ACL-7130

16-CH Isolated DI &16-CH Isolated DO Card

Features

- 16-CH isolated digital inputs and 16-CH isolated digital outputs
- 16-CH TTL digital inputs and 16-CH TTL digital outputs
- Non-polarity digital input range (isolated digital inputs)
- 2500 VRMS optical isolation
- Sink current up to 500 mA on each isolated output
- One 8254 chip on board which provide a set of cascaded timers and one independent counter
- Two external interrupt sources
- Compact, half-size PCB
- Register structure compatible with PCL-730

Operating Systems
- Windows 2000/NT/XP/9x
- DOS

Recommended Software
- VB/VC++/BCB/Delphi
- Turbo C/Borland C

Drivers Support
- ACLS-LVIEW
- ACLS-DLL1
- DOS library

Introduction

ADLINK ACL-7130 is an isolated digital I/O card. The card provides 16 isolated digital inputs and 16 isolated digital outputs. The isolated channels are suitable for applications in the industry environment. There are another 16 TTL digital inputs and outputs. The TTL inputs and outputs bring flexible functionalities in the ACL-7130. The device also features dual interrupt lines. One is generated by the external digital signals and the other is generated from the 8254 timer, which can be used in watchdog and trigger signal monitoring applications. In addition to the digital I/O functions, the ACL-7130 device provides one general-purpose 16-bit counter.

Specifications

Isolated Digital Input
- Number of channels: 16
- Input voltage range
  - 0-24 V, non-polarity
    - Logic high: 3-24 V
    - Logic low: 0-1 V
- Input resistance: 1.2 kΩ @ 1 W
- Isolation voltage: 2500 VRMS
- Data transfers: programmed I/O

Isolated Digital Output
- Number of channels: 16
- Output type: open collector Darlington transistor
- Sink current
  - Max. 500 mA for only one Darlington pair
  - 347 mA for all Darlington pair @ 10% duty
- Power dissipation: Max. 1.47 W per chip (8 DO channels)
- Output voltage: 5 to 40 V
- Isolation voltage: 5000 VRMS
- Data transfers: programmed I/O

Non-isolated Digital I/O
- Number of channels
  - 16 inputs
  - 16 outputs
- Compatibility: 5 V/TTL
- Digital logic levels
  - Input high voltage: 2.0-5.0 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
  - Sink current: 24 mA
- Data transfers: programmed I/O

General-Purpose Timer/Counter
- Number of channels: 2
- Resolution
  - 32 bits
  - 16 bits
- Compatibility: 5 V/TTL
- Base clock available
  - 2 MHz for both timer/counter
  - External clock to 10 MHz for 16-bit counter only

General Specifications
- I/O connector
  - 37-pin D-sub female
  - 20-pin ribbon male x2
- Operating temperature: 0 to 60 ˚C
- Storage temperature: -20 to 80 ˚C
- Relative humidity: 5 to 95%, noncondensing
- Power requirements

Device	+5 V
ACL-7130	360 mA typical

- Dimensions (not including connectors)
  163 mm x 123 mm

Termination Boards

- **DIN-37D**
  Termination Board with a 37-pin D-sub Connector and DIN-Rail Mounting (Including One 1-meter ACL-10137 Cable)
- **ACLD-9188**
  General-Purpose Termination Board with Two 20-pin Ribbon Connectors and One 37-pin D-sub Connector (Including Two 1-meter ACL-10120 Cables)
- **ACLD-9137**
  General-Purpose Termination Board with a 37-pin D-sub Male Connector

Pin Assignment

CN3

IDI_0	1	20	IDI_1
IDI_2	2	21	IDI_3
IDI_4	3	22	IDI_5
IDI_6	4	23	IDI_7
IDI_8	5	24	IDI_9
IDI_10	6	25	IDI_11
IDI_12	7	26	IDI_13
IDI_14	8	27	IDI_15
EIGND	9	28	EOGND
EOGND	10	29	EOGND
IDO_0	11	30	IDO_1
IDO_2	12	31	IDO_3
IDO_4	13	32	IDO_5
IDO_6	14	33	IDO_7
IDO_8	15	34	IDO_9
IDO_10	16	35	IDO_11
IDO_12	17	36	IDO_13
IDO_14	18	37	IDO_15
VDD	19		

CN1

DO0	1	2	DO1
DO2	3	4	DO3
DO4	5	6	DO5
DO6	7	8	DO7
DO8	9	10	DO9
DO10	11	12	DO11
DO12	13	14	DO13
DO14	15	16	DO15
GND	17	18	GND
+5Vout	19	20	+12Vout

CN2

DI0	1	2	DI1
DI2	3	4	DI3
DI4	5	6	DI5
DI6	7	8	DI7
DI8	9	10	DI9
DI10	11	12	DI11
DI12	13	14	DI13
DI14	15	16	DI15
GND	17	18	GND
+5Vout	19	20	+12Vout

JP5

1	CLK0
2	GATE0
3	OUT0
4	GATE1
5	OUT1/Pacer
6	GND

Ordering Information

- **ACL-7130**
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