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Find the *Chase Scientific AWG1000-12-4M-PCI-DOUT-5V-PECL* at our website: ***Click HERE***

AWG1000 - 1.0 GHz, 12-bit Arbitrary Waveform Generator

6/25/2003

Chase Scientific Company - *Innovators in Embedded Test & Measurement*

FEATURES

- 1.0 GS/s, 12-bit vertical resolution
- Single full size PCI compliant card
- SFDR less than -50 dB at 100 MHz
- Full scale Trise/Tfall = 260 psec typical
- Program up to 32K independent segments
- Program up to 16K loops/segment
- 1 MW memory standard (4 MW optional)
- 8 TTL marker outputs standard
- Synchronous trigger input
- Optional External Clock I/O (option 2)
- Programmable attenuator card (option 3) and 500 MHz White Noise Source (option 4)
- Software Drivers for Windows 95, 98, NT, 2000, XP, and Linux (option 5).



APPLICATIONS

- Radar design and testing
- Optical and Magnetic Storage Testing
- Advanced Ultrasound Design
- Video design, test, and production
- Network analysis
- Communications
- RF signal generation

DESCRIPTION

The AWG1000 is the fastest PCI based Arbitrary Waveform Generator in the world. The AWG1000 incorporates advanced features such as programmable segment sizes, up to 32K programmable segments, and programmable loop counts from 1 - 64K plus continuous. Up to 4 MW of memory is available (1 MW standard). The standard PCI architecture provides orders of magnitude faster data transfer rates than GPIB or serial ports.

Modular Construction

The AWG1000's modular add-on design means you can choose the features you want. You are delivered a product to meet your specific requirements and do not have to accept a one size fits all solution. Options include 4 MWord Memory, external clock input/output, a Programmable Attenuator, and a 500 MHz white noise source. Call Chase Scientific for customized configurations and for porting the AWG1000 design to other form factors.

Memory

The AWG1000 comes standard with 1 MW of sample memory on-board. The memory is factory expandable to 4 MW on-board. Memory is accessed automatically when the user manipulates the data segments (user arrays) via the software drivers. Also, by allowing each segment the ability to loop independently, the effective amount of memory is many times the physical memory.

Software Drivers, User Interface

A universal DLL is available for Windows 95/98/NT/2000/XP and Linux (optional). Call Chase Scientific for drivers for other operating systems. A simple debug Graphical User Interface (GUI) software is included with the drivers.

Ideal for Embedded Systems

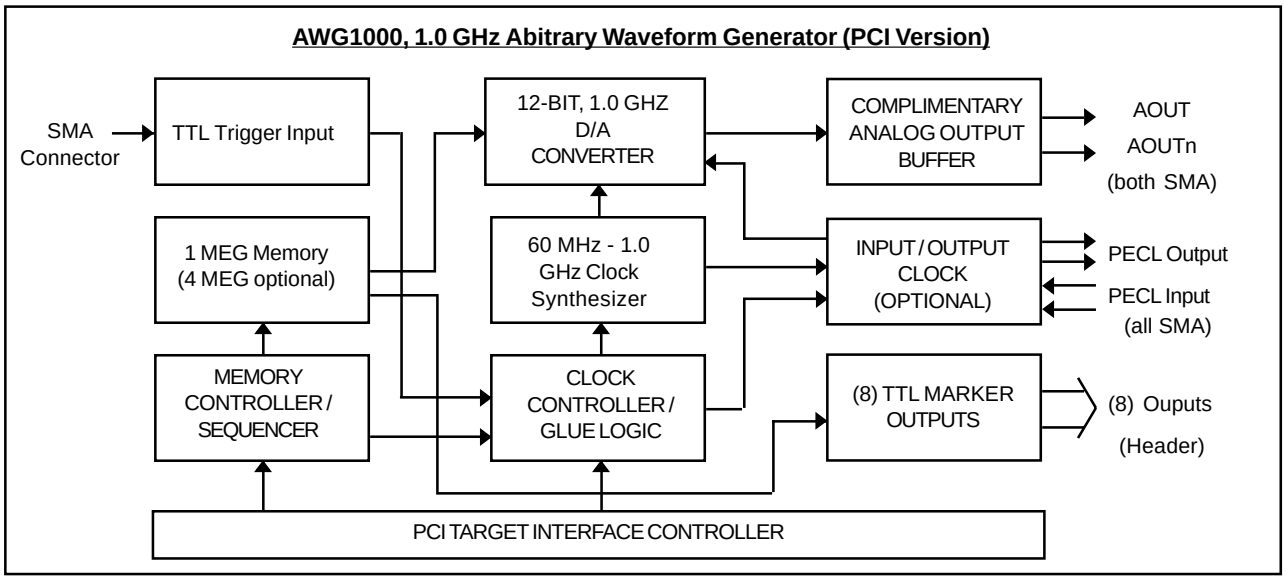
The AWG1000 is ideal for embedded applications where a stand-alone or bench-top unit is currently used. It provides OEMs and system builders a way to develop smaller, more efficient (faster transfer rates), and less expensive solutions than benchtop or ISA based products.

Made in USA

Designed for Microsoft Windows NT Windows 95

Electronic Products Editor's Choice July 1999

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SPECIFICATIONS

ANALOG OUTPUT: Single channel and complementary

(T=25°C unless otherwise stated)

Parameter	Conditions/other	Typical Values
Vertical Resolution	0.02Hz≤Fclk≤1.0GHz	12-Bit (1 out of 4096)
Output Impedance		50 ohms
Amplitude (See Attenuator Option for Programmability)		
Fixed output	60MHz≤Fclk≤1.0GHz	450 mVpp typical single-ended into 50 ohms (SMA connectors)
Offset		
Range		+/- 250mV into 50 ohms
Resolution		1mV
Rise Time (10-90%, no filters)		260 psec typical into 50 ohms
Fall Time (10-90%, no filters)		260 psec typical into 50 ohms
Internal Clock Jitter		<50 psec typical
Delay between trigger and output		80 output clocks +/- 1clk
SFDR (Spurious Free Dynamic Range)		
Fout < 200 MHz, Fclk = 1.00 GHz		< -50 dB Typical
Fout = 200 - 500 MHz, Fclk = 1.00 GHz		TBD
Internal Clock Rate Synthesizer		
Frequency range		60 MHz to 1.0 GHz
Resolution		1 Hz maximum
Stability	T = 0°C – 70°C	+/- 100 ppm
Memory		
Waveform	Standard	1 MWords x 12-Bits
	Option 1	4 Mwords x 12-Bits
# of User Segments		1 to 32K segments (max)
Segment Size Range		64 Words up to total memory, 16 word resolution
Maximum Segment Loops		16K
TTL Marker		8-bits (1/16 waveform clk)

DIGITAL OUTPUTS

(8) High Speed TTL	Fclk/16 resolution
(2) High Speed PECL	Optional Lower 2 (LSB) data bits (Option 2)
Buffered Clk Output	PECL 50 ohm Differential SMA outputs, DC coupled

DIGITAL INPUTS

High Speed Clk Input	(Option 2) 50 ohms SMA inputs: DC to 1.0 GHz
TTL Trigger Input	Used to initiate memory sequence; One-shot, retriggerable, software programmable, SMA connector

PROGRAMMABLE ATTENUATOR (Option 3)

Parameter	Conditions	Typical (unless stated)
Frequency Range	-3dB BW	DC – 600 MHz
Amplitude		
Range		0 dBm to -64 dBm
Resolution		0.25dBm
Insertion Loss		3.5 dBm typical

ENVIRONMENTAL (AWG1000)

Temperature	
Operating	0°C to 70°C Ambient
Non-operating	-40°C to 85°C
Humidity	
Operating	20% to 80% (no condensation)
Nonoperating	5% to 95% (no condensation)
Power	
+5V	8 Amps (40 Watts) Typical
+3.3V	3.03 Amps (10 Watts) Typical @ 1 MWords 6.06 Amps (20 Watts) Typical @ 4 MWords
+12V	340mA (4.0 Watts)
-12V	40mA (0.48 Watts)
Size	
AWG1000 Card	(1) Full-size 32-bit std. PCI card
Atten/Noise Card	(1) short 32-bit std. PCI card

OPTION SUMMARY

Option 1	4 MWords x 12-Bits
Option 2	External Clock Inputs/Outputs
Option 3	Programmable Attenuator PCI Card (DC - 600 MHz)
Option 4	500 MHz White Noise Source (on same card as Atten)
Option 5	Software Drivers for Linux (Windows are Free)

ORDERING INFORMATION

Model Number	Description
AWG1000-12-PCI	1.0 GHz, 12-bit PCI ARB Card
Option 1	*4 MW mem, on-board*
Option 2	*External Clock Inputs/Outputs*
Option 3	*Programmable Attenuators*
Option 4	*500 MHz White Noise Source*
Option 5	*Drivers for Linux*

* Free Drivers for Win 95/98/NT/2000/XP

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