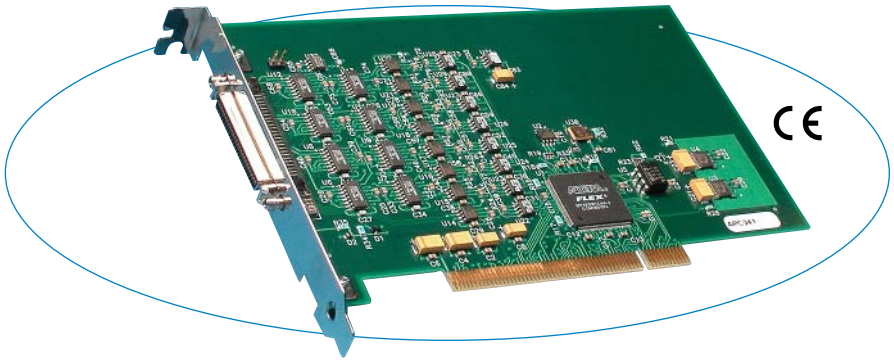
APC341 Simultaneous A/D Conversion Analog Input



This board is ideal for high-speed data acquisition. A large memory buffer reduces CPU interactions for increased overall performance.

APC341 boards provide fast, high resolution, simultaneous A/D conversion of eight channels.

These boards have sixteen analog inputs which are sampled as two eight-channel banks. Eight A/D converters (ADCs) permit simultaneous conversion of all eight channels in a bank. All 16 channels share two generous 512-sample memory buffers. Conversion of each bank requires only 8µS, and all 16 channels can be sampled in just 16µs.

Flexible configuration options give you extensive control over the conversion process. The channels or bank to be converted, timing, scan mode, and other parameters are user-programmable. Interrupt support adds further control to interrupt upon a programmable threshold when the data in memory exceeds the set threshold.

Features

- 16 differential inputs (±10V DC input range)
- Eight 14-bit A/D converters with simultaneous multi-channel conversion
- 8µS conversion time (125KHz) for 8-channel bank
- Two 512-sample memory buffers
- Data tagging for channel identification
- Programmable conversion timer
- Programmable channel conversion control
- External trigger input and output
- Continuous and single-cycle conversion modes
- Interrupt generation for memory full threshold conditions
- Precision calibration voltages stored on-board
- CE marked, FCC Part 15, Class B

Benefits

- Simultaneous channel conversion and on-board memory enable megahertz throughput rates.

Specifications

Analog Inputs

Input configuration: 16 differential channels.

A/D resolution: 14 bits.

Input range: ±10V.

Maximum throughput rate:
Eight channels can be simultaneously acquired.
One channel: 125KHz (8µS/conversion)
8 channels (same bank): 1MHz (8µS/8 channels)
16 channels (high & low banks): 1MHz (16µS/16 ch. at maximum 2.2K ohm source resistance).

Data sample memory: Two 512-sample memory buffers.

A/D triggers: Internal timer, external, and software.

Internal conversion timer: User-programmable delay between simultaneous conversion of 8-channel banks. Maximum delay is 2.09 second interval.

System accuracy: 2.4 LSB (0.014%).

Data format: Binary two's compliment.

Overvoltage protection: ±25V (power on), ±40V (off).

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

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

Environmental

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

Storage temperature: -55 to 105°C.

Relative humidity: 5 to 95% non-condensing.

MTBF: Consult factory.

Power: 265mA at +5V (320mA maximum).

PCI Bus Compliance

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

System base address: This board operates in memory space. It consumes 4K of memory space.

Data transfer bus: Slave with 32, 16, and 8-bit data transfer operation.

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

Ordering Information

I/O Boards

APC341
Analog input board

APC341E
Same as APC341 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-LINUX: Linux® support (website download only)

Accessories

5028-378
Termination panel, SCSI-2 connector, 50 screw terminals

5028-438
Cable, shielded, SCSI-2 connector at both ends

Visit our web page for more information

CompactPCI Boards

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