GX1632e

MARVIN TEST SOLUTIONS

ANALOG OUTPUT / ARBITRARY WAVEFORM GENERATOR

- 32 Channels
- (3) Modes of Operation: Analog Output, Arbitrary Waveform Generation, Streaming
- 16-bit resolution
- (5) Output ranges (±25 V max.)
- 625 KS/s Sample rate (32 channel configuration)
- Supports data streaming up to 800 MB/s (Gen 2, x4 PXIe)
- PXIe Interface

DESCRIPTION

The GX1632e is a 3U PXI Express digital to analog output board designed specifically for applications where multiple DC or AC analog outputs are required. The GX1632e offers 32 output channels with 16-bits of precision signal sourcing performance. Three modes of operation are available including Analog Output, Arbitrary Waveform Generation (ARB) and Data Streaming.

FEATURES

The GX1632e is organized into four groups of eight channels, providing up to 32 channels of AWG or DC source capability. For DC operation, each group can be programmed and triggered independently. All groups can be updated simultaneously and each channel within a group can be programmed to a unique voltage. When used as a waveform generator, 64M of sample memory is allocated to each group of eight channels with the user being able to allocate the memory for one or all channels.

With all 32 channels configured for AWG mode, the maximum sample rate is 625 KS/s. Each group can be clocked independently via a programmable clock source or all groups can be clocked by a common source. Within any group, channels can be configured for a combination of DC operation and AWG or data streaming. Data streaming is supported by the GX1632e which allows continuous transmission of data from the controller.

PROGRAMMING AND SOFTWARE

The board is supplied with the GXAO software package which includes a virtual instrument panel, a Windows 32/64-bit DLL driver library and documentation. The virtual panel can be used to interactively program and control the instrument from a window that displays the instrument's settings and status. An IVI-C driver is also provided with class compatibility to IviFGen.

Additionally, interface files are provided to support programming tools and languages such as ATEasy, LabView, LabView/Real-Time, C/C++, Microsoft Visual Basic®, Delphi, and Pascal. Help file and PDF User's Guide provides documentation that includes instructions for installing, using and programming the board.

APPLICATIONS

- Discrete avionics testing
- Automatic Test Equipment (ATE)
- System test
- Sensor emulation

STIMULUS

GX1632e

SPECIFICATIONS

OUTPUT CHARACTERISTICS	
Output Channels	32
Output Voltage Ranges	Programmable: ±1 V ±10 V ±25 V -8 V to +25V -25 V to +8 V
Output Current	±10 mA (max) per channel
Resolution	16-bit
Accuracy	±16 mV
Slew Rate	15 V / µs
ARBITRARY WAVEFORM GENERATOR	
Memory	64M samples (one per bank)
Waveform Sample Rate	1 MHz per channel (all 32 channels active)
Phase Error	1° max. (channel to channel)
Sample Clock	Programmable: 12 mHz to 1 MHz (one per bank)
Sample Clock Resolution	1 MHz / N, N=1 to 2^{32}-1
Sample Clock Source	PXI 100 MHz Clock, External (one per bank), PXI trigger bus, PXI Star trigger bus: 1 MHz max.
DIGITAL I/O	
Digital I/O Channels	(8) digital output channels (4) channels available for bank synchronization (4) channels available for external AWG clock inputs.
Logic Level	TTL
POWER	
3.3 VDC	0.5 A (max.)
12 VDC	1.5 A (typ.)

ENVIRONMENTAL	
Operating Temperature	0 °C to +50 °C
Storage Temperature	-20 °C to +70 °C
Size	3U PXI
Weight	12 oz
Connector	78-pin D-Type
CALIBRATION	
Calibration Interval	1 year

Note: Specifications are subject to change without notice

ORDERING INFORMATION

GX1632e	PXIe Analog Output / Arbitrary Waveform Generator Card
GX1632e-M	PXIe Analog Output / Arbitrary Waveform Generator Card (Ruggedized and Conformally Coated)
ACCESSORY	
GT96002	Connector, D-Type 78-Pin Male with Crimp Pins
GT97102	3 ft Harness, 78-Pin Male Connector on One End, Loose Wired (Numbered) Other End
GT97103	1 ft Harness, 78-Pin Male Connector on One End, Loose Wired (Numbered) Other End
GT97104	1 foot Harness, 78-Pin Male Connector on Both Ends
GT96107	3 Feet Harness, 78-Pin Male Connector on Both Ends
GT96078	78-Pin Connector to Screw Terminal Interface
GX96106	6 ft. Harness, 78 Pin Male Connector on Both Ends
GX98302	3U "Wireless" Scout Adapter for GX6138/GX6125/GX6377/GX6384/GX1648 (200-Pin Connector)
GT96113	GX1632e Calibration Cable Assembly

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