

GX1838 SERIES

PRECISION MULTIFUNCTION DC SOURCE PXI CARD

- Ideal for avionics and high voltage applications
- Eight high-density discrete outputs
- Three programmable voltage rails, 14-bit resolution
- Two output configurations: -10 V to +32 V (GX1838) or -20 V to +20 V (GX1838-20)
- 500 mA maximum current output



DESCRIPTION

The GX1838 is a multi-channel programmable DC Source providing multiple discrete outputs for avionics automotive, industrial testing and other ATE applications.

FEATURES

The GX1838 provides eight output channels that can either be set as open or switched to any of the three voltage rails. Each of the three voltage rails can be programmed to output -10 VDC to +32 VDC or -20 VDC to +20 VDC with 14-bit resolution.

Voltage rails A through C are used as voltage sources which can be connected to a precision digital to analog converter (DAC) or to an external reference input. Rail A can be connected to DAC A or to external reference A. Rail B can be connected to DAC B or to external reference B. Rail C can be connected to DAC C, external reference C, or to ground. This architecture provides for maximum flexibility. If additional output channels are required, an external switch matrix (such as the GX6616) can be used. An on board EEPROM contains the DAC's calibration parameters and provides for enhanced accuracy.

PROGRAMMING AND 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

Number of Output Channels	8
Number of Voltage Rails	3
Number of DACs	3
Output Voltage Ranges	-10 V to +32 VDC (all rails) -20 V to +20 VDC (all rails)
Resolution	14-bit
Accuracy @ 1 kOhm Load	$\pm 1 \text{ LSB} \pm -10 \text{ mV}$
Slew Rate	6 V/ μs
Maximum Load (Minimum Resistance)	50 Ω
MAXIMUM CURRENT *	
Per Channel	500 mA
Per Rail	500 mA
Per GX1838	500 mA
Output Protection	Short Circuit (Ground)
Power ON State	All Channels / Rails open
ENVIRONMENTAL	
Operating Temperature	0 °C to +55 °C
Storage Temperature	-20 °C to +70 °C
Size	3U PXI
Weight	14 oz

*The total maximum current is 500 mA (i.e., if one channel or rail uses the entire 500 mA, the other channels or rails cannot be used).

Note: Specifications are subject to change without notice

ORDERING INFORMATION

GX1838	Precision DC Source. 3 Voltage Rails with 8 Channels. 14-bit Resolution
GX1838-20	Precision DC Source. 3 Voltage Rails (+/-20V) with 8 Channels. 14-bit Resolution
ACCESSORY	
GX91801	25 Pin Male mating connector for GX1838/GX1164
GX91802	25 Pin Male mating connector for GX1838/GX1164 with a 3' unterminated harness
GX91803	3' harness for GX1838/GX1164, 25 pin male/female connectors on both ends