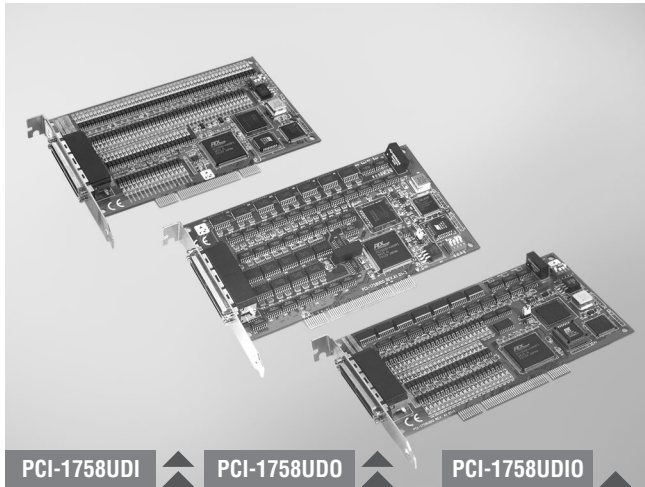


# PCI-1758UDI PCI-1758UDO PCI-1758UDIO

128-ch Isolated Digital Input Universal PCI Card

128-ch Isolated Digital Output Universal PCI Card

128-ch Isolated Digital I/O Universal PCI Card



PCI-1758UDI    PCI-1758UDO    PCI-1758UDIO

FCC CE RoHS

## Features

### PCI-1758UDO and PCI-1758UDIO

- 128 isolated digital output channels (64 channels for PCI-1758UDIO)
- High-voltage isolation on output channels (2,500 V<sub>DC</sub>)
- Wide output range (5 ~ 40 V<sub>DC</sub>)
- High-sink current for isolated output channels (90 mA max./channel)
- Current protection for each port
- BoardID™ switch
- Output status read-back
- Digital output value retained after hot system reset
- Programmable Power-up States
- Watchdog timer

### PCI-1758UDI and PCI-1758UDIO

- 128 isolated digital input channels (64 channels for PCI-1758UDIO)
- Wide input range (5 ~ 25 V<sub>DC</sub>)
- High ESD protection (2,000 V<sub>DC</sub>)
- Digital Filter function
- BoardID™ switch
- Interrupt handling capability for each channel

## Specifications

### Isolated Digital Input

- Channels** PCI-1758UDI: 128  
PCI-1758UDIO: 64
- Input Voltage** Logic 0: 2.5 V max.  
Logic 1: 5 V min. (25 V max.)
- Interrupt Capable Ch.** PCI-1758UDI: 128  
PCI-1758UDIO: 64
- Isolation Protection** 2,500 V<sub>DC</sub>
- Opto-Isolator Response** 20 μs
- Input Resistance** 3 kΩ

### Isolated Digital Output

- Channels** PCI-1758UDO: 128  
PCI-1758UDIO: 64
- Output Type** Sink (NPN)
- Isolation Protection** 2,500 V<sub>DC</sub>
- Output Voltage** 5 ~ 40 V<sub>DC</sub>
- Sink Current** 90 mA max./channel
- Opto-isolator Response** 20 μs

### General

- Bus Type** Universal PCI V2.2
- I/O Connectors** 1 x mini-SCSI HDRA-E100 female connector
- Dimensions (L x H)** 175 x 100 mm (6.9" x 3.9")
- Power Consumption**

|                | PCI-1758UDI | PCI-1758UDO | PCI-1758UDIO |
|----------------|-------------|-------------|--------------|
| <b>Typical</b> | 5 V @ 0.3 A | 5 V @ 1.1 A | 5 V @ 1.2 A  |
| <b>Max.</b>    | 5 V @ 0.6 A | 5 V @ 2.2 A | 5 V @ 1.8 A  |

- Operating Temperature** 0 ~ 60°C (32 ~ 140°F) (IEC 68-2-1, 2)
- Storage Temperature** -20 ~ 70°C (-4 ~ 158°F)
- Storage Humidity** 5 ~ 95% non-condensing

## Ordering Information

- PCI-1758UDI** 128-ch Isolated DI Universal PCI Card
- PCI-1758UDO** 128-ch Isolated DO Universal PCI Card
- PCI-1758UDIO** 128-ch Isolated Digital I/O Universal PCI Card

### Accessories

- PCL-101100S-1E** 100-pin Mini-SCSI Cable, 1 m
- PCL-101100S-2E** 100-pin Mini-SCSI Cable, 2 m
- ADAM-39100** 100-pin DIN-rail SCSI Wiring Board

## Feature Details

### Interrupt Function (PCI-1758UDI/PCI-1758UDIO)

PCI-1758UDI and PCI-1758UDIO provide an interrupt function for every digital input channel. You can disable/enable the interrupt functions, and select trigger type by setting the Rising Edge Interrupt Registers or Falling Edge Interrupt Registers of the card. When the interrupt request signals occur, software will service these interrupt requests by ISR. The multiple interrupt sources provide the card with more flexibility.

### Digital Filter Function (PCI-1758UDI/PCI-1758UDIO)

The digital filter function is used to eliminate glitches on input data and reduce the number of changes to examine and process. The filter blocks pulses that are shorter than the specified timing interval and passes pulses that are twice as long as the specified interval. Intermediate-length pulses that are longer than half of the interval, but less than the interval, may or may not pass the filter.

## Pin Assignments

| CNB      |     |    |          | CNA      |    |     |          |
|----------|-----|----|----------|----------|----|-----|----------|
| PEF_COMM | 100 | 50 | PAB_COMM | NC       | 1  | 51  | NC       |
| PEF_COMM | 99  | 49 | PAB_COMM | NC       | 2  | 52  | NC       |
| PF_IDI07 | 98  | 48 | PB_IDI07 | NC       | 3  | 53  | NC       |
| PF_IDI06 | 97  | 47 | PB_IDI06 | NC       | 4  | 54  | NC       |
| PF_IDI05 | 96  | 46 | PB_IDI05 | NC       | 5  | 55  | NC       |
| PF_IDI04 | 95  | 45 | PB_IDI04 | NC       | 6  | 56  | NC       |
| PF_IDI03 | 94  | 44 | PB_IDI03 | P0_IDI00 | 7  | 57  | P4_IDI00 |
| PF_IDI02 | 93  | 43 | PB_IDI02 | P0_IDI01 | 8  | 58  | P4_IDI01 |
| PF_IDI01 | 92  | 42 | PB_IDI01 | P0_IDI02 | 9  | 59  | P4_IDI02 |
| PF_IDI00 | 91  | 41 | PB_IDI00 | P0_IDI03 | 10 | 60  | P4_IDI03 |
| PE_IDI07 | 90  | 40 | PA_IDI07 | P0_IDI04 | 11 | 61  | P4_IDI04 |
| PE_IDI06 | 89  | 39 | PA_IDI06 | P0_IDI05 | 12 | 62  | P4_IDI05 |
| PE_IDI05 | 88  | 38 | PA_IDI05 | P0_IDI06 | 13 | 63  | P4_IDI06 |
| PE_IDI04 | 87  | 37 | PA_IDI04 | P0_IDI07 | 14 | 64  | P4_IDI07 |
| PE_IDI03 | 86  | 36 | PA_IDI03 | P1_IDI00 | 15 | 65  | P5_IDI00 |
| PE_IDI02 | 85  | 35 | PA_IDI02 | P1_IDI01 | 16 | 66  | P5_IDI01 |
| PE_IDI01 | 84  | 34 | PA_IDI01 | P1_IDI02 | 17 | 67  | P5_IDI02 |
| PE_IDI00 | 83  | 33 | PA_IDI00 | P1_IDI03 | 18 | 68  | P5_IDI03 |
| NC       | 82  | 32 | NC       | P1_IDI04 | 19 | 69  | P5_IDI04 |
| NC       | 81  | 31 | NC       | P1_IDI05 | 20 | 70  | P5_IDI05 |
| NC       | 80  | 30 | NC       | P1_IDI06 | 21 | 71  | P5_IDI06 |
| NC       | 79  | 29 | NC       | P1_IDI07 | 22 | 72  | P5_IDI07 |
| NC       | 78  | 28 | NC       | P01_COMM | 23 | 73  | P45_COMM |
| NC       | 77  | 27 | NC       | P01_COMM | 24 | 74  | P45_COMM |
| NC       | 76  | 26 | NC       | NC       | 25 | 75  | NC       |
| NC       | 75  | 25 | NC       | NC       | 26 | 76  | NC       |
| PCD_COMM | 74  | 24 | P89_COMM | NC       | 27 | 77  | NC       |
| PCD_COMM | 73  | 23 | P89_COMM | NC       | 28 | 78  | NC       |
| PD_IDI07 | 72  | 22 | P9_IDI07 | NC       | 29 | 79  | NC       |
| PD_IDI06 | 71  | 21 | P9_IDI06 | NC       | 30 | 80  | NC       |
| PD_IDI05 | 70  | 20 | P9_IDI05 | NC       | 31 | 81  | NC       |
| PD_IDI04 | 69  | 19 | P9_IDI04 | NC       | 32 | 82  | NC       |
| PD_IDI03 | 68  | 18 | P9_IDI03 | P2_IDI00 | 33 | 83  | P6_IDI00 |
| PD_IDI02 | 67  | 17 | P9_IDI02 | P2_IDI01 | 34 | 84  | P6_IDI01 |
| PD_IDI01 | 66  | 16 | P9_IDI01 | P2_IDI02 | 35 | 85  | P6_IDI02 |
| PD_IDI00 | 65  | 15 | P9_IDI00 | P2_IDI03 | 36 | 86  | P6_IDI03 |
| PC_IDI07 | 64  | 14 | P8_IDI07 | P2_IDI04 | 37 | 87  | P6_IDI04 |
| PC_IDI06 | 63  | 13 | P8_IDI06 | P2_IDI05 | 38 | 88  | P6_IDI05 |
| PC_IDI05 | 62  | 12 | P8_IDI05 | P2_IDI06 | 39 | 89  | P6_IDI06 |
| PC_IDI04 | 61  | 11 | P8_IDI04 | P2_IDI07 | 40 | 90  | P6_IDI07 |
| PC_IDI03 | 60  | 10 | P8_IDI03 | P3_IDI00 | 41 | 91  | P7_IDI00 |
| PC_IDI02 | 59  | 9  | P8_IDI02 | P3_IDI01 | 42 | 92  | P7_IDI01 |
| PC_IDI01 | 58  | 8  | P8_IDI01 | P3_IDI02 | 43 | 93  | P7_IDI02 |
| PC_IDI00 | 57  | 7  | P8_IDI00 | P3_IDI03 | 44 | 94  | P7_IDI03 |
| NC       | 56  | 6  | NC       | P3_IDI04 | 45 | 95  | P7_IDI04 |
| NC       | 55  | 5  | NC       | P3_IDI05 | 46 | 96  | P7_IDI05 |
| NC       | 54  | 4  | NC       | P3_IDI06 | 47 | 97  | P7_IDI06 |
| NC       | 53  | 3  | NC       | P3_IDI07 | 48 | 98  | P7_IDI07 |
| NC       | 52  | 2  | NC       | P23_COMM | 49 | 99  | P67_COMM |
| NC       | 51  | 1  | NC       | P23_COMM | 50 | 100 | P67_COMM |



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