# PCIE-1763AH PCIE-1763DH

16-ch Solid-State Relay Output(for AC) and 16-ch Isolated Digital Input w/ Digital Filter & Interrupt

16-ch Solid-State Relay Output(for DC) and 16-ch Isolated Digital Input w/ Digital Filter & Interrupt **PCIe Card** 



#### **Features**

- 16-ch solid-state relay (SSR) output with longer lifetime and higher operating speed compared to electro-mechanical relays
- Zero-crossing (synchronous) trigger for reduced inrush current and electrical
- 16-ch photoMOS relay output with longer lifetime and higher operating speed compared to electro-mechanical relays
- Much less contact problems such as arcs, bounce, and noise
- Suitable for both AC and DC applications with frequent ON/OFF switching
- LEDs for output state indication
- 16-ch isolated digital input (IDI) with both dry and wet contact configurations
- Interrupt capability for all pl channels
- Programmable duration noise filter for all IDI channels

## Introduction

The PCIE-1763AH provides 16 solid-state relay (SSR) outputs and 16 isolated digital input. The SSRs are classified to semiconductor relays which do not have moving contact and differ from the conventional electro-mechanical relays in many ways. They are superior to electro-mechanical relays in longer lifetime, higher operating speed, less contact problems such as arcs, bounce, and noise. In addition, the zero-crossing (synchronous) trigger effectively reduces inrush current and electrical noise during SSR turn-on. Therefore, they are most suitable for applications which need conducting high voltage (> 80 VAC) AC loads at 1 fr quent ON/OFF switching.

The PCIE-1763DH provides 16 photoMOS relay outputs and 16 isolated digital input The pch toMOS relays are classified to semiconductor relays which do not have moving contact and differ from the conventional electro-mechanical relays in many ways. They are supprior to electro-mechanical relays in longer lifetime, higher operating speed, less contact problems such as arcs, bounce, noise, and smaller size. Therefore, they are mist sitable for applications which need conducting AC or DC low voltage load (< 60 V) and frequent ON/OFF switching.

The isolated digital inputs accept both dry and wet contact configurations. All channels have interrupt capability and are equipped with programmable duration noise filter.

# **Specifications**

#### Solid-State Relay Output (PICE-1763AL)

Channels

Solid-size relay SPST (form A) Relay type

Load voltage 10 v max. (AC rms)

Load current 1.2 A<sub>RMS</sub> max.

 Peak load current 12 A (1 cycle @ 60 Hz)

On-state voltage drop 2.5 V max.

Off-state leakage current 100 μA max. 200 V/µs min.

Critical rate of rise of

off-state voltage

 Holding current 25 mA max. Zero crossing voltage 50 V max.

Turn-on time 100 µs max.

 $5000~V_{RMS}$ Isolation protection

#### Solid-State Relay Output (PCIE-1763DH)

Channels

Relay type PhotoMOS SPST (form A)

 Load voltage  $60 \; V_{\text{DC}} \; max.$  Load current 1.2 A max. Turn-on time 1.0 ms typ. Turn-off time 0.6 ms typ.

## Isolation protection **Isolated Digital Input**

Channels

Input voltage Logic 0: 3 V max. (0 V min.) Logic 1: 10 V min. (30 V max.)

1,500 V<sub>DC</sub> max.

 Input resistance  $2.7 \text{ k}\Omega$  Interrupt capability

Noise filter  $8 \mu s \sim 131 ms$  programmable for all channels

Opto-isolator response 50 us tvp./100 us max.

Isolation protection 2,500 V<sub>DC</sub> max.

#### General

Interface PCI Express x1

I/O Connector type 1 x DB62 female connector **Dimensions** 168 x 100 mm (6.6" x 3.9")

Typical: 3.3V @350mA, 12V @350mA Power consumption Max: 3.3V@ 370mA, 12V @ 1000mA

■ Operating temperature 0 ~ 60°C (32 ~ 140°F) Storage temperature -20 ~ 70°C (-4 ~ 158°F) 5 ~ 95% RH (non-condensing)

Storage humidity Certifications

## **Ordering Information**

■ PCIE-1763AH-AE 16-ch Solid-State relay (SSR) output and 16-ch

isolated digital input w/ digital filter & interrupt PCle

■ PCIE-1763DH-AE 16-ch Solid-State Relay Output(for DC) and 16-ch isolated digital input w/ digital filter & interrupt PCle

#### **Accessories**

PCL-10162-1E DB62 Shielded Cable, 1 m PCL-10162-3E DB62 Shielded Cable, 3 m ADAM-3962-AE DB62 DIN-rail Wiring Board