

USB-4761

8-ch Relay, 8-ch IDI USB Module

Packing List

Before installation, please make sure that you have received the following:

- USB-4761 Module with DIN-rail mounting kit
- Shielded USB 2.0 Cable (1.8 m)
- Companion DVD (DLL driver included)
- Startup Manual

If anything is missing or damaged, contact your distributor or sales representative immediately.

User Manual

For more detailed information on this product, please refer to the USB-4761 User Manual on the DVD (PDF format). CD:\Documents\Hardware Manuals\USB\USB-4761

Declaration of Conformity

FCC Class A

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause interference in which case the user is required to correct interference at his own expense.

CE

This product has passed the CE test for environmental specifications when shielded cables are used for external wiring. We recommend the use of shielded cables. This kind of cable is available from Advantech. Please contact your local supplier for ordering information.

Overview

The Advantech USB-4761 is a powerful data acquisition (DAS) module for the USB port. It features a unique circuit design and complete functions for data acquisition and control.

Notes

For more information on this and other Advantech products, please visit our websites at:

<http://www.advantech.com>

For technical support and service:

<http://www.advantech.com/support/>

This startup manual is for USB-4761.

Part No: 2003476112

3rd Edition

February 2016

Specifications

Isolated Digital Input

Number of Input Channels	8
Optical Isolation	2500 V _{DC}
Optical Isolator response time	50 us
Input Voltage	V _{IH} (max.) = 30 V _{DC} V _{IH} (min.) = 5 V _{DC} V _{IL} (max.) = 2 V _{DC}
Input Current	1.2 mA @ 5 V _{DC} 3.3 mA @ 12 V _{DC} 6.9 mA @ 24 V _{DC} 8.7 mA @ 30 V _{DC}

Relay Output

Channels	8
Rating (Resistive)	30 V _{DC} @ 1A 110 V _{AC} @ 0.3A 120 V _{AC} @ 0.5A 240 V _{AC} @ 0.25A
Max. Switching Power	62.5VA, 60W
Max. Switching Voltage	250 V _{AC} , 220V _{DC}
Max. Switching Current	5 A
Breakdown Voltage	1500V
Operation time	5 ms max
Release time	4 ms max
Life Expectancy	Mechanical 1x10 ⁸ operations (typical) Electrical 12V @ 10mA : 5X10 ⁷ operations (typical) 30V @ 200mA : 2X10 ⁵ operations (typical)

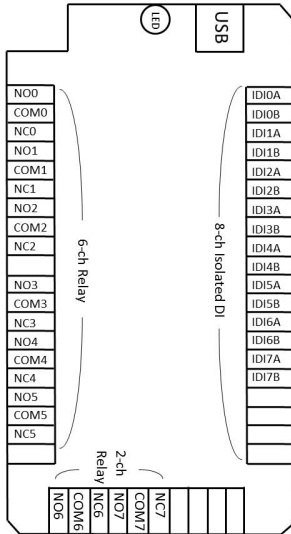
General Specifications

I/O Connector Type	10-pin screw terminal*5
Dimensions	132 x 80 x 32 mm (5.2" x 3.2" x 1.3")
Power Consumption	Typical : 5V @60 mA Max: 5V @400 mA
Temperature	Operating: 0 ~ +60°C (32 ~ 140°F) Storage: -20 ~ +70°C (-4 ~ 158°F)
Relative Humidity	5 ~ 95% RH non-condensing (refer to IEC 68-2-3)

Hardware Installation

1. Touch the metal part on the surface of your computer to neutralize the static electricity that might be in your body.
2. Plug your USB module into the selected USB port. Hold the module only by its edges. Plug the module firmly into place. Use of excessive force must be avoided; otherwise the module might get damaged.

Pin Assignments



Signal Name	Description
NO<0~7>	Normally open pin of relay output
COM<0~7>	Common pin of relay output
NC<0~7>	Normally close pin of relay output
IDInA <n=0~7>	Isolated digital input A
IDInB <n=0~7>	Isolated digital input B

LED Definitions

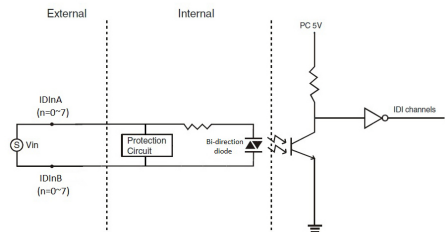
The USB Module is equipped with an LED indicator to show the current status of the device. When you plug the USB device into the USB port, the LED indicator will blink five times and then stay lit to indicate that it is on. Please refer to the following table for detailed LED indicator status information

LED Status	Description
ON	Device ready to work
OFF	Device not ready to work
Slow blinking (5 times)	Device initializing
Fast Blinking	Device working

Isolated Digital I/O Connections

Single-ended Channel Connections

USB-4761 has 8 isolated digital input channels. Each of isolated digital input channel accepts 5~30 V_{DC} voltage inputs, and accept bi-directional input. It means that you can apply positive or negative voltage to an isolated input pin (Vin). The figure below shows how to connect an external input source to one of the card's isolated input channels.



Relay Connections

After power on, the initial relay output status is shown as below:

