



USB-2060

USB I/O Module with Isolated 6-ch DI and 6-ch Power Relay

Features ■ 6-ch digital input and 6-ch relay output ■ Dry Contact and Wet Contact Selectable via Wire Connections ■ Long Distance Measurement ■ All Channels can be used as 16-bit Counters ■ 5A current contact rating ■ Configurable Power-on Value Settings Safety functionality when communication failed ■ Wide operating temperature range:-25°C~+75°C ■ 2500 VDC Intra-Module isolation ■ USB 1.1/2.0 Full-Speed (12Mbps) ■ No external power supply (USB Bus Powered) ■ Plug-and-Play without driver Lockable USB cable ■ Support firmware update via USB ■ Utility tool for module configuration and I/O testing easily and quickly PWR / RUN / ERR LED indicators Built-in dual watchdog (hardware / software) ■ Provide API library (VC/VB/BCB/.NET) ■ Module supported for Win2000/XP and Win7 (32/64 bit) X

Introduction

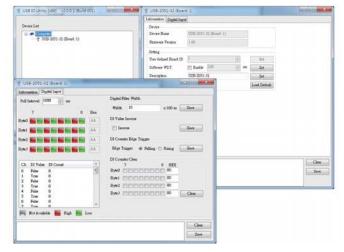
The USB-2060 is a full-speed USB device with 8 digital input and digital output channels module, and offers features for industrial control and manufacturing test applications, such as factory automation or embedded machine control. The USB-2060 provides 6 digital input channels, 6 Form A signal relay output channels. All digital input channels can be used as 16-bit counters. In addition, the digital input channels can be selected either as sink or source type via wire connections. The USB-2060 also provides 12 LED indicators that can be used to monitor the status of the digital input and relay output. There are also options for configuring power-on and safe values. 4 kV ESD protection and 3750 VDC intra-module isolation are also provided to enhance noise protection capabilities in industrial environments. With the true Plug & Play capability, it needs not opening up your computer chassis to install boards-just plug in the module, then get or set the data. Owing to another USB feature known as "hot-swapping", users do not even need to shut down and restart the system to attach or remove the USB-2060. The USB I/O utility can help users to configure and test USB-2060 quickly and easily without programming; In addition, we also provide the friendly API library and demos for users to develop own USB application with various application development tools (VB/C++/C#.NET/VB.NET). Therefore, the USB-2060 is the perfect way to add control capability to any USB capable computer.

Software

USB I/O Utility

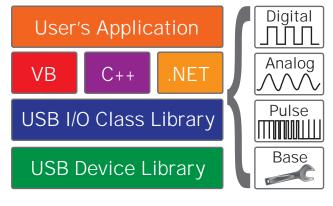
USB I/O Utility provides a simple way to easily test and instant acquire data for all ICP DAS USB I/O series modules without programming.

- Automatically scan all ICP DAS USB I/O modules
- Easily and quickly configure and test USB I/O modules
- Completely and precisely log I/O data for analysis



VB/C++/C#.NET/VB.NET SDK

ICP DAS provides a SDK for USB I/O modules to help user to develop own project easily and quickly. The SDK can be supported in VB/C++/C#.NET/VB.NET to fulfill project development.



Applications

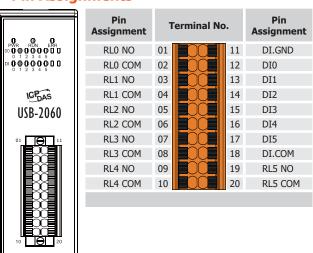
- Building automation
- Factory automation
- Machine automation
- Testing equipment

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■ System Specifications

USB		
Specification	USB 2.0 Full-Speed (12Mbps)	
CPU Module		
Watchdog Timer	1 Hardware watchdog (1.6 second) 1 Software watchdog (Programmable)	
EMS Protection		
ESD (IEC 61000-4-2)	4 kV contact for each terminal 8 kV air for random point	
LED Indicators		
Status	3 x Power and Communication	
	8 x Power Relay	
Power		
Consumption	1.5 W	
Mechanical		
Dimensions (mm)	33 x 110 x 96 (W x L x H)	
Environmental		
Operating Temperature	-25 ~ +75 °C	
Storage Temperature	-40 ~ +85 °C	
Humidity	10 ~ 95% RH, Non-condensing	

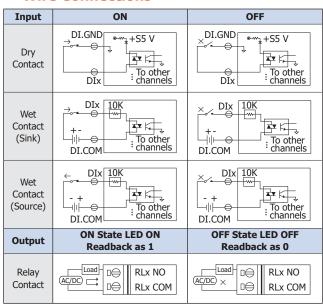
Pin Assignments



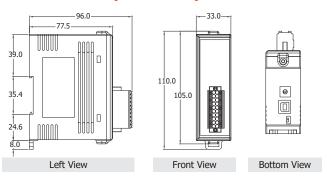
■ I/O Specifications

Digital 1	Input/Counter	
Channels		6
Туре		Dry Contact, Source Wet Contact, Sink/Source
Wet Contact	ON Voltage Level	+10 VDC ~ +50 VDC
	OFF Voltage Level	+4 VDC Max.
Dry Contact	ON Voltage Level	Close to GND
	OFF Voltage Level	Open
Contact	Effective Distance	500 meters Max.
Max. Counts		65535 (16-bit)
Frequency		500 Hz
Min. Pulse Width		1 ms
Input Impedance		10 ΚΩ
Overvoltage Protection		70 VDC
Relay Output		
Channels		6 x Form A (SPST-NO)
Contact Rating		DC: 5 A @ 24 VDC AC: 5 A @ 250 VAC (47 ~ 63 Hz)
Operate Time		10 ms (Max.)
Release Time		5 ms (Max.)
Electrical Endurance		1 x 10 ⁵ ops
Mechanical Endurance		2 x 10 ⁷ ops
Surge Strength		Between Open Contact: 1000 VAC (1 Min.) Between Coil and Contacts: 3000 VAC (1 Min.)
Power on Value		Yes, Programmable
Safe Value		Yes, Programmable

■ Wire Connections



■ Dimensions (Units: mm)



Ordering Information

USB-2060 CR	USB I/O Module with Isolated 6-ch DI (Dry, Wet) and 6-ch Power Relay (RoHS)
USB-2000 CK	Includes CA-USB15 Cable (USB 2.0 A-Male to B-Male Cable, w/Ferrite Core, 1.5 M)

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