

# VME-AD16

## 16 Analog Inputs

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- General purpose analog input board
- 16 analog differential inputs, 0...+10 V, 0(4)...20 mA or  $\pm 10$  V
- 12 bits resolution
- Each channel separately adjustable

### Optoisolation

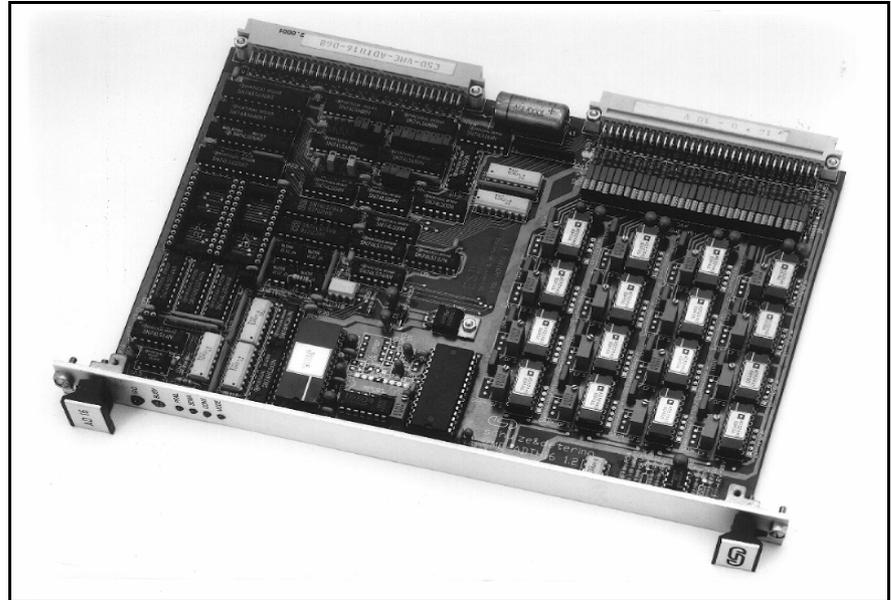
- Safety of operation by electrical isolation between VMEbus and process environment

### LED Display

- Easy diagnosis by display of 'Power-Fail' and other actual states on the front panel

### Wiring via P2

- Proper wiring of analog inputs to the backplane via P2



### Input Circuit

The VME-AD16 contains 16 differential input channels, each equipped with an integrated instrumentation amplifier (AD524) with selectable gain. The gain can also have a customer specific value (to be specified when ordering). A low-pass filter at every input provides for sufficient noise suppression (3 dB cut-off frequency is 16 Hz with standard component parts, others upon request). The amplified signals are fed to the 12 bits A/D converter via a 16 x 1 multiplexer.

Each input is available as 0...+10 V input or 0(4)...20 mA input. Both kinds of input may be on the same board.  $\pm 10$  V inputs for all 16 channels are available in a special version of the VME-AD16. Additionally, 8 TTL outputs (e.g. for strobes) are on the board.

All control and data lines between VMEbus section and process section are optoisolated.

### LED Display

Easy diagnosis of the actual conditions of the VME-AD16 is possible by means of LED displays on the front panel for: Board select, convert, semaphore bit and monitoring of internal (+5 V) and external power supplies ( $\pm 15$  V) (PFAIL).

### Software Support

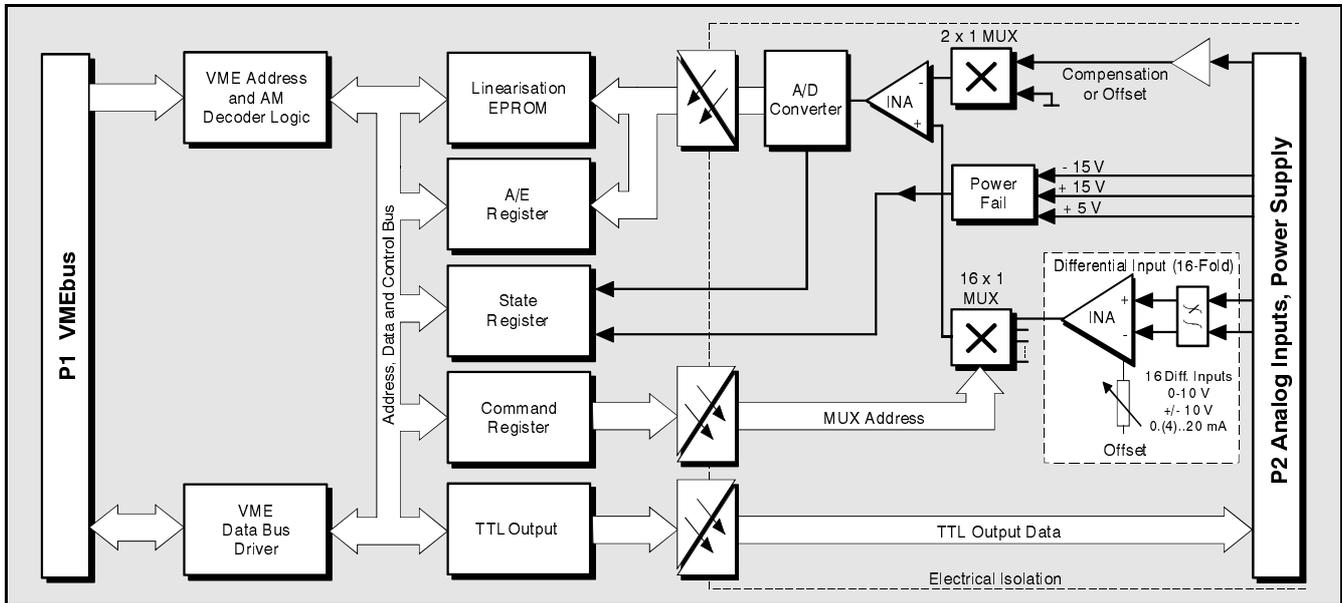
The operation manual contains detailed programming applications for the setting of a channel and for the starting of a conversion.

Control of the VME-AD16 via VMEbus is easily done with simple commands, so that no driver is necessary. Nevertheless drivers for all popular operating systems are available.

(This product is in life cycle stage end-of-life.)

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## 16 Analog Inputs



### Technical Specifications:

#### Process section:

Inputs:	16 differential analog inputs with 16 Hz low-pass filters
Resolution:	12 bits
Accuracy:	0.05 %
Gain:	1, 10, 100, 1000 and customer specific
Sample rate:	max. 10 kHz
Input signals:	1. selectable for each input separately: 0...+10 V 0(4)...20 mA or 2. for all 16 inputs: -10...+10 V
Outputs:	8 TTL outputs from an optocoupler TLP 521
LED array:	BUSY (board select), PFAIL (+15 V, -15 V, +5 V), CONV (convert), SEMA (semaphore)
Electrical isolation:	by optocouplers

#### VMEbus section:

Base address:	selectable by jumpers, the board covers 256 bytes
Address modifier (AM):	full AM decoding additionally with don't care mode for 'supervisory'/'nonprivileged' mode
VMEbus revision compatibility:	IEEE 1014 rev. C.1
Data transfer options:	SADO24, SD16

#### General:

Ambient temp:	0...70 °C
Humidity:	max. 90%, non-condensing
Connector types:	P1: DIN 41612-C96 P2: DIN 41612-C64
Board size:	160 mm x 233 mm

#### General (continued):

VME dimensions:	6U height, 1 slot width
Weight:	400 g
Power consumption:	1 A at 5 VDC
External power consumption for analog section:	+15 V / 200 mA -15 V / 100 mA

#### Order information:

Designation		Order no.
VME-AD16-1	16 analog inputs 0...+10 V	V.1701.02
VME-AD16-2	16 analog inputs 0...20 mA	V.1701.04
VME-AD16-3	16 analog inputs 0...+10 V and 0...20 mA (mixed, customer-specified)	V.1701.08
VME-AD16-4	16 analog inputs -10...+10 V	V.1701.10
VME-AD16-ADAPT1	Adapter module with screw terminal blocks, connection to P2	V.1701.06
VME-AD16-ADAPT2	Adapter module with clamp terminal blocks, connection to P2	V.1701.07
VME-AD16-P2VCC	15 V connection for P2	V.1701.90
VME-ADTH-PT100	Adapters for 16 x Pt100 thermo elements	V.1703.06
VME-DVPS30/15	Dual voltage power supply, 30VA, linear, ±15V	V.1910.15
VME-AD16-OS9	C driver for OS-9 as source code	P.1701.50
VME-AD16-VxW	C driver for VxWorks as source code	P.1701.56