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 32-bit Counters
- 5A current contact rating
- Configurable Power-on Value Settings
- Safety functionality when communication failed
- 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
- Provide API library (VB/C++/C#.NET/VB.NET/LabVIEW)
- Module supported for Win2000/XP , Win7/8/10/11 (32/64 bit) and Linux (32/64 bit)

Introduction

The USB-2060 is a full-speed USB I/O device with 6 digital input channels and 6 Form A signal relay output channels. All digital input channels can be used as 32-bit counters. In addition, the digital input channels are sink or source type selectable via wire connections. The USB-2060 also offers 12 LED indicators that can be used to monitor the status of the digital input and relay output. Dual watchdog function that provided with configurable power-on and safe values ensures the device operates continuously, even in harsh environments.

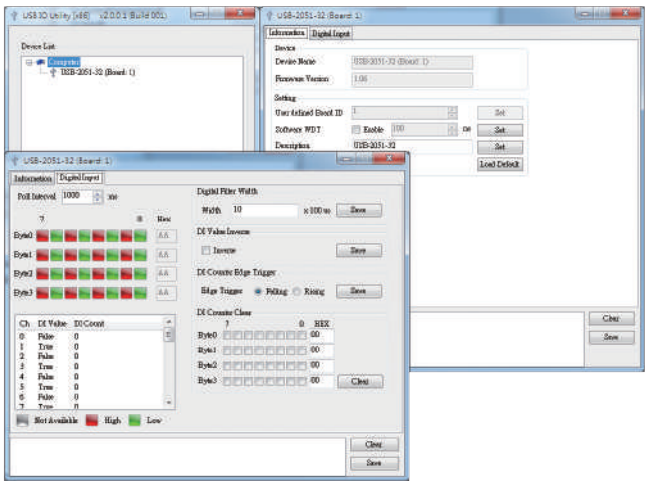
We also provide API library and demos with source code for Windows and Linux users to develop their own USB applications with various development tools (VB/C++/C#.NET/VB.NET/LabVIEW). Therefore, the USB-2060 is the perfect choose for you to implement I/O expansion via a plug-and-play USB interface.

Software

USB I/O Utility

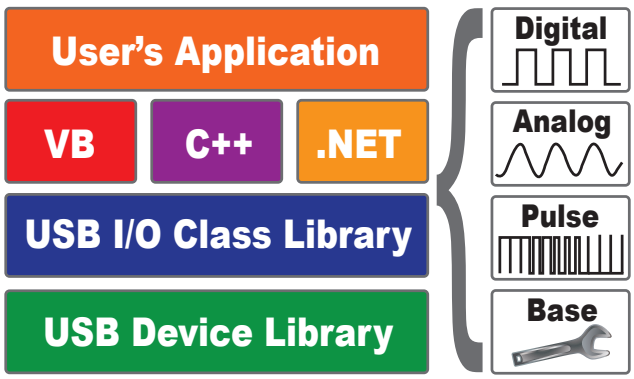
USB I/O Utility provides a simple way to easily test and instant acquire data for all ICP DAS USB I/O series modules without programming.

- 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/LabVIEW 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/LabVIEW to fulfill project development.



Applications

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

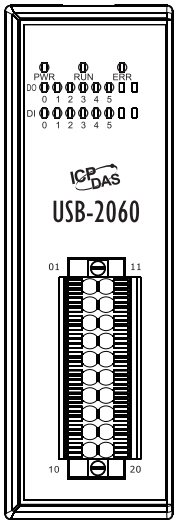
System Specifications

USB	
Specification	USB 1.1/2.0 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
	12 x DI and DO
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

I/O Specifications

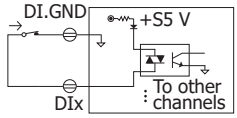
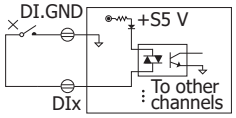
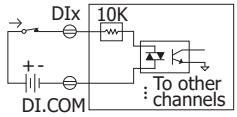
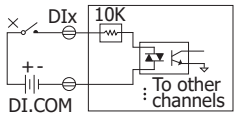
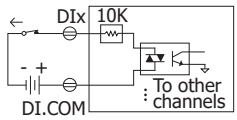
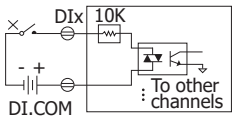
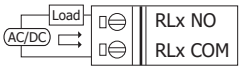
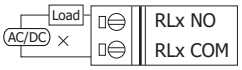
Digital Input/Counter		
Channels		6
Type		Dry Contact, Source Wet Contact, Sink/Source
Wet Contact	ON Voltage Level	+10 VDC ~ +50 VDC
	OFF Voltage Level	+4 VDC Max.
Dry Contact	ON Voltage Level	Close to GND
	OFF Voltage Level	Open
	Effective Distance	500 meters Max.
Max. Counts		32-bit
Frequency		500 Hz
Min. Pulse Width		1 ms
Input Impedance		10 KΩ
Overvoltage Protection		70 VDC
Intra-Module Isolation		3000 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
Intra-Module Isolation		3000 VDC

Pin Assignments

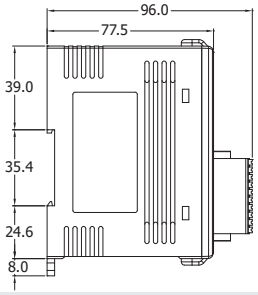


Pin Assignment	Terminal No.		Pin Assignment
RL0 NO	01	11	DI.GND
RL0 COM	02	12	DI0
RL1 NO	03	13	DI1
RL1 COM	04	14	DI2
RL2 NO	05	15	DI3
RL2 COM	06	16	DI4
RL3 NO	07	17	DI5
RL3 COM	08	18	DI.COM
RL4 NO	09	19	RL5 NO
RL4 COM	10	20	RL5 COM

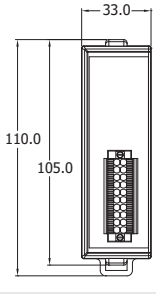
Wire Connections

Input	ON	OFF
Dry Contact		
Wet Contact (Sink)		
Wet Contact (Source)		
Output	**ON State LED ON Readback as 1**	**OFF State LED OFF Readback as 0**
Relay Contact		

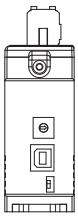
Dimensions (Units: mm)



Left View



Front View



Bottom View

Ordering Information

USB-2060 CR	USB I/O Module with Isolated 6-ch DI (Dry, Wet) and 6-ch Power Relay (RoHS) Includes 1.5M USB Cable (CA-USB15)