

# GX1838

## PRECISION MULTIFUNCTION DC SOURCE

- Eight discrete output channels
- Three programmable voltage rails
- Two output configurations: -10V to +32 or -20V to +20V
- 14-bit resolution
- 500 mA maximum current output
- 3U PXI board



## 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  $-10 V_{DC}$  to  $+32 V_{DC}$  or  $-20V_{DC}$  to  $+20 V_{DC}$  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 onboard EEPROM contains the DAC's calibration parameters and provides for enhanced accuracy.

## SOFTWARE

The GX1838 is supplied with a virtual instrument panel, which includes 32-bit DLL driver libraries and documentation. The virtual panel can be used to interactively adjust and control the instrument from a window that displays the current instrument settings and measurements.

In addition, various interface files provide support for programming tools and languages such as ATEasy, LabVIEW, Microsoft® and Borland® C/C++, Microsoft Visual Basic®, Borland Delphi, and more.

## 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 CHANNELS	8
NUMBER OF VOLTAGE RAILS	3
NUMBER OF DACS	3
OUTPUT VOLTAGE RANGES	-10 V to +32 V <sub>DC</sub> (all rails) -20 V to +20 V <sub>DC</sub> (all rails)
RESOLUTION	14-bit
ACCURACY	±1 LSB ±10 mV, 1 K ohm load
SLEW RATE	6 V/μs
MAX. LOAD (MIN. RESISTANCE)	50 Ω
<b>MAXIMUM CURRENT *</b>	
PER CHANNEL	500 mA
PER RAIL	500 mA
PER GX1838	500 mA
OUTPUT PROTECTION	Short Circuit (Ground)
POWER ON STATE	All Channels/Rails open
<b>ENVIRONMENTAL</b>	
OPERATING TEMPERATURE	0° to 55°C
STORAGE TEMPERATURE	-20° to +70°C
SIZE	3U PXI
WEIGHT	14 oz

Note: Specifications subject to change without notice.

\*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).

## ORDERING INFORMATION

GX1838	Precision DC Source ( -10 V to +32 V <sub>DC</sub> )
GX1838-20	Precision DC Source ( -20 V to +20 V <sub>DC</sub> )
GX91801	25 DIN Male Mating Connector for GX1838
GX91802	25 DIN Male Mating Connector for GX1838 with a 3' unterminated harness

## PIN ASSIGNMENT

OUTPUT CHANNELS CONNECTOR (J3)			
Shield	1	14	GND
I/O Ch0	2	15	GND
I/O Ch1	3	16	GND
I/O Ch2	4	17	GND
I/O Ch3	5	18	GND
I/O Ch4	6	19	GND
I/O Ch5	7	20	GND
I/O Ch6	8	21	GND
I/O Ch7	9	22	GND
Ext A	10	23	GND
Ext B	11	24	GND
Ext C	12	25	GND
Shield	13	---	---