



USB-2055

USB I/O Module with Isolated 8-ch DI and 8-ch DO



USB-2055-32

USB I/O Module with Isolated 16-ch DI and 16-ch DO

Features

- 8/16-ch digital input and digital output
- Dry Contact and Wet Contact Selectable via Wire Connections
- All Channels can be used as 32-bit Counters
- Short Circuit, Overload and Overvoltage Protection
- 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-2055 and USB-2055-32 are full-speed USB I/O device with 8 or 16 digital input and digital output channels module. 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-2055/USB-2055-32 also offers 16/32 LED indicators that can be used to monitor the status of the digital input and digital output channels. Dual watchdog function that provided with configurable power-on and safe values ensures the device operates continuously, even in harsh environments.

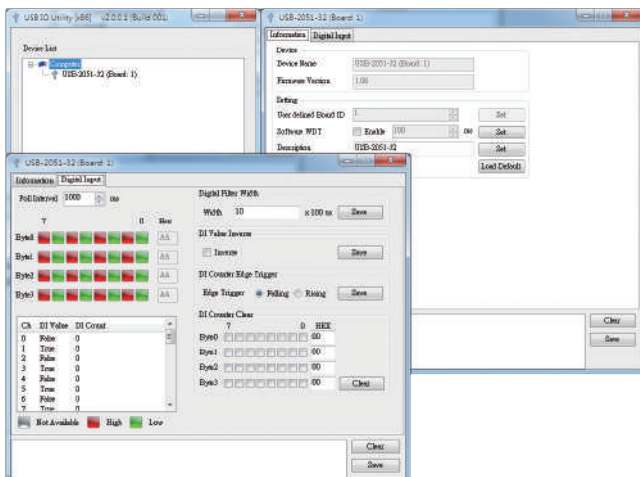
We also provide API library and demos with source code for Windows and Linux users to develop their own USB applications with various development tools (VB/C++/C#.NET/VB.NET/LabVIEW). Therefore, the USB-2055/USB-2055-32 is the perfect choose for you to implement I/O expansion via a plug-and-play USB interface.

Software

USB I/O Utility

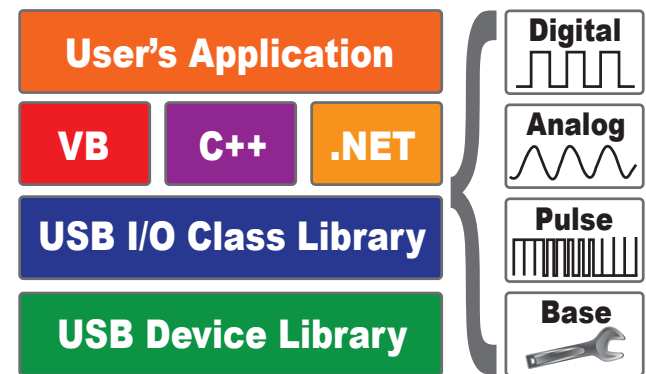
USB I/O Utility provides a simple way to easily test and instant acquire data for all ICP DAS USB I/O series modules without programming.

- 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

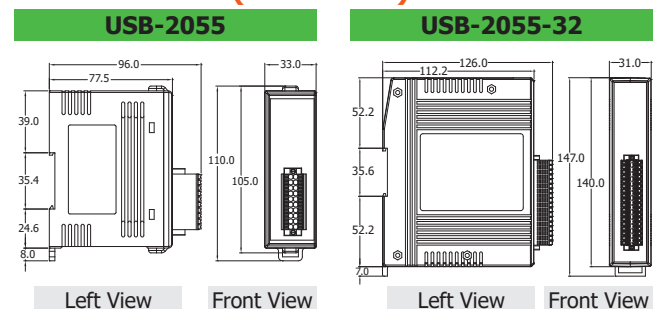


VB/C++/C#.NET/VB.NET/LabVIEW SDK

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.



Dimensions (Units: mm)



System Specifications

Model	USB-2055	USB-2055-32
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 16 x DI and DO	
Power		
Consumption	1.4 W	2.2 W
Mechanical		
Dimensions (mm) (W x L x H)	33 x 110 x 96	31 x 147 x 126
Environmental		
Operating Temperature	-25 ~ +75 °C	
Storage Temperature	-40 ~ +85 °C	
Humidity	10 ~ 95% RH, Non-condensing	

I/O Specifications

Model	USB-2055	USB-2055-32
Digital Input/Counter		
Channels	8	16
Type	Dry Contact, Source Wet Contact, Sink/Source	
Wet Contact	ON Voltage Level	+10 V _{DC} ~ +50 V _{DC}
	OFF Voltage Level	+4 V _{DC} 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 V _{DC}	
Intra-Module Isolation	3000 V _{DC}	
Digital Output		
Channels	8	16
Type	Open Collector, Sink (NPN)	
Load Voltage	+3.5 ~ +50 V _{DC}	
Max. Load Current	650 mA/Channel	600 mA/Channel
Overvoltage Protection	60 V _{DC}	
Overload Protection	1.4 A (with short-circuit protection)	
Power on Value	Yes, Programmable	
Safe Value	Yes, Programmable	
Intra-Module Isolation	3000 V _{DC}	

Applications

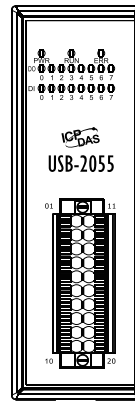
- Building automation
- Factory automation
- Machine automation
- Testing equipment
- Automation
- Measurement and testing
- Laboratory research

Ordering Information

USB-2055 CR	USB I/O Module with Isolated 8-ch DI (Dry, Wet) and 8-ch DO (Sink, NPN) (RoHS) Includes 1.5M USB Cable (CA-USB15)
USB-2055-32 CR	USB I/O Module with Isolated 16-ch DI (Dry, Wet) and 16-ch DO (Sink, NPN) (RoHS) Includes 1.5M USB Cable (CA-USB15)

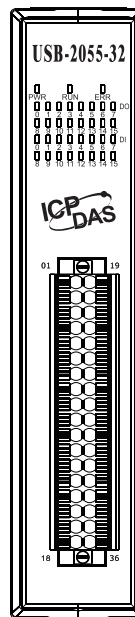
Pin Assignments

USB-2055



Pin Assignment	Terminal No.	Pin Assignment
DI.GND	01	11 DO.GND
DI0	02	12 DO0
DI1	03	13 DO1
DI2	04	14 DO2
DI3	05	15 DO3
DI4	06	16 DO4
DI5	07	17 DO5
DI6	08	18 DO6
DI7	09	19 DO7
DI.COM	10	20 DO.PWR

USB-2055-32



Pin Assignment	Terminal No.	Pin Assignment
DO.GND	01	19 DI.GND
DO0	02	20 DI0
DO1	03	21 DI1
DO2	04	22 DI2
DO3	05	23 DI3
DO4	06	24 DI4
DO5	07	25 DI5
DO6	08	26 DI6
DO7	09	27 DI7
DO8	10	28 DI8
DO9	11	29 DI9
DO10	12	30 DI10
DO11	13	31 DI11
DO12	14	32 DI12
DO13	15	33 DI13
DO14	16	34 DI14
DO15	17	35 DI15
DO.PWR	18	36 DI.COM

Wire Connections

	ON	OFF
Input		
Dry Contact		
Wet Contact (Sink)		
Wet Contact (Source)		
Output		
Drive Relay		
Resistance Load		