



# VME-DPIO32

## 32 Digital I/Os

- 32 digital process inputs with interrupt  
32 outputs 6...28 V/0.3 A, sustained short-circuit-proof, error detection  
All 32 outputs programmable for pulse-width modulation (PWM) or gating control
- Up to 20 inputs programmable as counters

## Opto-isolated Process I/Os

VME-DPIO32 contains 32 opto-isolated digital process I/O channels including all necessary components on a VMEbus 6U board and needing one slot.

## Wide Voltage Ranges

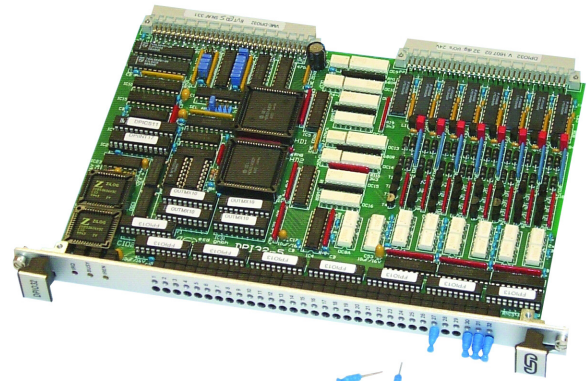
The 32 digital I/O channels are programmable in 8 groups of 4 as inputs or outputs. The groups are electrically isolated from each other. The input channels accept an input voltage range of 5 VDC to 30 VDC with each channel generating an interrupt on the VMEbus programmable to rising or to falling edge and 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 output drivers are the components LMD18400. Activated by short-circuit, over-temperature and over-voltage, the protection circuit of the driver sends an error signal upon the following conditions: no load, short-circuit to GND, to VCC, over-voltage 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). 2 x 24 programmable 16-bit registers for switching period and resolution are available. The minimum pulse width amounts to 10: s. The outputs can be synchronized.



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For further information please visit  
<http://www.esd-electronics-usa.com/VME.html>

## Counter Inputs

You can use up to 20 digital inputs as counter inputs; four connect 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-colored LED on the front panel of the VMEDPIO32. 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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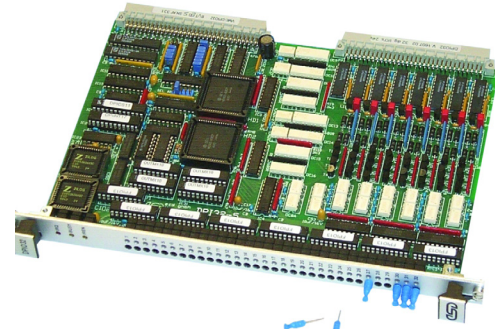
### Technical Specifications

#### 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 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'/'non-privileged' mode.
VMEbus revision compatibility	IEEE 1014 rev. D
Data transfer options	S- AD024, SD16



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#### General

Ambient temperature	0...70o 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



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