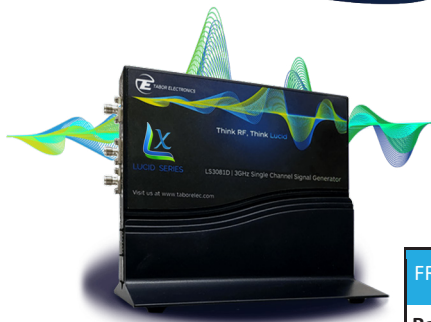




## Lucid X-Series Specification

LUCID SERIES  
THINK RF THINK LUCID



The Lucid X-Series of Microwave Signal Generators have 8GHz, 20GHz and 40GHz frequency ranges. With phase noise better than -120dBc/Hz at 1GHz, fast and high-resolution frequency switching and +15dBm of standard output power – these instruments matched some of the industries toughest requirements. Built on Tabor's modular technology platform, the LSX family is available in PXIe, USB-Modular, Rack, Benchtop and Portable formfactors. Ideal for modular test systems, embedded, bench and automated test equipment applications.

FREQUENCY	
<b>Range:</b>	
LSX8081M/D/P/R:	100 kHz to 8GHz
LSX2091 M/D/P/R:	100 kHz to 20GHz
LSX4091 M/D/P/R:	100 kHz to 40GHz
<b>Resolution:</b>	0.001Hz
<b>Phase offset:</b>	0.01deg
<b>Switching speed:</b>	
In Band	20 $\mu$ s
Between Bands:	100 $\mu$ s
FREQUENCY REFERENCE	
<b>Temp. Stability:</b>	$\pm$ 25ppb max.
<b>Aging:</b>	3 $\pm$ ppm for 20 years
<b>Warm up time:</b>	30min
AMPLITUDE	
<b>Max output</b>	
Settable:	+15 dBm
Calibrated:	+10 dBm
<b>Min output</b>	Base
Settable:	-70 dBm
Calibrated:	-50 dBm
<b>Resolution:</b>	0.01dB
<b>Power Mute:</b>	-70 dBm
<b>Output Return</b>	-10 dB
<b>Accuracy (dB):</b>	-50dBm to +10dBm
Up to 100MHz:	$\pm$ 0.5 (typ.)
100MHz to 3GHz:	$\pm$ 0.7(typ.)
3GHz to 9GHz:	$\pm$ 0.8(typ.)
Above 9GHz:	$\pm$ 1(typ.)
PHASE NOISE (dBc/Hz) (typ.)	
<b>@ offset</b>	<b>100Hz 1k 10k 100k 1M 10M</b>
<b>100MHz: (DDS)</b>	-110 -140 -154 -162 -164 -165
<b>250MHz: (DDS)</b>	-102 -134 -147 -153 -156 -158
<b>500MHz: (DDS)</b>	-96 -128 -141 -147 -150 -152
<b>1GHz :</b>	-93 -118 -125 -130 -145 -164
<b>2GHz :</b>	-87 -112 -119 -124 -139 -158
<b>4GHz:</b>	-81 -106 -113 -118 -133 -152
<b>8GHz:</b>	-75 -100 -107 -112 -127 -146

<b>10 GHz:</b>	-68 -93 -100 -105 -120 -139
<b>20 GHz:</b>	-66 -91 -98 -103 -118 -137
<b>40 GHz:</b>	-64 -89 -96 -101 -116 -134
HARMONICS (dBc)	
<b>Range</b>	up to -10dBm      -10dBm to +10dBm
<b>Up to 500MHz</b>	-40dBc      -20dBc
<b>500MHz to 2GHz</b>	-40dBc      -20dBc
<b>2GHz to 18GHz</b>	-40dBc      -20dBc
<b>18GHz to 40GHz</b>	-40dBc      -20dBc
SUB-HARMONICS (dBc)	
<b>Up to 40 GHz</b>	-70dBc
NON-HARMONICS (dBc)	
<b>Up to 500 MHz:</b>	-70dBc (typ.)
MODULATION	
FREQUENCY MODULATION	
<b>Max Deviation:</b>	5 MHz
Resolution:	0.1%or 1 Hz (the greater)
<b>Modulation</b>	1MHz
Resolution:	1Hz
AMPLITUDE MODULATION	
<b>AM Depth:</b>	
Type:	Linear
Maximum settable:	100%
Resolution:	0.1%of depth
Accuracy kHz)	5% $\pm$ >of setting
<b>Modulation rate:</b>	DC to 100 kHz
PHASE MODULATION	
Peak	360deg
Modulation	DC to 100 kHz
PULSE MODULATION (PLS OPTION)	
<b>On/off ratio:</b>	70 dB
<b>Rise/Fall Time:</b>	15ns
<b>Resolution:</b>	10ns
<b>Minimum Width:</b>	30ns
<b>Repetition</b>	DC to 10 MHz
PATTERN MODULATION (IPAT OPTION)	
<b>Number of steps:</b>	1to 248



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## General Specifications

MODULE	
RF Outputs:	1 per module
Voltage:	+12.0 to +12.6 VDC
Power Consumption:	Normal Operation: 18W nom. Max: 24W max.
Interface:	MICRO-USB, SPI
Dimensions (W x H x D):	12 x 16 x 2.5 cm
Weight:	Without Package: 1.0 kg Shipping Weight: 1.5 kg
PORTABLE	
RF Outputs:	1 per unit
Voltage:	15v
Power Consumption:	60W, 45W (Typ)
Display Type:	10", TFT capacitive touch screen
Interface:	1 x USB type B, 1 x micro USB for LAN adapter
Dimensions (W x H x D):	280 x 225 x 65 mm
Weight:	Without Package: 3.0kg Shipping Weight: 4.5 kg
Battery:	4-cell, replaceable. Standby: Up to 2 hours. Max. load: Up to 1 hours
Storage:	SD Card, Removable

BENCH/RACK	
RF Outputs:	Up to 4
Voltage:	90VAC to 264VAC, 47Hz to 63Hz
Power Consumption:	100W
Display Type:	Bench - 5", TFT capacitive touch screen, Rack - none
Interface:	USB - 1 x rear panel USB type B, LAN - 1 x rear panel 1000/100/10 BASE-T
Dimensions (W x H x D):	Bench - 315 X 102 x 425 mm. Rack - 1U box: 450 X 43 x 500 mm
Weight:	Without Package: 6.0kg Shipping Weight: 6.5 kg
Storage:	SD Card, Removable
PXIe	
RF Outputs:	1 per module
Power Consumption:	50W max per slot
Interface:	PCIe Gen 3 x4
Dimensions (W x H x D):	2 Slot PXIe
Weight:	Without Package: 1.0 kg Shipping Weight: 1.5 kg
COMMON	
Temperature:	Operating: 0°C to +40°C Storage: -40°C to +70°C
Warm up time:	15 minutes
Humidity:	85% RH, non-condensing
Safety:	CE Marked, IEC61010-1:2010 EMC: IEC 61326-1:2013
Calibration:	2 years
Warranty <sup>1</sup> :	3 year standard (1) 1 year standard in India

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