# USB-4620 **USB-4622**

## 5-port Full-speed Isolated USB 2.0 Hub

## 5-port High-speed USB 2.0 Hub



## **Features**

- 5 downstream USB 2.0 ports
- Compatible with USB 2.0 Full-speed
- 3,000 V<sub>DC</sub> voltage isolation for each downstream port
- Suitable for DIN-rail mounting
- One lockable USB cable included
- 10 ~ 30 V<sub>DC</sub> power input (power adapter not included\*)

## **Specifications**

#### Connectivity

- Ports
- Compatibility
- Transfer Speed
- Supply Current

#### General Housing

12 Mbps

- Dimensions (L x W x H) 132 x 80 x 32 mm (5.2" x 3.15" x 1.26")
- DC Input
- Power Consumption
- Operating Temperature 0 ~ 60°C (32 ~ 140°F)
- Storage Humidity

Isolation Protection

## **Ordering Information**

USB-4620-AE

#### Accessories

- PWR-242-AE
- **1960004544**
- 1960005788
- USB-LOCKCABLE-AE 1.8 M Lockable USB 2.0 Cable with Screw Kit

**DIN-rail Power Supply** 

Wallmount Bracket

VESA Mount Bracket



## **Features**

- 5 downstream USB 2.0 ports
- Compatible with USB 2.0 High-speed, USB 2.0 Full-speed, USB 1.0
- 480 Mbps high-speed data transfer
- LED indicator
- Suitable for DIN-rail mounting
- One lockable USB cable included
- 10 ~ 30 V<sub>DC</sub> power input (power adapter not included\*)

## **Specifications**

#### Connectivity

- Ports
- Compatibility
- Transfer Speed 480 Mbps/12 Mbps/1.5 Mbps 500 mA max. per channel
- Supply Current

#### General

- Housina
- Plastic (ABS+PC)

Upstream x 1 (Type B) Downstream x 5 (Type A)

USB 2.0 High-speed, USB 2.0 Full-speed, USB 1.0

- Dimensions (L x W x H) 132 x 80 x 32 mm (5.2" x 3.15" x 1.26")
- DC Input  $10 \sim 30 V_{DC}$
- 24 V @ 36 mA
- Operating Temperature 0 ~ 60°C (32 ~ 140°F) .
- Storage Temperature -20 ~ 70°C (-4 ~ 158°F)
- Storage Humidity 5~95% RH non-condensing

## **Ordering Information**

### Accessories

- PWR-242-AE **DIN-rail Power Supply** 1960004544 Wallmount Bracket 1960005788 VESA Mount Bracket
- USB-LOCKCABLE-AE
  - 1.8 M Lockable USB 2.0 Cable with Screw Kit

5-port High-speed USB 2.0 Hub

5-port Full-speed Isolated USB 2.0 Hub

- 5 ~ 95% RH non-condensing
- $10 \sim 30 V_{DC}$
- 24 V @ 36 mA
- Storage Temperature -20 ~ 70°C (-4 ~ 158°F)

## Plastic (ABS+PC)

### Protection

3.000 Vpc

500 mA max. per channel

Upstream x 1 (Type B) Downstream x 5 (Type A)

USB 2.0 Full-speed

- Power Consumption

USB-4622-BE

## **4-Port Isolated USB 3.0 SuperSpeed Hub**



### **Features**

- 2,500 V<sub>DC</sub> voltage isolation for upstream ports
- 4 x downstream USB 3.0 SuperSpeed ports
- Can be powered via a USB bus or  $10 \sim 30 V_{DC}$  external power source •
- ESD protection up to ±8 kV (Level 3)
- · Power status and downstream port speed LED indicators
- The world's first isolated USB 3.0 SuperSpeed Hub
- Transfer speed is up to 5 Gbps
- Lockable USB 3.0 cable is included

#### Connectivity

- Ports
- Compatibility
- Transfer Speed 5 Gbps shared by all downstream ports
- Load Current

#### General

- Housing
- Dimensions Power Input
- 132 x 80 x 32 mm  $10 \sim 30 V_{DC}$
- 760 mW (no load)
- Power Consumption • Operating Temperature 0 ~ 70 °C (32 ~ 158 °F) with External power
  - 0 ~ 60 °C (32 ~ 140 °F) with USB bus power

5 ~ 95% RH (non-condensing)

-20 ~ 70 °C (-4 ~ 158 °F)

External power: 900 mA max. per port

USB bus power: 700 mA max. shared by all ports<sup>(2)</sup>

- Storage Temperature
- Storage Humidity

#### Protection

- Isolation Protection
- ESD Protection

2.500 VDC Contact discharge: ±4 kV (Level 2) Air discharge: ±8 kV (Level 3)

## **Ordering Information**

#### USB-4630-AE 96PS-A40WDIN

4-port isolated USB 3.0 SuperSpeed hub DIN rail power supply, 40 W, 24 V

#### Note:

- (1) Because of the USB 3.0 isolation requirement, when USB-4630 is connected to a USB 2.0 host, downstream ports will not accept USB 3.0 devices. In addition, cascading multiple USB-4630s is not supported.
- (2) Refer to Figure 1. Derating Curve for the load current when using USB bus power.



Figure 1. Derating Curve for Load Current Using USB Bus Power

All product specifications are subject to change without notice.

#### 1 x Upstream (Type B) 4 x Downstream (Type A) USB 3.0 SuperSpeed<sup>(1)</sup>

Plastic (ABS + PC)

# **USB-4702 USB-4704**

## 10 kS/s, 12-bit, 8-ch Multifunction DAQ **USB Module**

48 kS/s, 14-bit, 8-ch Multifunction DAQ **USB Module** 



## **Features**

- Supports USB 2.0
- Portable .
- Bus-powered
- 8 analog input channels
- 12-bit (USB-4702), 14-bit (USB-4704) resolution AI
- Sampling rates up to 10 kS/s (USB-4702), 48 kS/s (USB-4704)
- 8-ch DI/8-ch DO. 2-ch AO and one 32-bit counter

## Introduction

USB-4702/4704 are low-cost USB data acquisition modules. You no longer need to open the chassis to install DAQ modules. Just plug in the module, then get the data. It's easy to use and efficient. Reliable and rugged enough for industrial applications, yet affordable for home projects, USB-4702/4704 are the perfect way to add measurement and control capability to any USB capable computer. It obtains all required power from the USB port, so no external power connection is ever required. With the features of USB-4702/4704, they are your most cost effective choice of lab or production line test & measurement tool.

## **Specifications**

#### Analog Input

											signa saipai	
<ul> <li>Channels 8 single-ended/4 differential (software programmable)</li> <li>Resolution USB-4702: Single-ended: 11 bits Differential: 12 bits</li> <li>SUB-4704: Single-ended: 13 bits Differential: 14 bits</li> </ul>				<ul> <li>Channels</li> <li>Compatibility</li> <li>Output Voltage</li> </ul>	8 TTL Logic 0: 0.4 V max.@ 4 mA (sink) Logic 1: 3.5 V min.@ 4 mA (source)							
<ul> <li>Max. Sam</li> </ul>	pling Ra	te	USB-4	1702: 1	) kS/s n	nan. 171 nax.	0113				Counter	
	1 3		USB-4	1704: 48	3 kS/s n	nax.					Channels	1
Note: The san For example, if channel.	npling rat 4 channe	te for e els of U	ach ch SB-470	annels 2 are us	will be ed, the	affecte samplir	ed by u ng rate	used ch is 10k/4	annel 1 = 2.5	number. kS/s per	<ul> <li>Resolution</li> <li>Compatibility</li> <li>Max Input Frequency</li> </ul>	32 bits 3.3 V/TTL 5 MHz
FIFO Size			512 sa	amples							- Max. Input Frequency	5 1011 12
<ul> <li>Overvoltage</li> </ul>	ge Prote	ction	30 Vp	-p							General	
<ul> <li>Input Impe</li> <li>Sampling</li> <li>Input Rang</li> </ul>	edance Modes ge (V, so	ftware	127 kg Softwa progra	Ω are, onb <b>ammat</b>	oard pr	ogramm <b>Absolu</b>	nable pa te Acc	acer, and <b>uracy</b>	d extern	al	<ul> <li>Bus Type</li> <li>I/O Connector</li> </ul>	USB 2.0 USB-4702: 1 x DB37 female connector
Single Endec	1	±10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Dimensions (L x W)	USB-4/U4: UNDOARD SCREW TERMINAI
Differential		N/A	±1	±1.25	±2	±2.5	±4	±5	±10	±20		USB-4704: 132 x 80 x 32 mm (5 2" x 3 15" x 1 26")
Absolute	USB- 4702	0.2	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	<ul> <li>Power Consumption</li> </ul>	Typical: 5 V @ 100 mA Max : 5 V @ 500 mA
(% of FSR)*	USB- 4704	0.15	0.1	0.1	0.1	0.1	0.1	0.1	0.15	0.15	<ul> <li>Operating Temperature</li> <li>Storage Temperature</li> </ul>	0 ~ 55°C (32 ~ 131°F) -20 ~ 70°C (-4 ~ 158°F)
*: ±1 LSB is ad	lded as the	e deriva	tive for	absolute	e accura	ю					<ul> <li>Storage Humidity</li> </ul>	5 ~ 95% RH non-condensing
Analog Out	tput										Ordening Inf	
<ul> <li>Channels</li> </ul>			2								Urdering into	prmation
<ul><li>Resolution</li><li>Output Rate</li></ul>		12 bit Static	s update							<ul><li>USB-4702-AE</li><li>USB-4704-AE</li></ul>	10 kS/s, 12-bit, 8-ch Multi. USB Module 48 kS/s, 14-bit, 8-ch Multi. USB Module	
<ul> <li>Output Ra</li> <li>Slew Rate</li> </ul>	nge		(v, soi 0.7 V/	iware p lus	rogrami	nable) (	J~D				Accessories	

- **Driving Capability**
- Output Impedance
- **Operation Mode**
- Accuracy

#### **Digital Input**

- Channels
- Compatibility
- . Input Voltage
- 3.3 V/5 V/TTL Logic 0: 0.8 V max. Logic 1: 2.0 V min.

5 mA

51 Ω

8

Single output

Relative: ±12 LSB

Differential non-linearity: ±5 LSB

#### **Digital Autout**

- PCL-10137-1E
- PCL-10137-2E
- PCL-10137-3E
- ADAM-3937-BE
- 1960004544
- 1960005788

DB37 Cable, 1m DB37 Cable, 2m DB37 Cable, 3m DB37 DIN-rail Wiring Board Wallmount Bracket VESA Mount Bracket

# USB-4711A

## 150 kS/s, 12-bit, 16-ch Multifunction **DAO USB Module**



### Features

- Supports USB 2.0
- Portable
- Bus-powered
- 16 analog input channels .
- 12-bit resolution Al
- Sampling rate up to 150 kS/s
- 8-ch DI/8-ch DO, 2-ch AO and one 32-bit counter
- Detachable screw terminal on modules
- Suitable for DIN-rail mounting .
- One lockable USB cable for secure connection included

## Introduction

The USB-4700 series consists of true plug & play data acquisition modules. You no longer need to open the chassis to install DAQ modules. Just plug in the module, then get the data. It's easy to use and efficient. Reliable and rugged enough for industrial applications, yet affordable for home projects, the USB-4700 series module is the perfect way to add measurement and control capability to any USB capable computer. The USB-4700 series is fully plug & play and with onboard terminal block for easy usage. It obtains all required power from the USB port, so no external power connection is ever required. USB-4711A is a multifunction module, with 16-ch Analog Input, 2-ch Analog Output, 16-ch Digital I/O and counter channel which is able to output a constant frequency square wave. With the features of USB-4700 series; USB-4711A is your most cost effective choice of lab or production line test & measurement tool.

## **Specifications**

#### **Analog Input**

- Channels 16 single-ended/8 differential (software programmable)
- 12 bits Resolution
- Max. Sampling Rate 150 kS/s max.

Note: The sampling rate for each channels will be affected by used channel number. Eg. if 4 channels are used, the sampling rate is 150k/4 = 37.5 kS/s per channel.

- FIFO Size
- Overvoltage Protection 30 Vp-p
- Input Impedance 1GΩ
- Sampling Modes Software, onboard programmable pacer, and external
- Input Range (V. software programmable) & Absolute Accuracy

1,024 samples

Bipolar	± 10	± 5	± 2.5	± 1.25	± 0.625
Absolute Accuracy (% of FSR)*	0.1	0.1	0.2	0.2	0.4

\*: ±1 LSB is added as the derivative for absolute accuracy

#### Analan Qutnut

Analog output		
<ul> <li>Channels</li> </ul>	2	
<ul> <li>Resolution</li> </ul>	12 bits	
<ul> <li>Output Rate</li> </ul>	Static update	
<ul> <li>Output Range</li> </ul>	(V, software p	programmable)
Internal Deference	Unipolar	0 ~ 5, 0 ~ 10
Internal Reference	Bipolar	±5, ±10
<ul> <li>Slew Rate</li> </ul>	0.125 V/us	
<ul> <li>Driving Capability</li> </ul>	5 mA	
<ul> <li>Output Impedance</li> </ul>	0.1 Ω	
<ul> <li>Operation Mode</li> </ul>	Single outpu	t
<ul> <li>Accuracy</li> </ul>	Relative: ±1 I	_SB
	Differential n	on-linearity: ±1 LSB

#### **Digital Input** - (

<ul> <li>Channels</li> </ul>	8
<ul> <li>Compatibility</li> </ul>	3.3 V/5 V/TTL
<ul> <li>Input Voltage</li> </ul>	Logic 0: 0.8 V max. Logic 1: 2.0 V min.
Digital Output	

Channels	8
Compatibility	3.3 V/TTL
Output Voltage	Logic 0: 0.4 V max.@ 6 mA
	Logic 1: 2.6 V min.@ 6 mA

#### **Event Counter**

- Channels 1 Compatibility 3.3 V/TTL
- Max. Input Frequency 1 kHz

#### General

<ul> <li>Bus Type</li> </ul>	USB 2.0
I/O Connector	Onboard screw terminal
<ul> <li>Dimensions (L x W x H)</li> </ul>	132 x 80 x 32 mm (5.2" x 3.15" x 1.26")
<ul> <li>Power Consumption</li> </ul>	Typical: 5 V @ 360 mA Max.: 5 V @ 450 mA
<ul> <li>Operating Temperature</li> </ul>	0~60°C (32~140°F)
<ul> <li>Storage Temperature</li> </ul>	-20 ~ 70°C (-4 ~ 158°F)
<ul> <li>Storage Humidity</li> </ul>	5 ~ 95% RH non-condensing
Ordering Info	rmation

- USB-4711A-AE 150 kS/s, 12-bit, 16-ch Multi. USB Module
- Accessories
- 1960004544
- 1960005788
- Wallmount Bracket VESA Mount Bracket

## 200 kS/s, 16-bit, 16-ch Multifunction DAQ USB Module



### Features

- Supports USB 2.0
- Portable
- Bus-powered
- 16 analog input channels
- 16-bit resolution Al
- Sampling rate up to 200 kS/s
- 8-ch DI/8-ch DO, 2-ch AO and one 32-bit counter
- Detachable screw terminal on modules
- Suitable for DIN-rail mounting
- One lockable USB cable for secure connection included

## Introduction

The USB-4700 series consists of true plug & play data acquisition devices. No more opening up your computer chassis to install boards just plug in the module, then get the data. It's easy to use and efficient. USB-4716 offers 16 single-ended/ 8 differential analog inputs with 16-bit resolution, up to 200 kS/s throughput, 16 digital I/Os, and 1 user counter, plus 2 16-bit analog outputs. The high performance makes USB-4716 your best choice for test & measurement applications in the production line or in the lab.

Reliable and rugged enough for industrial applications, yet affordable for home projects, the USB-4716 is the perfect way to add measurement and control capability to any USB capable computer. The USB-4700 series is fully plug & play and easy to use. It obtains all required power from the USB port, so no external power connection is ever required.

## **Specifications**

#### **Analog Input**

- Channels
   16 single-ended/ 8 differential
   (software programmable)
- ResolutionMax. Sampling Rate
  - 16 bits 200 kS/s (for USB 2.0)

Note: The sampling rate for each channels will be affected by used channel number. For example, if 4 channels are used, the sampling rate is 200k/4 = 50 kS/s per channel.

- FIFO Size
- Overvoltage Protection 30 Vp-p
- Input Impedance 1 GΩ
- Sampling Modes
   Software, onboard programmable pacer, or external

1,024 samples

Input Range (V, software programmable) & Absolute Accuracy

Single Ended	N/A	0 ~ 10	0 ~ 5	0 ~ 2.5	0~1.25
Differential	±10	±5	±2.5	±1.25	±0.625
Absolute Accuracy (% of FSR)*	0.015	0.03	0.03	0.05	0.1

\*: ±1 LSB is added as the derivative for absolute accuracy

#### Analog Output

<ul> <li>Channels</li> </ul>	2	
Resolution	16 bits	
<ul> <li>Output Rate</li> </ul>	Static update	
<ul> <li>Output Range</li> </ul>	(V, software p	rogrammable)
Internal Deference	Unipolar	0~5,0~10
	Bipolar	±5, ±10
Slew Rate	0.125 V/us	
<ul> <li>Driving Capability</li> </ul>	5 mA	
<ul> <li>Output Impedance</li> </ul>	0.1 Ω max.	
<ul> <li>Operation Mode</li> </ul>	Single output	
<ul> <li>Accuracy</li> </ul>	Relative: ±1 L	SB

#### **Digital Input**

- Channels
- CompatibilityInput Voltage

3.3 V/5 V/TTL Logic 0: 1.0 V max. Logic 1: 2.0 V min.

8

#### **Digital Output**

- Channels
   8

   Compatibility
   3.3 V/TTL

   Output Voltage
   Logic 0: 0.4 V max.

   Logic 1: 2.4 V min.
   Logic 1: 2.4 V min.

   Output Capability
   Sink: 6 mA (sink)
  - Source: 6 mA (source)

#### **Event Counter**

- Channels
   Compatibility
   3.3V/TTL
  - Max. Input Frequency 1 kHz

#### General

- Bus Type
   USB 2.0
  - I/O Connector Onboard screw terminal Dimensions (L x W x H) 132 x 80 x 32 mm (5.2" x 3.15" x 1.26")
  - Power Consumption Typical: 5 V @ 360 mA
- Max.: 5 V @ 450 mA
- Operating Temperature 0 ~ 60°C (32 ~ 158°F)
  - Storage Temperature -20 ~ 70°C (-4 ~ 158°F) Operating Humidity 5 ~ 85% RH non-condensing
- Operating Humidity
   Storage Humidity
   5 ~ 85% RH non-condensing
   5 ~ 95% RH non-condensing

## **Ordering Information**

USB-4716-AE

200 kS/s, 16-bit, 16-ch Multi. USB Module

- Accessories • 1960004544 Wallmount Bracket • 10600067289
- 1960005788

#### er. = Channe Compat = Output V

Output Capability

## 8-ch Thermocouple Input USB Module with 8-ch Isolated Digital Input



### **Features**

- Supports USB 2.0
- Supports voltage, current, and thermocouple inputs
- Bus-powered
- 8 thermocouple input channels .
- 2,500 V<sub>DC</sub> isolation
- Supports 4 ~ 20 mA current input
- Detachable screw terminal on modules
- 8-ch isolated DI and 8-ch isolated DO
- Suitable for DIN-rail mounting .
- One lockable USB cable for secure connection included

## Introduction

The USB-4700 series consists of true plug & play data acquisition devices. No more opening up your computer chassis to install boards just plug in the module, then get the data. It's easy to use and efficient. USB-4718 offers 8 thermocouple inputs with 16-bit resolution, up to 0.1% input range accuracy. Portable design makes the USB-4718 suitable for field research. Also, the input channels can be set separately making handling multiple type of sensors with just one USB-4718 module possible.

Reliable and rugged enough for industrial applications, yet affordable for home projects, the USB-4718 is the perfect way to add measurement and control capability to any USB capable computer. The USB-4700 series is fully plug and play and easy to use. It obtains all required power from the USB port, so no external power connection is ever required.

## **Specifications**

#### **Analog Input**

- Accuracy ±0.1% for voltage input
- Bandwidth
- Channels
- Ch. Independent Conf. Yes
- CMR @ 50/60 Hz 92 dB min.
- Resolution
- Input Impedance 1.8 MΩ
- Input Range
- 0 ~ 15 mV, 0 ~ 50 mV, 0 ~ 100 mV, 0 ~ 500 mV, 0 ~ 1 V, 0 ~ 2.5 V, 0 ~ 20 mA, 4 ~ 20 mA Thermocouple, mV, V, mA

16 bits

13.1 Hz @ 50 Hz.

15.72 Hz @ 60 Hz

8 differential

Input Types Sampling Rate

10 S/s (shared for all channels)

Note: The sampling rate for each channel is fixed due to the hardware design. It is 10/8 = 1.25 S/s per channel no matter how many channels you use.

Span Drift

#### T/C Type and Temperature Ran

J	0 ~ 760°C	R	500 ~ 1750°C
Κ	0~1370°C	S	500 ~ 1750°C
Т	-100 ~ 400°C	B	500 ~ 1800°C
Е	0~1000°C		

- TVS/ESD Protection
- Zero Drift

#### **Isolated Digital Input**

- Channels
- Input Voltage
  - 2,500 VDC

Built-in

±0.3 µV/°C

Isolation Protection Opto-isolator Response 25 µs

#### **Isolated Digital Output**

- Channels
- Output Type
- Isolation Protection
  - 2,500 V<sub>DC</sub>
  - Output Voltage 5 ~ 30 Vpc, 1.1 A max./ total

8

Sink (NPN)

- Sink Current 200 mA max./channel
- Opto-isolator Response 25 µs

#### General

- Bus Type
- USB 2.0
- Onboard screw terminal I/O Connector
  - Dimensions (Lx W x H) 132 x 80 x 32 mm (5.2" x 3.15" x 1.26")
- Power Consumption 100 mA @ 5 V 1.6 sec. (system)
- Watchdog Timer •
- **Operating Temperature** 0 ~ 60°C (32 ~ 140°F)
- Storage Temperature -20 ~ 70°C (-4 ~ 158°F)
- 5 ~ 95% RH non-condensing Storage Humidity

## **Ordering Information**

USB-4718-AE

#### Accessories

1960004544	Wallmount Bracket
1960005788	VESA Mount Bracket

Last updated : 5-May-2015

8-ch Thermocouple Input USB Module

- •
- ±25 ppm/°C

nperature Ranges		
	R	500 ~ 1750°C
	S	500 ~ 1750°C
)	В	500 ~ 1800°C

8
Logic 0: 3 V max.
Logic 1: 5 V min. (30 V max.)

## 32-ch Isolated Digital I/O USB Module



### **Features**

- Compatible with USB 1.1/2.0
- Bus-powered
- 16 isolated DI and 16 isolated DO channels •
- High voltage isolation on all channels (2,500 V<sub>DC</sub>)
- High sink current on isolated output channels (200 mA/Channel)
- Supports 5 ~ 60 V<sub>DC</sub> isolated input channels
- Interrupt handling capability
- Timer/counter capability •
- Suitable for DIN-rail mounting •
- One lockable USB cable for secure connection included

## Introduction

The USB-4700 series consists of true plug & play data acquisition devices. No more opening up your computer chassis to install boards-just plug in the module, then get the data. It's easy to use and efficient. USB-4750 is a 32-channel isolated digital I/O module. With isolation protection of 2,500 Vpc, and dry contact support, USB-4750 is ideal for industrial applications where high-voltage protection is required. Each I/O channel of the USB-4750 corresponds to a bit in an I/O port. This makes USB-4750 very easy to program. This module also offers a counter or timer and one digital input interrupt to a PC so users can then easily configure by software.

Reliable and rugged enough for industrial applications, yet affordable for home projects, the USB-4750 is the perfect way to add measurement and control capability to any USB capable computer. The USB-4750 is fully compatible with USB plug & play and easy to use. It obtains all required power from the USB port, so no external power connection is ever required.

## **Specifications**

#### **Isolated Digital Input**

- Channels
- Input Voltage
- Interrupt Capable Ch.
- Isolation Protection 2,500 VDC

#### **Isolated Digital Output**

- Channels
- Output Type
- Isolation Protection
- Output Voltage  $5 \sim 40 V_{DC}$
- Sink Current
- 200 mA max. per channel Total 1.1 A max.

2

32-bit

#### **Isolated Counter**

- Channels
- Resolution
- Max. Input Frequency 1 MHz
- Isolation Protection 2.500 Vpc

#### General

- Bus Type USB 1.1/2.0
- I/O Connector
- Dimensions (L x W x H) 132 x 80 x 32 mm (5.2" x 3.15" x 1.26")

Onboard screw terminal

- **Power Consumption** Typical: 5 V @ 200 mA
- Max.: 5 V @ 350 mA
- Operating Temperature 0 ~ 60°C (32 ~ 140°F)
- Storage Temperature -20 ~ 70°C (-4 ~ 158°F)
- Storage Humidity 5~95% RH, non-condensing

## **Ordering Information**

- USB-4750-BE
- Accessories 1960004544
- Wallmount Bracket
- 1960005788

VESA Mount Bracket

32-ch Isolated Digital I/O USB Module

#### AD\ANTECH Industrial USB I/O Modules

All product specifications are subject to change without notice

Sink (NPN) 2,500 V<sub>DC</sub>

Logic 1: 5 V min. (60 V max.) or dry contact

16

2

16

Logic 0: 2 V max.

# **USB-4751 USB-4751L**

## 48-ch Digital I/O USB Module

## 24-ch Digital I/O USB Module



#### **Features**

- Compatible with USB 1.1/2.0
- Portable
- Bus-powered
- 48/24 TTL digital I/O lines .
- Emulates mode 0 of 8255 PPI
- Buffered circuits for higher driving capacity than the 8255
- Interrupt handling capability
- Timer/Counter interrupt capability •
- Supports both dry and wet contact
- 50-pin Opto-22 compatible box header
- Suitable for DIN-rail mounting
- One lockable USB cable for secure connection included

## CEFCC Rohs

## Introduction

The USB-4700 series consists of true plug & play data acquisition devices. No more opening up your computer chassis to install boards; just plug in the module, then get the data. It's easy to use and efficient. USB-4751/4751L is a 48/24-bit digital I/O module with USB interface. Its 48/24 bits are divided into six/three 8-bit I/O ports and users can configure each port as input or output via software. USB-4751/USB-4751L also provides one event counter and three 16-bit timers, which can be cascaded to become a 32-bit timer.

## **Specifications**

#### **Digital Input**

= (	Cha	nn	els
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<ul> <li>Compatibility</li> </ul>	
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Input Voltage

#### **Digital Output**

- Channels
- Compatibility
- Output Voltage
  - Logic 1: 3.8 V min.

2

32-bit

5 V/TTL

5 V/TTL

Logic 0: 0.8 V max.

Logic 1: 2 V min.

#### Output Capability Sink: 12 mA @ 0.5 V Source: 12 mA @ 3.8 V for single channels 5 mA @ 3.8 V for all channels in high status

Logic 0: 0.5 V max.

USB-4751: 48 (shared with output)

USB-4751L: 24 (shared with output)

USB-4751: 48 (shared with input)

USB-4751L: 24 (shared with input)

#### **Counter/Timer**

- Channels
- Resolution
- Max. Input Frequency 8 MHz

#### General

Bus Type

#### USB 1.1/2.0

I/O Connector

- 50-pin box headers, pin assignments are fully compatible with Opto-22 I/O module racks
- Dimensions (L x W x H) 132 x 80 x 32 mm (5.2" x 3.15" x 1.26")
- **Power Consumption** Typical: 5 V @ 200 mA
  - Max.: 5 V @ 500 mA
- Operating Temperature 0 ~ 60°C (32 ~ 140°F)
  - Storage Temperature -20 ~ 70°C (-4 ~ 158°F)
- Storage Humidity 5~95% RH, non-condensing

## **Ordering Information**

USB-4751-AE 48-ch Digital I/O USB Module USB-4751L-AE 24-ch Digital I/O USB Module

#### Accessories

- 1960004544
- Wallmount Bracket VESA Mount Bracket
- 1960005788 PCL-10150-1.2E
- 50-pin Flat Cable, 1.2 m ADAM-3950-AE 50-pin DIN-rail Flat Cable Wiring Board
  - 24-ch IDI Board w/ 20-pin & 50-pin Flat Cables
- PCLD-782B-AE PCLD-785B-AE
  - 24-ch Relay Board w/ 20- pin & 50-pin Flat Cables

## 8-ch Relay and 8-ch Isolated Digital Input USB Module



### Features

- Compatible with USB 1.1/2.0
- Portable
- Bus-powered
- 8 relay output channels and 8 isolated digital input channels
- LED indicators to show activated relays
- 8 Form C type relay output channels
- High-voltage isolation on input channels (2,500  $V_{\text{DC}}$ )
- High ESD protection (2,000 V)
- Wide input range (5 ~ 30 V<sub>DC</sub>)
- Interrupt handling capability
- Detachable screw terminal on modules
- Suitable for DIN-rail mounting
- One lockable USB cable for secure connection included

## Introduction

The USB-4761 is a relay actuator and isolated digital input module with USB interface. It provides 8 optically-isolated digital inputs with isolation protection of 2,500  $V_{DC}$  for collecting digital signals in noisy environments and 8 relay actuators for serving as on/off control devices or small power switches. For easy monitoring, each relay is equipped with one green LED to show its on/off status.

#### **Rugged Protection**

The USB-4761's digital input channels feature a rugged isolation protection for industrial, lab and machinery automation applications. They durably withstand voltages up to 2,500  $V_{DC}$ , protecting your host system from any incidental harms. If connected to an external input source with surge-protection, the USB-4761 can offer up to a maximum of 2,000 V ESD (Electrostatic Discharge) protection.

## **Specifications**

#### **Isolated Digital Input**

- Channels
- Input Voltage
  - Logic 1: 5 V min. (30 V max.)

Logic 0: 2 V max.

8

- Isolation Protection 2,500 V<sub>DC</sub>
- Opto-Isolator Response 50 µs

#### **Relay Output**

- Contact Rating
   0.25 A @ 240 V<sub>AC</sub>, 1 A @ 30 V<sub>DC</sub>
- Max. Switching Power 62.5 VA, 60 W
- Max. Switching Voltage 250 V<sub>AC</sub>, 220 V<sub>DC</sub>
- Max. Switching Current 5 A
- Operate/Release Time max. 5 / 4 ms
- Life Expectancy (Electrical)
   5 x 10<sup>7</sup> cycles typ. @ 10 mA/12 V 2 x 10<sup>5</sup> cycles typ. @ 2000 mA/30 V

#### General

- Bus Type USB 1.1/2.0
- I/O Connector
   Onboard screw terminal
- Dimensions (L x W x H) 132 x 80 x 32 mm (5.2" x 3.15" x 1.26")
- Power Consumption Typical: 5 V @ 60 mA
  - Max.: 5 V @ 400 mA
- Operating Temperature  $0 \sim 60^{\circ}C (32 \sim 140^{\circ}F)$
- Storage Temperature -20 ~ 70°C (-4 ~ 158°F)
- Storage Humidity 5 ~ 95 % RH, non-condensing

## **Ordering Information**

USB-4761-BE 8-ch Relay/Isolated Digital Input USB Module

#### Accessories

19600045441960005788

Wallmount Bracket VESA Mount Bracket

AD\ANTECH Industrial USB I/O Modules

All product specifications are subject to change without notice

## 4-ch, 24-bit, 192 kS/s Dynamic Signal Acquisition USB 3.0 I/O Module with Analog Output and Tachometer



### **Features**

- USB 3.0 SuperSpeed and daisy chainable by built-in USB hub
- 4 simultaneously sampled analog inputs, up to 192 kS/s
- 24-bit resolution ADCs with -94 dB total harmonic distortion plus noise (THD+N)
- Built-in anti-aliasing filter
- 2 mA integrated electronic piezoelectric (IEPE) excitation currents
- 2 analog outputs with update rate up to 192 kS/s
- 24-bit resolution DACs with -90 dB total harmonic distortion plus noise (THD+N)

4

Logic 0: 3 V max.

(00.)

- · 2 tachometer inputs for period or frequency measurement
- 4-ch isolated digital input and 4-ch isolated digital output

## Introduction

USB-5801 is a high accuracy dynamic signal acquisition USB 3.0 module specifically designed for vibration and acoustic measurements. It provides four simultaneously sampled, 24-bit, IEPE sensor inputs with up to 192 kS/s sample rate for high resolution measurements. It is also equipped with two 24-bit analog outputs with up to 192 kS/s update rate. In addition, it has two tachometer inputs whose data can be correlated to the sensor data. The built-in USB hub makes this module daisy chainable with other USB-5000 series products.

Digital Input - Channels

Input voltage

## **Specifications**

#### **Analog Input**

<ul> <li>Channels</li> </ul>	4 (simultaneous sampling,	<ul> <li>Onto-isolator response time</li> </ul>		Logic 1: 10 v min. (30 v max.) 100 us
- Possiution	24 bits (delta sigma ADC)	<ul> <li>Isolation protection</li> </ul>		2 500 Vpc
Nex Compling Date	24 DIIS (UEIIA-SIGIIIA ADC) 1 $100 \text{ kC}(a \text{ (with resolution } < 1.0 \text{ mC}(a))$			2,500 000
Max. Sampling Rate	$1 \sim 192 \text{ KS/S}$ (Willi lesolution $\leq 1.9 \text{ IIIS/S}$ )	Digital Output		
Input Coupling     Trianan Madaa	AC/DC, selectable per channel			1
<ul> <li>Irigger wodes</li> </ul>	Start, Delayed Start, Stop, Delayed Start	- Unanners		+ F 40.)/
- Input Pongo		<ul> <li>Load voltage</li> </ul>		$5 \sim 40 V_{DC}$
		<ul> <li>Load current</li> </ul>		350 mA/cn (sink)
Offset Error	< ±0.1 mV	<ul> <li>Opto-isolator response</li> </ul>	time	100 µs
Gain Error	< ±0.02 %	<ul> <li>Isolation protection</li> </ul>		2,500 V <sub>DC</sub>
<ul> <li>Iotal Harmonic Distortion Plus</li> <li>Naisa (TUD, N)</li> </ul>	-94 aB	0		
NUISE (IND+N)	0 1	General		
IEPE EXCITATION	2 IIIA	<ul> <li>Interface</li> </ul>	USB 3.0	
Analog Output		<ul> <li>Data transfer rate</li> </ul>	5 Gbps	
<ul> <li>Channels</li> </ul>	2 (simultaneous sampling,50 $\Omega$	<ul> <li>Connectors</li> </ul>	BNC * 4 10-pin 3	(AI) .81 mm terminal block * 2 (Tachometer, DI/O)
- Posolution	24 bits (dolta sigma DAC)		3-pin 3.8	31 mm terminal block * 2 (power)
- Undete rete	1 102 kS/a (with resolution $< 1.0 \text{ mS/a}$ )		USB 3.0	type A (to PC)
- Opuale fale	$1 \sim 192$ K3/5 (WILLI RESULLIUL $\leq 1.9$ 113/5)		USB 3.0	type B (to downstream port)
- Output coupling		<ul> <li>Dimensions</li> </ul>	168 mm	x 120 mm x 40 mm (6.6" x 4.7" x 1.6")
- Output range	$\pm 1$ V, $\pm 10$ V	<ul> <li>Operating temperature</li> </ul>	0 ~ 60 °C (32 ~ 140 °F)	
	< ±0.5 IIIV	<ul> <li>Storage temperature</li> </ul>	-40 ~ 70 °C (-40 ~ 158 °F)	
Galili error     Total harmonia distantian plus	< ±0.03%	<ul> <li>Storage humidity</li> </ul>	= 0.5% PU (pop condensing)	
<ul> <li>Iotal narmonic distortion plus noise (THD - N)</li> </ul>	-90 GB	- Dowor cupply	5 ~ 55 /0	10 20 V or LISP bue power
- Trigger mode	Start delay to start stop, delay to stop	- Power suppry		$10 \sim 30$ V <sub>DC</sub> of 03D bus power
- Auto calibration		<ul> <li>Power consumption</li> </ul>		typ./TBD THA HIAX. @ 24 V external power
- Auto campiation	165		I DU IIIA	typ./TBD THA HIAX. @ 5 v bus power
Tachometer Input		Ordening Info		tion
<ul> <li>Channels</li> </ul>	2	Ordering init	rmu	non
<ul> <li>Input voltage</li> </ul>	Logic 0: 3 V max.	USB-5801-AE	4-ch, 24-	-bit, 192 kS/s Dynamic Signal Acquisition
	Logic 1: 10 V min. (30 V max.)		USB 3.0	I/O Module with Analog Output and
<ul> <li>Input frequency</li> </ul>	5 kHz max.		Tachome	ter
<ul> <li>Isolation protection</li> </ul>	2,500 V <sub>DC</sub>	96PSD-A40W24-MM	DIN RAIL	A/D 100-240V 40W 24V

### AD\ANTECH Industrial I/0

All product specifications are subject to change without notice.

# **USB-5817 USB-5820**

8-ch, 16-bit, 200 kS/s Isolated Analog Input USB 3.0 I/O Module

4-ch, 16-bit, 200 kS/s Isolated Analog Output USB 3.0 I/O Module



USB-5817

### **Features**

- USB 3.0 SuperSpeed
- Daisy chainable by built-in USB hub
- $8 \times 16$ -bit analog input channels with 2,500 V<sub>DC</sub> isolation
- Support voltage and current measurement
- Wide common-mode voltage range (±275 V)
- Removable European-type connector
- Supported operating systems: Windows XP/7/8/10

## Introduction

USB-5817 is a 8-ch, 16-bit, 200 kS/s Isolated Analog Input USB 3.0 I/O Module . Its compact size and DIN-rail mount kit make it easily installed in a cabinet. Built in USB hub can support daisy chain topology. Euro type pluggable terminal blocks and LED indicator help users to maintain and set up their system. For safe and reliable operation, all of the 8 analog input channels are protected by a 2,500  $V_{\text{DC}}$  isolation circuit. Furthermore, it supports both voltage and current measurement with common-mode voltage up to ±275 V.

16 bits

±275 V

< ±0.1%

2,500 VDC

USB 3.0

5 Gbps

2 x RJ-45 (EtherCAT)

 $0 \sim 60 \circ C (32 \sim 140 \circ F)$ -40 ~ 70  $\circ C (40 \sim 158 \circ F)$ 5 ~ 95% RH (non-condensing)

0 ~ 10 V, ±10 V, 0-20 mA

200 kS/s (shared by all channels)

Common-mode 200 k $\Omega$ , Differential 800 k $\Omega$ 

2 x 10-pin terminal block (I/O), 3.81 mm

120 x 120 x 40 mm (4.72 x 4.72 x 1.57 in)

2 x 3-pin screw terminal block (power), 3.81 mm

External 10 ~ 30  $V_{DC}$  or USB bus power TBD mA typ./TBD mA max. @ 24 V external power TBD mA typ./TBD mA max. @ 5 V bus power

## **Specifications**

#### **Analog Input**

- Channels
- Resolution
- **Input Voltage Range** Common-Mode Voltage Range
- **Measurement Error**
- **Isolation Protection**
- Sampling rate
- Input Impedance

#### General

- Interface
- Data transfer rate Connectors
- Dimensions
- **Operating Temperature**
- Storage Temperature
- Storage Humiditv
- Power Supply
- **Power Consumption**

## **Ordering Information**

- USB-5817-AE
- 96PSD-A40W24-MM

8-ch, 16-bit, 200 kS/s Isolated Analog Input USB 3.0 I/O Module DIN rail A/D 100 ~ 240 V, 40 W, 24 V



**USB-5820** 

### **Features**

- USB 3.0 SuperSpeed
- Daisy chainable by built-in USB hub
- 4 x 16-bit analog output channels with 2,500 V DC isolation
- Multiple voltage and current output ranges
- Removable European-type connector
- Supported operating systems: Windows XP/7/8/10

## Introduction

USB-5820 is a 4-ch. 16-bit. 200 kS/s Isolated Analog Output USB 3.0 I/O Module . Its compact size and DIN-rail mount kit make it easily installed in a cabinet. Built in USB hub can support daisy chain topology. Euro type pluggable terminal blocks and LED indicator help users to maintain and set up their system. For safe and reliable operation, all of the 4 analog output channels are protected by a 2,500 V<sub>DC</sub> isolation circuit. Furthermore, it supports multiple voltage and current output ranges.

0 ~ 5 V, 0 ~ 10 V,  $\pm$ 5 V,  $\pm$ 10 V

0 ~ 20 mA, 4 ~ 20 mA (source type)

1 x 10-pin terminal block (I/O), 3.81 mm

## **Specifications**

#### **Analog Output**

- Channels
  - > 1 k $\Omega$  (voltage output)  $< 625 \Omega$  (current output) < ±0.1%

- Interface Data transfer rate Connectors
- Dimensions
- **Operating Temperature**
- Storage Temperature
- Storage Humidity
- Power Supply

#### **Ordering Information** 4-ch, 16-bit, 200 kS/s Isolated Analog Output USB 3.0 I/O

- USB-5820-AE
- Module 96PSD-A40W24-MM DIN rail A/D 100 ~ 240 V, 40 W, 24 V

#### Resolution **Output Voltage Range** Output Current Range Load **Output Error Isolation Protection** Updating rate Slew Rate

#### General

- - 2 x 3-pin screw terminal block (power), 3.81 mm 2 x RJ-45 (EtherCAT) 2 x HJ-45 (clifelCAT) 120 x 120 x 40 mm (4.72 x 4.72 x 1.57 in) 0 ~ 60 °C (32 ~ 140 °F) -40 ~ 70 °C (-40 ~ 158 °F)

- - 5~95% RH (non-condensing) External 10 ~ 30  $V_{DC}$  or USB bus power
- **Power Consumption** 
  - TBD mA typ./TBD mA max. @ 24 V external power TBD mA typ./TBD mA max. @ 5 V bus power

16 bits

2,500 VDC

200 kS/s

20 V/µs

USB 3.0

5 Gbps

# **USB-5830 USB-5850 USB-5860**

16-ch Isolated Digital Input and 16-ch Isolated Digital Output USB 3.0 I/O module

16-ch Isolated Digital Input & 8-ch PhotoMOS Relay USB 3.0 I/O module

8-ch Isolated Digital Input & 8-ch Relay USB 3.0 I/O module



#### USB-5830

#### Features

- USB 3.0 SuperSpeed .
- Daisy chainable by built in USB hub 16-ch digital input and 16-ch digital output with 2,500
- Voc isolation Wide input voltage range (10 ~ 30 V<sub>DC</sub>)

FCC C E ROHS

- Wide output voltage range (5 ~ 40 V<sub>DC</sub>) and high output
- current (350 mA/ch)
- Quick removable European type connector
- LED indicators for I/O status
- Supported operating systems: Windows XP/7/8/10

FCC C E ROHS

## USB-5850 Features

- USB 3.0 SuperSpeed
- Daisy chainable by built in USB hub
- 16-ch digital input and 8-ch PhotoMOS Relay output (Form A) isolation
- Wide input voltage range (10 ~ 30 VDC)
- 1500 V<sub>DC</sub> optical isolation for relay outputs .
- Quick removable European type connector
- LED indicators for I/O status

**Specifications** 

**Digital Input** 

Channels Input voltage

Channels

Relay type

Load Voltage

Load current

Turn-on time

Turn-off time

General

Interface

Connectors

Dimensions

Storage humidity

Peak load current

Isolation protection

Data transfer rates

Isolation protection

PhotoMOS Relay Output

.

Supported operating systems: Windows XP/7/8/10



## USB-5860

## FCC C E ROHS

#### Features

- USB 3.0 SuperSpeed
- Daisy chainable by built in USB hub 8-ch Isolated Digital Input and 8-ch Form A-type Relay Output
- Wide input voltage range (10 ~ 30 V<sub>DC</sub>)
- High-voltage isolation on input channel (2,500 VDC)
- Quick removable European type connector
- LED indicators for I/O status
- Supported operating systems: Windows XP/7/8/10

Logic 0: 3 V max.

2,500 Vpc

8

Form A

500VA, 60W 270Vac, 125Vpc

 $30m\Omega$  max.

Max. 10ms

Max. 5ms

USB 3.0

5 Gbps

Logic 1: 10 V min. (30 V max.)

2A @ 250Vac, 2A @ 30Vbc

Mechanical 2 x 107 ops. at no load.

Electrical 3 x 10<sup>4</sup> ops. @ 2A/250V<sub>AC</sub>

10-pin 3.81 mm terminal block \*

3 (I/O) 3-pin 3.81 mm screw terminal

block (power) \* 2

USB 3.0 type A (to PC) USB 3.0 type B (hub)

0 ~ 60°C (32 ~ 140°F) -40 ~ 70°C (-40 ~ 158°F)

Typical 240mA @ 5V; Max. 460mA @ 5V

5 ~ 95% RH (non-condensing)

120 x 120 x 40 mm

10 ~ 30 Vpc

## Introduction

The USB-5800 series are industrial isolated digital input and output USB 3.0 I/O modules. Its compact size and DIN-rail mount kit can install easily in a cabinet. Built in USB hub can support daisy chain topology. Euro type pluggable terminal blocks and LED indicator help users to maintain and set up their system. All digital input and digital output channels are protected by 2,500 V<sub>oc</sub> isolation.

## **Specifications**

#### **Digital Input**

- Channels Input voltage
- Isolation protection

#### **Digital Output**

- . Channels
- I nad voltage
- Load current

#### 250mA/ch (sink) @ 60°C Isolation protection 2 500 Vpc

Logic 0: 3 V max.

2,500 Voc

5~40 Vpc

16

100us

USB 3.0

5 Gbps

4 (1/0)

10 ~ 30 V<sub>DC</sub>

Logic 1: 10 V min. (30 V max.)

350mA/ch (sink) @ 25°C

10-pin 3.81 mm terminal block

3-pin 3.81 mm screw terminal block (power) \* 2

0 ~ 60°C (32 ~ 140°F) -40 ~ 70°C (-40 ~ 158°F) 5 ~ 95% RH (non-condensing)

USB 3.0 type A (to PC)

USB 3.0 type B (hub) 120 x 120 x 40 mm

Typical 240mA @ 5V;

Max. 480mA @ 5V

. **Opto-isolator Response Time** 

#### General

- Interface
- Data transfer rates Connectors
- Dimensions
- Operating temperature Storage temperature
- Storage humidity
- Power supply
- **Power Consumption**

## **Ordering Information**

- USB-5830-AE
- 96PSD-A40W24-MM
- 16-ch isolated digital input & 16-ch isolated digital output USB 3.0 I/O module DIN RAIL A/D 100-240V 40W

.

96PSD-A40W24-MM

## Operating temperature Storage temperature

Max. 420mA @ 5V

I/O module

24V

8-ch PhotoMOS relay USB 3.0

DIN RAIL A/D 100-240V 40W

Power supply Power Consumption

### Ordering Information 16-ch isolated digital input &

- USB-5850-AE

## **Specifications**

#### **Digital Input**

- Channels Input voltage
- Isolation protection

## **Relay Output**

- Channels
- **Relay Type**
- Contact Rating (resistive)
- Max. Switching Power Max. Switching Voltage
- Resistance
- **Operating Time Releasing Time**
- Life Expectancy

#### General

- Interface Data transfer rates
- Connectors
- - Dimensions
  - **Operating temperature** Storage temperature
  - Storage humidity
    - Power supply Power Consumption

96PSD-A40W24-MM

#### Ordering Information USB-5860-AE

8-ch isolated digital input & 8-ch relay USB 3.0 I/O module DIN RAIL A/D 100-240V 40W 24V

**ADVANTECH** Industrial I/O

24V

4A @ 100ms (1 pulse)

#### 1 ms typical 0.6 ms typical

-PhotoMOS SPST (Form A)

60V (AC peak or DC)

Logic 0: 3 V max.

2,500 Voc

1.2A

1,500 VDC

Logic 1: 10 V min. (30 V max.)

USB 3.0 5 Gbps 10-pin 3.81 mm terminal block \* 4 (1/0) 3-pin 3.81 mm screw terminal block (power) \* 2 USB 3.0 type A (to PC) USB 3.0 type B (hub) 0 ~ 60°C (32 ~ 140°F) -40 ~ 70°C (-40 ~ 158°F) 5 ~ 95% RH (non-condensing) 10 ~ 30 Vpc Typical 240mA @ 5V:

## **USB-5855 USB-5856 USB-5862**

32-ch Isolated Digital Input & 16-ch PhotoMOS Relay USB 3.0 I/O module

32-ch Isolated Digital Input and 32-ch Isolated Digital Output USB 3.0 I/O module

16-ch Isolated Digital Input & 16-ch Relay USB 3.0 I/O module



#### USB-5855

#### Features

- USB 3.0 SuperSpeed .
- . Daisy chainable by built in USB hub
- 32-ch digital input and 16-ch PhotoMOS Relay output (Form A) isolation

FCC C E ROHS

- Wide input voltage range (10 ~ 30 VDC)
- 1500 V<sub>DC</sub> optical isolation for relay outputs
- Quick removable European type connector
- LED indicators for I/O status
- Supported operating systems: Windows XP/7/8/10



FCC C E ROHS

USB-5856

#### Features

- USB 3.0 SuperSpeed
- Daisy chainable by built in USB hub
- 32-ch digital input and 32-ch digital output with 2,500 V<sub>DC</sub> isolation
- Wide input voltage range (10 ~ 30 V<sub>DC</sub>)
- Wide output voltage range (5 ~ 40 V<sub>DC</sub>) and high output
- current (350 mA/ch)
- Quick removable European type connector LED indicators for I/O status

**Specifications** 

**Digital Input** 

Channels Input voltage

**Digital Output** 

I nad voltage

Load current

Channels

Isolation protection

Supported operating systems: Windows XP/7/8/10



### USB-5862

## FCC C E ROHS

#### Features

- USB 3.0 SuperSpeed
- Daisy chainable by built in USB hub 16-ch Isolated Digital Input and 16-ch Form A-type
- Relay Output
- Wide input voltage range (10 ~ 30 V<sub>DC</sub>)
- High-voltage isolation on input channel (2,500 VDC) Quick removable European type connector
- LED indicators for I/O status
- Supported operating systems: Windows XP/7/8/10

Logic 0: 3 V max.

2,500 Vpc

16

Form A

500VA, 60W 270Vac, 125Vpc

 $30m\Omega$  max.

Max. 10ms

Max. 5ms

USB 3.0

5 Gbps

Logic 1: 10 V min. (30 V max.)

2A @ 250Vac, 2A @ 30Vbc

Mechanical 2 x 107 ops. at no load.

Electrical 3 x 10<sup>4</sup> ops. @ 2A/250V<sub>AC</sub>

10-pin 3.81 mm terminal block \*

6 (I/O) 3-pin 3.81 mm screw terminal

block (power) \* 2 USB 3.0 type A (to PC) USB 3.0 type B (hub)

0 ~ 60°C (32 ~ 140°F) -40 ~ 70°C (-40 ~ 158°F)

Typical 240mA @ 5V; Max. 680mA @ 5V

5 ~ 95% RH (non-condensing)

168 x 120 x 40 mm

10 ~ 30 Vpc

## Introduction

The USB-5800 series are industrial isolated digital input and output USB 3.0 I/O modules. Its compact size and DIN-rail mount kit can install easily in a cabinet. Built in USB hub can support daisy chain topology. Euro type pluggable terminal blocks and LED indicator help users to maintain and set up their system. All digital input and digital output channels are protected by 2,500 V<sub>oc</sub> isolation.

## **Specifications**

#### **Digital Input**

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

1.2A

1,500 VDC

1 ms typical

0.6 ms typical

USB 3.0

5 Gbps

<sup>c</sup> 8 (I/O)

10 ~ 30 Vpc

2,500 Voc

PhotoMOS SPST (Form A)

10-pin 3.81 mm terminal block

3-pin 3.81 mm screw terminal

168 x 120 x 40 mm 0 ~ 60°C (32 ~ 140°F) -40 ~ 70°C (-40 ~ 158°F) 5 ~ 95% RH (non-condensing)

block (power) \* 2 USB 3.0 type A (to PC) USB 3.0 type B (hub)

Typical 240mA @ 5V;

Max. 720mA @ 5V

60V (AC peak or DC)

4A @ 100ms (1 pulse)

Isolation protection

#### **PhotoMOS Relay Output**

- Channels
- Relay type
- Load Voltage Load current
- Peak load current
- Isolation protection
- Turn-on time
- Turn-off time

#### General

- Interface
- Data transfer rates Connectors
- Dimensions
- **Operating temperature**
- Storage temperature Storage humidity
- Power supply
- . Power Consumption

## **Ordering Information**

- USB-5855-AE
- 96PSD-A40W24-MM
- 32-ch isolated digital input & 16-ch PhotoMOS relay USB 3.0 I/O module DIN RAIL A/D 100-240V 40W
  - USB-5856-AE
    - 32-ch isolated digital output USB 3.0 I/O module 96PSD-A40W24-MM DIN RAIL A/D 100-240V 40W 24V

**Ordering Information** 

## **Specifications**

#### **Digital Input**

- Channels Input voltage
- Isolation protection

#### **Relay Output**

- Channels **Relay Type**
- Contact Rating (resistive)
- Max. Switching Power
- Max. Switching Voltage
- Resistance
- **Operating Time Releasing Time**
- Life Expectancy

#### General

- Interface Data transfer rates
- Connectors
- - Dimensions
- **Operating temperature**
- Storage temperature Storage humidity

  - Power supply Power Consumption

96PSD-A40W24-MM

#### Ordering Information USB-5862-AE

16-ch isolated digital input & 16-ch relay USB 3.0 I/O module DIN RAIL A/D 100-240V 40W 24V

Last updated: 27-Jun-2018

**ADVANTECH** Industrial I/O

24V

#### 5~40 Vpc 350mA/ch (sink) @ 25°C 250mA/ch (sink) @ 60°C 2 500 Vpc

10-pin 3.81 mm terminal block \*

3-pin 3.81 mm screw terminal block (power) \* 2 USB 3.0 type A (to PC)

USB 3.0 type B (hub) 168 x 120 x 40 mm

Typical 240mA @ 5V; Max. 600mA @ 5V

10 ~ 30 Voc

0 ~ 60°C (32 ~ 140°F) -40 ~ 70°C (-40 ~ 158°F)

5 ~ 95% RH (non-condensing)

32-ch isolated digital input &

Logic 1: 10 V min. (30 V max.)

Logic 0: 3 V max.

2,500 Voc

32

USB 3.0

5 Gbps

8 (I/O)

Isolation protection Opto-isolator Response Time 100us

#### General

.

- . Interface
- Data transfer rates Connectors

Dimensions

Operating temperature

Storage temperature

Storage humidity

Power Consumption

Power supply