

# ACL-7122/PET-48DIO

## Opto-22 Compatible 144/48 DIO Cards

### Features

- High-density 144-CH digital inputs/outputs (ACL-7122.)
  - 48-CH digital inputs/outputs with a timer (PET-48DIO)
  - TTL/DTL compatible digital I/O channels
  - Direct interface with OPTO-22 compatible I/O modules
  - Emulates industry standard 8255 PPI (mode 0)
  - Buffered circuits for high driving capacity
  - Output status read back
  - Programmable interrupt handling
  - PC/AT bus with 11 IRQ levels
- **Operating Systems**
    - Windows 2000/NT/XP/9x
    - DOS
  - **Recommended Software**
    - VB/VC++/BCB/Delphi
    - Turbo C/Borland C
  - **Drivers Support**
    - ACLS-LVIEW
    - ACLS-DLL/DLL2
    - DOS library

### Introduction

The ACL-7122/ PET-48DIO is a 144/48-CH high-density parallel digital I/O board for ISA bus. This board provides 6/2 sets of 24-CH I/O interface. Every 24-CH interface emulates mode 0 of the industry standard 8255 Programmable Peripheral Interface (PPI) chips, each offers three 8-bit ports: PA, PB, and PC. PC is subdivided into 2 nibble-wide (4-bit) ports. Each PPI channel has an individual connector with OPTO-22 pin assignment.

### Specifications

#### Digital I/O

- Number of channels
  - 144 inputs/outputs (ACL-7122)
  - 48 inputs/outputs (PET-48DIO)
- Compatibility: 5 V/TTL
- Digital logic levels
  - Input high voltage: 2-5.25 V
  - Input low voltage: 0-0.8 V
  - Output high voltage: 2.4 V minimum
  - Output low voltage: 0.5 V maximum
- Output driving capacity
  - Source current
    - 2.6 mA (Port A and Port B of ACL-7122)
    - 15 mA (Port C of ACL-7122 and all ports of PET-48DIO)
  - Sink current: 24 mA
- Data transfer: programmed I/O, interrupt

#### Programmable Event Counter (PET-48DIO only)

- Number of channels: 1
- Resolution: 16 bits
- Compatibility: 5 V/TTL
- Trigger edge: rising or falling edge, programmable

#### Programmable Timer Pacer (PET-48DIO only)

- Number of channels: 1
- Resolution: 32 bits
- Compatibility: 5 V/TTL
- Base clock available: internal 32.768 kHz or 2 MHz

#### Interrupt Control

- Available IRQ levels (jumper selectable)

ACL-7122	3, 4, 5, 6, 7, 9, 10, 11, 12, 14, 15
PET-48DIO	3, 4, 5, 7, 9, 10, 11, 12, 15

- IRQ sources (programmable)

ACL-7122	DIO Port C0, C3, C4
PET-48DIO	DIO Port C3, C7 or timer

#### General Specifications

- I/O connector
  - 50-pin ribbon male x 6 (ACL-7122)
  - 50-pin ribbon male x 2 (PET-48DIO)
- Operating temperature: 0 to 55 °C
- Storage temperature: -20 to 80 °C
- Relative humidity: 5 to 95%, noncondensing

- Power requirements

Device	+5 V
ACL-7122	1.40 A typical 1.80 A maximum
PET-48DIO	720 mA typical 860 mA maximum

- Dimensions (not including connectors)

- 183 mm x 119 mm (ACL-7122)
- 170 mm x 121 mm (PET-48DIO)

### Termination Boards

#### ■ DIN-50P

Termination Board with a 50-pin Ribbon Connector and DIN-Rail Mounting (Including One 1.5-meter ACL-10150 Cable)

#### ■ DIN-24R/12

Termination Board with 24-CH Relay Outputs @ 12V Coil Voltage and DIN-Rail Mounting (Including One 1.5-meter ACL-10150 Cable)

#### ■ DIN-24R/24

Termination Board with 24-CH Relay Outputs @ 24V Coil Voltage and DIN-Rail Mounting (Including One 1.5-meter ACL-10150 Cable)

#### ■ DIN-24P/24

Termination Board with 24-CH Isolated Digital Inputs and DIN-Rail Mounting (Including One 1.5-meter ACL-10150 Cable)

#### ■ DIN-24G

Termination Board with 24-CH Grayhill I/O Modules and DIN-Rail Mounting

#### ■ TB-24P/24

Termination Board with 24-CH Isolated Digital Inputs (Including One 1.5-meter ACL-10150 Cable)

#### ■ TB-16P8R

Termination Board with 16-CH Isolated DI & 8-CH Relay Outputs (Including One 1.5-meter ACL-10150 Cable)

#### ■ TB-24R/12

Termination Board with 24-CH Relay Outputs @ 12V Coil Voltage (Including One 1.5-meter ACL-10150 Cable)

#### ■ TB-24R/24

Termination Board with 24-CH Relay Outputs @ 24V Coil Voltage (Including One 1.5-meter ACL-10150 Cable)

#### ■ TB-24

General-Purpose Termination Board with Two 37-pin D-sub Connectors and Two 50-pin Ribbon Connectors (Including One 1.5-meter ACL-10150 Cable)



### Pin Assignment

PnC7	1	2	+12Vout/GND (User Selection)*
PnC6	*3	*4	+12Vout/GND (User Selection)*
PnC5	5	6	GND
PnC4	7	8	GND
PnC3	9	10	GND
PnC2	11	12	GND
PnC1	13	14	GND
PnC0	15	16	GND
PnB7	17	18	GND
PnB6	19	20	GND
PnB5	21	22	GND
PnB4	23	24	GND
PnB3	25	26	GND
PnB2	27	28	GND
PnB1	29	30	GND
PnB0	31	32	GND
PnA7	33	34	GND
PnA6	35	36	GND
PnA5	37	38	GND
PnA4	39	40	GND
PnA3	41	42	GND
PnA2	43	44	GND
PnA1	45	46	GND
PnA0	47	48	GND
+5Vout	49	50	GND

Note: Only GND available in the ACL-7122

### Ordering Information

- **ACL-7122**  
Opto-22 Compatible 144-CH DIO Card
- **PET-48DIO**  
Opto-22 Compatible 48-CH DIO & Timer/Counter Card