VME-DPIO32/63140
32 Digital I/Os
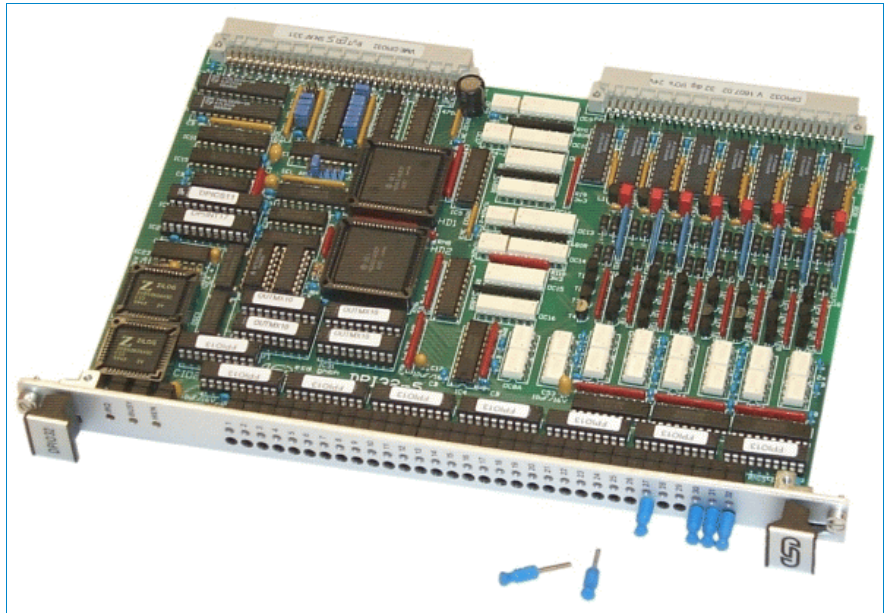

Process IOs with wide Voltage Range
- *32 digital inputs with interrupt, 5 ... 30 VDC*
- *32 digital outputs 6 ... 28 VDC/0.3 A*
- *Counter: 4 inputs programmable as counters*

Electrical Isolation and Circuit Protection
- *all I/Os electrically isolated*
- *outputs are sustained short-circuit-proof and support error detection with interrupt*
- *inputs are overvoltage protected between -3 VDC and +35 VDC*

Pulse Processor HD63140
- *all 32 outputs programmable for pulse-width modulation (PWM) or gating control*

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 outputs are driven by Quad High Side Drivers LMD18400. 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, short circuit 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 HD63140 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 µs. The outputs can be synchronized.

Counter Inputs
Up to 4 digital inputs may be used as counter inputs at the CIO8536.
The maximum counter frequency for the inputs is 3 MHz.

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.
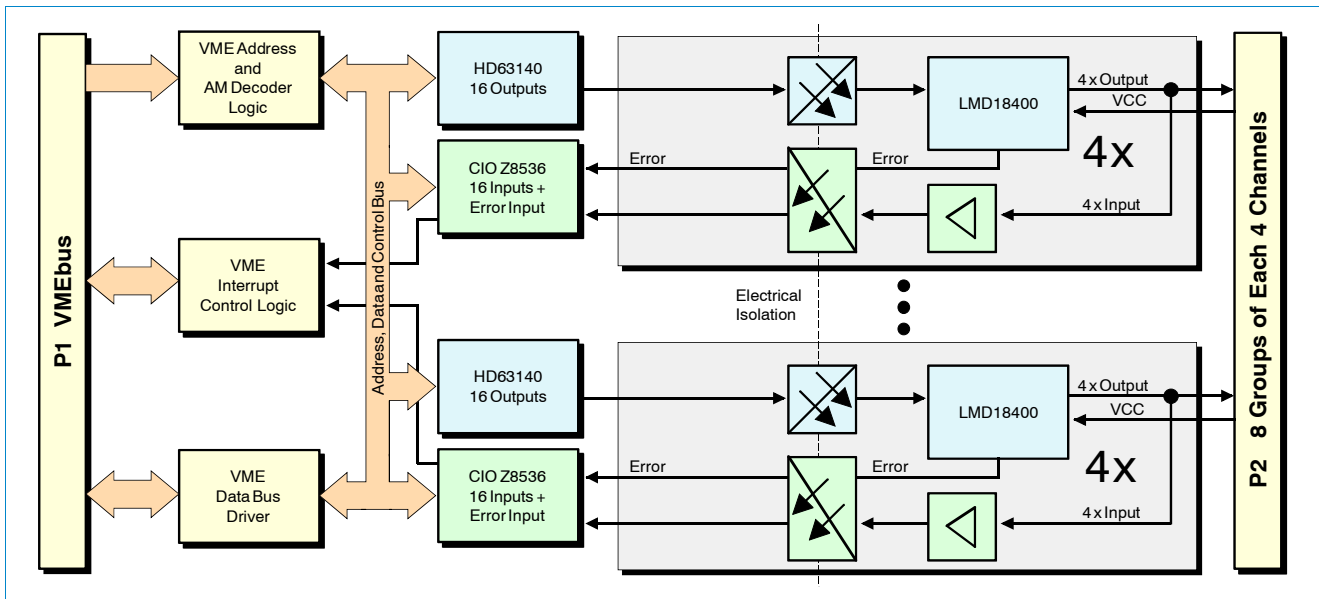
P2 Adapters support easy Wiring
The 64-pin adapter blocks VME-P2-ADAPT1 or VME-P2-ADAPT1 are connected via ribbon cable to the P2 connector of the VME-DPIO32/63140. They offer wiring with screw or clamp terminals for all P2 I/O signals.
To feed power supply for the 8 output groups separately (4 outputs are combined to one group) the power adapter VME-DPIO32-P2VCC is used.
If a separate wiring of the output groups is not necessary the adapter VME-DPIO32-P2VCC-3X feeds power to 3 VME-DPIO32/63160 installed in 3 VMEbus slots side-by-side is an economic solution.

VME-DPIO32/63140
32 Digital I/Os

Technical Specifications:

Process section:

Interrupt inputs:	up to 32 channels 5...30 V, programmable edge, over voltage 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. 4 counter inputs at CIO8536, max. counter frequency 3 MHz
Pollution degree:	2 (acc. to DIN EN 61131-2)
Over voltage category:	II (acc. to DIN EN 61131-2)
Electrical isolation:	functional isolation between I/O circuits and VMEbus, dimensioning of air and creepage distances: max. isolation working voltage U_e = 600 V AC/DC (acc. to. DIN EN 61131-2, pollution degree 2, over voltage category II) max. isolation voltage of optocouplers U_{rms} = 2500 V_{rms} for 1 minute

VMEbus section:

Base address:	selectable by jumpers over the whole address range of 16 Mbytes. The board covers 4 kbytes.
Address Modifier (AM) mode:	full AM decoding additionally with don't care mode for 'supervisory'/'non privileged'
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-DPIO32/63140	32 digital I/Os, PWM, 4x counter, timer	V.1607.04
VME-P2-ADAPT1	64-pole adapter block for P2 with screw terminal blocks, ribbon cable included	V.1923.01
VME-P2-ADAPT2	64-pole adapter block for P2 with clamp terminal blocks, ribbon cable included	V.1923.02
VME-DPIO32-P2VCC	output power connection to P2 via 6,3 mm flat-connectors, separately for the 8 output groups of one VME-DPIO32/63140	V.1607.90
VME-DPIO32-P2VCC-3X	combined output power connection to 3x P2 via 6,3 mm flat-connectors for all output groups of three VME-DPIO32/63140	V.1607.93
VME-DPI32-OS9	C driver for OS-9 as source code	P.1607.50
VME-DPI32-VxW	C driver for VxWorks as source code	P.1607.56