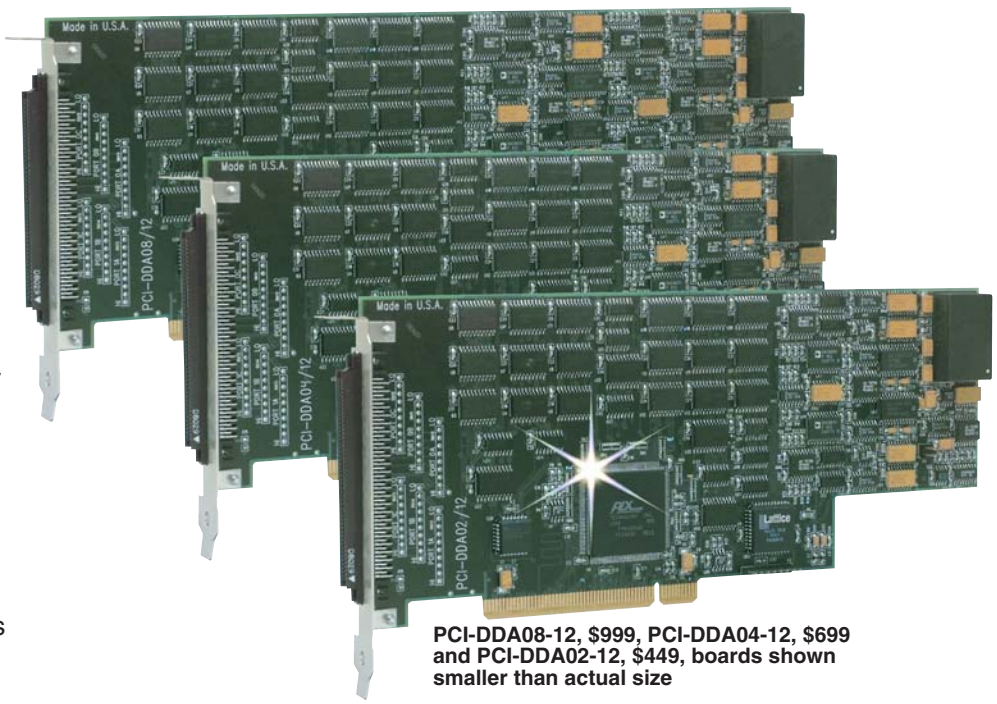
PCI-DDA02-12, PCI-DDA04-12 and PCI-DDA08-12 High-Speed 2, 4 and 8 Channel Analog Output Board for PCI Bus

$449
Basic Unit

- One 12-Bit D/A Per Channel
- 48 Bits Digital I/O
- Channels Individually Programmable
- Fully Plug-and-Play and Auto-Calibrating



PCI-DDA08-12, $999, PCI-DDA04-12, $699 and PCI-DDA02-12, $449, boards shown smaller than actual size

The PCI-DDA series family consists of three models with either 2, 4, or 8 output channels and 48 bits of digital I/O.

The PCI-DDA series analog output channels may be updated independently or simultaneously.

The PCI-DDA series is completely plug-and-play. There are no switches, jumpers or potentiometers on the board. All board addresses, interrupt channels etc. are set by your computer's plug-and-play software.

Analog Outputs

The PCI-DDA series provides two, four, or eight channels of 12-bit analog output (one part in 4096). Each channel is implemented with an independent D/A converter and the analog outputs are updated under software control. Software selectable output ranges of 0 to 10 V, 0 to 5 V, 0 to 2.5 V, ±10 V, ±5 V, and ±2.5 V are available.

Parallel Digital I/O

The PCI-DDA series provide 48 bits of parallel, digital I/O in the form of four 8-bit ports and four 4-bit ports. This digital capability is based on an on-board, high output current emulation of the 82C55 mode 0 and allows each of the ports to be set independently as input or output.

The digital I/O section of the board is fully connector compatible with all of OMEGA's 50-Pin digital signal conditioning boards, such as the SSR-RACK24 (see section H for details).

All I/O signals are brought through a 100-pin high-density connector. The optional C100FF-2 cable splits the 100 pins into two separate 50-pin cables. The first 50-pin cable contains the signals from pins 1-50, while the second carries pins 51-100 and keeps the analog signals in one cable and the digital in another.

Software Support

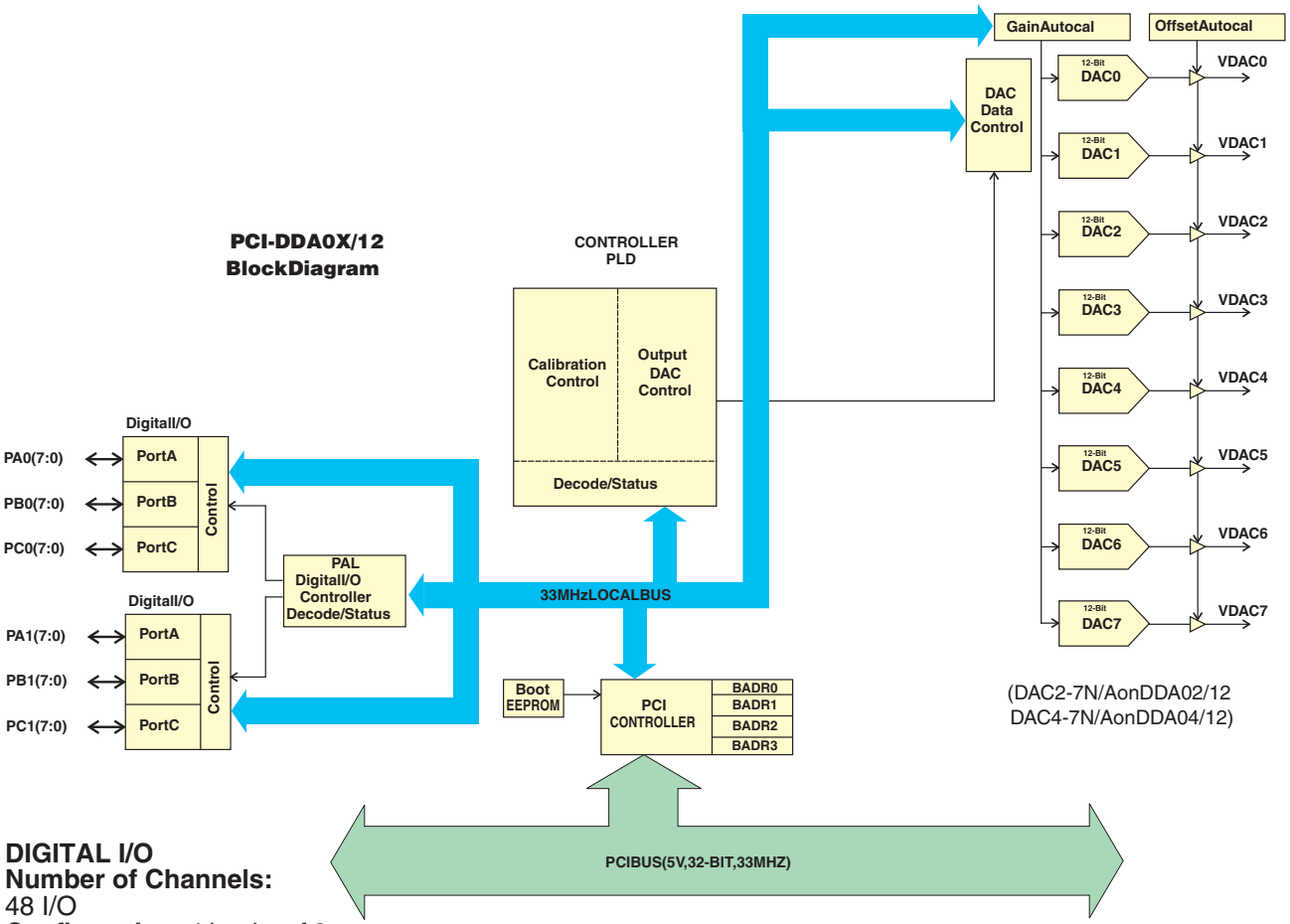
The PCI-DDA series is supplied with InstaCal software for calibration and test. In addition, it is also supported by the optional Universal Library. The Universal Library is a set of I/O libraries and drivers for those users creating their own custom programs. The Universal Library is compatible with most Windows (32-bit) based languages. An optional driver for LabVIEW is also available.

Specifications

ANALOG OUTPUT

Resolution: 12-bits
Number of Channels: 8, 4 or 2 depending on model
Output Ranges: ±10 V, ±5 V, ±2.5 V, 0 to 10 V, 0 to 5 V, 0 to 2.5 V
Data Transfer Modes: programmed I/O
Offset Error: ± (300µV +¼ LSB) (calibrated)
Gain Error: ±.02% calibrated)
Differential Non-Linearity: ±1 LSB max
Integral Non-Linearity: ±1 LSB max
Throughput: PC dependent
Settling Time: 10 µs max (20 V step to ±½ LSB),
Slew Rate: 5 V/µs
Current Drive: ±5 mA
Output Short-Circuit Duration: 25 mA indefinite
Output Impedance: 0.1 Ohms max
Power Up and Reset State: all DAC's cleared to 0 volts, ±210 mV

PCI-DDA0X/12 BlockDiagram



(DAC2-7N/AonDDA02/12
DAC4-7N/AonDDA04/12)

DIGITAL I/O
Number of Channels: 48 I/O
Configuration: 4 banks of 8, 4 banks of 4, programmable by bank as input or output
Output High: 2.4 Volts @ -15 mA min
Output Low: 0.5 Volts @ 64 mA min
Input High: 2.0 Volts min, 7 Volts absolute max
Input Low: 0.8 Volts max, -0.5 Volts absolute min
Power On / Reset State all ports to input mode

POWER CONSUMPTION

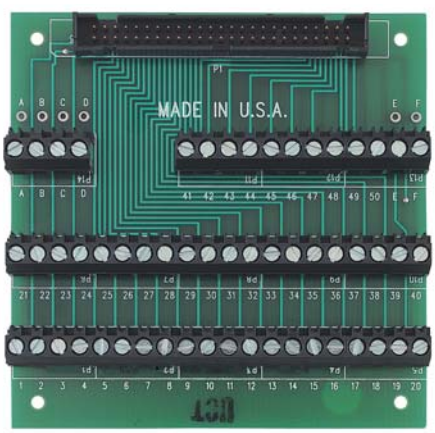
PCI-DDA08-12
+5 V Operating: 1.6 A typical, 2.6 A max
+12 V: 24 mA typical, 48 mA max
-12 V: 16 mA typical, 25 mA max

PCI-DDA04-12
+5 V Operating: 1.5 A typical, 2.4 A max
+12 V: 12 mA typical, 24 mA max
-12 V: 8 mA typical, 12 mA max

PCI-DDA02-12
+5V Operating: 1.4A typical, 2.2 A max
+12V: 6 mA typical, 12 mA max
-12V: 4 mA typical, 6 mA max

ENVIRONMENTAL
Operating Temp Range: 0 to 70°C (32 to 158°F)
Storage Temp Range: -40 to 100°C (-40 to 212°F)
Humidity: 0 to 90% non-condensing

MOST POPULAR MODELS HIGHLIGHTED!



The CIO-MINI50 screw terminal board

To Order *(Specify Model Number)*

Model No.	Price	Description
PCI-DDA02-12	**$449**	2-channel, 12-bit D/A and digital I/O board for PCI-bus
PCI-DDA04-12	**699**	4-channel, 12-bit D/A and digital I/O board for PCI-bus
PCI-DDA08-12	**999**	8-channel, 12-bit D/A and digital I/O board for PCI-bus
CIO-MINI50	**69**	50-pin, screw terminal board (two are required, one for analog I/O and one for digital I/O)
C100FF-2	**49**	100 pin ribbon cable, 2′ long. Splits 100 pin connector into two 50-pin connectors. (one is required)
UNIV-DRVR	**49**	Universal Software Library
CIO-LABVIEW-DRVR	**49**	LabVIEW drivers

***PCI-DDA** cards comes with Instacal test software and complete operator's manual*

Ordering example: PCI-DDA02-12** board, **CIO-MINI50** screw terminal panel, **C100FF-2** cable, **UNIV-DRVR** Universal Software Library and **OMEGACARE**℠ 1-year extended warranty for **PCI-DDA02-12** (adds 1 year to standard-3 year warranty) $449 + 69 + 49 + 49 + 44 = **$661.

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