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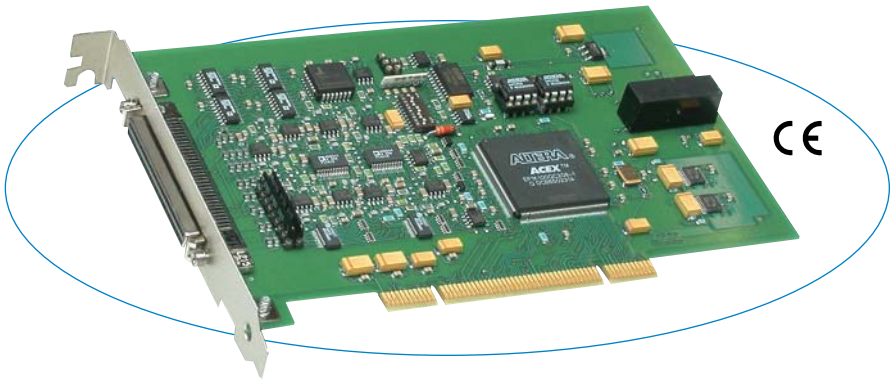
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Find the *Acromag APC730* at our website: ***Click HERE***

APC730
Multi-function I/O

- **Analog Input**
- **Analog Output**
- **Digital I/O**
- **Counter/Timer**



The APC730 combines analog I/O, digital I/O, and counter/timer functions on a single high-density module to save PCI slots.

APC730 I/O boards provide a variety of I/O functions on a single card. These new high-density boards perform both high-speed and high-resolution A/D and D/A conversion and also handle digital I/O plus counter/timer functions.

Now you can conserve your precious card slots and still get all the I/O functionality you need. The APC730 is designed for extreme versatility with many deluxe features to meet most applications. However, the APC730 is still very budget-friendly.

Features

Analog Inputs

- 16 differential or 32 single-ended inputs (±3.3V, ±5V, ±10V, 0-5V, and 0-10V ranges)
- 16-bit ADC with 512 sample RAM
- 10µS conversion time (100KHz)
- Interrupt upon ADC memory threshold condition (user-programmable data sample threshold)
- User-programmable interval timer

Analog Outputs

- Eight analog output channels (±10V range)
- Individual 16-bit DACs per channel
- 1024 sample FIFO for waveform generation
- 12.375µS settling time (80.8KHz throughput)
- Interrupt on user-programmable FIFO threshold

Digital I/O

- 16 TTL bidirectional input/outputs

Counter/Timer

- One 32-bit counter/timer

Specifications

Analog Input

Input configuration: 16 differential or 32 single-ended channels multiplexed to a single A/D converter.

A/D resolution: 16 bits.

Input ranges: ±3.3V, ±5V, ±10V, 0-5V, and 0-10V.

Maximum throughput rate:
One channel updated at a time.
1 channel (maximum): 10µS
16 channels (maximum): 160µS
32 channels (maximum): 320µS

Data sample memory: 512 samples shared by all channels.

A/D trigger: Internal timer, external source, software.

On-board timer: One user-programmable timer for analog input acquisition control.

System accuracy: ±3 LSB typ. (SW calib., gain=1, 25°C).

Data format: Straight binary or binary two's compliment.

Input overvoltage protection: -40 to 55V power off.

Common mode rejection ratio (60Hz): 96dB typical.

Channel-to-channel rejection ratio (60Hz): 96dB typical.

Analog Output

Output configuration: 8 single-ended channels, each controlled by its own independent D/A converter.

D/A resolution: 16 bits.

Output range: ±10V.

Maximum throughput rate:
Outputs updated simultaneously or individually.
1 channel: 12.375µS
8 different channels: 12.375µS

DAC programming: Via independent channel registers or through shared FIFO.

Data sample memory: 1024 sample FIFO shared by all channels.

D/A trigger: Internal timer, external source, software.

On-board timer: One user-programmable timer for analog output control.

System accuracy: 0.0076% of 20V span max. error corrected (i.e. calibrated) at 25°C with output unloaded.

Data format: Straight binary.

Output at reset: 0V.

Output current: -10 to 10mA (maximum).

Short circuit protection: Indefinite at 25°C.

Digital I/O

I/O channel configuration: 16 TTL transceivers, input/output direction selectable on an 8-channel basis.

Digital Input

Input voltage range: 0 to 5V DC.

Input signal threshold:
Low to high: 2.0V typical.
High to low: 0.8V typical.

Input response time: 250 nanoseconds.

Interrupts: 16 channels of interrupts for high-to-low, low-to-high, or any change-of-state event types.

Debounce: Individual debounce selectable on each channel. User-selectable (4µS, 64µS, 1mS, or 8mS).

Digital Output

Output voltage range: 0 to 5V DC.

Output ON current range: -15 to 64mA.

Output pullups: 4.7K ohm socketed resistors.

Counter/Timers

Counter/timer configuration: one 32-bit counter (requires use of channels 2 through 5 of digital I/O section).

Functions:
Watchdog timer, event counting, pulse measurement, period measurement, output waveform generation (pulse width modulation, continuous pulse, single pulse, continuous waveform).

Internal clock: Programmable 1, 4, 8MHz.

External clock: 3.4MHz.

Input voltage range: 0 to 5V DC.

Output voltage range: 0 to 5V with 4.7 ohm pull-up. Maximum of 0 to 35V with external supply.

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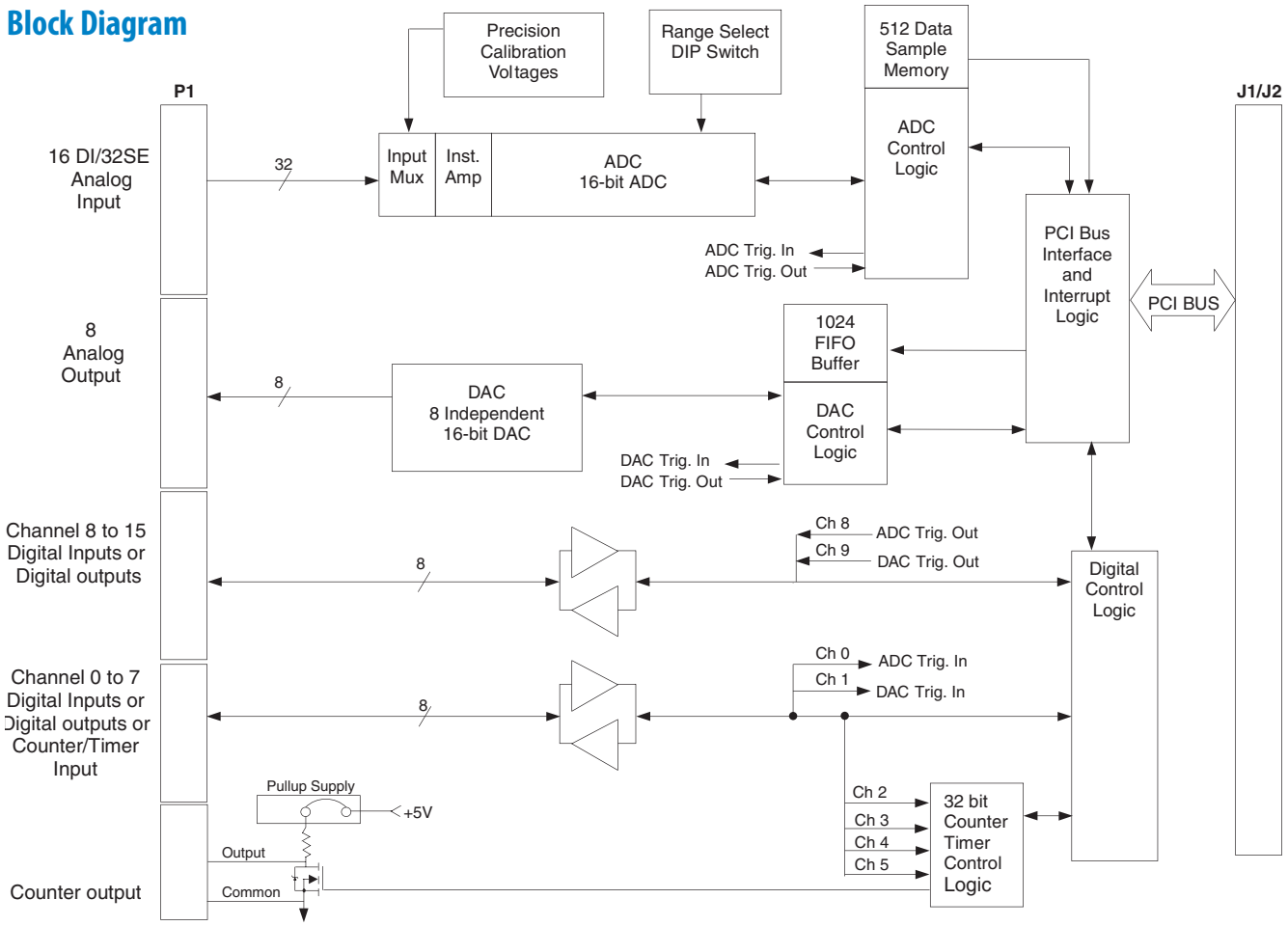
CompactPCI Boards

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Block Diagram



Specifications (continued)

PCI Bus Compliance

This device meets or exceeds all written PCI local bus specifications per rev. 2.2 dated June 1998.

System base address: This board operates in memory space. It consumes 1K of memory space.

Data transfer bus: Slave with 32, 16, and 8-bit data transfer operation. 32-bit read or write accesses implemented as two 16-bit transfers.

Interrupts (INTA#): Interrupt A is used to request an interrupt.

Environmental

Operating temperature: 0 to 70°C (E version -40 to 85°C)

Storage temperature: -40 to 85°C.

Relative humidity: 5 to 95% non-condensing.

Power: 245mA at +5V (290mA maximum).

MTBF: Consult factory.

Ordering Information

I/O Boards

APC730
Multi-function I/O board

APC730E
Same as APC730 plus extended temperature range

Software

PMCSW-API-VXW: VxWorks® software support package

PCISW-API-WIN32: 32-bit Windows® DLL Driver software package

PCISW-API-WIN64: 64-bit Windows® DLL Driver software package

PCISW-API-LNX: Linux™ support (website download only)

Accessories

5025-288
Termination panel, SCSI-3 connector, 68 screw terminals

5028-432
Cable, shielded, SCSI-3 connector at both ends

Visit our web page for more information

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