

ProDAQ VXI Data Acquisition Systems

ProDAQ 3202 Programmable Voltage Reference Plug-In



OVERVIEW

The ProDAQ 3202 voltage reference card is used in the ProDAQ 3180 ultra-performance motherboards and LXI function card carriers. The ProDAQ 3202 voltage reference card is plugged directly onto the motherboard or carrier and can distribute the reference voltage to all ProDAQ function cards via two signal lines. This allows the distribution as a differential signal to overcome possible noise pick-up.

The ProDAQ 3202 voltage reference card features a high-precision voltage source for 10 V, which is then divided down using high-precision dividers to generate reference voltages from ± 9 V to ± 4.5 mV. It features a temperature sensor to further enhance its exceptional initial temperature stability of 2 ppm/ $^{\circ}$ C. The ProDAQ 3202 voltage reference card output can be switched directly to the programmable gain amplifier of different ProDAQ analog-to-digital converter (ADC) function cards for on-the-fly calibration or for self-test purposes.

Features & Benefits

- ▶ Full-scale, **programmable calibration** from **4.5 mV to 9 V**
- ▶ +/- **differential V_{ref}** output
- ▶ **Accuracy** within **0.002%**
- ▶ **Temperature compensation**
- ▶ **Less than 1 μ V RMS noise**

For more information,
visit www.bustec.com.

Learn more about the
ProDAQ 3202 on our website
by scanning the code below.





SPECIFICATIONS

OUTPUT

Nominal Output Voltages ± 4.5 mV, ± 9 mV, ± 45 mV, ± 90 mV, ± 450 mV, ± 900 mV, ± 4.5 V, ± 9 V, 0 V (GND)

Remark: The actual output values are measured during calibration and stored on the card.

Output Resistance $< 5 \Omega$, 3Ω typical

Max. Capacitive Load 10 nF

INITIAL ACCURACY

Output	Accuracy (μ V)
± 9 V	$< \pm 240$
± 4.5 V	$< \pm 150$
± 900 mV	$< \pm 24$
± 450 mV	$< \pm 15$
± 90 mV	$< \pm 3.3$
± 45 mV	$< \pm 1.95$
± 9 mV	$< \pm 0.87$
± 4.5 mV	$< \pm 0.74$

OUTPUT VOLTAGE DRIFT

Output	Maximum (μ V/ $^{\circ}$ C)	Typical (μ V/ $^{\circ}$ C)
± 9 V	18	8
± 4.5 V	10	5
± 900 mV	4	2
± 450 mV	2	1
± 90 mV	1	0.5
± 45 mV	0.8	0.2
± 9 mV	0.5	0.2
± 4.5 mV	0.5	0.2

PHYSICAL CHARACTERISTICS

Dimensions 56 mm x 34 mm

Weight 45 g

POWER REQUIREMENTS

Power Consumption < 350 mW

ENVIRONMENTAL

Temperature 0° C to $+50^{\circ}$ C (operational)
 -40° C to $+70^{\circ}$ 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

- **3202-AA** Programmable voltage reference plug-in

Related Products

- **3180-AA** Ultra-performance motherboard module

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