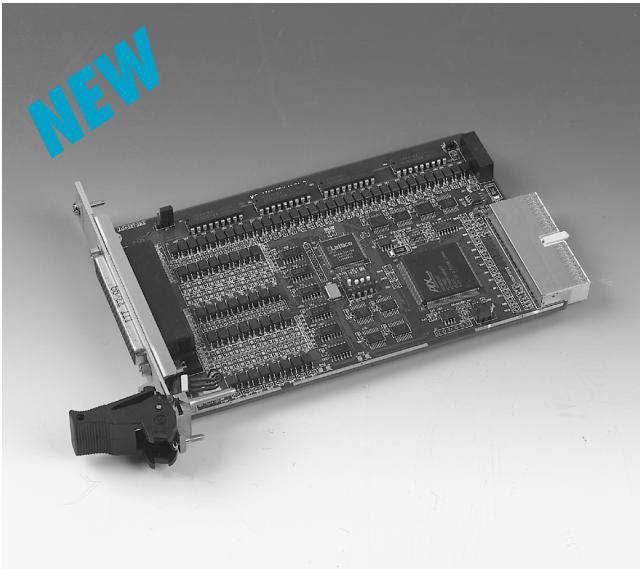


MIC-3756

64-channel Isolated Digital I/O Card



Features

- 32 isolated digital output channels
- 32 isolated digital input channels
- Either +/- voltage input for DI by group
- High-voltage isolation on I/O channels (2,500 V_{DC})
- Wide input range (10 ~ 50 V_{DC})
- Wide output range (5 ~ 40 V_{DC})
- High-sink current on isolated output channels (200 mA max./channel)
- High over-voltage protection (70 V_{DC}) for input channels
- Board ID
- Output status read-back for output channels
- Keeps digital output values after hot system reset
- Channel-Freeze function for output channels
- Interrupt handling capability
- Provides convenient wiring terminal module with LED indicators for DIN-rail mounting
- High-density 100-pin SCSI connector

Introduction

The MIC-3756 card offers 32 isolated digital input channels as well as 32 isolated digital output channels with isolation protection up to 2,500 V_{DC}, which makes it ideal for industrial applications where high-voltage isolation is required. In addition, all output channels are able to keep their last values after a hot system reset. Furthermore, the MIC-3756 provides Channel-Freeze function that keeps the current output status unchanged for each channel during operation.

Robust Protection

The MIC-3756 features robust isolation protection for applications in industrial, lab and machinery automation. It can durably withstand voltage up to 2,500 V_{DC}, preventing your host system from any incidental harm. If connected to an external input source with surge-protection, the MIC-3756 can offer up to a maximum of 2,000 V_{DC} ESD (Electrostatic Discharge) protection for input channels. If the input voltage rises up to 70 V_{DC}, the input channels of MIC-3756 can still manage to work properly for a short period of time.

Wide Input/Output Range

The MIC-3756 has a wide range of input voltage from 10 to 50 V_{DC}, and it is suitable for most industrial applications with 12 V_{DC}, 24 V_{DC} and 48 V_{DC} input voltage. It also features a wide output voltage range from 5 to 40 V_{DC}, suitable for most industrial applications with 12 V_{DC}/24 V_{DC} output voltage. In the mean time, we are also ready to serve your needs for specific input/output voltage range. Do not hesitate to ask us about tailoring our products to meet your specifications. All these qualities make the MIC-3756 the best choice for customers in industrial applications.

Board ID

The MIC-3756 has a built-in DIP switch that helps define each card's ID when multiple MIC-3756 cards have been installed on the same PC chassis. The board ID setting function is very useful when users build their system with multiple MIC-3756 cards. With correct Board ID settings, you can easily identify and access each card during hardware configuration and software programming.

Channel-Freeze Function

The MIC-3756 provides Channel-Freeze function, which can be enabled either in dry contact or wet contact mode (selected by the on-board jumper). When the Channel-Freeze function is enabled, the last status of each digital output channel will be safely kept for emergency use. Moreover, you can enable this function through software as it is useful in software simulation and testing program.

Reset Protection Fulfills Requirement for Industrial Applications

When the system has undergone a hot reset (i.e. without turning off the system power), the MIC-3756 can either retain the output values of each channel or return to its default configuration as open status, depending on its on-board jumper setting. This function protects the system from wrong operations during unexpected system resets.

Ordering Information

- MIC-3756/3:** 3U 64-channel isolated digital I/O card
- MIC-3756/6:** 6U 64-channel isolated digital I/O card
- PCL-10250:** 100-pin SCSI to two 50-pin SCSI cable, 1 and 2 m
- ADAM-3951:** Wiring terminal module with LED indicators for DIN-rail mounting

Applications

- Industrial ON/OFF control
- Switch status sensing
- BCD interfacing
- Digital I/O control
- Industrial and lab automation
- SMT/PCB machinery
- Semi-conductor machinery
- PC-based Industrial Machinery
- Testing & Measurement
- Laboratory & Education

Specifications

Isolated Digital Input

Number of Input Channel	32 (16-ch/group)	
Interrupt Inputs	2 (IDIO, IDI16)	
Optical Isolation	2500 V _{DC}	
Opto-isolator response time	25 μs	
Over-voltage Protect	70 V _{DC}	
ESD (ElectroStatic Discharge)	2,000 V _{DC}	
Input Voltage	VIH (max.)	50 V _{DC}
	VIH (min.)	10 V _{DC}
	VIL (max.)	3 V _{DC}
Input Current	10 V _{DC}	1.70 mA (typical)
	12 V _{DC}	2.10 mA (typical)
	24 V _{DC}	4.40 mA (typical)
	48 V _{DC}	9.00 mA (typical)
	50 V _{DC}	9.40 mA (typical)

Isolated Digital Output

Number of Output Channel	32
Optical Isolation	2500 V _{DC}
Opto-isolator response time	25 μs
Supply Voltage	5 ~ 40 V _{DC}
Sink Current	200 mA max/channel

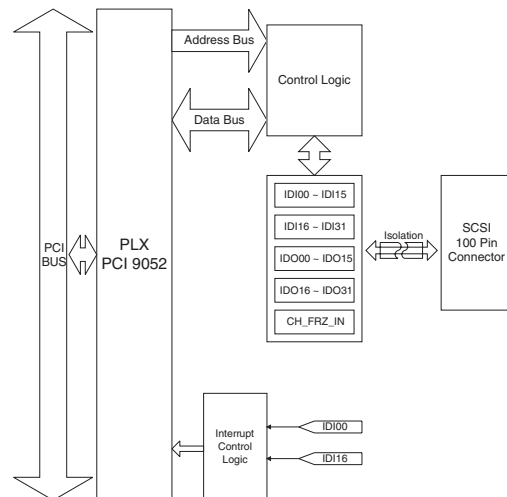
General

I/O Connector Type	100-pin SCSI-II female	
Dimensions	175 mm x 100 mm (6.9" x 3.9")	
Power Consumption	Typical	+3V @ 285 m
	Max.	+5 V @ 475 mA
Temperature	Operation	0° ~ +60° C (32° ~ 140° F) (refer to IEC 68-2-1,2)
	Storage	-20° ~ +70° C (-4° ~ 158° F)
Relative Humidity	5% ~ 95% RH non-condensing (refer to IEC 68-2-3)	

Pin Assignments

IDI00 ~ IDI15 : Isolated digital input of Group 0	IDI00 1 51	IDI01 51 51
IDI16 ~ IDI31 : Isolated digital input of Group 1	IDIE0 2 52	IDIE5 52 52
IDO00 ~ IDO15 : Isolated digital output of Group 0	IDI04 3 53	IDK05 53 53
IDO16 ~ IDO31 : Isolated digital output of Group 1	IDI06 4 54	IDK07 54 54
ECOM0 : External common input of Group 0	IDI08 5 55	IDK09 55 55
ECOM1 : External common input of Group 1	IDI10 6 56	IDI11 56 56
PCOM0 : External common output of Group 0	IDI12 7 57	IDI13 57 57
PCOM1 : External common output of Group 1	IDI14 8 58	IDI15 58 58
NC : No connection	ECOM0 9 59	ECOM0 60 60
IGND : Isolated ground	NC 11 61	NC 61 61
CH_FRZ_IN : Channel-Freeze input pin	NC 12 62	NC 62 62
CH_FRZ_COM : Common pin for Channel-Freeze input	IDI16 13 63	IDI17 63 63
	IDI18 14 64	IDI19 64 64
	IDI20 15 65	IDI21 65 65
	IDI22 16 66	IDI23 66 66
	IDI24 17 67	IDI25 67 67
	IDI26 18 68	IDI27 68 68
	IDI28 19 69	IDI29 69 69
	IDI30 20 70	IDI31 70 70
	ECOM1 21 71	PCOM1 71 71
	ECOM1 22 72	PCOM1 72 72
	NC 23 73	NC 73 73
	NC 24 74	NC 74 74
	NC 25 75	NC 75 75
	IDO00 26 76	IDO01 76 76
	IDO02 27 77	IDO03 77 77
	IDO04 28 78	IDO05 78 78
	IDO06 29 79	IDO07 79 79
	IDO08 30 80	IDO09 80 80
	IDO10 31 81	IDO11 81 81
	IDO12 32 82	IDO13 82 82
	IDO14 33 83	IDO15 83 83
	PCOM0 34 84	PCOM0 84 84
	PCOM0 35 85	PCOM0 85 85
	IGND 36 86	IGND 86 86
	IGND 37 87	IGND 87 87
	IDO16 38 88	IDO17 88 88
	IDO18 39 89	IDO19 89 89
	IDO20 40 90	IDO21 90 90
	IDO22 41 91	IDO23 91 91
	IDO24 42 92	IDO25 92 92
	IDO26 43 93	IDO27 93 93
	IDO28 44 94	IDO29 94 94
	IDO30 45 95	IDO31 95 95
	PCOM1 46 96	PCOM2 96 96
	PCOM1 47 97	PCOM2 97 97
	IGND 48 98	IGND 98 98
	IGND 49 99	IGND 99 99
	CH_FRZ_IN 50 100	CH_FRZ_COM 100 100

Block Diagram



- WebLink WebOT 1
- IPPC & AWS 2
- TPC 3
- FPM 4
- IPC 5
- UNO-2000 6
- ICOM 7
- DA&C 8
- cPCI 9
- ADAM-3000 10
- ADAM-4000 11
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