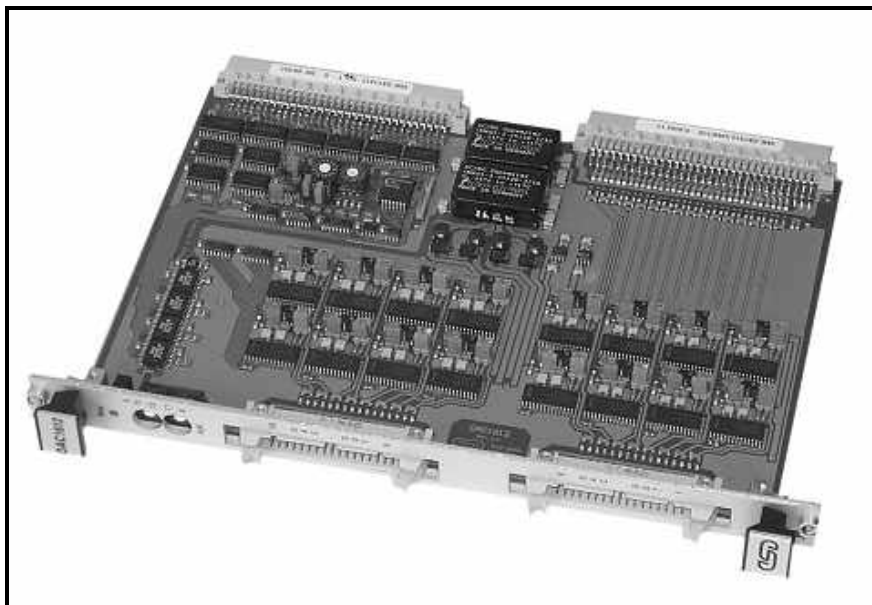# VME-DAC1612
16 Analog Outputs

esd gmbh

Up To 16 D/A Converters
- *General purpose analog output board*
- *12 bits resolution, 5 μs settling time*
- *Multiple output voltage ranges possible, optionally current outputs for 8 channels*
- *Buffered outputs, short-circuit-proof*

Industrial Standard
- *Safety of operation by electrical isolation between VMEbus and process environment*
- *Proper wiring of analog outputs and analog parts power supply to the backplane via P2 and at the front panel*

Output Circuit

The VME-DAC1612 is an interface board designed for the generation of up to 16 analog signals for process control purposes.

Output voltages can be selected to 0...+5 V, 0...+10 V, ±5 V or ±10 V.
The selection is done by setting the corresponding jumpers on the board. Gain and offset can be adjusted by potentiometers. The VME-DAC1612 is delivered with adjustment for bipolar voltages.

Adapter Board

Conversion of the output voltage (0...+10 V) into an output current (0...20 mA or 4...20 mA) is possible with option VME-DAC812-20mA for 4 or 8 channels.

Electrical Isolation

Fast magnetic coupling barriers IL715 and DC/DC-converters perform the electrical isolation between VMEbus and analog process section.

Wiring

The P2 connector links both the external power supply inputs of the analog section and the process signals to the system.
For the connection of the signals from P2 with ribbon cable to an industrial mounted module (according to DIN EN 50022) with terminal blocks, the option DAC1612-ADAPT1 or DAC1612-ADAPT2 are recommended.
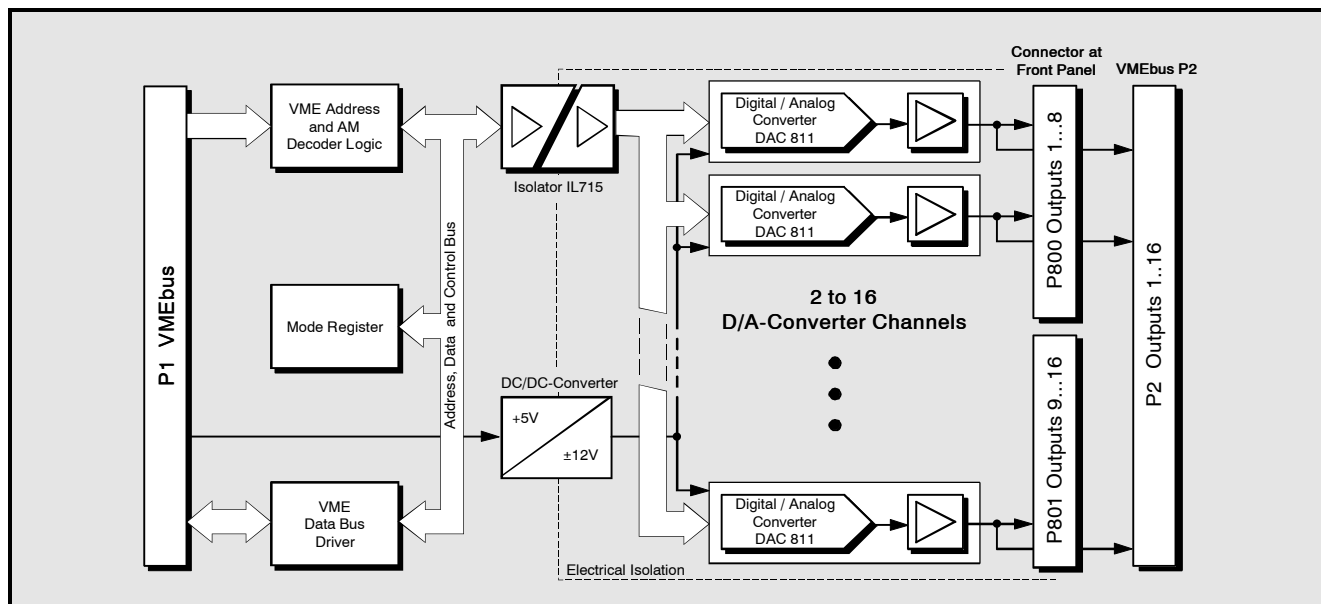*The analog outputs are also accessible via two 34-pin post connectors in the front panel.*

Software Support

Control of the VME-DAC1612 via VMEbus is easily done with simple commands, so that no driver is necessary. Nevertheless, drivers for all popular operating systems are available.

VME-DAC1612
16 Analog Outputs

Technical Specifications:

Process section:

Outputs:	unipolar:	0...+5 V or 0...+10 V
	bipolar:	-5...+5 V or -10...+10 V
	output current:	0...20 mA or 4...20 mA
	(with option DAC812-20mA, 8 channels)	
Number of channels:	4, 8 or 16 channels	
Resolution:	12 bits	
Settling time:	5 µs (VME data in to output, typ. 20 °C)	
LED array:	BUSY (board select)	
Electrical isolation:	by digital isolators IL715 and DC/DC-converters	

VMEbus section:

Base address:	selectable by jumpers over the whole address range of 16 Mbyte. 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 temperature:	0...70 ˚C
Humidity:	max. 90%, non-condensing
Connector types:	P1, P2: DIN 41612-C96 P800, P801: 34-pin post connector
Board size:	160 mm x 233 mm
VME dimensions:	6U height, 1 slot width
Weight:	400 g
Power consumption:	typ. 1.6 A at 5 VDC

Order information:

Designation		Order no.
VME-DAC1612-x	x channels unipolar/bipoar 0...+10 V, -10...+10 V (x = 04, 08, 16)	V.1706.x
VME-DAC1612-ADAPT1	Adapter module with screw terminal blocks, connection to P2	V.1706.09
VME-DAC1612-ADAPT2	Adapter module with clamp terminal blocks, connection to P2	V.1706.10
VME-DAC812-20mA-x	Adapter for conversion to 0(4)...20 mA (x = 4, 8)	V.1706.2x
VME-DAC1612-OS9	C driver for OS-9 as source code	P.1706.50
VME-DAC1612-VxW	C driver for VxWorks as source code	P.1706.56