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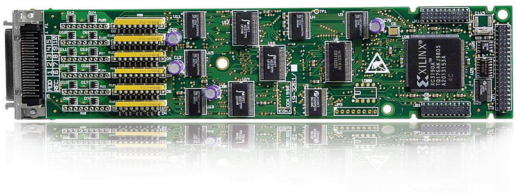
WHEN ACCURACY MATTERS

ProDAQ Data Acquisition Function Cards

ProDAQ 3610 48-Channel DIO Function Card



LXI VXI bus

OVERVIEW

The ProDAQ 3610 high-speed DIO function card is a high-density card that fits into ProDAQ VXIbus motherboards and LXI function card carriers. This high-speed DIO card has 48 channels and is designed for demanding applications ranging from normal slow digital input/output to high-speed pattern generation and pattern recognition. The card provides the user with 384 input/output channels if eight DIO function cards are fitted to one ProDAQ motherboard.

Users can configure the 48 channels as input or output channels in groups of eight. To achieve high throughput rates, a 16-bit, 2 kS, or 16 kS onboard FIFO is used for the data handling. The ProDAQ 3610 also can operate in repetitive or strobed input/output mode. The input triggers can come either from the motherboard or from the front-panel as an active-low TTL level, and can be generated by the system clock or by a clock divider. The output triggers can be directed either to the motherboard as a pulse or level trigger, to the VXI backplane, or to the output connector. An alarm trigger can be generated after a predefined time, by the FIFO or by software command.

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

- **48 TTL channels**
- **3 MHz maximum update rate**
- High-speed **pattern generation** and **pattern recognition**
- **Configurable** as **input/output channels** in groups of 8
- **Flexible triggering**
- **2 kS or 16 kS onboard FIFO**
- Up to **384 DIO channels** in 1U (LXI) or 1 slot (VXI)

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

Learn more about the **ProDAQ 3610** on our website by scanning the code below.

SPECIFICATIONS

SAMPLING

FIFO	2 or 16 kSample

INPUT CHARACTERISTICS

Number of Channels	48 TTL channels
Input Filter	RC filter with 510/100 pF followed by Schmitt-Trigger gate with 0.8 V hysteresis
Input Levels	V_{in} (high) > 2 V V_{in} (low) < 0.8 V I_{in} ±1 µA
Over-Voltage Protection	6.5 V

OUTPUT CHARACTERISTICS

Steady state low logic	V_{out}: max. 0.6 V @ 8 mA
Steady state high logic	V_{out}: min. 2.4 V @ -8 mA
Data Throughput	Max. 6 MB/s 1 MHz @ 48 channels 1.5 MHz @ 32 channels 3 MHz @ 16 channels

FRONT PANEL I/O

Trigger Input	Motherboard or front-panel (TTL active low) Front-panel additional (first 8-bit of 48) System clock Clock divider
Trigger Output	Motherboard (pulse or level) VXI backplane Output connector (level)
Connector	50-pin SCSI female

PHYSICAL CHARACTERISTICS

Dimensions	230 x 53 mm
Weight	< 100 g

POWER REQUIREMENTS

Current Consumption	Voltage (V)	Current (mA)
	+5	120
Power Consumption	< 0.6 W (note: The above current excludes the current sourced from external loads)	

ENVIRONMENTAL

Temperature	0°C to +50°C (operational) -40°C to +70°C (storage only)
Humidity	10% - 90% (non-condensing)

SOFTWARE SUPPORT

Driver support for Microsoft Windows, VxWorks, and Linux
(Contact Bustec Ltd. for more information)

WARRANTY PERIOD

12 months (extended periods available at additional cost)

Ordering Information

- **3610-AA** 48-ch DIO function card with 2k FIFO
- **3610-AB** 48-ch DIO function card with 16k FIFO

Related Products

- **6100-xx** LXI function card carrier
- **3180-AA** Ultra-performance motherboard module
- **8010-AA** 0.5m SCSI cable

Contact Bustec

Europe
Bustec Ltd.
Bustec House
Shannon, Co. Clare
Ireland

T +353 61 707 100
F +353 61 707 106
E sales@bustec.com

North America
Bustec, Inc.
1507 East Valley Parkway
Suite 3-412
Escondido, CA 92027
U.S.A.

T 909. 797.0484
F 760. 751.1284
E sales@bustec.com