

9421 ANALOG INPUT MODULE

SPECIFICATIONS

Number of Analog Input Channels: 32 Differentials

Noise floor: at least -120dBv per root Hz over 85

Channel Resolution: 12 bits kHz bandwidth

Conversion Rate: 500ksa/s. Clock may be supplied on board or from external source.

Digital Data Format: 12 bit 2's complement

Input Impedance: > 1Mohm

Input Ranges: user specified

VME COMPLIANCE

Meets VME Specifications revision C.1 IEEE Std. 1014-1987

User programmable

A16:D32 DTB Slave

Address modifier code 29 or 2D HEX

Short I/O space covering 256K consecutive byte locations, base address configurable within 64K I/O Space.

Board size: 6U

Power Requirements

+5 Volts @ 250mA

12 Volts @ 1A

Environmental

Operating Temperature: -10 to 50°C or -25 to 75°C

Storage Temperature: -25 to 125°C

Shock: 10g, 11ms on all axis

The 9421 Analog Input Module offers the following features:

- The user may program the module so that the data from the A/D converters is sent to either an external FPDP interface or the VMEbus.
- The A/D converters are self calibrating. No potentiometer adjustments are required. Calibration consists of writing a logic “1” to the calibration register and then polling to determine when the calibration cycle is complete. The calibration cycle needs to be performed only on system boot-up and requires approximately 10 seconds.
- Low power dissipation. During operation, the board requires less than 12 watts.
- All 32 channels are simultaneously sampled. Throughput is 500 kHz per channel.
- A software controlled power down places the A/D converters in a standby state consuming 1mW. This reduces the board power consumption by 98%. The power down state may be implemented by writing a logic “1” to the appropriate bit in the control register. A logic “0” will enable all A/D converters.
- An onboard set of voltage references allow the user to test the board without the need of external devices.
- Up to 8 boards may be synchronized and share the same FPDP interface. The user need only write the ID byte and Channel byte to the appropriate control registers. Multiple units appear as a single unit on the FPDP interface.

If a custom external data interface is required, we can typically accomplish this for an NRE charge of less than \$4000 by simply reprogramming the external interface chip.