

PMC ANALOG-DIGITAL INPUT-OUTPUT MODULE

ANZ572



KEY FEATURES

- 1 million samples per second per channel for 16 channels
- 16 million samples per second per 16 channels
- Simultaneous sample and hold on all channels
- 12-bit ADC resolution
- 16 analog input ports at 1MHz
- Independent output voltage ranges for each port
- 2 million parameters per second maximum throughput
- 1 million samples per second each output port
- 16 analog output ports
- 16 million samples per second output total
- 16-bit DAC resolution
- 16 bit digital output port
- Supports internal or external sample clock at 1 MHz
- Accuracy to within 0.2%

OVERVIEW

The PMC Analog-Digital Input-Output Module (ANZ572) is a powerful multifunction board that combines 16-bit digital-to-analog converters (DAC) with 12-bit analog-to-digital converters (ADC). 16 independently configurable analog input/output channels sample and hold simultaneously, with independent output voltage ranges for each port.

PERFORMANCE

With a total analog input rate of 16 million samples per second (MSPS), an analog output rate of 16 million samples per second, and a digital output throughput rate of 2 million parameters per second, the ANZ572 is one of the highest performing input-output boards on the market today.

APPLICATIONS

The ANZ572 replaces stand-alone ADC and DAC boards using one-fourth of the number of VME slots previously required for ground data acquisition systems. The analog outputs drive strip charts, oscillographs, and dials, while the digital outputs control lamps and status indicators. Analog inputs can be used to inject antenna gain control (AGC) data from a telemetry receiver or collect other general purpose analog signals such as battery voltage from a test article umbilical.

TECHNOLOGY

The popular PCI Mezzanine Card (PMC) form factor provides the benefits of a small footprint and works with L-3's VME-based (4 PMC modules per PMC carrier board) systems. The ANZ572 provides a convenient technology upgrade path, and can mix-and-match with other PMC modules from L-3 and third-party suppliers.

Excellence You Can Measure



ANZ572 SPECIFICATIONS

Analog Output Ports

Ports per module	.16
Resolution	~ 0.3 mV
Range	Each port independent; $\pm 10V$, $\pm 5V$, 0 to 10V, 0 to 5V software selectable
Output current	$\pm 10mA$ (typical) continuous, short circuit protected
Output impedance	.600 Ω
Reset to 0V	System reset or command
Absolute accuracy	.02% (Hi-Z load > 10 M Ω)

External Sample Clock

Input Frequency	.1 MHz
Signal type	Differential, LVDS or RS-422
Input impedance	.100 Ω
Signal characteristics	Rising edge tracked (PLL), 50% duty cycle clock synthesized from input clock

Analog Input Ports

Number of channels	.16
ADC resolution	.12 bits
Input voltage ranges	$\pm 10V$, $\pm 5V$, $\pm 2.5V$, 0 to 10V
Sample and hold	Simultaneous all channels
Sample rate	.1 MSPS per channel
Maximum total input rate	.16 MSPS (4 MSPS when used on a VME Mezzanine Carrier)
Common mode rejection	.80dB minimum @ 60 Hz
Input type	Differential (or signal and ground)
Input impedance	>100K Ω Differential; > 50KW Ω Single Ended
Accuracy typical	.02%
Input coupling	.DC
Resolution	< .025%

Digital Output Ports

Ports per module	.16 bits plus strobe
Output strobe	.200nsec, positive polarity
Output trigger	Presence of tag
Format	Parallel bits
Drivers	$\pm 24mA$, LVTTTL (3.3V)
Maximum throughput rate	.2M parameters per second

General Requirements

Form factor	PMC, IEEE 1386-2001
Operating temperature	.0 to 55 C
Relative humidity	<90% (non-condensing)
Connector type	.1 Molex 50-pin, 1 triax NDL-Q
Diagnostic display	.4 status LEDs
Typical Power	.7.3 Watts
Maximum Currents	+5V @ 0.135A +3.3V @ 1.2A +12V @ 0.263A -12V @ 0.276A

Internal Sample Clock

Maximum rate	.1 MSPS per channel
Minimum rate	.1 SPS per channel sample rate
Resolution	.20 bit divisor
Channel control	Software selectable on a per channel basis

Compatibility

VME Mezzanine Carrier (ZCM596)
VME Mezzanine Carrier with Arbiter (ZCA596)
VISTA Software

Ordering Information

ANZ572	Analog-Digital Input-Output Module, PMC (16 Channels)
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