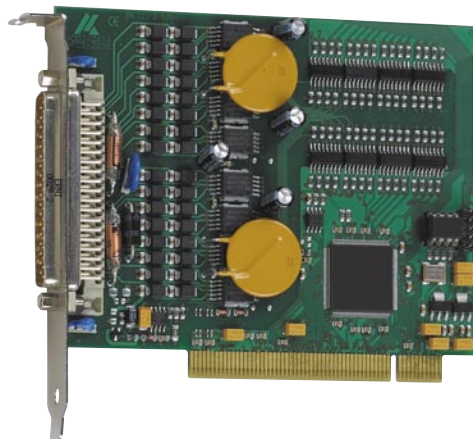


Digital output board, optically isolated, 32 digital outputs, 24 V



PCI 32-bit



Signed 64-bit drivers
for Windows 7/Vista/XP



LabVIEW™



LabWindows/CVI™



Features

- 32 digital outputs, 24 V, optically isolated
- Output current per channel: 500 mA
- Voltage range: 10 V to 36 V
- Diagnostic report, through status register at short-circuits, overtemperature, voltage drop or watchdog
- Programmable watchdog for resetting the outputs to "0", function release through software
- Interrupt triggered through error
- At Power-On the outputs are reset to „0“

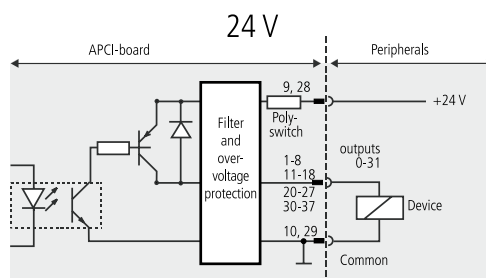
Safety features

- Optical isolation 1000 V
- Creeping distance IEC 61010-1
- Protection against fast transients (burst), overvoltage, electrostatic discharge and high-frequency EMI
- Maximum output current for 32 outputs 6 A typ. (2 x 3 A)
- 24 V power outputs with protection diodes and filters
- Self-resetting fuse (electronic fuse)
- Short-circuit current per output 1.5 A typ.
- Output capacitors against electromagnetic emissions
- Fast demagnetisation in case of inductive loads
- External 24 V voltage supply screened and filtered

Applications

- Signal switching
- Interface to electromechanical relays
- Automatic test equipment
- ON/OFF monitoring of motors, lights...
- Watchdog timer • Machine interfacing

Connection principle of the outputs at 24 V



APCI-2032

32 digital outputs, 24 V,
500 mA/channel

Optical isolation 1000 V

Output filters, short-circuit protection

Watchdog

The outputs are reset to "0"
at Power-On

Software drivers

Standard drivers for:

- Linux
- 32-bit drivers for Windows 11 / 10 / 8 / 7 / Vista / XP / 2000
- Signed 64-bit drivers for Windows 11 / 10 / 8 / 7 / XP
- Real-time use with Linux and Windows on request

Drivers and samples for the following compilers and software packages:

- .NET
- Microsoft VC++ • Borland C++
- Visual Basic • Delphi
- LabVIEW • LabWindows/CVI • DIAdem

ADDIPACK functions:

Digital output • Watchdog

On request:

Further operating systems, compilers and samples.

Driver download: www.addi-data.com/drivers

Specifications

Digital outputs

Outputs:	32
Output type:	High-side (load to ground) acc. to IEC 1131-2
Optical isolation:	through opto-couplers, 1000 V from PC to peripheral
Nominal voltage:	24 V
Supply voltage:	10 V to 36 V
Max. current for 32 outputs:	6 A typ. (2x3 A)
Output current:	500 mA max./channel
Short-circuit current/output shutdown at 24 V, $R_{load} < 0.1 \Omega$:	1.5 A
RDS ON resistance:	0.4 Ω max.
Switch-on time:	$I_{out}=0.5 A$, load = resistance: 94 μs typ.
Switch-off time:	$I_{out}=0.5 A$, load = resistance: 8 μs typ.
Overttemperature (shutdown):	170 °C (output driver)
Temperature hysteresis:	20 °C (output driver)

Safety

Shut-down logic (V_{CC} diagnostic):	If the ext. 24 V voltage drops below 5 V, then the outputs are switched off.
CC-Diagnostics:	Pin 19: status bit or interrupt to the PC
Watchdog:	8-bit, programmable, 20 ms up to 5 s in steps of 20 ms

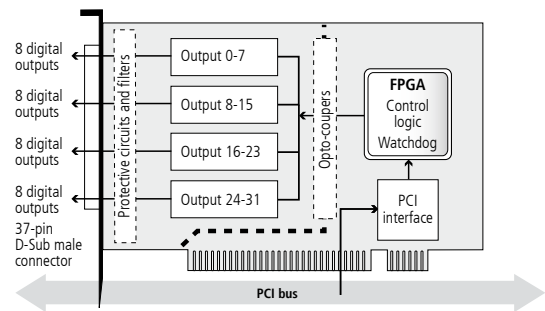
EMC – Electromagnetic compatibility

The product complies with the European EMC directive. The tests were carried out by a certified EMC laboratory in accordance with the norm from the EN 61326 series (IEC 61326). The limit values as set out by the European EMC directive for an industrial environment are complied with. The respective EMC test report is available on request.

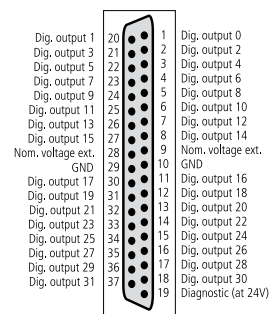
Physical and environmental conditions

Dimensions:	131 x 99 mm
System bus:	PCI 32-bit 5 V acc. to specification 2.1 (PCISIG)
Space required:	1 PCI slot
Operating voltage:	+5 V, $\pm 5\%$ from the PC
Current consumption:	230 mA $\pm 10\%$ typ.
Front connector:	37-pin D-Sub male connector
Temperature range:	0 to 60 °C (with forced cooling)

Simplified block diagram



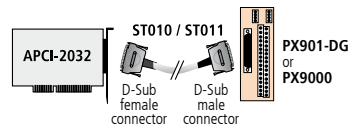
Pin assignment – 37-pin D-Sub male connector



ADDI-DATA connection

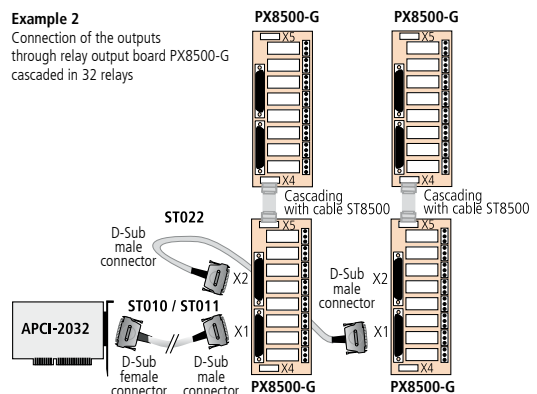
Example 1

Connection of the outputs through screw terminal panels



Example 2

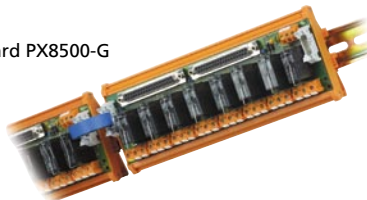
Connection of the outputs through relay output board PX8500-G cascaded in 32 relays



Screw terminal panel PX901-DG with cable ST010



Relay output board PX8500-G



APCI-2032

APCI-2032: Digital output board, optically isolated, 32 digital outputs, 24 V. Incl. technical description and software drivers

PX901-D: Screw terminal panel, LED status display

PX901-DG: Same as PX901-D, for DIN rail

PX9000: 3-row screw terminal panel for DIN rail, LED status display

PX8500-G: Relay output board for DIN rail, cascable

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: Round cable between two PX8500-G, shielded, 2 m
ST8500: Ribbon cable for cascading two PX8500-G

Ordering information