Digital I/O board, optically isolated, 64 digital inputs and outputs, 24 V

**Features**
- CompactPCI 3.3 V or 5 V
- Inputs
  - 32 optically isolated digital inputs, 24 V, including 16 interruptible inputs and 3 counter inputs
  - Inputs organised in 4 groups of 8 channels, each group has its own ground line
  - Reverse voltage protection
  - All inputs are filtered
- Outputs
  - 32 optically isolated digital outputs, 11 V to 36 V
  - Output current per channel 500 mA
  - Watchdog for resetting the outputs to "0"
  - At Power-On, the outputs are reset to "0"
  - Total current for 8 outputs 1.85 A
  - Electronic fuse
  - Short-circuit current per output max. 1.7 A
  - Overtemperature and overvoltage protection
  - 24 V power outputs with protection diodes and filters
  - Output capacitors against electromagnetic emissions
  - Ext. 24 V voltage supply screened and filtered
  - Shutdown logic, when the external supply voltage drops below 5 V
- Safety features
  - Optical isolation 1000 V
  - Creeping distance IEC 61010-1
  - Protection against fast transients (burst), overvoltage, electrostatic discharge and high-frequency EMI
  - Interrupt started through counter, timer
  - Separate ground lines for inputs and outputs

**Applications**
- Industrial I/O control • PLC coupling
- Signal switching
- Interface to electromechanical relays
- Automatic test equipment
- ON/OFF monitoring of motors, lights...
- Watchdog • Machine interfacing
- ...

**Software drivers**
A CD-ROM with the following software and programming samples is supplied with the board.

**Standard drivers for:**
- Linux
- 32-bit drivers for Windows 8 / 7 / Vista / XP / 2000
- Signed 64-bit drivers for Windows 8 / 7 / XP
- Real-time use with Linux and Windows on request

**Drivers and samples for the following compilers and software packages:**
- C#, .NET, C

**On request:**
Further operating systems, compilers and samples.

Driver download: www.addi-data.com/downloads
Specifications

Digital inputs

Number of inputs: 32, 4 groups of channels with common ground:
Input: 0-7, 8-15, 16-23, 24-31
- 0-7: high side load to ground acc. to IEC 1131-2

Optical isolation: Through opto-couplers, 1000 V

Nominal voltage 24 V (CPCI-1564): Digital inputs Counter inputs
Input current at 24 V: 4 mA typ., 10,5 mA typ.
Logic input levels:
UL max.: 30 V
UL min.: 19 V
UL max.: 14 V
UL min.: 0 V

Digital outputs

Number of outputs: 32, optically isolated up to 1000 V
Output type: High side load to ground acc. to IEC 1131-2
Nominal voltage: 24 V (CPCI-1564); or 5 V (CPCI-1564-5V)
Supply voltage: 11 V to 36 V, min. 5 V (via front connector)
Max. current for 8 outputs: 1.85 A typ.
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Nominal voltage: 24 V (CPCI-1564); or 5 V (CPCI-1564-5V)

Current consumption: 395 mA ± 15 mA typ.
Operating voltage: +5 V, ± 5 %, 3.3 V from CompactPCI system

Dimensions: 160 x 100 mm

Environmental conditions

Dimensions: 160 x 100 mm
System bus: CompactPCI 32-bit
Space required: 1 CompactPCI slot 3U (only at 3HE)
Operating voltage: +5 V, ± 5 %, ± 3.3 V from CompactPCI system
Current consumption: 295 mA ± 15 mA typ.

Environment: /°C (input driver)

Fault connector: 37-pin D-Sub male connector for 32 dig. outputs
37-pin D-Sub male connector for 32 dig. inputs (only 3HE)
Additional connector: 37-pin D-Sub male connector on separate bracket for 32 digital inputs (only 3HE)

Temperature range: -40 °C to +85 °C (with forced cooling)

Simplified block diagram

Pin assignment – 37-pin D-Sub male connector

Example 1:
- Connection of the inputs (ribbon cable)
- Connection of the outputs through screw terminal panel PX901-DG or PX9000

Example 2:
- Connection of the outputs through relay output board PX8500-G cascaded in 32 relays

Ordering information

CPCI-1564
Digital I/O board, 64 digital I/O, optically isolated, 24 V. Incl. technical description, software drivers

Accessories

URS-1564-6U: 6U bracket for mounting in 6U housing
PX901-D: Screw terminal panel
PX901-DG: Screw terminal panel for DIN rail
PX9000: 3-row screw terminal panel
PX8500-G: Relay output board for DIN rail, cascadable
ST010: Standard round cable, shielded, twisted pairs, 2 m
ST011: Standard round cable, shielded, twisted pairs, 5 m
ST010-S: Same as ST010, for high currents (24 V supply separate)
ST022: Standard round cable between PX8500 and PX901, shielded, 2 m
ST8500: Ribbon cable for cascading two PX8500

* Preliminary product information

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