

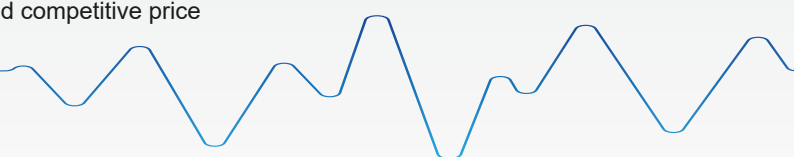

**Technocomm Instruments Pvt. Ltd.**  
Total Solutions in  
Instrumentation & Information

**Technocomm Instruments Pvt. Ltd.** is a Company Pioneer in Marketing and Supporting of highly sophisticated overseas products in India. The Company is promoted by group of technocrats having more than 35 years of experience in instrumentation sales and support. Our prospective and satisfied customers are Defence Organizations, Research & Development Organizations, Space Organizations, Engineering Institutions, Universities, Private & Public Sectors and Educational Institutions.

We Choose instruments from the best companies around the world, the pioneers in the respective fields. We have served many reputed organizations in India and have been lauded by them for our quality products, in-time service and competitive price

**Tabor Electronics Ltd** Established in 1971/Tabor electronics has become a world-leading provider of high-end signal sources, featuring RF, pulse, function lend arbitrary waveform generators and transceivers; high voltage amplifiers; and waveform and modulation creation software. Tabor has earned global recognition for its highly skilled workforce and innovative engineering capabilities

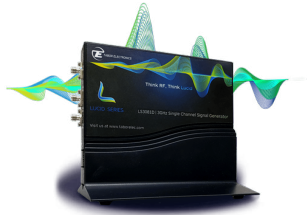
Tabor products are currently used in a wide range of applications from quantum physics experiment control to military and aerospace asset testing.



## RF SIGNAL GENERATORS - LUCID SERIES

The Lucid RF signal generator Series is geared towards solving applications demanding outstanding dynamic range, fast switching speed, and easy remote programming for seamless system integration, all in a compact module platform. The series was designed to offer industry leading price to performance ratio, delivering a full product portfolio for generating signals for various applications whether, 5G, radar, communications, and more.

The Lucid series feature 3, 6, and 12GHz single channel versions, all sharing the same industry leading highlighted features, in a compact, small footprint module. Featuring extremely fast switching speed, superior signal integrity, and purity, all the necessary modulated signals for analog communication systems, built-in SPI, and micro-USB interface, the Lucid Series is designed to meet today's most demanding specifications, needed from the R&D benches to the production lines.



Desktop

Portable

Benchtop

Rack Mount

### THE FEATURES AT A GLANCE:

Platform	Desktop	Portable	Benchtop	Rack Mount
Frequency Range	3,6 and 12GHz			
Channels	1	1	1, 2, 4	1, 2, 4
Power	-20 (-90 option) to +15 dBm			
Phase Noise (@10kHz)	1GHz: -138 dBc/Hz typ 2GHz: -133 dBc/Hz typ 3GHz: -130 dBc/Hz typ 6GHz: -124 dBc/Hz typ 12GHz: -118 dBc/Hz typ			
Harmonics: Up to 100MHz 100MHz to 12GHz	-30dBc -50dBc	-30dBc -50dBc	-30dBc -50dBc	-40dBc -50dBc
Non-Harmonics up to 12 GHz	-90dBc (typ) -60dBc max			
Modulation	Internal or External: FM, AM, PM, Pulse, Pattern, Sweep, List,			
Run Modes	Continuous, Trigger			
Remote Programming	Full IVI (C++, CVI, LabView), Python & MATLAB drivers and Lucid Studio			
Product Emulators	Keysight, R&S, quicksyn, Anapico & Holzworth			
Connectivity	SPI, micro-USB	SPI, micro-USB	USB, LAN	USB, LAN
Storage	Removable SD Card			Removable SD Card
Display	-	10" touch screen	5" Color Touch Display	-

## µW SIGNAL GENERATORS - LUCID-X SERIES

The new Lucid-X extends the frequency range of Tabor's industry leading Lucid series of analog signal generator all the way up to mm-Wave. It offers advanced features and industry leading performance, while maintaining the most compact form factor.

The series feature 8, 20 and 40GHz frequency ranges enabling. Built on Tabor's modular technology platform, the LSX family is available in PXIe, USB-Modular, Rack, Benchtop and Portable formfactors.

### THE FEATURES AT A GLANCE:

Platform	Desktop	Portable	Benchtop	Rack Mount	PXIe
Frequency Range	20 and 40GHz				
Channels	1	1	1, 2, 4	1, 2, 4	1
Power	-50 (-70 Option) to +10dBm				
Phase Noise (@10kHz) (typ.)	-155dBc/Hz at 100MHz -141dBc/Hz at 500MHz -134dBc/Hz at 1GHz -116dBc/Hz at 8GHz -109dBc/Hz at 20GHz -103dBc/Hz at 40GHz				-134dBc/Hz at 1GHz
Harmonics: Up to 8GHz 8GHz to 20GHz 20GHz to 40GHz	-50dBc -40dBc -35dBc				
Non-Harmonics	-90dBc (typ) -60dBc max.				
Modulation	Internal or External: AM, FM, PM, Pattern, Sweep & Pulse				
Run Modes	Continuous, Trigger				
Remote Programming	Full IVI (C++, CVI, LabView), Python & MATLAB drivers and Lucid Control Panel				
Product Emulators	Keysight, R&S, Guicksyn, Anapico & Holzworth				
Connectivity	SPI, USB Type C	SPI, Micro-USB, LAN	USB, LAN	USB, LAN	PXIe
Storage	Removable SD Card			Removable SD Card	-
Display	-	10" touch screen	5" Color Touch Display	-	-

## ARBITRARY WAVEFORM GENERATORS / TRANSCEIVERS - PROTEUS SERIES

The new Proteus Arbitrary Waveform Generator is ideal for applications in Quantum Computing, Electronic Warfare, Radar, and next generation communications such as 5G, 6G, Ultrawide Bandwidth (UWB), and WiFi (802.11) 6 and 7. Built on the latest RF DAC and RF ADC technology, the series has sample rates up to 9GS/s and multiple Nyquist zone frequency range capability in excess of 10GHz.

It's an innovative task oriented programming environment, and user programmable FPGA. When used in combination with its optional RF Digitizer it gives you the ability to change waveforms in real-time - ideal for improving the coherence time of a Qubit, characterizing an RF amplifier, or responding to an EW threat.



Desktop



Benchtop



PXIe Modules

### THE FEATURES AT A GLANCE:

Platform	Desktop	Benchtop	PXIe
Channels	2, 4, 6, 8, 12		2, 4
Modes	Standard, Arbitrary, Task		
Max. Sample Clock Rate	9GS/s		
Memory Size	1G/2G/4G/8G		
Vertical Resolution	16 bits		
Output Type	DC, Direct (AC)		
Bandwidth	625MHz, 1.25GHz, 2.5GHz, 4.5GHz, 7GHz		625MHz, 1.25GHz, 2.5GHz, 4.5GHz, 9GHz
Max Amplitude (into 50Ω)	1.2Vp-p, 600mVp-p		
Transition Time (20/80 typ.)	<130ps, <100ps, <60ps		
Run Modes	Continuous, Trigger, Gate		
Digitizer (AWT Option)	12bit, 5.4GS/s Single Channel or 2.7GS/s Dual Channel		
Storage	Removable SSD		
Remote Programming	Full IVI (C++, CVI, LabView), Python & MATLAB drivers and Wave Design Studio		
Connectivity	3 x USB HOST, 1 x 1Gbit LAN Std., 2 x 10Gbit Optical/LAN Ports Optional		PXIe Gen3 x8 Lanes
Display	-	9" Touch Color LCD Display	-

## RF ARBITRARY WAVEFORM GENERATORS / TRANSCEIVERS - PROTEUS SERIES

Tabor's new addition to the Proteus, Arbitrary Waveform generators / Transceivers series. The new RF AWG/AWT has a built-in IQ modulator with advanced capabilities for multi-channel RF signal generation. The system is based on a PXIe platform and enables you to transmit, receive and perform digital signal processing in a single instrument.

The Proteus series offers an integrated Numerically Controlled Oscillator (NCO), digital interpolator, and IQ modulator for the generation of complex RF signals directly from the Proteus instrument. The internal digital-up-converter enables the direct generation of IQ modulation signals eliminating limitations such as IQ mismatch, and in-band carrier feed-through that is present with external IQ modulators and mixers.

Platform	Desktop	Benchtop	PXIe
Channels	2, 4, 8, 12		2, 4
Modes	Standard, Arbitrary, Task		
Max. Sample Clock Rate	9GS/s		
Memory Size	8GS		
Vertical Resolution	16 bits		
Output Type	AC		
Bandwidth	8GHz		
Max Amplitude (into 50Ω)	550mVp-p		
Transition Time (20/80 typ.)	<40ps		
Run Modes	Continuous, Trigger, Gate		
Digitizer (AWT Option)	12bit, 5.4GS/s Single Channel or 2.7GS/s Dual Channel		
Storage	Built-In M.2   Removable SSD		-
Remote Programming	Full IVI (C++, CVI, LabView), Python & MATLAB drivers and Wave Design Studio		
Connectivity	3 x USB HOST, 1 x 10Gbit LAN Std., Thunderbolt 3, GIPB, 2 x 10Gbit Optical Options		PXIe Gen3 x8 Lanes
Display	-	9" Touch Color LCD Display	-

## ARBITRARY FUNCTION GENERATORS - WONDER WAVE SERIES

The Wonder Wave Series line of arbitrary waveform generators (AWG), with all of the memory management capabilities needed to create complex waveforms, it also implements a Direct Digital Synthesizer (DDS) enabling many standard modulation types and frequency agility capabilities. Superior and far more versatile the Wonder Wave Series exhibit performance and provide solutions to the most demanding test stimulus challenge.



### THE FEATURES AT A GLANCE:

MODEL	WW50 61/62/64	WW10 71/72/74	WW2074
Channels	1, 2, 4	1, 2, 4	4
Waveform Type	Standard, Arbitrary, Pulse, Modulated and Sequenced		
Max. Sample Clock Rate	50MS/s	100MS/s	200MS/s
Memory Size	512k (1M option)	1M (2M/4M option)	
Memory Management	2k Segments; 4k Steps; 1M Loops		10k Segments; 4k Steps; 1M Loops
Vertical Resolution	16 bits		
Max Frequency (Sine/Square/others)	25MHz / 15MHz / 7.5MHz	50MHz / 25MHz / 15MHz	80MHz / 50MHz / 25MHz
Max Amplitude (into 50Ω)	10Vp-p		
Transition Time (typ.)	<4ns		
Display	User Friendly 3.8" color LCD Display		
Remote Programming	Full IVI driver (C++, CVI, LabView), MATLAB and ArbConnection		
Connectivity	LAN, USB, GPIB		

## PULSE PATTERN GENERATORS - PULSE MASTER IS A SERIES

The Pulse Master is a Series of Single and Dual Channel Pulse/Waveform Generators that offers a complete array of pulse, standard, arbitrary, sequenced and modulated waveforms with unmatched performance, even compared to instruments designed to generate fewer types of signals.

MODEL	PM8571A	PM8572A
Channels	1	2
Waveform Type	Standard, Arbitrary, Pulse and Modulated	
Period Range	20ns to 1000s	
Pulse Width Range	8ns to 10s	
Timing Resolution	10ps	
Trigger Jitter	<100ps	
Max Frequency (Sine/Square/others)	100MHz / 62.5MHz / 31.25MHz	
Max. Sample Clock Rate	250MS/s (typ 300MS/s)	250MS/s
Memory Size	1M (2M/4M option)	
Vertical Resolution	16 bits	
Modulation	AM, FM, FSK, ASK, PSK, Amplitude and Frequency Hop, (n)PSK, (n)QAM, PWM and Sweep	
Max Amplitude (into 50Ω)	16Vp-p (20Vp-p option)	
Transition Time (typ.)	<4ns	
Display	User Friendly 3.8" color LCD Display	
Remote Programming	Full IVI driver (C++, CVI, LabView), MATLAB and ArbConnection	
Connectivity	LAN, USB, GPIB	

## PXIe CHASSIS - 6 SLOT PXIE BASED CHASSIS WITH EMBEDDED CONTROLLER

The PXE6410 is a PXIe based 6 based slot Gen 3 x4 chassis, that supports the Tabor Proteus Family of AWG's and the TE330x family of PXIe RF amplifiers. The system includes an embedded PC with an internal SSD drive, HDMI connection, USB interfaces for a mouse and keyboard, as well as control using USB-C and 1000BASE-T LAN.

MODEL	PXE6410	PXE21100
Slots	6 slots	21 slots
Bus Configuration	Gen 3, x4 Lanes	Gen 4, x8 Lanes
<b>Embedded Controller</b>		
CPU	Intel D1508 2 Cores Std. / D1548 8 Cores Opt.	Intel i5-13500E Std. / Intel i9-13900E Opt.
Memory	16G Std. / 64G Opt.	16G Std. / 128G Opt.
Storage	120GB Std. / 1T Opt.	
Ports	3xUSB A (Host), 1xUSB C (Device), LAN	4xUSB A (Host), LAN
Build-in Graphics	HDMI	Display Port
Operating System	Windows 10 IoT Std.	



## PCI & PXI WAVEFORM GENERATORS

Tabor's PCI/PXI Arbitrary waveform generators are designed to enable a high level of integration, allowing it to implement its unique Arbitrary waveform generation technology in this platform. Being the bench models replica for the WonderWave Arbitrary waveform generator's series, the PXI and PCI arbitrary waveform generators 5000 series, set new standards of performance. They combine two technologies, making use of the best qualities from each of the types of generators allowing it to create complex waveforms, on one hand, and generating all the standard functions and modulation formats, on the other.



### THE FEATURES AT A GLANCE:

MODEL	TE5200   TE5325	TE5201   TE5300	TE5251   TE5351
Channels			
Channels	Standard, Arbitrary, Pulse, Modulated and Sequenced		
Max. Sample Clock Rate	50MS/s	125MS/s	250MS/s
Memory Size	1M	2M	
Memory Management	4k Segments; 4k Steps; 128k Loops		10k Segments; 4k Steps; 1M Loops
Vertical Resolution	14 bits		16 bits
Modulation	AM, FM, Arbitrary FM, FSK, Sweep		AM, FM, FSK, ASK, Freq. & Amp. Hop, Sweep
Max Frequency (Sine/Square/others)	25MHz / 15MHz / 7.5MHz	50MHz / 30MHz / 15MHz	100MHz / 62.5MHz / 31.25MHz
Max Amplitude (into 50Ω)	8Vp-p   10Vp-p		10Vp-p
Transition Time (typ.)	<6ns		
Remote Programming	Full IVI driver (C++, CVI, LabView), MATLAB and ArbConnection		
Connectivity	PXI Hybrid, PCI		

## SIGNAL / WAVEFORM AMPLIFIERS

Signal amplifiers are used to increase the size of a signal by some factor, in a system where the signal source being used does not provide the required output level. When choosing a waveform amplifier these criteria of the signal amplifier's performance must be taken into account: Input & Output Impedance, Gain, Bandwidth (BW), Slew Rate (SR), Total Harmonic Distortion (THD), and Load.

Tabor's signal generator amplifiers are designed to operate in conjunction with all of Tabor's arbitrary waveform generators and RF signal generator series. Combined, these waveform amplifiers deliver a high performance signal generation package, enabling high speed and high-frequency arbitrary generation capabilities with the most sophisticated signal generation, all in a single setup solution.



High-Frequency Amplifier



High-Voltage Amplifier

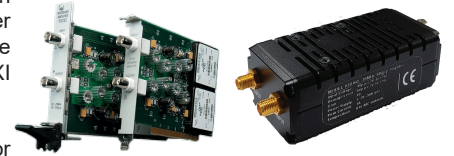
### THE FEATURES AT A GLANCE:

MODEL	9250A	9260A	9100   9200	9100A   9200A   9400A
Channels	2 Single or Differential		1, 2	1, 2, 4
Max Amplitude	20Vp-p	34Vp-p	300Vp-p	400Vp-p
Large Signal Bandwidth	15MHz	30MHz	500kHz	
Small Signal Bandwidth	30MHz	45MHz	1.5MHz	
Max. Output Current	200mA	750mA, 1A Peak	150mA   100mA	120mA   100mA   50mA
Input Impedance	50Ω   75Ω   1MΩ		1MΩ	
Output Impedance	50Ω   75Ω   600Ω	2.5Ω   50Ω   75Ω	0.1Ω	
Gain	10 (or custom)		50 (or custom)	
Transition Time (typ)	<22ns	<10ns	<1.5μs	<1μs
Connectivity	Bench			

## PCI, PXI & MODULAR SIGNAL AMPLIFIERS

Low power supply rails, a main part of the PXI, cPCI and PCI equipment, are a common cause for an inability to produce high voltage output. Tabor Electronics' new amplifiers convert the supply rails to higher voltage suitable for signals up to 40Vp-p, thus solving this problem. The PCI & PXI Signal Amplifiers line operates in conjunction with Tabor's arbitrary waveform generators providing the ultimate solution for PXI and PCI, high-voltage, wideband applications.

Tabor Electronics's amplifiers produce high voltages by converting the supply rails to voltage suitable for signals up to 180Vp-p



### THE FEATURES AT A GLANCE:

MODEL	TE3180	TE3222	TE3322	A10150	A10160
Channels	1				
Max Amplitude	180Vp-p	20Vp-p	20Vp-p	16Vp-p   20Vp-p	34Vp-p
Large Signal Bandwidth	300kHz	20MHz		150MHz	30MHz
Small Signal Bandwidth	1MHz	50MHz		200MHz	45MHz
Max. Output Current	150mA	200mA		250mA	750mA
Input Impedance	50Ω	50Ω, 1MΩ		50Ω	
Output Impedance	0.1Ω	50Ω, 1MΩ, 600Ω		50Ω	2.5Ω
Gain	20 (or custom)	10 (or custom)		5 (or custom)	10 (or custom)
Transition Time	<1.5μs	<22ns		<2.6ns	<10ns
Connectivity	PXI Hybrid		PCI	Snap-On	

## MODULAR RF SIGNAL AMPLIFIERS

These combined with Tabor's RF AWG's or Lucid Signal Generators can provide output power of up to 28dBm with a very small footprint, these ultra wideband (20GHz) amplifiers are designed for high frequency, high power signal applications. They are an ideal amplifier to compliment any signal source that needs an extended power boost for demanding application.

The A10200 RF amplifier was designed to extend the power range of the Tabor arbitrary waveform generators and RF signal generators, yet it is compatible with many signal sources instruments.



### THE FEATURES AT A GLANCE:

MODEL	TE3201	TE3202	A10200
Channels	1	2	1
Frequency Range	100kHz-20GHZ		
Gain	10dB	10dB or 20dB	20dB
P1dB	27dBm		
Noise Figure	9dB		
Psat	30dBm		
Connectivity	PXI Hybrid		In-Line Snap-On

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