

ProDAQ Data Acquisition Function Cards

ProDAQ 3550 2-Channel, Fast DAC Arbitrary Waveform Generator



LXI

VXI
bus

OVERVIEW

The ProDAQ 3550 fast DAC and arbitrary waveform generator function card provides two channels per card, each equipped with a 16-bit fast and precise DAC 2-pole analog filter and 256k x 16 SRAM memory per channel, with several standard output ranges available. The ProDAQ 3550 can be used as a two-channel waveform generator; the memory can be divided into segments to store complex waveforms. Segments not currently used in a waveform can be loaded during running bursts, providing higher data throughput.

If users require larger SRAM, they can configure the ProDAQ 3550 as a single-channel, dual-output DAC with 512k SRAM. Several trigger modes are available for synchronization purposes. The 2-pole analog filter (Sallen-Key type) provides three software-selectable cutoff frequencies, and users can also select filter bypass mode. The output buffer provides necessary gain and output power and a software-controlled calibration process automatically removes offset and gain errors, providing unprecedented accuracy required for demanding DC and low-frequency applications.

The ProDAQ 3550 function card is equipped either with a high-density SCSI-type connector or five LEMO connectors. In the case of the SCSI-type connector, four pins will be dedicated to each output to minimize contact resistance.

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

- ▶ **2 channels**
- ▶ **16-bit resolution**
- ▶ **256 kS** memory per channel
- ▶ **Segmentable** memory
- ▶ **1 MHz** update rate
- ▶ Extensive **trigger capabilities**
- ▶ **Offset correction** accurate within 0.01%

For more information,
visit www.bustec.com.

Learn more about the
ProDAQ 3550 on our website
by scanning the code below.





SPECIFICATIONS

SAMPLING

Resolution	16-bit
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OUTPUT CHARACTERISTICS

Number of Channels	2
Output Ranges	0..5 V, 0..10 V, 0..20 V, ± 5 V, ± 10 V or ± 20 V (other output ranges available on request)
Output Filter	Type 2-pole Sallen-Key
Filter Cutoff	100 kHz, 10 kHz, 1kHz, Bypass
Output Impedance	>0.01 M Ω
Output Protection	Continuous short to ground
Update Time	DC to 1 μ sec
Accuracy (after internal calibration)	-AA, -AB, -BA, -BB: better 0.01% -AC, -BC: better 0.32%, typical 0.05%

FRONT PANEL I/O

Connectors	50-pin SCSI or LEMO
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PHYSICAL CHARACTERISTICS

Dimensions	230 x 53 mm
Weight	< 100 g

POWER REQUIREMENTS

Current Consumption	Voltage (V)	Current (mA)
	+24	12
-24	12	
+15	26	
-15	20	
+12	76	
-12	66	
+5	250	

(note: ± 15 V are derived from ± 24 V on the motherboard)

Power Consumption	3.9 W maximum
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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

- ▶ **3550-AA** 2-ch, fast DAC arbitrary waveform generator (0..5 V)
- ▶ **3550-AB** 2-ch, fast DAC arbitrary waveform generator (0..10 V)
- ▶ **3550-AC** 2-ch, fast DAC arbitrary waveform generator (0..20 V)
- ▶ **3550-BA** 2-ch, fast DAC arbitrary waveform generator (± 5 V)
- ▶ **3550-BB** 2-ch, fast DAC arbitrary waveform generator (± 10 V)
- ▶ **3550-BC** 2-ch, fast DAC arbitrary waveform generator (± 20 V)

Related Products

- ▶ **6100-xx** LXI function card carrier
- ▶ **3180-AA** Ultra-performance motherboard module

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