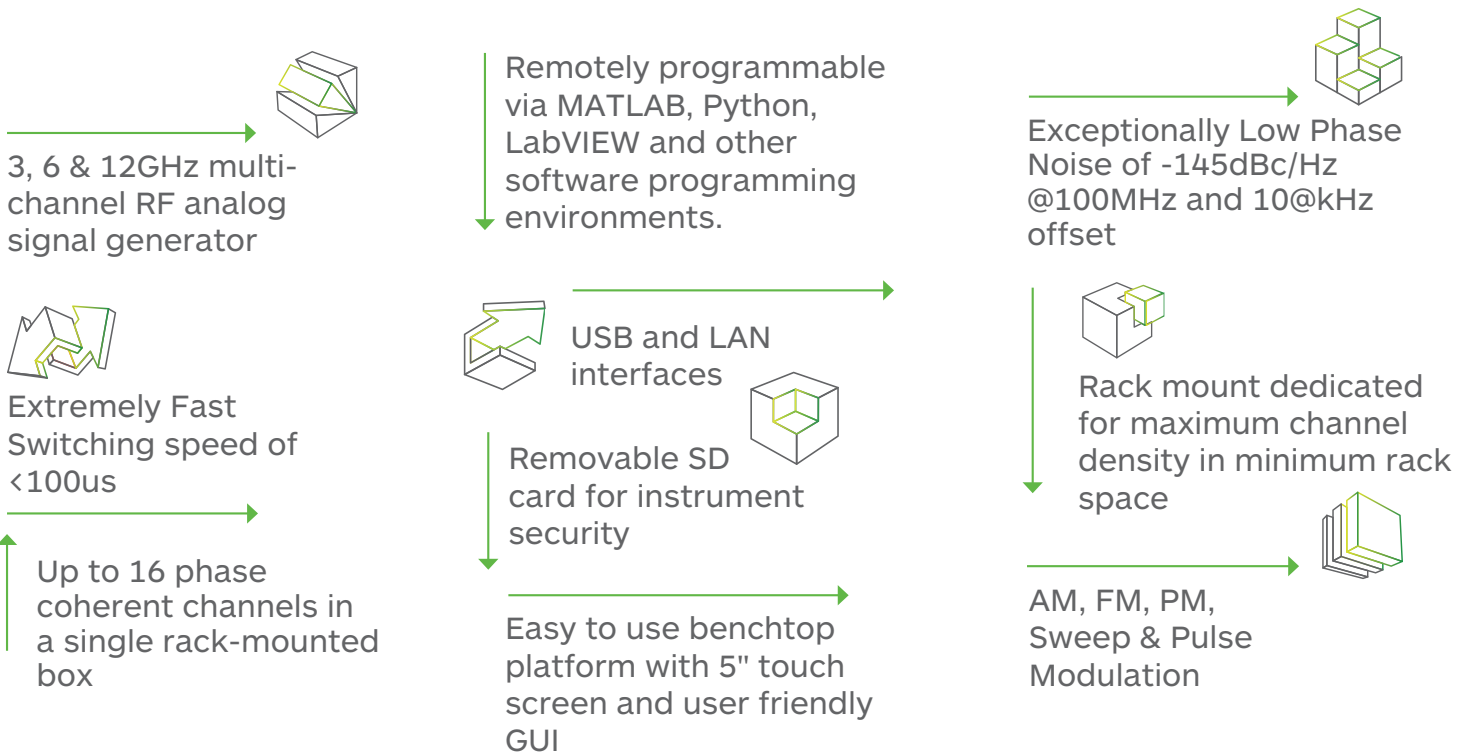


LUCID SERIES

THINK RF THINK LUCID

Tabor is proud to introduce its latest addition to its Lucid series line of RF analog signal generators. The all-new Lucid Series Rackmount platform is designed to offer maximum channel density at minimum cost of space. The rack-mounted platform, offers up to 4 phase coherent channels in a 19" 1U box and up to 16 phase coherent channels in a 3U, 19" box. Featuring extremely fast switching speed, superior signal integrity and purity, removable memory card for maximum security, all the necessary modulated signals for analog communication systems, with built in LAN and USB interface, the Lucid Series is designed to meet today's most demanding specifications, needed from the R&D benches to the production lines.



Extremely Fast Switching

In today's world, time is a crucial factor, whether in design, on the production floor or inside ATE systems. With a switching speed of less than 100µs, Tabor's All-New Lucid Series ensures maximum measurements at minimum time, setting the industry's highest throughput standard.

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Signal Integrity and Purity

One of the most important requirements in today's testing and measurement applications is high signal quality. With a typical SSB phase noise of -145dBc at 100MHz, and -132dBc at 1GHz, at 10 kHz carrier offset, Tabor's All-New Lucid Series platform delivers one of the best quality signals available on the market today, answering the ever-growing demand for clear and precise signals.

Multiple Ways to Control the Unit and Write Your Code

Tabor's Lucid Series comes with its own dedicated software to control the instrument functions, modes and features via a graphical user interface (GUI) as well as a complete set of drivers, allowing you to write your application in various environments including Labview, Python, CVI, C++, VB and MATLAB. You may also link the supplied dll to other Windows-based API's or use low-level SCPI commands to program the instrument, regardless of whether your application is written for Windows, Linux or Macintosh operating systems.

Modulation Schemes

Signal bursts and chirps have become a common need in the daily life of any aerospace or defense application. With Tabor's All-New Lucid Series, any pulse modulation is possible, no matter if its "narrow" or "standard" pulse need. On top of its outstanding pulse modulation performance, the Lucid Series is also equipped with many CW interferers, and modulated signals such as AM, FM, PM and Sweep.

Multi-channel, phase coherent, rack-mounted platform

Many test systems and experimental setups require multiple RF channels, either separate or synchronized. The new Lucid series rackmount platform offers up to 16, separate or phase coherent, RF outputs. Up to 4 channels are available in a single, 1U, 19" box, and up to 16 channels are available in a 3U, 19" box. Tabor's all-new Lucid series rackmount version saves valuable rack space and investment capital without compromising performance.

Specifications

FREQUENCY	
Range:	
LS3081/2/4/16R:	100 kHz to 3GHz
LS6081/2/4/16R:	100 kHz to 6GHz
LS1291/2/4/16R:	100 kHz to 12GHz
Resolution:	0.001 Hz
Phase offset:	0.01 deg
Switching speed:	
Standard:	500us
Fast (Option):	100 μs
List Mode (WB):	100us Full bandwidth
List Mode (NB):	<6us Narrow bandwidth (<10% BW)
Digital Sweep Mode (Frequency and amplitude):	
Range:	
LS3081/2/4/16R:	100 kHz to 3GHz
LS6081/2/4/16R:	100 kHz to 6GHz
LS1291/2/4/16R:	100 kHz to 12GHz
Dwell time:	10us to 1000s 1us resolution
Number of points:	
List:	2 to 4096
Step:	2 to 65535
Step change:	Linear or logarithmic
Trigger:	Free run, External, Bus, Timer
FREQUENCY REFERENCE	
Temp. Stability:	±100 ppb, ±20 ppb (option)
Aging:	± 1.25 ppm for 10 years
Warm up time:	30 min
Internal:	
Output Frequency:	10/100 MHz
Output Wave shape:	Sine
Output Power:	+5 ±2 dBm
Reference Mute:	-60 dBm
Locking Range:	± 2.0 ppm
Output Impedance:	50Ω
External:	
Input Frequency:	10 / 100 MHz
Input Power:	-5 to +10 dBm
Absolute Max.	
Input Level:	+15 dBm
Input Impedance:	50Ω
Locking Range:	20Hz
Wave shape:	Sine or Square

AMPLITUDE	
Max output power:	+15 dBm
Min output power:	-90 dBm
Resolution:	0.01 dB
Power Mute:	-65dBm
Output Return Loss:	-10dBm
Switching speed:	100 us
Accuracy (dB):	±0.5 (up to 10dBm)

PHASE NOISE (dBc/Hz)	
up to 1.5 GHz:	-136 typ (-132 max)
1.5 to 3 GHz:	-130 typ (-125 max)
3 to 6 GHz:	-124 typ (-120 max)
6 to 12 GHz:	-118 typ (-114 max)

HARMONICS (dBc)	
up to 12 GHz:	-40dBc

NON HARMONICS (dBc)	
up to 12 GHz:	-60dBc

MODULATION

FREQUENCY MODULATION

Maximum Deviation:	
0.05*f:	(<1.5GHz)
25MHz:	(1.25 to 2.5 GHz)
50MHz:	(2.5 to 5GHz)
100MHz:	(5 to 10GHz)
200MHz:	(>10GHz)
Resolution:	0.1% or 1 Hz (the greater)
Modulation Rate:	1 MHz

PHASE MODULATION	
Peak Deviation:	300 rad

AMPLITUDE MODULATION

AM Depth Linear:	+15 dBm
Maximum settable:	90%
Resolution:	0.1% of depth
Accuracy (1 kHz rate):	< ± 4% of setting
AM Depth Exponential:	
Maximum settable:	40 dB
Resolution:	0.01 dB
Accuracy (1kHz rate):	< ± 4% of setting
Modulation rate:	DC to 100 kHz

PULSE MODULATION (Option)	
On/off ratio:	80 dB
Rise/fall time (10%-90%):	25ns
Resolution:	6.4ns
Minimum Width:	30ns
Pulse Repetition frequency:	DC to 10 MHz

INPUTS

MODULATION INPUT

Connector Type:	BNC
Input Impedance:	50Ω
AM, FM modulation	
Max. input voltage:	1V
Input damage level:	±3.5V

Pulse modulation (Option)

Input voltage	TTL, CMOS compatible
Low threshold	0V
High threshold	1V
Damage level	-0.42V +5.42V

TRIGGER INPUT

Connector type	BNC
Input Impedance	50Ω or 10kΩ
Input voltage	TTL, CMOS compatible
Damage level	±5V

EXTERNAL REFERENCE INPUT

Connector type	BNC
Input Impedance	50Ω
Waveform	Sine or Square
Frequency	10/100MHz



Specifications

OUTPUTS		GENERAL		ORDERING INFORMATION	
RF OUT		Voltage Range:	90VAC to 264VAC	MODEL	DESCRIPTION
Impedance	50Ω	Frequency Range	47Hz to 63Hz	LS3081R:	3GHz 1CH rack-mounted Analog Signal Generator
Connector type	SMA	Power Consumption	400W	LS3082R:	3GHz 2CH rack-mounted Analog Signal Generator
Number of outputs		Interface:		LS3084R:	3GHz 4CH rack-mounted Analog Signal Generator
LS3081/6081/1291R	1	USB	1 x rear USB host, (type A) 1 x rear USB device, (type B)	LS30816R:	3GHz 16CH rack-mounted Analog Signal Generator
LS3082/6082/1292R	2	LAN	1000/100/10 BASE-T	LS6081R:	6GHz 1CH rack-mounted Analog Signal Generator
LS3084/6084/1294R	4	Storage	32GB removable SD card	LS6082R:	6GHz 2CH rack-mounted Analog Signal Generator
LS3084/6084/12916R	16	Dimensions:		LS6084R:	6GHz 4CH rack-mounted Analog Signal Generator
Inter channel		1U box	450 X 43 x 500 mm(W x H x D)	LS60816R:	6GHz 16CH rack-mounted Analog Signal Generator
Isolation	TBD	3U box	450 X 129 x 500 mm(W x H x D)	LS1291R:	12GHz 1CH rack-mounted Analog Signal Generator
Phase stability	TBD	Weight:		LS1292R:	12GHz 2CH rack-mounted Analog Signal Generator
REFERENCE OUT		Without Package		LS1294R:	12GHz 4CH rack-mounted Analog Signal Generator
Impedance	50Ω	1U box	6 Kg	LS12916R:	12GHz 16CH rack-mounted Analog Signal Generator
Connector type	BNC	3U box	12 Kg	OPTIONS	
		Shipping Weight		Pulse	Pulse Modulation
		1U box	7 Kg	FS	Fast Switching option 100us
		3U box	13 Kg	SD	Removable SD memory card
		Temperature:		W-Rack	Rack mount kit
		Operating	0°C to +40°C	Emulator pack	Emulator for Keysight, R&S, Anapico & Holzworth
		Storage	-40°C to +70°C		
		Warm up time:	15 minutes		
		Humidity:	85% RH, non-condensing		
		Safety:	CE Marked, IEC61010-1-1:2008		
		EMC:	IEC 61326-1:2006		
		Calibration:	2 years		
		Warranty:	1 / 3 year warranty plan		

