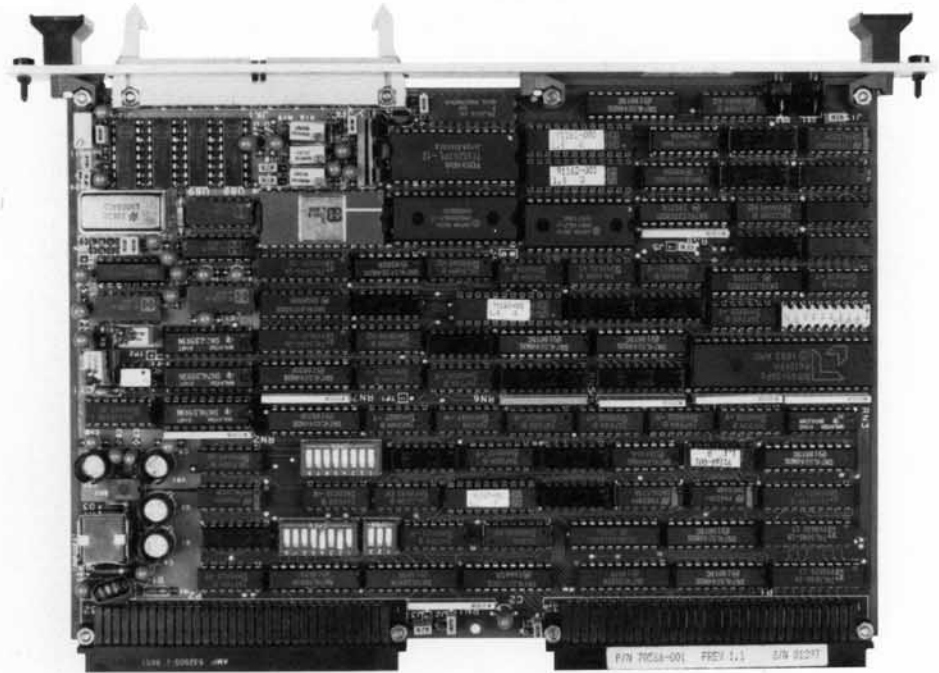


XVME-566 High-Performance Analog Input Module



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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