ProDAQ Data Acquisition Function Cards

ProDAQ 3518 8-Channel, 18-bit DAC Function Card

OVERVIEW

The ProDAQ 3518 Digital-to-Analog Converter Function Card is one of the ProDAQ range of high density function cards, designed to be fitted to the ProDAQ VXIbus motherboards and LXI function card carriers.

Taking advantage of new technological improvements this high density card contains 8 independent 18-bit programmable Digital-to-Analog (DAC) channels. The ProDAQ 3518 DAC Function Card is specially designed for applications that require an outstanding DC performance as for example thermocouple simulation. Each channel includes the option to use 4-wire sensing in order to ensure the highest possible accuracy.

There are three different standard voltage output versions of the ProDAQ 3518 available with ranges of either 0 to 10V, ±10 V or ±20 Volt. Three other standard versions provide output ranges suitable for thermocouple simulation: ±50 mV for thermocouple types B, and C; 0 to 50 mV for thermocouple types N, R, S and T; 0 to 100 mV for thermocouple types E, J and K. Versions with custom output ranges are available on request.

Each channel includes the option to use 4-wire sensing in order ensure the highest possible DC accuracy.

ProDAQ modules, carriers and function cards provide compatibility with all current popular software environments and allow users to safely and simply expand their existing hardware and software systems.

The ProDAQ 3518 DAC Function Card is supplied with VXIplug&play drivers for Windows. Drivers for Linux and VxWorks are available on request.

All **ProDAQ function cards** can be used in both ProDAQ VXIbus motherboards and LXI function card carriers, providing users with the highest channel density and functionality available today.

Features & Benefits

- ▶ **8 independent DACs**

- ▶ **18-bit resolution**

- ▶ **Thermocouple simulation**

- ▶ **Different output ranges** available

- ▶ **Flexible triggering**

- ▶ **Up to 64** independant DAC outputs per VXI slot

- ▶ **Up to 32 independant DAC outputs** per LXI function card carrier or **64 channels** per 1U 19inch rack space.

For more information, visit **www.bustec.com**.

Learn more about the **ProDAQ 3518** on our website by scanning the code below.

SPECIFICATIONS

ELECTRICAL

Number of Channels	8
Resolution	18-bit
Output Voltage Ranges	Unipolar: 0-10 V, ±10 V, ±20 V
	Bipolar: 0-50 mV (N/R/S/T), 0-100 mV (E/J/K), ±50 mV (B/C)
Output Current	5 mA
INL	1 LSB (3518-BB at +10 V)
Offset Error	0.5 LSB (3518-BB at 0 V)
Offset Drift	0.4 LSB/°C (3518-BB at 0 V)
Full Scale Error	0.0014 % (3518-BB at +10 V)
Full Scale Drift	6 ppm / °C (3518-BB at +10 V)
Output Resistance	< 0.1 Ω
DAC Update Rate	100 sps
Noise	1.7 ppm RMS (3518-BB at +10 V, 0.1 Hz to 10 Hz)
Settling Time	< 5 ms
Sensing	4-Wire
Warm-up Time	30 minutes
Power Consumption	TBD max.

MISCELLANEOUS

Dimensions	230 mm x 53 mm
Weight	< 100 g
Temperature	0 °C to +50 °C (operational)
	-40 °C to +70 °C (storage only)
Humidity	10 % - 90 % (non-condensing)

FRONT PANEL I/O

Connectors	50-pin SCSI female

PHYSICAL CHARACTERISTICS

Dimensions	230 x 53 mm
Weight	79 g

ENVIRONMENTAL

Temperature	0 °C to +50 °C (operational)
	-40 °C to +70 °C (storage only)
Humidity	10 % - 90 % (non-condensing)
Warm-up Time	< 30 minutes

SUPPORT

Software support	Driver support for Microsoft Windows, VxWorks, and Linux (Contact Bustec Ltd. for more information)
Configuration	Cards can be factory installed or field installed by user
Warranty Period	12 months (extended periods available at additional cost)

Ordering Information

- **3518-AB** 8-ch., 18-bit DAC, 0-10 V output
- **3518-BB** 8-ch., 18-bit DAC, ±10 V output
- **3518-BC** 8-ch., 18-bit DAC, ±20 V output
- **3518-TB** 8-ch., 18-bit DAC, ±50 mV, TC Types B/C
- **3518-TN** 8-ch., 18-bit DAC, 0-50 mV, TC Types N/R/S/T
- **3518-TK** 8-ch., 18-bit DAC, 0-100 mV, TC Types E/J/K
- **Other ranges available**

Related Products

- **ProDAQ 3180** Ultra-performance motherboard module
- **ProDAQ 6100** LXI function card carrier

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