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Data Sheet

August 15, 2026

ABACO SYSTEMS / VMIC

Abaco Systems / VMIC VMIVME-3125-000 32-Channel 12-Bit A/D Converter Module

The Abaco Systems VMIVME-3125-000 is a 32-channel, 12-bit analog-to-digital converter module designed for VMEbus systems. It offers high-performance data acquisition capabilities for industrial and scientific applications, featuring individual channel input ranges and programmable gain. This module ensures accurate and reliable conversion of analog signals into digital data.

**MODEL****Abaco Systems /
VMIC VMIVME-
3125-000****CALIBRATION****Available on
request****CONDITION****Used****STATUS****In stock****RFQ / SKU****VMIVME-3125-
000****LISTING**[https://aumictechlabs.c
om/products/vmivme-3
125-000-2/](https://aumictechlabs.com/products/vmivme-3125-000-2/)

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NAICS 423690 • 811210 • 541380

This unit

The Abaco Systems VMIVME-3125-000 is a 12-bit analog-to-digital converter module for VMEbus systems delivering 40 kSPS minimum aggregate conversion rate. It accommodates 32 single-ended or 16 differential analog input channels with selectable voltage ranges (± 5 V, ± 10 V, 0 to $+10$ V) and current inputs (0-20 mA, 4-20 mA, 5-25 mA). Jumper-selectable programmable gain amplifiers provide x1, x10, or x100 gains, enabling signal conditioning across ± 50 mV to ± 10 V input spans. The module features autoscanning capability that continuously digitizes inputs and stores results in dual-ported data registers for direct VMEbus access without software.

intervention. Built-in-test functionality validates PGA, ADC, and control logic operation in real time. Input isolation of 1,000 V analog-to-digital ground, 10 M Ω minimum input impedance, and ± 40 V overvoltage protection ensure signal integrity in demanding industrial and scientific applications. Software-selectable offset binary or two's complement data coding accommodates diverse processing requirements. Standard 50 kHz low-pass filtering with optional 40 Hz cutoff addresses noise rejection across frequency domains. Accuracy specification of $\pm 0.04\%$ reading $\pm 0.03\%$ range ± 2.0 supports precision measurement tasks.

Technical Specifications

Form Factor: 6U Eurocard

ADC Resolution: 12 bits

Conversion Rate: 40 kSPS minimum aggregate

Analog Input Channels: 32 single-ended or 16 differential

Voltage Input Ranges: ± 5 V, ± 10 V, 0 to +10 V (selectable); ± 50 mV to ± 10 V with PGA

Current Input Ranges: 0-20 mA, 4-20 mA, 5-25 mA

Programmable Gain: x1, x10, x100 (jumper-selectable)

Input Impedance: 10 M Ω minimum (line-to-line and line-to-common)

Common-Mode Voltage: ± 11 V maximum (differential inputs, referenced to analog ground)

CMRR: ≥ 90 dB (x100 gain); ≥ 72 dB (x1 gain)

Input Noise (10-1000 Hz at 3σ): 300 μ Vp-p (x100 gain), 1.0 mVp-p (x10 gain), 4.0 mVp-p (x1 gain)

Overvoltage Protection: ± 40 V sustained (powered), ± 25 V (unpowered), ± 40 V transient (1 second)

Input Filtering: 50 kHz standard (-3 dB); optional 40 Hz (-3 dB)

Input Isolation: 1,000 V analog GND/digital GND

Accuracy: $\pm 0.04\%$ reading $\pm 0.03\%$ range ± 2.0

Data Coding: Offset binary or two's complement (software-selectable)

Built-In-Test: Real-time BIT for PGA, ADC, and control logic

Key Features

Dual-ported data registers enable VMEbus access without software polling

Autoscanning continuously digitalizes all channels

1,000 V input isolation protects digital circuitry

Selectable current termination resistors (250 Ω or 500 Ω at 0.01%)

Pull-down resistors (~ 22 M Ω) prevent floating inputs

Typical Applications

Industrial data acquisition systems

Scientific instrumentation and laboratory measurement

VMEbus embedded systems requiring multi-channel signal conditioning

Real-time monitoring with integrated self-test capability

Compatibility & Integration

VMEbus interface (6U Eurocard form factor)

Compatible with VMIVME-3125 product family

VMIVME3125000 Characteristics / Specifications

PARAMETER	VALUE
Model	VMIVME-3125
Instrument Type	Isolated scanning 12-bit analog to digital converter board
Card Form Factor	6U dual height Eurocard
Measurement Resolution	12 bits
Input Channels Voltage	32 single-ended or 16 differential
Input Channels Current	32 single-ended with termination options
Channel Scan Rate Aggregate	40 kSPS minimum
Programmable Gains	x1, x10, x100 plus or minus 0.3 percent
Ad Converter Ranges	plus or minus 5 V, plus or minus 10 V, 0 to +10 V jumper selectable
Voltage Input Span Family	plus or minus 50 mV to plus or minus 10 V bipolar or 0 to +100 mV to 0 to +10 V unipolar
Current Ranges Supported	0 to 20 mA, 4 to 20 mA, 5 to 25 mA
Input Impedance Voltage	10 MOhm minimum
Common Mode Voltage Maximum	plus or minus 11 V
Cmrr Gain X1	90 dB minimum DC to 60 Hz 350 Ohm unbalance
Cmrr Gain X	90 dB
Input To Vme Isolation	1000 VDC
Input Noise Gain X1	300 uVp-p 10 to 1000 Hz at 3 sigma
Input Noise Gain X	1.0 mVp-p
Input Filter Cutoffs	-3 dB at 50 kHz or 40 Hz plus or minus 20 percent
Overvoltage Protection Power On	plus or minus 40 V sustained
Voltage Accuracy Term	plus or minus 0.04 percent reading plus or minus 0.03 percent range plus or minus 2.0 mV
Current Accuracy Term	plus or minus 0.05 percent reading plus or minus 0.03 percent range plus or minus 2.44 uA
Temperature Drift Per C	plus or minus 30 ppm reading plus or minus 25 ppm range plus or minus 20 uV

PARAMETER	VALUE
Interchannel Crosstalk 50 Khz Filter	-73 dB maximum DC to 1 kHz
Bit Reference Voltages	0.000 V, +4.980 V, +0.4928 V, 9.91 mV
Power Plus 5 Vdc Maximum	2.5 A plus or minus 5 percent
Operating Temperature	0 to plus 65 C
Storage Temperature	-40 to plus 85 C
Relative Humidity	20 to 80 percent noncondensing
Altitude Operating	10000 ft (3048 m)
Mass Maximum	0.7 kg
Input Connector	37-pin subminiatureDfemale
Vme Space	A16 D16 D08 EO occupies 128 bytes
Ordering Alias Base	VMIVME-3125-000
Humidity	20 to 80 percent noncondensing

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	40 to plus 85 C
Operating temperature	0 to plus 65 C
Operating Temperature	0 to plus 65 C
Humidity	20 to 80 percent noncondensing
Relative Humidity	20 to 80 percent noncondensing
Altitude Operating	10000 ft (3048 m)
Mass Maximum	0.7 kg
Input Connector	37-pin subminiatureDfemale
Vme Space	A16 D16 D08 EO occupies 128 bytes
Ordering Alias Base	VMIVME-3125-000 Notes From VMIC VMIVME-3125 Isolated Scanning 12-bit 32-Channel ADC brochure specifications at +25 C. Ordering fieldAselects 50 kHz filter, 40 Hz filter, or 250/500 Ohm current terminations.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Model	VMIVME-3125
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Voltage Input Span Family	plus or minus 50 mV to plus or minus 10 V bipolar or 0 to +100 mV to 0 to +10 V unipolar
Current Ranges Supported	0 to 20 mA, 4 to 20 mA, 5 to 25 mA
Input Impedance Voltage	10 MOhm minimum
Common Mode Voltage Maximum	plus or minus 11 V
Cmrr Gain X100	90 dB minimum DC to 60 Hz 350 Ohm unbalance
Cmrr Gain X10	90 dB
Cmrr Gain X1	72 dB
Input To Vme Isolation	1000 VDC
Input Noise Gain X100	300 uVp-p 10 to 1000 Hz at 3 sigma
Input Noise Gain X10	1.0 mVp-p
Input Noise Gain X1	4.0 mVp-p
Input Filter Cutoffs	-3 dB at 50 kHz or 40 Hz plus or minus 20 percent
Overvoltage Protection Power On	plus or minus 40 V sustained
Voltage Accuracy Term	plus or minus 0.04 percent reading plus or minus 0.03 percent range plus or minus 2.0 mV
Current Accuracy Term	plus or minus 0.05 percent reading plus or minus 0.03 percent range plus or minus 2.44 uA

PARAMETER	VALUE
Temperature Drift Per C	plus or minus 30 ppm reading plus or minus 25 ppm range plus or minus 20 uV
Interchannel Crosstalk 50 Khz Filter	-73 dB maximum DC to 1 kHz
Bit Reference Voltages	0.000 V, +4.980 V, +0.4928 V, 9.91 mV
Power Plus 5 Vdc Maximum	2.5 A plus or minus 5 percent
Operating Temperature	0 to plus 65 C
Storage Temperature	-40 to plus 85 C
Relative Humidity	20 to 80 percent noncondensing
Altitude Operating	10000 ft (3048 m)
Mass Maximum	0.7 kg
Input Connector	37-pin subminiatureDfemale
Vme Space	A16 D16 D08 E0 occupies 128 bytes

Ordering Alias Base: VMIVME-3125-000

Notes

From VMIC VMIVME-3125 Isolated Scanning 12-bit 32-Channel ADC brochure specifications at +25 C. Ordering fieldAselects 50 kHz filter, 40 Hz filter, or 250/500 Ohm current terminations.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.