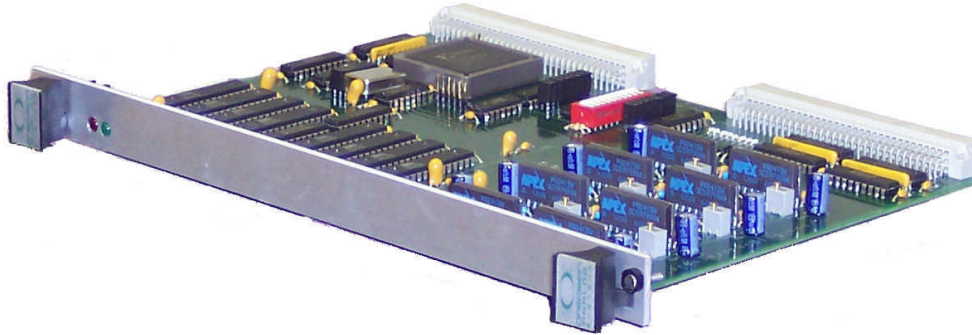


PAS 9717/AO

8 Channel 16 Bit High Power VME Analog Output Card



GENERAL DESCRIPTION

The **PAS 9717/AO** provides eight high power analog output channels with sixteen-bit resolution on a 6U VME card. Each channel consists of a high speed Digital to Analog Converter, (DAC), followed by a high power operational amplifier. The output amplifiers are capable of supplying 50 mAmps of current, and will accept power supply voltages up to +/- 100 Volts. The total power dissipated by the amplifiers must be considered to determine if they will work in a given application. Example power dissipation calculations are shown in section IV of the product manual.

All of the output channels and the external power supply connections can be terminated on the P2 connector of the VME backplane. A DB37 connector mounted through the front panel is available as an option for terminating the output and power supply signals. Refer to the end of section II of the product manual for ordering information.

The card can be used in VME systems with A16, A24, or A32 addressing, and data writes of 16 and 32 bits are supported. DIP switches are used to configure the width of the address bus, and the instruction type specifies the data bus width. Board identifier registers, control and status register, and a 32-bit test register are also provided.

Electrical Specifications

| | +/- 40 Volt Card | +/- 15 Volt Card |
|---|--|-------------------------|
| Number of Channels | 8 Analog Outputs | 8 Analog Outputs |
| Resolution | 16 bits | 16 bits |
| Output Voltage | +/- 40 Volts | +/- 15 Volts |
| LSB bit weight | 1.22 mVolt | 458 microVolt |
| Output Current | +/- 50 mAmps | +/- 50 mAmps |
| Current Limit | +/- 60 mAmps | +/- 60 mAmps |
| Output Resistance | 75 ohms | 75 ohms |
| Voltage Swing @ 40 mA | +/- (Vs -12 Volts) | +/- (Vs -12 Volts) |
| Settling Time | 12 uSec to 0.1%(typ) | 12 uSec to 0.1%(typ) |
| Zero Error | +/- 2 LSB (adjustable to zero) | |
| Gain Error | +/- 0.05 % FS (adjustable to zero) | |
| DAC Type | DAC712P (Standard DAC) | |
| DAC Integral Nonlinearity | +/- 4 LSB (max.) | |
| DAC Differential Nonlinearity | +/- 4 LSB (max.) | |
| (Refer to the product manual for higher linearity grade DACs) | | |
| Card Power Requirements (Backplane power supplies) | 5 Volts @ 1 Amp, (typ) 12 Volts @ 120 mAmps, -12 Volts @ 200 mAmps | |
| External Power Supply Voltage | +/- 50 Volts (min), +/- 100 Volts (max) | |
| Quiescent Current | 20 mA (typ.), 30 mA (max) | |

Features

Data Format: Binary Two's Complement data

Reset Value: DAC's reset to zero during power up or software reset

VME Interface: D32, D16, A32, A24, A16 Slave, no interrupts

Board Identifier: VMEIDPAS9717AOA0 programmed in CPLD

Simultaneous Update: Software update causes all DACs to update simultaneously

Status Indicators: Pass and Fail or Board Access LEDs on front panel

Environmental Specifications

| | |
|------------------------------------|----------------------------|
| Operating Temperature Range | 0 to 60 degrees Celsius |
| Storage Temperature Range | -20 to 85 degrees Celsius |
| Relative Humidity Range | 20% to 80%, non-condensing |

Physical Specifications

| | |
|-------------------|---|
| Dimensions | 233 mm X 160mm, 6U X 160 VME form factor |
| Weight | 16 oz. (typ) |
| Connectors | 2 ea. 96 position (VME bus connectors) 1 ea. DB37 female (Analog Output connector) |

