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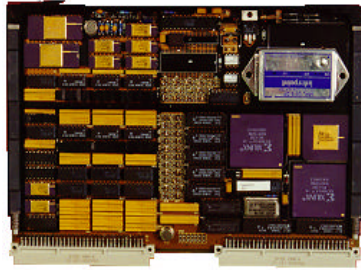
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**Contact us:** (888) 88-SOURCE | [sales@artisanng.com](mailto:sales@artisanng.com) | [www.artisanng.com](http://www.artisanng.com)

## AIO/32 (Analog I/O)

24 input - 16 or 12 bit A/D and 8 output - 12 bit D/A Scanning analog board with anti-alias filters

The VISTA Controls family of Rugged 6U VME I/O cards have been designed to provide system engineers with maximum flexibility and reliability to meet their I/O requirements with Off-The-Shelf Solutions.



The **VISTA AIO/32 (Analog I/O)** card provides the User with the highest count of Analog Input/Output available in extended temperature configurations. This allows the use of the smallest number of cards possible.

The **VISTA AIO/32 (Analog I/O)** Board provides **24** ~ 16 or 12 bit resolution input A/D channels, plus two unbuffered **DC** input channels, combined with **8** ~12 bit D/A output channels. The I/O has an voltage operating range of +/- 10V.

Factory programmable 2nd order anti-alias filters are provided for the A/D inputs, and first order filters for the D/A outputs.

The Analog I/O board offers 3 operating modes:

- Auto scanning
- Random Pole
- Scanning Pole

The Analog I/O board is the ideal single board solution for airborne, shipboard, land vehicle and other harsh environment applications.

At the request of the customer, VISTA can offer modifications to the listed features which could satisfy that totally unique application requirement.

### FEATURES:

Dual Port SRAM: 256 Kbytes

VME Interface:

- 6U VMEbus Slave A24/D16
- Programmable interrupter: 7 levels

Power Consumption:

5 watts typical (5VDC @ 1 A)

Mechanical:

- IEEE 1101.2 single-slot @ 0.8 inch centers
- Wedge locks, Integral heat sinks and stiffeners
- Front Panel on Air Cooled versions
  - » IEEE 1101.1 Compliant
- Weight: 22.4 oz ( Conduction Cooled )

Built-In-Test Circuitry:

- For Continuous and Initiated Bit Operation
- Complete Testing of all active components

**APPLICATIONS**  
**Navigation Systems**  
**Fire Control Systems**  
**Flight Control Systems**  
**Sight-head Stabilization**  
**Data Collection**  
**Communication**  
**C3I**

### Analog Inputs

- 24 channels differential or single ended input
- 2 channels of unbuffered (DC) inputs
- 16 or 12 bit analog to digital converter
  - Input Range: +/- 10VDC
  - Input Impedance : 100 K (differential)
- 62.5 kHz sampling rate per channel
- Conversion rate : >50 K samples/ second
- Second order anti-alias filters (Options: None, 100 & 1000Hz std.)
- Software trigger to synchronize multiple boards simultaneously
- Selectable output coding (binary offset or two's complement)
- Power up in auto scan mode with all channels scanned
- Accuracy = %of full scale (total error from all Sources over Temperature)
  - « 16 bit resolution with 1% resistors = 0.8%  
or with 0.1% resistors = 0.4%
  - « 12 bit resolution with 1% resistors = 0.8%  
or with 0.1% resistors = 0.6%

### Analog Outputs

- 8 channels
- 8 - 12 bit digital to analog converters
  - Output Range: +/- 10VDC @ 10 mA max.
  - Output Short Circuit Protected
- Outputs directly addressable by processor
- 10 mA Outputs : Tri-stateable for redundant operation
- Filter: Active, 1st order (Options: None, 100 & 1000 Hz std)
- Hardware or software output enable for redundant operation
- 1 DAC per channel
- Accuracy: 0.5% of full scale over temperature
- DAC settling time : 10us

### System Features

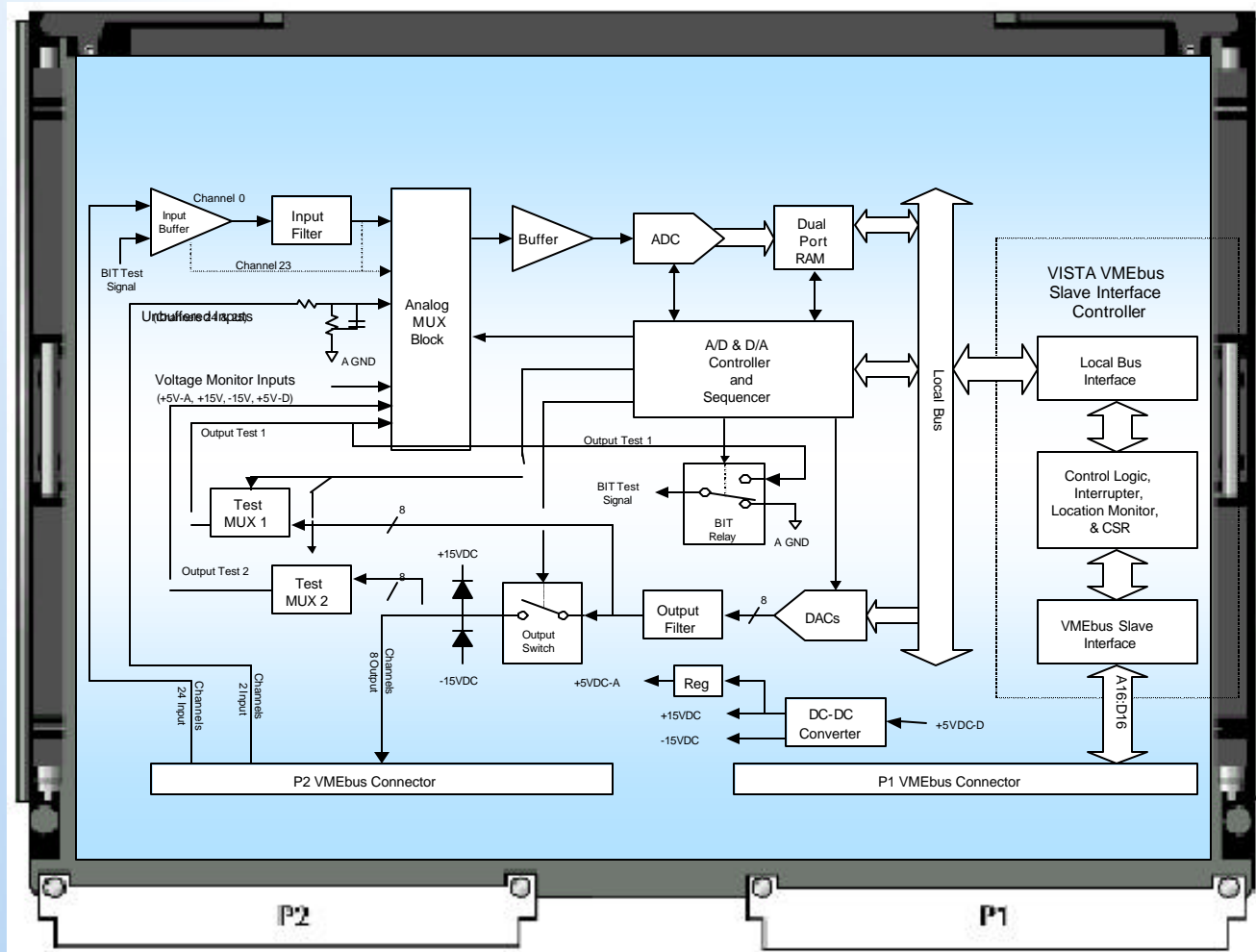
- ✍ **VxWorks Drivers available (call for other OS support)**
- ✍ **Conduction Cooled, -40°C to +75 °C Operating Temp.**  
(Class 3; see Environmental Classifications)
- ✍ **0.1 g<sup>2</sup> / Hz Vibration**  
per Mil-Std-810E,  
(Class 3)
- ✍ **40G Shock**  
per Mil-Std-810E, (Class 3)



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24 input - 16 or 12 bit A/D and 8 output - 12 bit D/A Scanning analog board with anti-alias filters



Order Option Code	Resolution (Input)	Input Filter	Input Voltage	Output Filter	Output Voltage	Resistors 1%
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1xx	16 bit					
2xx	12 bit					
x00		None	+/-10VDC	None	+/-10VDC	Yes
x11		None	+/-10VDC	100Hz	+/-10VDC	Yes
x12		None	+/-10VDC	1kHz	+/-10VDC	Yes
x30		100Hz	+/-10VDC	None	+/-10VDC	Yes
x32		100Hz	+/-10VDC	100Hz	+/-10VDC	Yes
x33		100Hz	+/-10VDC	1kHz	+/-10VDC	Yes
x40		1kHz	+/-10VDC	None	+/-10VDC	Yes
x42		1kHz	+/-10VDC	100Hz	+/-10VDC	Yes
x43		1kHz	+/-10VDC	1kHz	+/-10VDC	Yes

**Ordering Information:** (call if your configuration is not shown)

AIO/32 - CLx - yyy

Order Option Code  
From 1st Column  
of Table

Environmental Class

1= laboratory, convection cooled

2= rugged, convection cooled

3= rugged, conduction cooled

4= Mil Temp, conduction cooled \*\*

\*\*\*NOT AVAILABLE with 16 bit inputs\*\*

(see environments table in catalog for more detail)

\*See Order Option Sheet for more detailed information on options

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