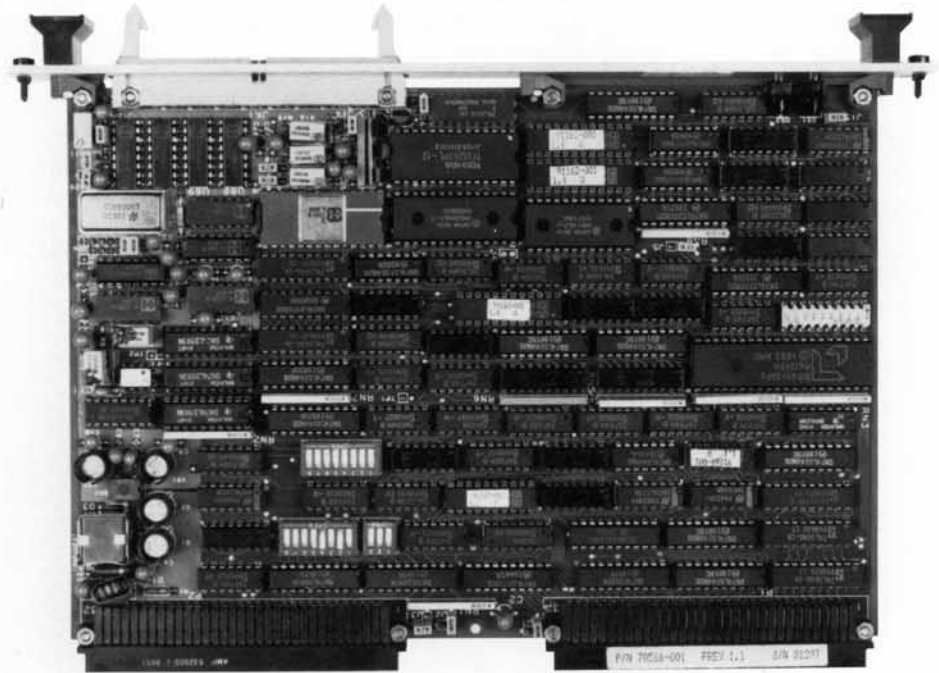


XVME-566 High-Performance Analog Input Module



Features

- 100 KHz throughput
- 64 Kbytes dual-access RAM
- Programmable gain
- Programmable conversion sequence
- External trigger and on-board sample clock
- Powerful automatic sampling modes

Applications

- High-speed sampling
- Vibration analysis
- Automatic data collection

Overview

The XVME-566 is a high-performance VMEbus-compatible Analog Input Module. It converts data on 32 single-ended or 16 differential analog input channels and provides 12-bit resolution. Conversions are performed at a rate of 100 KHz, using a dual sample and hold architecture.

At conversion rates of 100 KHz and faster, 100% of the VMEbus bandwidth can be used in servicing the module. The XVME-566 alleviates this problem by providing 64 Kbytes of dual-access RAM, enough for over 32,000 samples. The sequence of channels to be converted can be programmed in a 256 byte sequence RAM. This sequence RAM allows for looping of sample sequences, interrupting the VMEbus when a particular sample is completed, and stopping the sampling process. A gain RAM is also used to provide the gain factor for each individual channel.

A programmable sample clock is provided, which controls the basic sampling rate up to 100 KHz. A sequence of samples can be initiated by either a second on-board trigger clock and external trigger or an S/W trigger.

Hardware Specifications

Analog Inputs

Number of Channels

Single-ended	32
Differential	16
ADC input ranges	0-10, ± 5 , ± 10

Programmable Gain

Range 1	1, 2, 5, or 10
Range 2	4, 8, 20, or 40
Range 3	10, 20, 50, or 100

Maximum Input Voltage

Power on	35 V
Power off	20 V

Common Mode Voltage 14 V

Common Mode Rejection Ratio 60 db, min.

Accuracy

Resolution	12 or 8 bits
Linearity	$\pm 1/2$ LSB
Differential linearity	$\pm 1/2$ LSB
Monotonicity	Guaranteed
System accuracy	
Gain = 1	0.05% FSR
Gain = 100	0.1% FSR
System accuracy temp. drift	
Gain = 1	40 ppm/ $^{\circ}$ C, max.
Gain = 100	110 ppm/ $^{\circ}$ C, max.

Speed

Conversion time	<10 usec.
Throughput	100 KHz, 12-bit mode 142 KHz, 8-bit mode
Trigger clock	up to 100 KHz
Sample clock	up to 142 KHz

Power requirements 5 V

Environmental Specifications

Temperature

Operating	0 $^{\circ}$ to 65 $^{\circ}$ C (32 $^{\circ}$ to 149 $^{\circ}$ F)
Non-operating	-40 $^{\circ}$ to 85 $^{\circ}$ C (-40 $^{\circ}$ to 185 $^{\circ}$ F)

Humidity

5 to 95% RH, non-condensing

Altitude

Operating	Sea level to 10,000 ft. (3048 m)
Non-operating	Sea level to 50,000 ft. (15240 m)

Vibration

Operating	5 to 2000 Hz .015" peak-to-peak displacement 2.5 g (maximum) acceleration
Non-operating	.030" peak-to-peak displacement 5.0 g (maximum) acceleration

Shock

Operating	30 g peak acceleration, 11 msec duration
Non-operating	50 g peak acceleration, 11 msec duration

VMEbus Compliance

Complies with VMEbus Specification, IEEE 1014
A16/A24:D16/D08(E0) DTB Slave
Interrupter - I(1)-I(7)(STAT), RORA
Interrupt Vector - D08(O)(DYN)
Utility Signals - SYSFAIL
Form Factor - NEXP (233.35 mm x 160 mm)
Conforms to Xycom Standard I/O Architecture

Warranty Information

The XVME-566 carries a two-year warranty.

Ordering Information

XVME-566: High-performance Analog
Input Module

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