

VME-DPIO32

32 Digital I/Os

32 I/Os

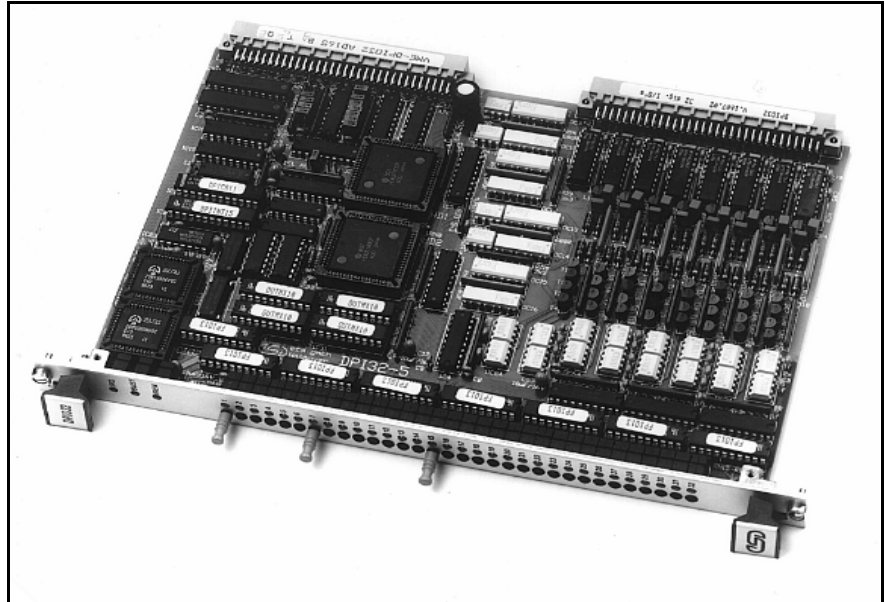
- 32 digital process inputs with interrupt
- 32 outputs 6...28 V/0.3 A, sustained short-circuit-proof, error detection

PWM

- all 32 outputs programmable for pulse-width modulation (PWM) or gating control

Counter

- up to 20 inputs programmable as counters



Optoisolated Process I/Os

VME-DPIO32 contains 32 optoisolated digital process I/O channels. It includes all necessary components on a VMEbus 6U board and needs one slot.

Wide Voltage Ranges

The 32 digital I/O channels are programmable in 8 groups of 4 channels as inputs or outputs. The 8 groups are electrically isolated from each other. The input channels accept an input voltage range of 5 VDC to 30 VDC. Each input channel can generate an interrupt on the VMEbus and that is programmable to rising or to falling edge. The inputs are overvoltage protected between -3 VDC and +35 VDC.

The digital output channels accept an operating voltage range of 6 VDC to 24 VDC with a rated current of 0.3 A.

Output Protection and Error Signals

The components LMD18400 are used as output drivers. The protection circuit of the driver is activated by short-circuit, over temperature and overvoltage. An error signal will be generated by the drivers on the following conditions: no load, shortcircuit to GND, to VCC, overvoltage or over temperature of the driver module.

PWM

In addition to the bit programmable operating mode of the outputs, it is possible to use the single output channels via the pulse processor components HD63143 for pulse-width modulation (PWM).

A total of 2 x 24 programmable 16 bit registers for switching period and resolution are available. The minimum pulse width amounts to 10 μ s. The outputs can be synchronized.

Counter Inputs

Up to 20 digital inputs may be used as counter inputs, four of which are connected in parallel to CIO8536 and to HD64143. The maximum counter frequency for these four inputs is 3 MHz (CIO 8536). Depending on the operating mode, the counters of the HD63143 can process frequencies of up to 100 kHz or up to 1 MHz. For the counter inputs different operating modes are possible: Event counter, pulse-width measurement, frequency measurement, free running with interrupt, incremental encoder inputs etc.

Display and Simulation

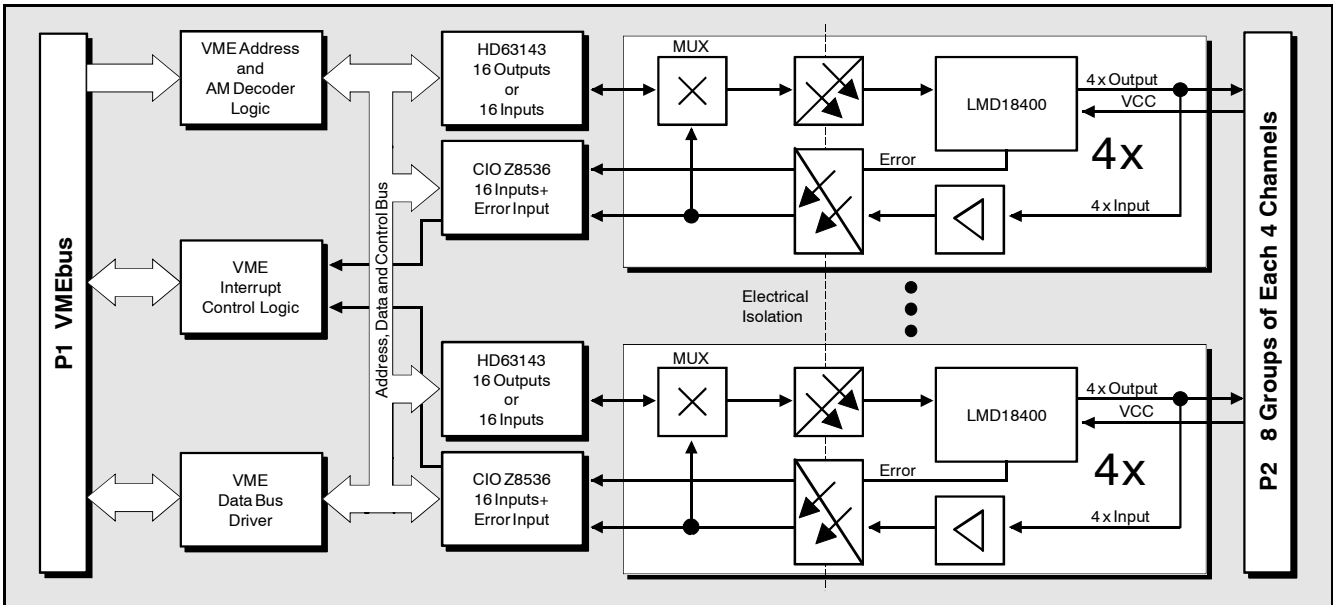
The actual I/O status and error status of each I/O channel is displayed by a two-coloured LED on the front panel of the VME-DPIO32. Additionally, there are test sockets for each channel located on the front panel for stimulation of the input channels or for disable of the output driver error signal.

Software Support

Driver software for the VME-DPIO32 is available for all popular operating systems.

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Technical Specifications:

Process section:

Interrupt inputs:	up to 32 channels 5...30 V, programmable edge, overvoltage protected
Outputs:	up to 32 channels 6...28 V, 0.3 A (24 V, 50 °C) sustained short-circuit-proof, error detection with interrupt
PWM:	all 32 output channels, three-phase current operation possible, period and resolution programmable
Counter:	max. 16 input channels at P2 connector, 20 controller inputs (4 inputs in parallel to CIO and HD63143), max. counter frequency 3 MHz (4 CIO counters)
Electrical isolation:	with optocouplers, according to VDE 0110b §8, isolation class C: 250 VAC / 300 VDC

VMEbus section:

Base address:	selectable by jumpers over the whole address range of 16 Mbytes. The board covers 4 kbytes.
Address Modifier (AM):	full AM decoding additionally with don't care mode for 'supervisory'/'nonprivileged' mode.
VMEbus revision compatibility:	IEEE 1014 rev. D
Data transfer options:	SADO24, SD16

General:

Ambient temperature:	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
VME dimensions:	6U height, 1 slot width

Order information:

Designation	Order no.
VME-DPIO32 32 digital I/Os, PWM, counter, timer	V.1607.02
VME-DIOC- ADAPT1 Adapter module P2 - terminal blocks	V.1923.01
VME-DIOC- ADAPT2 Adapter module P2 - terminal blocks	V.1923.02
VME-DPI32- P2VCC 24 V connection for P2	V.1607.90
VME-DPI32- OS9 C driver for OS-9 as a source code	P.1607.50
VME-DPI32- VxW C driver for VxWorks as a source code	P.1607.56