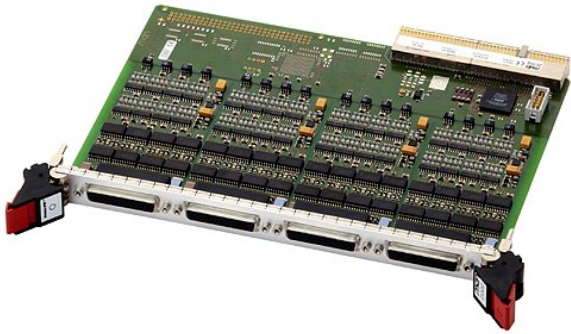


D302 - 6U CompactPCI® Card with 128 Binary I/Os



- 1-slot CompactPCI® peripheral board
- 4 optically isolated units
- 32 channels for each unit
- Individual use of each channel as input or output
- Individual edge-triggered interrupts
- Input/output load on ground
- High-side output switches
- Output current 1.9 A per channel or 16 A per unit
- Over-current and over-temperature protection

The D302 is an input/output CompactPCI® target board for 128 binary process signals. The I/Os are divided into four optically isolated units. The card is used for input/output of digital signals with different voltage levels and ground references. For each unit 32 channels are driven to the 44-pin D-Sub connector. Each channel can be either input or output.

The binary inputs/outputs can be universally used in

industrial systems. They are optically isolated from the system, which is essential for advanced automotive and industrial applications.

Technical Data

Binary I/Os

- 128 binary signals
 - 4 optically isolated units
 - 32 channels for each unit
- Individual use of each channel as input or output
- Individual edge-triggered interrupts
- Input/output load on ground
- High-side output switches
- High output current
 - Max. 1.9A per channel
 - Max. 16A per unit
- Over-current and over-temperature protection

Output Characteristics

- Output voltage range: 12V..32V
- Output current log. 0: max. 10mA
- Output current log. 1: max. 1.9A
- Switching time for output change: < 200µs
- Isolation voltage (optocoupler): 500V DC

Input Characteristics

- Input voltage min.: 0V
- Input voltage max. external supply voltage (12..32V)
- Voltage level log. 0: 0V..6V or open
- Voltage level log. 1: 12V..32V
- Input current log. 1: 2.03mA @ 24V
- Switching threshold: 9.2V @ 0.78mA typ.
- Switching time for input change: min. 33µs, max. 44µs
- Excess voltage protection: max. +47V

Peripheral Connections

- Via front panel on four shielded 44-pin HD-Sub receptacle connectors

CompactPCI® Bus

- CompactPCI® peripheral slot
 - PICMG Spec. 2.0 R3.0 compliant
 - 32-bit data bus
 - 33MHz
- V(I/O): +5V
- Concurrent primary and secondary bus operation

Electrical Specifications

- Isolation voltage
 - 500V DC between isolated side and digital side
 - 180V DC between the channels
 - Voltage between the connector shield and isolated ground is limited to 180V using a varistor; AC coupling between connector shield and isolated ground through 47nF capacitor
- Supply voltage/power consumption:
 - +5V (4.85V..5.25V), 106mA

- +3.3V (3.2V..3.5V), 27mA
- +24V (external supply voltage 12..32V), 78mA (total for all units)
- MTBF: 129,000h @ 50°C (derived from MIL-HDBK-217F)

Mechanical Specifications

- Dimensions: standard double Eurocard, 233.3mm x 160mm
- Weight: 324g

Environmental Specifications

- Temperature range (operation):
 - 0..+60°C or -40..+85°C
 - Airflow: min. 10m³/h
- Temperature range (storage): -40..+85°C
- Relative humidity range (operation): max. 95% without condensation
- Relative humidity range (storage): max. 95% without condensation
- Altitude: -300m to + 3,000m
- Shock: 15g/11ms
- Bump: 10g/16ms
- Vibration (sinusoidal): 2g/10..150Hz
- Conformal coating on request

Safety

- PCB manufactured with a flammability rating of 94V-0 by UL recognized manufacturers

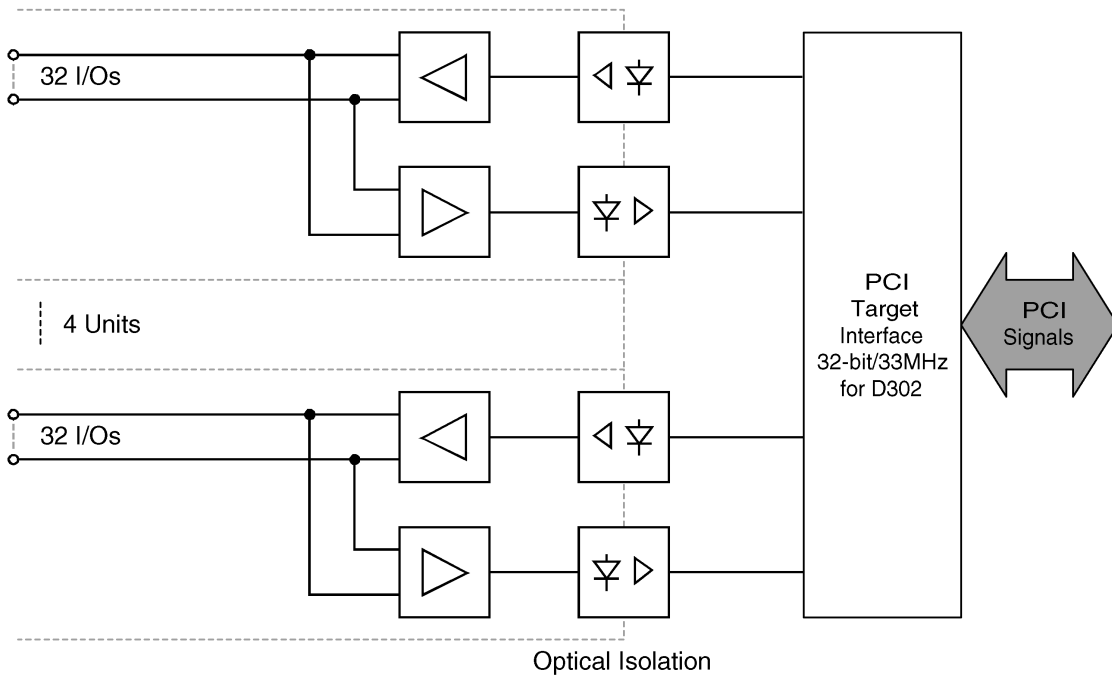
EMC

- Tested according to EN 55022 (radio disturbance), IEC1000-4-2 (ESD) and IEC1000-4-4 (burst)

Software Support

- MEN Driver Interface System (MDIS™ for Windows®, Linux, VxWorks®, QNX®, OS-9®)
- For more information on supported operating system versions and drivers see Software.

Diagram



Ordering Information

Standard Hardware

02D302-00 128-bit binary I/O controller, 0..+60°C

Miscellaneous

05M000-14 M-Module cable, 2.5m, with 44-pin HD-Sub plug/housing to pig tail

05M000-20 M-Module cable, 2m with 44-pin HD-Sub plug/housing to 44-pin HD-Sub plug/housing, (connecting 1:1)

05M000-25 M-Module cable, 2m, with 44-pin half-pitch D-Sub plug/housing to 50-pin D-Sub receptacle/housing, (connecting 1:1)

Software: OS independent

13M066-06 MDIS5 low-level driver sources (MEN) for M66, A302 and D302

Software: Windows

13M066-70 MDIS4/2004 / MDIS5 Windows driver (MEN) for M66, A302 and D302

Documentation

20APPN001 Application Note: Using MEN +5V CompactPCI Boards with +3.3V V(I/O)

20D302-00 D302 User Manual

For the most up-to-date ordering information and direct links to other data sheets and downloads, see the D302 online data sheet under » www.men.de.

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