-152, LSG-152-20
500 MHz – 2.2 GHz		LSG-222, LSG-222-20
1 GHz – 4 GHz		LSG-402
1.5 GHz – 6 GHz		LSG-602
LMS		
0.5 MHz – 270 MHz		LMS-271D
70 MHz – 450 MHz		LMS-451D, LMS-451D-13, LMS-451D-20
250 MHz – 1.5 GHz		LMS-152D, LMS-152D-13, LMS-152D-20
500 MHz – 2.3 GHz		LMS-232D
600 MHz – 3.2 GHz		LMS-322D
1 GHz – 4 GHz		LMS-402D, LMS-402D-13
1.5 GHz – 6 GHz		LMS-602D
2 GHz – 8 GHz		LMS-802DX, LMS-802CX
4 GHz – 8 GHz		LMS-802
5 GHz – 10 GHz		LMS-103
8 GHz – 12 GHz		LMS-123
8 GHz – 16 GHz		LMS-163
6 GHz – 18 GHz		LMS-183DX, LMS-183CX
10 GHz – 20 GHz		LMS-203
BLX		
700 MHz – 22 GHz		BLX-223
500 MHz – 40 GHz		BLX-403, BLX-403-20



The series compared

	LSG	LMS	BLX
Frequency range	20 MHz – 6 GHz	0.5 MHz – 20 GHz	500 MHz – 40 GHz
Resolution	100 kHz	100 Hz	100 Hz
Switching time	10 ms	0.1 ms (CX: 0.02 ms)	5 ms
Sweep	Stepped	Linear (CX: chirp)	Stepped
Ext. 10 MHz reference	Option	Standard	Standard
Pulse modulation	–	Option	Standard
Sweep trigger	–	Option	–
Interface	USB Mini-B	USB	USB, Ethernet

LSG series

12 MODELS · 20 MHZ – 6 GHZ · STEPPED SWEEP

The LSG generators deliver high output levels and excellent spectral purity. They need no additional supply and operate in CW or sweep mode.



Features

- 100 kHz frequency resolution, 10 ms switching time
- Stepped frequency sweep
- External 10 MHz reference as an option
- +13 dBm as an option, +20 dBm versions (-20)
- Powered and controlled via USB (Mini-B)

Typical applications

- Engineering and production test labs
- Automated test equipment (ATE)
- Portable LO source and field testing
- WiFi, 4G and 5G test systems
- Radar testing and simulation

Model	Frequency (MHz)	Phase noise 10/100 kHz (dBc/Hz)	Output power (dBm)	Spurious (dBc)	Harmonics (dBc)
LSG-121	20–120	-105/-125	+10 to -45	-80	-15
LSG-121-20	20–120	-105/-125	+20 to -35	-80	-15
LSG-251	50–250	-105/-125	+10 to -45	-80	-15
LSG-251-20	50–250	-105/-125	+20 to -35	-80	-15
LSG-451	70–450	-105/-125	+10 to -45	-80	-15
LSG-451-20	70–450	-105/-125	+20 to -35	-80	-15
LSG-152	250–1500	-95/-115	+10 to -45	-80	-15
LSG-152-20	250–1500	-95/-115	+20 to -35	-80	-15
LSG-222	500–2200	-90/-110	+10 to -45	-80	-15
LSG-222-20	500–2200	-90/-110	+20 to -35	-80	-15
LSG-402	1000–4000	-85/-105	+10 to -45	-80	-15
LSG-602	1500–6000	-75/-95	+10 to -45	-80	-15

LMS series

21 MODELS · 0.5 MHZ – 20 GHZ · LINEAR SWEEP

The LMS generators offer low phase noise, fast switching and a phase-continuous linear frequency sweep (LFM). DX and CX models provide an 80 dB level range, the CX models are fast-chirp generators with 0.02 ms switching time, e.g. for radar applications.



Features

- 100 Hz frequency resolution, ±2 ppm accuracy
- Phase-continuous sweep from 1 ms to 1000 s, up, down or bidirectional
- External 10 MHz reference as standard
- Frequency sweep trigger and pulse modulation (from 100 ns) as options
- +13 and +20 dBm versions

Model	Frequency (MHz)	Phase noise 10/100 kHz (dBc/Hz)	Switching (ms)	Output power (dBm)	Spurious (dBc)	Harmonics (dBc)
LMS-271D	0.5–270	-98/-105	0.1	+10 to -40	-80	-20
LMS-451D	70–450	-97/-103	0.1	+10 to -45	-80	-20
LMS-451D-13	70–450	-97/-103	0.1	+13 to -42	-89	-20
LMS-451D-20	70–450	-97/-103	0.1	+20 to -35	-80	-20
LMS-152D	250–1500	-95/-101	0.1	+10 to -45	-80	-20
LMS-152D-13	250–1500	-95/-101	0.1	+13 to -42	-80	-20
LMS-152D-20	250–1500	-95/-101	0.1	+20 to -35	-80	-20
LMS-232D	500–2300	-98/-105	0.1	+10 to -40	-80	-20
LMS-322D	600–3200	-90/-97	0.1	+10 to -45	-80	-20
LMS-402D	1000–4000	-98/-105	0.1	+10 to -40	-80	-20
LMS-402D-13	1000–4000	-95/-105	0.1	+13 to -42	-80	-20
LMS-602D	1500–6000	-85/-94	0.1	+10 to -40	-80	-20
LMS-802	4000–8000	-81/-89	0.1	+10 to -40	-80	-20
LMS-802DX	2000–8000	-85/-93	0.1	+10 to -70	-80	-40
LMS-802CX*	2000–8000	-84/-90	0.02	+10 to -70	-55	-35
LMS-103	5000–10000	-81/-89	0.1	+10 to -40	-80	-20
LMS-123	8000–12000	-77/-86	0.1	+10 to -40	-80	-20
LMS-163	8000–16000	-75/-83	0.1	+10 to -30	-80	-20
LMS-183DX	6000–18000	-75/-83	0.1	+10 to -70	-80	-40
LMS-183CX*	6000–18000	-82/-82	0.02	+10 to -70	-55	-35
LMS-203	10000–20000	-75/-83	0.1	+10 to -30	-80	-20

* CX models: fast chirp with 0.02 ms switching time, e.g. for radar applications.

BLX series

3 MODELS · UP TO 40 GHZ · USB AND ETHERNET





The BLX generators cover L to Ka band with a single unit. They are controlled via USB or Ethernet and fit a single rack unit for ATE racks.

Features

- 500 MHz to 40 GHz, 100 Hz resolution
- Internal and external pulse modulation as standard
- External 10 MHz reference as standard
- USB and Ethernet (static IP or DHCP)
- BLX-403-20 with +20 dBm output power
- Coming soon: BLX-223 up to 22 GHz

Model	Frequency (MHz)	Phase noise 10/100 kHz (dBc/Hz)	Switching (ms)	Output power (dBm)	Spurious (dBc)	Harmonics (dBc)
BLX-223 (coming soon)	700–22000	-85/-95	5	+10 to -35	-70	-35
BLX-403	500–40000	-80/-90	5	+10 to -35	-70	-35
BLX-403-20	500–40000	-80/-90	5	+20 to -30	-70	-25

All data as specified by the manufacturer Vaunix (website and Product Guide 2026). Detailed datasheets are available from bq-microwave.

Your contact for Vaunix

Looking for the right signal generator or a special version? We are happy to advise you and clarify details directly with Vaunix.

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