TABOR ELECTRONICS

Simulate, Stimulate, Test...

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Version 6.4

About Tabor Electronics

Established in 1971, Tabor Electronics has become a world-leading provider of high-end signal sources, featuring RF, pulse, function and 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. In addition to offering a full range of self-branded instruments, Tabor is also a world-class OEM that private-labels a variety of products for industry leaders. Technologically advanced, featuring the highest levels of performance, reliability, and, most importantly, price-competitiveness, Tabor products are currently used in a wide range of applications from quantum physics experiment control to military and aerospace asset testing.

Over the past decade Tabor has extended its global reach. Headquartered in Nesher, Israel, Tabor maintains a worldwide distribution network and has become the partner of choice for over 50 major distributors and integrators around the globe.

Customer Service and Support

- Professional assistance for choosing the perfect solution.
- Individualized technical support help desk.
- Repair and calibration services in Israel and the USA.

Warranty

The instruments come standard with a three- or five-year warranty. Each instrument has full test results, a calibration certificate, an online product and programming manual, software drivers, and programming examples. Our obligation under this warranty is to repair or replace any instrument or part thereof that, within the warranty period after shipment, proves defective upon examination. To exercise this warranty, write or call your local Tabor representative or contact Tabor Headquarters and you will be given prompt assistance and shipping instructions.

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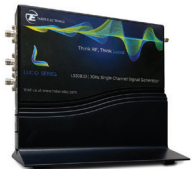
RF Signal Generators

LUCID Series

Tabor's Lucid Series of RF analog signal generators offers industry-leading performance in multiple form factors. The series features 3, 6, and 12 GHz models in desktop, portable, benchtop, or rackmount configurations. All units have extremely fast switching speed, superior signal fidelity, and analog modulation including AM, FM, PM, and Pulse Modulation. It has an intuitive graphical user interface, remote SCPI control, and backwards command compatibility with most signal generators.

DESKTOP PLATFORM



The Desktop Platform offers all the functionality of a full-featured benchtop analog RF signal generator but in an industry-leading small package. It is designed to be used on the bench, as an embedded source, or as part of a larger automated test system (especially when rack space is at a premium). A GUI and an API are provided for easy control from your PC through Micro-USB or SPI.

Models	LS3081D	LS6081D	LS1291D
Frequency Range	9kHz to 3GHz	9kHz to 6GHz	9kHz to 12GHz
Channels	1	1	1
Power	-20 (-90 option) to +15 dBm	-20 (-90 option) to +15 dBm	-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
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	Continuous, Trigger	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	SPI, micro-USB

PORTABLE PLATFORM

A rugged field-portable signal generator, the Portable Platform is equipped with a10" touch screen that is suitable for day and night use. In addition, it has more than 2-hours of operational battery life with built-in USB, an optional LAN interface, and a removable micro-SD card. You'll get the performance you need without worrying about an AC supply.

Models	LS3081P	LS6081P	LS1291P
Frequency Range	9kHz to 3GHz	9kHz to 6GHz	9kHz to 12GHz
Channels	1	1	1
Power	-20 (-90 option) to +15 dBm	-20 (-90 option) to +15 dBm	-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
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	Continuous, Trigger	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	SPI, micro-USB
Product Emulators	Keysight, R&S, quicksyn, Anapico & Holzworth		
Connectivity	USB, micro-USB to LAN	USB, micro-USB to LAN	USB, micro-USB to LAN

BENCHTOP PLATFORM

Creating multiple analog RF signals on the bench is easy., The Benchtop Platform is housed in a 19 ¾" 2U enclosure with a 5" touchscreen and front panel controls enabling stand-alone operation. The unit can be configured with 1,2 or 4-phase coherent RF channels and has built-in LAN, a USB interface with SCPI control, and a removable micro-SD card. With phase-coherent, multi-channel capability it can solve a host of measurement applications in quantum physics, amplifier characterization, and phased array antenna systems.

Models	LS3081B | LS3082B | LS3084B	LS6081B | LS6082B | LS6084B	LS1291B | LS1292B | LS1294B
Frequency Range	9kHz to 3GHz	9kHz to 6GHz	9kHz to 12GHz
Channels	1 | 2 | 4	1 | 2 | 4	1 | 2 | 4
Power	-80 (opt -150) to + 15 (opt +27) dBm	-80 (opt -150) to + 15 (opt +27) dBm	-80 (opt -150) to + 15 (opt +27) 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
Non-Harmonics	-90dBc (typ) -60dBc max		
Modulation	Internal or External: FM, AM, PM, Pulse, Pattern, Sweep, List		
Run Modes	Continuous, Trigger	Continuous, Trigger	Continuous, Trigger
Storage	Removable SD Card		
Display	5" Color Touch Display		
Remote Programming	Full IVI (C++, CVI, LabView), Python & MATLAB drivers and Lucid Studio		
Product Emulators	Keysight, R&S, quicksyn, Anapico & Holzworth		
Connectivity	USB, LAN	USB, LAN	USB, LAN

RACK MOUNT PLATFORM

The Rack Mount Plartform With all the features of the Benchtop Platform the Rack Mount offers the industry's highest channel density in the least possible space, with up to 4 phase-coherent channels in a 19" 1U unit and up to 16 phase-coherent channels in a 19" 3U unit. Connectivity for remote control is enabled with LAN and USB interfaces and SCPI control.

Models	LS3081R | LS3082R | LS3084R	LS6081R | LS6082R | LS6084R	LS1291R | LS1292R | LS1294R
Frequency Range	9kHz to 3GHz	9kHz to 6GHz	9kHz to 12GHz
Channels	1 | 2 | 4	1 | 2 | 4	1 | 2 | 4
Power	-80 (opt -150) to + 15 (opt +27) dBm	-80 (opt -150) to + 15 (opt +27) dBm	-80 (opt -150) to + 15 (opt +27) 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	-40dBc -50dBc	-40dBc -50dBc	-40dBc -50dBc
Non-Harmonics	-90dBc (typ) -60dBc max		
Modulation	Internal or External: FM, AM, PM, Pulse, Pattern, Sweep, List		
Run Modes	Continuous, Trigger	Continuous, Trigger	Continuous, Trigger
Storage	Removable SD Card		
Remote Programming	Full IVI (C++, CVI, LabView), Python & MATLAB drivers and Lucid Studio		
Product Emulators	Keysight, R&S, quicksyn, Anapico & Holzworth		
Connectivity	USB, LAN	USB, LAN	USB, LAN

µW Signal Generators

LUCID-X Series

The new Lucid-X Series extends the frequency range of Tabor's industry-leading Lucid Series of analog signal generators. The series features 8, 20, and 40GHz frequency ranges and offers all the advanced capability of the Lucid series but extended to mmWave. Built on Tabor's modular-technology platform, the LSX family is available in PXIe, Desktop, Rack, Benchtop and Portable formfactors. Specs are not final.

DESKTOP PLATFORM

The Desktop Platform offers all the functionality of a fully featured, full-size, µW analog signal generator in the smallest footprint module available. . Its small size enables it to be used as single signal generator on the bench or easily scaled to hundreds of channels, in larger systems, while keeping the required space to a minimum.

Models	LSX8081D	LSX2091D	LSX4091D
Frequency Range	100 kHz to 8GHz	100 kHz to 20GHz	100 kHz to 40GHz
Channels	1	1	1
Power	-50 (-70 Option) to +10dBm	-50 (-70 Option) to +10dBm	-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		
Harmonics: Up to 8GHz 8GHz to 20GHz 20GHz to 40GHz	-50dBc	-50dBc -40dBc	-50dBc -40dBc -35dBc
Non-Harmonics up to 40 GHz	-90dBc (typ) -60dBc max		
Modulation	Internal or External: AM, FM, PM, Pattern, Sweep & Pulse		
Run Modes	Continuous, Trigger	Continuous, Trigger	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, USB Type C	SPI, USB Type C

PORTABLE PLATFORM

A rugged field-portable signal generator, the Portable Platform is equipped with a10" touch screen that is suitable for day and night use. In addition, it has more than 1-hour of operational battery life with built-in USB, an optional LAN interface, and a removable micro-SD card. You'll get the performance you need without worrying about an AC supply.

Models	LSX8081P	LSX2091P	LSX4091P
Frequency Range	100 kHz to 8GHz	100 kHz to 20GHz	100 kHz to 40GHz
Channels	1	1	1
Power	-50 (-70 Option) to +10dBm	-50 (-70 Option) to +10dBm	-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		
Harmonics: Up to 8GHz 8GHz to 20GHz 20GHz to 40GHz	-50dBc	-50dBc -40dBc	-50dBc -40dBc -35dBc
Non-Harmonics up to 12 GHz	-90dBc (typ) -60dBc max		
Modulation	Internal or External: AM, FM, PM, Pattern, Sweep & Pulse		
Run Modes	Continuous, Trigger	Continuous, Trigger	Continuous, Trigger
Display	Field ready, with 10" touch screen suited for day and night use and 1 hour battery operation		
Remote Programming	Full IVI (C++, CVI, LabView), Python & MATLAB drivers and Lucid Control Panel		
Product Emulators	Keysight, R&S, Quicksyn, Anapico & Holzworth		
Connectivity	SPI, Micro-USB, and LAN	SPI, Micro-USB, and LAN	SPI, Micro-USB, and LAN

BENCHTOP PLATFORM

Creating multiple analog uW/mmW signals on the bench is easy. The Benchtop Platform is housed in a 19 ¾" 2U enclosure with a 5" touchscreen and front panel controls enabling stand-alone operation. The unit can be configured with 1 ,2 or 4- phase coherent RF channels, and has built-in LAN, a USB interface with SCPI control, and a removable micro-SD card. With phase- coherent, multi-channel capability it can solve a host of measurement applications in quantum physics, amplifier characterization, and phased array antenna systems.

Models	LSX8081B | LSX8082B | LSX8084B	LSX2091B | LSX2092B | LSX2094B	LSX4091B | LSX4092B | LSX4094B
Frequency Range	100 kHz to 8GHz	100 kHz to 20GHz	100 kHz to 40GHz
Channels	1, 2, 4	1, 2, 4	1, 2, 4
Power	-50 (-70 Option) to +10dBm	-50 (-70 Option) to +10dBm	-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		
Harmonics: Up to 8GHz 8GHz to 20GHz 20GHz to 40GHz	-50dBc	-50dBc -40dBc	-50dBc -40dBc -35dBc
Non-Harmonics	-90dBc (typ) -60dBc max		
Modulation	Internal or External: AM, FM, PM, Pattern, Sweep & Pulse		
Run Modes	Continuous, Trigger	Continuous, Trigger	Continuous, Trigger
Storage	Removable SD Card		
Display	5" Color Touch Display		
Remote Programming	Full IVI (C++, CVI, LabView), Python & MATLAB drivers and Lucid Control Panel		
Product Emulators	Keysight, R&S, Quicksyn, Anapico & Holzworth		
Connectivity	USB, LAN	USB, LAN	USB, LAN

RACK MOUNT PLATFORM

With all the features of the Benchtop Platform the Rack Mount offers the industry's highest mmWave channel density in the least possible space, with up to 4 phase-coherent channels in a 19" 1U unit and up to 16 phase phase-coherent channels in a 19" 3U unit. Connectivity for remote control is enabled with LAN and USB interfaces and SCPI control.

Models	LSX8081R | LSX8082R | LSX8084R	LSX2091R | LSX2092R | LSX2094R	LSX4091R | LSX4092R | LSX4094R
Frequency Range	100 kHz to 8GHz	100 kHz to 20GHz	100 kHz to 40GHz
Channels	1, 2, 4	1, 2, 4	1, 2, 4
Power	-50 (-70 Option) to +10dBm	-50 (-70 Option) to +10dBm	-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		
Harmonics: Up to 8GHz 8GHz to 20GHz 20GHz to 40GHz	-50dBc	-50dBc -40dBc	-50dBc -40dBc -35dBc
Non-Harmonics	-90dBc (typ) -60dBc max		
Modulation	Internal or External: AM, FM, PM, Pattern, Sweep & Pulse		
Run Modes	Continuous, Trigger	Continuous, Trigger	Continuous, Trigger
Storage	Removable SD Card		
Remote Programming	Full IVI (C++, CVI, LabView), Python & MATLAB drivers and Lucid Control Panel		
Product Emulators	Keysight, R&S, Quicksyn, Anapico & Holzworth		
Connectivity	USB, LAN	USB, LAN	USB, LAN

PXIe Platform

The Modular Platform offers all the functionality of a fully featured rack or bench µW analog signal generator in a two-slot PXIe module. Its small size and modularity enable it to be scaled from a single channel up to hundreds of channels, providing µW and mm waves.

Models	LSX8081X	LSX2091X	LSX4091X
Frequency Range	100 kHz to 8GHz	100 kHz to 20GHz	100 kHz to 40GHz
Channels	1	1	1
Power	-50 (-70 Option) to +10dBm	-50 (-70 Option) to +10dBm	-50 (-70 Option) to +10dBm
Phase Noise (@10kHz)	-134dBc/Hz at 1GHz		
Harmonics up to 8GHz 8GHz to 20GHz 20GHz to 40GHz	-50dBc	-50dBc -40dBc	-50dBc -40dBc -35dBc
Non-Harmonics up to 40 GHz	-90dBc (typ) -60dBc max		
Modulation	Internal or External: AM, FM, PM, Pattern, Sweep & Pulse		
Run Modes	Continuous, Trigger	Continuous, Trigger	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	PXIe	PXIe	PXIe

Arbitrary Waveform Generators / Transceivers

Proteus Series

Proteus provides both state-of-the-art arbitrary waveform generation with optional digitizer capability. The system integrates the ability to transmit, receive, and perform user-programmable FPGA-based digital signal processing and decision making all in a single instrument. Proteus provides the key capability for closed-loop transceiver software defined radio applications in aerospace, defense, telecommunications, automotive, and physics applications.

PXIe Platform

The Proteus module takes full advantage of the PXI Express Platform. Its core transmit, receive, and FPGA processing functions are enhanced with the addition of high-speed data transfer and incredible phase coherent channel density (up to 32 channels per 19" 3U chassis).

MODEL	P1282M | P1284M	P2582M | P2584M	P9082M
Channels	2 | 4	2 | 4	2
Modes	Standard, Arbitrary, Task		
Max. Sample Clock Rate	1.25GS/s	2.5GS/s	9GS/s
Memory Size	1G/2G/4G	2G/4G/8G	2G/4G/8G
Vertical Resolution	16 bits	16 bits	Up to 16 bits
Output Type	DC	DC | Direct (AC)	
Bandwidth	625MHz	1.25GHz | 2.5GHz	4.5GHz | 9GHz
Max Amplitude (into 50Ω)	1.2Vp-p	1.2Vp-p | 600mVp-p	
Transition Time (20/80 typ.)	<150ps	<100ps | <40ps	
Run Modes	Continuous, Trigger, Gate		
Digitizer (AWT Option)	12bit, 5.4GS/s Single Channel or 2.7GS/s Dual Channel		
Remote Programming	Full IVI (C++, CVI, LabView), Python & MATLAB drivers and Wave Design Studio		
Connectivity	PXIe Gen3 x8 Lanes		

Desktop Platform

The Desktop Platform provides up to 12 channels of capability, but without a touch screen, saving both space and cost. This compact platform has both an internal computer and remote control via an external PC. Connectivity to the instrument is provided by 3 x USB HOST and 1 x 10Gbit LAN as standard. Thunderbolt 3, GPIB, or 2 x 10Gbit Optical are available as options.

MODEL	P1282D | P1284D | P1288D | P12812D	P2582D | P2584D | P2588D | P25812D	P9082D | P9084D | P9086D
Channels	2 | 4 | 8 | 12	2 | 4 | 8 | 12	2 | 4 | 6
Modes	Standard, Arbitrary, Task		
Max. Sample Clock Rate	1.25GS/s	2.5GS/s	9GS/s
Memory Size	1G/2G/4G	2G/4G/8G	2G/4G/8G
Vertical Resolution	16 bits	16 bits	Up to 8 bits
Output Type	DC	DC | Direct (AC)	DC | Direct (AC)
Bandwidth	625MHz	1.25GHz | 2.5GHz	4.5GHz | 7GHz
Max Amplitude (into 50Ω)	1.2Vp-p	1.2Vp-p | 600mVp-p	1.2Vp-p | 600mVp-p
Transition Time (20/80 typ.)	<150ps	<100ps | <40ps	<100ps | <40ps
Run Modes	Continuous, Trigger, Gate	Continuous, Trigger, Gate	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		

Benchtop Platform

The Benchtop has all the capability of the Desktop but has a 9" touch screen, keypad and an on-board PC, creating a fully standalone system. With a maximum channel count of 12 AWGs, it is a compact, self-contained unit, providing waveform creation, sequencing and analysis on the bench.

MODEL	P1282B | P1284B | P1288B | P12812B	P2582B | P2584B | P2588B | P25812B	P9082B | P9084B | P9086B
Channels	2 | 4 | 8 | 12	2 | 4 | 8 | 12	2 | 4 | 6
Modes	Standard, Arbitrary, Task		
Max. Sample Clock Rate	1.25GS/s	2.5GS/s	9GS/s
Memory Size	1G/2G/4G	2G/4G/8G	2G/4G/8G
Vertical Resolution	16 bits	16 bits	Up to 8 bits
Output Type	DC	DC | Direct (AC)	DC | Direct (AC)
Bandwidth	625MHz	1.25GHz | 2.5GHz	4.5GHz | 7GHz
Max Amplitude (into 50Ω)	1.2Vp-p	1.2Vp-p | 600mVp-p	1.2Vp-p | 600mVp-p
Transition Time (20/80 typ.)	<150ps	<100ps | <40ps	<100ps | <40ps
Run Modes	Continuous, Trigger, Gate	Continuous, Trigger, Gate	Continuous, Trigger, Gate
Digitizer (AWT Option)	12bit, 5.4GS/s Single Channel or 2.7GS/s Dual Channel		
Display	9" Touch Color LCD Display		
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		

RF Arbitrary Waveform Generators / Transceivers

PXIe Platform

Utilizing state of the art RF DAC and ADC technology, phase coherent channel density (up to 32 channels per 19" 3U 19" chassis) and high- speed data transfer, the Proteus RF PXIe Series can be used to create complex RF environments in real-time.

MODEL	P9482M	P9484M
Channels	2	4
Modes	Standard, Arbitrary, Task	
Max. Sample Clock Rate	9GS/s	9GS/s
Memory Size	8GS	8GS
Max. Vertical Resolution	16 bits	16 bits
Output Type	AC	AC
Bandwidth	8GHz	8GHz
Max Amplitude (into 50Ω)	550mVp-p	550mVp-p
Transition Time (20/80 typ.)	<40ps	<40ps
Run Modes	Continuous, Trigger, Gate	
Digitizer (AWT Option)	12bit, 5.4GS/s Single Channel or 2.7GS/s Dual Channel	
Remote Programming	Full IVI (C++, CVI, LabView), Python & MATLAB drivers and Wave Design Studio	
Connectivity	PXIe Gen3 x8 Lanes	

Desktop Platform

Provides up to 12 channels of capability, but without a touch screen, saving both space and cost – the RF DAC and ADC capability can replace and simplify many test setups that include cumbersome Vector Signal Generators and Analyzers. This compact desktop platform is controlled via an external PC and connectivity to the instrument is provided by 3 x USB HOST, 1 x 10Gbit LAN as standard or Thunderbolt 3, GPIB or 2 x 10Gbit Optical as options.

MODEL	P9482D	P9484D	P9488D	P94812D
Channels	2	4	8	12
Modes	Standard, Arbitrary, Task			
Max. Sample Clock Rate	9GS/s		9GS/s	
Memory Size	8GS		8GS	
Max. Vertical Resolution	16 bits		16 bits	
Output Type	AC		AC	
Bandwidth	8GHz		8GHz	
Max Amplitude (into 50Ω)	550mVp-p		550mVp-p	
Transition Time (20/80 typ.)	<40ps		<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		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			

Benchtop Platform

The Benchtop has all the capabilities of the Desktop but has a 9" touch screen, keypad and an on-board PC, creating a fully standalone system. With a maximum channel count of 12 AWG's, it is a compact, self-contained unit, providing waveform creation, sequencing and analysis on the bench.

MODEL	P9482B	P9484B	P9488B	P94812B
Channels	2	4	8	12
Modes	Standard, Arbitrary, Task			
Max. Sample Clock Rate	9GS/s		9GS/s	
Memory Size	8GS		8GS	
Max. Vertical Resolution	16 bits		16 bits	
Output Type	AC		AC	
Bandwidth	8GHz		8GHz	
Max Amplitude (into 50Ω)	550mVp-p		550mVp-p	
Transition Time (20/80 typ.)	<40ps		<40ps	
Run Modes	Continuous, Trigger, Gate			
Digitizer (AWT Option)	12bit, 5.4GS/s Single Channel or 2.7GS/s Dual Channel			
Display	9" Touch Color LCD Display			
Storage	Built-In M.2 | Removable SSD		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			

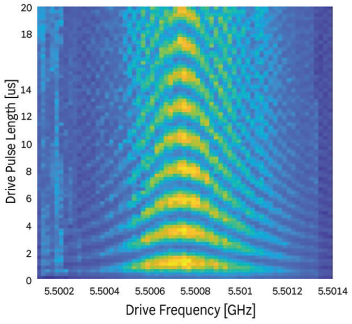
PXIe Chassis with Embedded Controllers

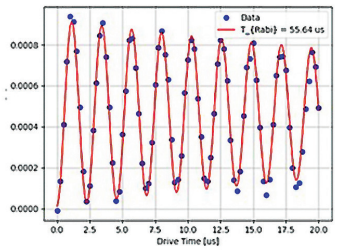
The PXIe Chassis allows you to purchase any Proteus PXIe module or amplifier and later add more channels or upgrade to higher sample rates. The system includes an embedded PC with an internal SSD drive, HDMI connection, and USB interfaces for a mouse and keyboard, as well as control using USB-C and 1000BASE-T LAN.

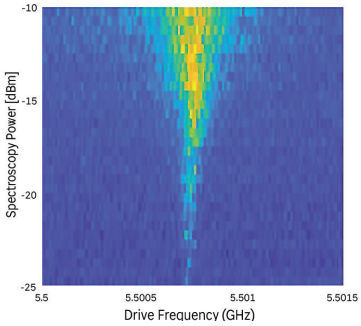
MODEL	PXE6410	PXE21100
Slots	6 slots	21 slots
Bus Configuration	Gen 3, x4 Lanes	Gen 4, x8 Lanes
Embedded Controller		
CPU	Intel D1508 2 Cores Std. / D1548 8 Cores Opt.	Intel i5-13500E Std. / Intel i9-13900E Opt,
Memory	16G Std. / 64G Opt.	16G Std. / 128G Opt.
Storage	120GB Std. / 1T Opt.	
Ports	3xUSB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

Applications

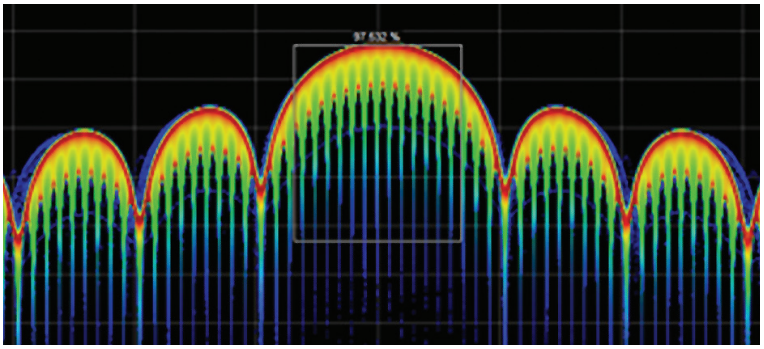
Quantum Physics - Proteus plays a part in many quantum physics experiments. Its unique AWT architecture allows for the generation and analysis of pulses in real time, with fast measurement response and feedback provided with its FPGA-based decision-block architecture. Applications include NMR/EPR, device characterization, computing, communications, and sensing. With direct to RF/u W capability, it eliminates the need for complicated up/down converting units and requires no IQ alignments. It can be scaled to thousands of coherent channels, and its advanced signal processing engine has the capability of analyzing up to 10 frequency multiplexed readout lines.



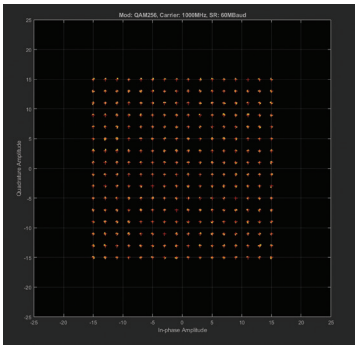


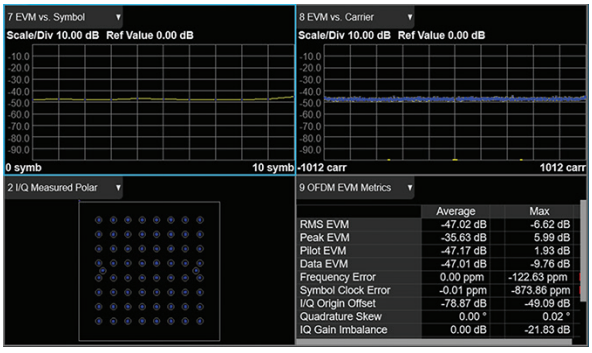


Radar and Electronic Warfare - The Proteus is an ideal tool for real-time waveform generation and analysis up to and including X-band. The transceiver allows for real-time closed loop analysis for fast feedback systems such as radar target generation and adaptive electronic warfare systems. The scalable, multi-channel, coherent, deterministic waveform playout capability allows for the generation of multiple active emitters, while its 2GHz of bandwidth allows for the easy creation of background electromagnetic emissions.



Next Generation Wireless Communications Systems – When designing, developing, and manufacturing new wireless systems – based on technologies such as multipule-input and multiple-output (MIMO) antenna matrices and orthogonal frequency-division multiplexing (OFDM) – we built the Proteus on a scalable, wide bandwidth (2GHz) architecture, with high-performance RF DAC/ADC (EVM better than -50dBc) that is compatible with MATLAB. This allows you to create, model, then transfer waveforms or sequences of waveforms to theProteus for real world testing.





Generate any Imaginable Scenario - Proteus has an innovative hardware-based, task-oriented programming system for complex waveform sequences. You can generate and download waveforms simultaneously and stream data directly to the FPGA (bypassing the memory) at speeds of up to 4GS/s. A full and easy-to-program digital subsystem of up and down converters along with finite impulse response filters and FFT and multiple real-time averaging blocks make the Proteus AWT one of the most comprehensive measurement solutions available.

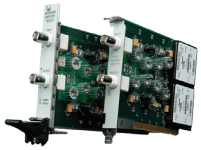
Modular RF Amplifiers

These amplifiers, combined with Tabor's RF arbitrary waveform generators 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 amplifications They are an ideal amplifier to compliment any signal source that needs an extended power boost for demanding applications.

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

PXI & PCI Signal Amplifiers

Tabor Electronics' amplifiers produce high voltages by converting the supply rails to voltage suitable for signals up to 180Vp-p. They operate in conjunction with Tabor's Waveform Generators thus providing the ultimate solution for PXI, PCI and bench, high-voltage, wideband applications.



MODEL	TE3180	TE3222	TE3322
Channels	1	1	1
Max Amplitude	180Vp-p	40Vp-p	40Vp-p
Large Signal Bandwidth	300kHz	15MHz	15MHz
Small Signal Bandwidth	1MHz	30MHz	30MHz
Max. Output Current	150mA	200mA	200mA
Input Impedance	50Ω	50Ω | 1MΩ	50Ω | 1MΩ
Output Impedance	0.1Ω	50Ω | 1MΩ | 600Ω	50Ω | 1MΩ | 600Ω
Gain	20 (or custom)	10 (or custom)	10 (or custom)
Transition Time	<1.5µs	<22ns	<22ns
Connectivity	PXI Hybrid	PXI Hybrid	PCI

Modular Signal Amplifiers

Tabor Electronics' amplifiers produce high voltages by converting the supply rails to voltage suitable for signals up to 180Vp-p. They operate in conjunction with Tabor's Waveform Generators thus providing the ultimate solution for PXI, PCI and bench, high-voltage, wideband applications.

MODEL	A10150	A10160
Channels	1	1
Max Amplitude	16Vp-p | 20Vp-p	34Vp-p
Large Signal Bandwidth	150MHz	30MHz
Small Signal Bandwidth	200MHz	45MHz
Max. Output Current	250mA	750mA
Input Impedance	50Ω	50Ω
Output Impedance	50Ω	2.5Ω
Gain	5 (or custom)	10 (or custom)
Transition Time	<2.6ns	<10ns
Connectivity	Snap-On	Snap-On

Arbitrary Waveform Generators

Wonder Wave Series

This series combines two technologies. While being a true, memory-based AWG device, with all 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.

MODEL	WW5064	WW1074	WW2074
Channels	4	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)	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 Arbitrary Generators

Pulse Master Series

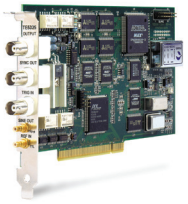
Tabor Electronics' single or dual-channel pulse and waveform generators offer a complete array of pulse, standard, arbitrary, sequenced, and modulated waveforms with unmatched performance. Their smart, compact, 2U half-rack-width footprint allows you to save substantial benchtop or rack space, while benefiting from high performance, bandwidth, signal integrity, and reliability, with the flexibility to adapt to a full spectrum of applications.

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

PXI & PCI Arbitrary Waveform / Function Generators

TE-AWG Series

The 5000 Series offers excellent performance in the PXI, cPXI, and PCI class. It combines two technologies (DDS&ARB), making use of the best qualities from each of these technologies to create complex waveforms on one hand while generating all the standard functions and modulation formats on the other.



MODEL	TE5200 | TE5325	TE5201 | TE5300	TE5251 | TE5351
Channels	1	1	1
Waveform Type	Standard, Arbitrary, Pulse, Modulated and Sequenced		
Max. Sample Clock Rate	50MS/s	125MS/s	250MS/s
Memory Size	1M	2M	2M
Memory Management	4k Segments; 4k Steps; 128k Loops		10k Segments; 4k Steps; 1M Loops
Vertical Resolution	14 bits	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	8Vp-p | 10Vp-p	10Vp-p
Transition Time (typ.)	<8ns	<6ns	<4ns
Remote Programming	Full IVI driver (C++, CVI, LabView), MATLAB and ArbConnection		
Connectivity	PXI Hybrid | PCI	PXI Hybrid | PCI	PXI Hybrid | PCI

Signal Amplifiers

Tabor Electonics' designed a line of wideband amplifiers to operate in conjunction with its series of waveform generators, thus providing the ultimate solution for high-voltage, wideband applications – enabling both complex signals as well as high-voltage throughput.

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

TABOR ELECTRONICS

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