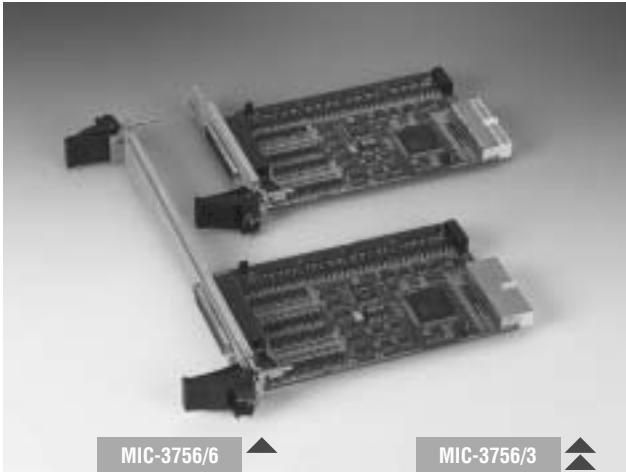


# MIC-3756

## 64-ch 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<sub>DC</sub>)
- Wide input range (10 ~ 50 V<sub>DC</sub>)
- Wide output range (5 ~ 40 V<sub>DC</sub>)
- High-sink current on isolated output channels (200 mA max./channel)
- High over-voltage protection (70 V<sub>DC</sub>) for input channels
- BoardID™ switch
- 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

### 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<sub>DC</sub>, 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 a channel-freeze function that keeps the current output status unchanged for each channel during operation.

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<sub>DC</sub>, 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<sub>DC</sub> ESD (Electrostatic Discharge) protection for input channels. Even if the input voltage rises up to 70 V<sub>DC</sub>, the input channels of MIC-3756 can still manage to work properly for a short period of time.

### Specifications

#### Isolated Digital Input

- **Channels** 32
- **Input Voltage** Logic 0: 2 V max.  
Logic 1: 10 V min. (50 V max.)
- **Interrupt Capable Ch.** 2 (DI00, DI16)
- **Isolation Protection** 2,500 V<sub>DC</sub>
- **Input Resistance** 1 kΩ (50 V), 4 kΩ (5 V)

#### Isolated Digital Output

- **Channels** 32
- **Output Type** Sink (NPN)
- **Isolation Protection** 2,500 V<sub>DC</sub>
- **Output Voltage** 5 ~ 40 V<sub>DC</sub>
- **Sink Current** 200 mA max./channel
- **Opto-Isolator Response** OFF delay (±20%) 5 μs  
ON delay (±20%) 120 μs
- **Photo-Couple Response Time**

| Input Voltage | *OFF delay (±20%) | *ON delay (±20%) |
|---------------|-------------------|------------------|
| 12 V          | 120 μs            | 10 μs            |
| 24 V          | 140 μs            | 5 μs             |
| 30 V          | 150 μs            | 4 μs             |
| 50 V          | 200 μs            | 4 μs             |

\*OFF delay means the photo-couple turn OFF delay time when DI input is removed

\*ON delay means the photo-couple turn ON delay time when DI input voltage is connected.

#### General

- **PICMG Compliance** CompactPCI V2.0, R 3.0  
Hot-Swap V2.1, R 2.0
- **Bus Type** CompactPCI
- **I/O Connectors** 1 x 78-pin D-type female connector
- **Dimensions** 160 x 100 mm (6.9" x 3.9") with 3U/6U Bracket
- **Power Consumption** Typical: 5 V @ 220 mA  
Max: 3.3 V @ 260 mA
- **Operating Temperature** 0 ~ 60° C (32 ~ 140° F) (refer to IEC 68-2-1, 2)
- **Operating Humidity** 5 ~ 95% RH, non-condensing (refer to IEC 68-2-3)
- **Storing Temperature** -20 ~ 70° C (-4 ~ 158° F)
- **Certifications** CE

### Ordering Information

- **MIC-3756/3** 3U 64-channel isolated digital I/O Card, user's manual and driver CD-ROM. (cable not included)
- **MIC-3756/6** 6U 64-channel isolated digital I/O Card, user's manual and driver CD-ROM. (cable not included)
- **PCL-10178-1** DB-78 cable assembly 1 m
- **ADAM-3978** DB-78 wiring terminal for DIN-rail mounting

|    |                       |
|----|-----------------------|
| 1  | Software              |
| 2  | IPPC                  |
| 3  | TPC                   |
| 4  | FPM                   |
| 5  | ATM & AWS             |
| 6  | DA&C                  |
| 7  | cPCI                  |
| 8  | ADAM-3000             |
| 9  | Motion Control        |
| 10 | ICOM                  |
| 11 | Industrial Networking |
| 12 | UNO                   |
| 13 | ADAM-6000             |
| 14 | ADAM-5000             |
| 15 | ADAM-6000             |
| 16 | ADAM-8000             |
| 17 | BAS                   |