GX3348 SERIES

MARVIN TEST SOLUTIONS

6U PXI MULTI-CHANNEL ANALOG I/O PXI CARD

- Three programmable DC outputs, -20 VDC to +32 VDC
- Available with a 4 x 48 or 4 x 64 relay matrix configuration
- DC measurement capability on each channel
- 500 mA maximum current output
- External source input with switchable amplifier
- Pulse / square wave generator option

DESCRIPTION

The GX3348 is a multi-channel analog I/O 6U PXI card which provides (3) programmable sources, a ground source connection, a pulse / square wave generator (A version only) and a 4 x 48 or 4 x 64 matrix - allowing the user to route the 3 sources, or ground to any of the 48 or 64 I/O channels. In addition, each I/O channel can be connected to a 16-bit A to D converter, providing DC voltage measurement capability for each channel. The module also offers (8) static digital I/O for controlling / monitoring a UUT's digital signals.

FEATURES

The 4 inputs to the switch matrix can be connected to the following sources:

- Programmable -20 to +32 VDC source
- External source (with amplifier or bypassed
- Waveform generator (A version only)
- Ground (0 V)

Each I/O channel also includes DC measurement capability; allowing each input channel to be monitored and facilitating module self-test. Combined maximum output current for all programmable sources is 500 mA. If using the external source inputs, 5 VDC or ground connection, maximum current is limited to 3 A. An onboard EEPROM contains the DAC's and ADC's calibration parameters.

SOFTWARE

The board is supplied with the GXPDO driver, a software package that includes a virtual instrument panel, and 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 current settings and status. In addition, interface files are provided to support access to programming tools and languages such as ATEasy, LabView, LabView/Real-Time, C/C++, Microsoft Visual Basic®, C#, Delphi, and Pascal. An On-Line help file and PDF User's Guide provides documentation that includes instructions for installing, using and programming the board.

APPLICATIONS

- LRU/SRU avionics testing
- Automotive ECU testing
- Process control systems
- Precision data acquisition
- Automatic Test Equipment (ATE)

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SPECIFICATIONS

USER CHANNEL I/O SPECIFICATIONS	
Number of Channels	48: GX3348, GX3348A (with pulse generator)) 64: GX3348-64, GX3348A-64 (with pulse generator)
Channel Multiplexer Configuration	4 x 48: GX3348, GX3348A, 4 x 64: GX3348-64, GX3348A-64
Maximum Current per Channel	500 mA
Maximum Source Current	500 mA total for all three programmable sources 3 A for all other sources
Number of Voltage Rails	4
Voltage Rails / Pulse Generator	-20 to +32 VDC or Ext. Input (with amplifier or bypassed) -20 to +32 VDC or 5 VDC -20 to +32 VDC or Ext. Input Ground (0 V) Rail A: Pulse Generator (Requires firmware version 0x0000AC00 and above.) Applies only to GX3348A and GX3348A-64 modules
Number of DACs	3
DAC Resolution	16-bit
Output Accuracy	±0.1% of voltage setting ±20 mV, 1 k load
Slew Rate (DAC or amplifier)	6 V/µs (typ); 1 k, 50 pF load
Amplifier Gain	6.6, nominal
Amplifier Bandwidth	DC to 10 KHz
Amplifier Output Swing	-20 to +32 V max.
DAC and Amplifier Output Protection	Short circuit (ground)

Pulse Generator (Rail A only) GX3348A and GX3348A-64 modules only	Programmable Base voltage range: -20V to +32V Programmable Peak voltage range: -20V to +32V Programmable Delay: 1000 usec to 4294967295 usec Programmable Width: 1000 usec to 4294967295 usec Delay and width resolution: 1 us Period range: 2000 uSec to 4294.9 sec Mode: Continuous, Triggered Base / Peak voltage accuracy: ±0.1% of voltage settings ±20 mV
Square Wave Generator (Rail A only) GX3348A and GX3348A-64 modules only	Programmable offset range: -20V to +20V Programmable output: 0 to 20V p-p Programmable period: 2000 uSec to 4294.9 sec Programmable period resolution: 1 usec Programmable duty cycle range: 0.00% to 99.99%, 1000 usec min duty cycle width Mode: Continuous, Triggered Output level accuracy: ±0.1% of voltage setting, ±20mV
Measurement Channels	48 or 64 Measurement range: -20V to +32V Resolution: 16 bits Accuracy: ±20 mV
Digital I/O	(8) LVTTL static I/O 200 series resistor with diode protection on each I/O
Power ON State	All channels / rails open
PHYSICAL AND ENVIRONMENTAL	
Operating Temperature	GX3348: 0 °C to +55°C GX3348-M: 0 °C to +85°C
Storage Temperature	GX3348: -20°C to +85°C GX3348-M: -51°C to +85°C
Relative Humidity (operating)	GX3348: 5% to 85%, temperature range 0°C to 60°C GX3348-M: 5% to 95%, temperature range 0°C to 60°C GX3348, GX3348-M: 5% to 60% for operating temperatures above 60°C
Altitude (operating)	4600 meters (max)
Connector	78 pin, D-sub, female
Mechanical	6U PXI, single slot, hybrid slot compatible
Weight	14 oz
CALIBRATION	
Calibration Interval	1 year

Note: Specifications are subject to change without notice

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ORDERING INFORMATION

GX3348	48 Channel Analog I/O Card
GX3348A	48 Channel Analog I/O, Pulse Generator Card
GX3348A-64	64 Channel Analog I/O, Pulse Generator Card
GX3348-64	64 Channel Analog I/O Card
GX3348-64M	64 Channel Analog I/O Card (Ruggedized & Conformally Coated)
ACCESSORY	
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
GT96002	Connector, D-Type 78-Pin Male with Crimp Pins
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
GX96105	6 ft harness, 78 pin male connector on one end, loose wires (numbered) on other end
GX96106	6 ft. Harness, 78 Pin Male Connector on Both Ends
GT96110	5 ft Cable, 78-Pin Male Connector on Both Ends
GT97112	15' Cable, 78-Pin Male Connector on One End, Loose Wired (Numbered) Other End
GT97113	15 ft Cable, 78-Pin Female Connector on One End, Loose Wired (Numbered) Other End
CALIBRATION	
CalEasy-GX3348	CalEasy for the GX3348 (Single User License) with One Year Support and Subscription
CalEasy	CalEasy License for all Supported Marvin Test Solutions Products (Single User License) with One Year Support and Subscription
CalEasy-2Y	CalEasy License for all Supported Marvin Test Solutions Products (Single User License) with Two Year Support and Subscription
CalEasy-3Y	CalEasy License for all Supported Marvin Test Solutions Products (Single User License) with Three Year Support and Subscription
GX3348-CAL	GX3348 Calibration/Verification Service. Includes pre-verification data (post calibration data provided if applicable)
GX3348-CAL-3	GX3348 Calibration/Verification Service - 3 years. Includes pre-verification data (post calibration data provided if applicable)
GX3348-CAL-5	GX3348 Calibration/Verification Service - 5 years. Includes pre-verification data (post calibration data provided if applicable)

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