



335-2050-500 Analog I/O Card

Features

- When configured for input mode, each channel acts as a 24-bit analog to digital converter (ADC)
- When configured for output mode, each channel has a 20-bit digital to analog converter (DAC) with output line drive buffering
- Each channel supports a fourth mode, whereby the channel is high impedance
- All outputs are updated simultaneously and all inputs are read back simultaneously

Summary

Phillips' Analog I/O card is a daughtercard module that plugs into a Phillips ICX card. As such, the Analog I/O card is one of several plug-in modules that change the type and function of the ICX card in order to support different test interface.

The Analog I/O card supports up to 24 channels of differential (two-wire) I/O. Each channel can be configured as an input and output, or high impedance. A high impedance external loopback circuit supports testing of the I/O outside the high impedance switch. The Analog I/O card configuration identifier is 0x05.

Specifications

I/O Control:

Configuration: 24 two-wire analog voltage channels

Individual 20-bit DAC and 24-bit ADC per channel

Input/output range: $\pm 15.75V/\pm 15.00V$

Modes per channel: analog output, analog input, analog I/O (self monitor), loopback, or high impedance (1M Ω)

I/O ESD Protection: 2kV per Method 3015.7

Analog Outputs:

DAC resolution: 20-bits

Output range: $\pm 15.00V$

Least significant bit: 40 μV

Settling time: 2ms to 0.2%

Throughput rate: >300 Hz, all output channels simultaneously updated

Accuracy: 0.1% of 30V span max, corrected error at 25 deg C, no load

Channel at reset: High impedance

Output current: 25mA

Short circuit protection: indefinite at 25 deg C

Analog Inputs:

ADC resolution: 24-bits

Input range: $\pm 15.75V$

Least Significant Bit: 2 μV

Conversion rate: >300 Hz, all input channels simultaneously read

Accuracy: 0.1% of 30V span max, corrected error at 25 deg C

Channel at reset: High impedance

Input resistance: 98.7k Ω

Ordering Information

Hardware

335-2050-500