

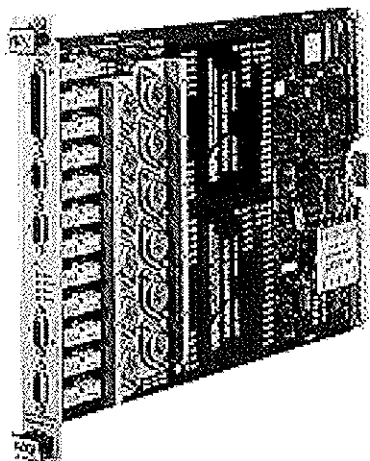


*North Atlantic Instruments*

**VXI-5410C-55**

## **VXI-5410C-55**

### **Twelve Digital to Analog (D/A) Channels**



- Programmable voltage:  $\pm 10$  and  $\pm 16.384$  VDC
- 16-bit monotonic, high current
- Remote Sensing
- Internal or External trigger
- Self-test

#### **GENERAL**

The model 5410C-55 provides twelve independent, single-ended 16 bit Digital-to-Analog (D/A) channels within a message based VXI compatible size "C" card.

Each D/A is guaranteed to be monotonic (16 bits) over the full temperature range. Each output will deliver 60 mA for a total of 720mA. Any single output can deliver 410 mA.

Remote sensing is provided for each channel to eliminate errors caused by voltage drops on the interconnecting cables. Internal protection is provided to prevent output voltages from going to the rails if remote sensing is inadvertently disconnected.

## SPECIFICATIONS

<b>D/A Converter</b>	Twelve single-ended, 16 bit bipolar D/A converters with output current amplifiers.
<b>Output Range</b>	5410C-55-1 $\pm 10.0000$ VDC 5410C-55-3 $\pm 16.3835$ VDC
<b>Minimum Step Size</b>	0.3 mV
<b>Output Impedance max</b>	<0.1 W (DC)
<b>Short Circuit Duration</b>	Continuous
<b>Available Output Drive Current</b>	60 mA per channel for a total of 720 mA. Any single output can deliver 410 mA.
<b>Slew Rate</b>	8 V/ $\mu$ s (250 mA load)
<b>Monotonicity</b>	16 bits (Guaranteed 0°C to 70°C)
<b>Relative Accuracy</b>	$\pm 0.003\%$ FSR at 25°C $\pm 0.006\%$ FSR at 70°C
<b>Bipolar Gain</b>	0.016 ppm/1000 hours average
<b>Bipolar Zero</b>	0.011 ppm/1000 hours average
<b>DNL</b>	0.02 ppm/1000 hours average
<b>Gain Temp. Coefficient</b>	1 ppm/°C max.
<b>Self-Test Accuracy</b>	$\pm 3\%$ of full scale range
<b>VXIbus Data Rate</b>	15 kbytes/sec ASCII data
<b>Conversion Rate</b>	In excess of 1000 voltage changes per second.
<b>Trigger</b>	Output of each channel can be programmed to be either continuous or initiated by an external (front panel) trigger or via the trigger bus
<b>Interface</b>	VXIbus Native (MATE/CIIL)
<b>Operating Temperature</b>	-10°C to +65°C
<b>Storage Temperature</b>	-40°C to +85°C
<b>Relative humidity</b>	to 90% RH
<b>Shock</b>	Designed to meet 15G, 11 ms
<b>Vibration</b>	Designed to meet MIL-T-28800C for class V equipment.
<b>Operating Altitude</b>	10,000 feet
<b>Non-operating Altitude</b>	40,000 feet
<b>Power Requirements</b>	$\pm 24$ Vdc at 1.2 A with max. output load $\pm 12$ Vdc at 300 mA +5 Vdc at 2.3 A
<b>Size</b>	VXIbus C-size standard, single slot
<b>Weight</b>	4.3 lbs
<b>Calibration intervals</b>	1 year
<b>Acoustic noise</b>	None
<b>Max. corrective time</b>	0.5 hours. No preventive maintenance is required.
<b>Connectors</b>	All connections via four front panel 9 pin Female "D" connectors. Remote sensing via front panel 25 pin Male "D" connector. Mating connectors are not supplied.
<b>Cooling</b>	0.2mm H <sub>2</sub> O @ 2.6 L/sec