USB-2026

USB I/O Module with 5-ch AI, 2-ch AO, 2-ch DI and 2-ch DO

Features

- Multifunction (5 AI, 2 AO, 2 DI and 2 DO)
- Overload and Short Circuit Protection for Digital Output
- 240 Vrms Overvoltage Protection for Voltage Input
- 4~20 mA current output provide Open Wire Detection
- Individual Channel Configuration
- USB 2.0 Full-Speed (12Mbps)
- USB Bus Powered
- Lockable USB cable
- Driver Free

Introduction

The USB-2026 is a multifunction module that includes 5 analog input channels, 2 analog output channels, 2 digital input channels, 2 digital output channels and compatibles with USB 2.0 full-speed. It equips small size, portable, USB bus powered, various input type features to help user build up own project easily and quickly.

Compare with traditional PC I/O card, it is waste of time to open chassis and configure I/O board. In ICP DAS USB I/O, you will enjoy the simply controlling I/O in the efficient way. ICP DAS USB I/O equips USB bus powered feature, one cable to access I/O and provide power without additional power wiring. ICP DAS USB I/O is a small size module. You can use these I/O modules in wide range application, ex: fan-less control or measurement, automatically testing with BOX-PC…etc.

The USB-2026 provides a programmable input range on all analog input (±150 mV, ±500 mV, ±1 V, ±5 V, ±10 V, ±20 mA or 0 ~ +20 mA), analog outputs are 12-bit at ±5 V, ±10 V, 0 ~ +20 mA or +4 ~ +20 mA and all digital outputs can be set as alarm output. Each analog input can be configured for an individual range and provides a high overvoltage protection of 240 Vrms.

Applications

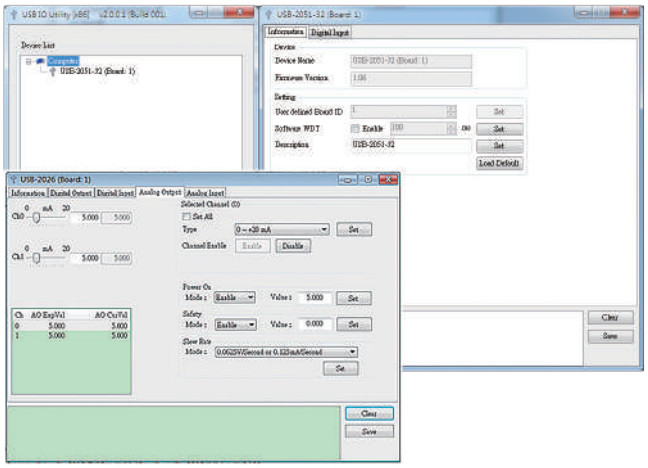
- Automation
- Measurement and testing
- Laboratory research

Software

USB-2K Utility

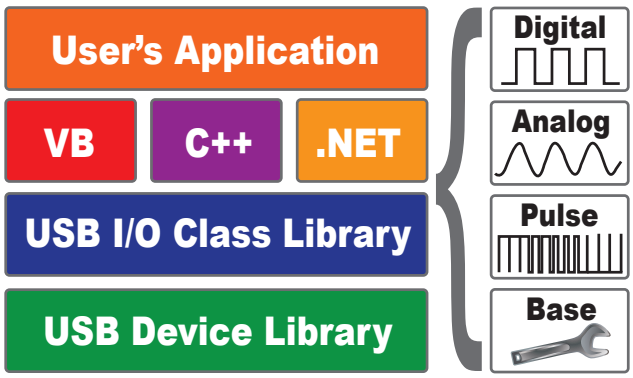
USB-2K Utility provides a simple way to easily test and instant acquire data for all ICP DAS USB IO series modules without programming.

- USB module configuration
- I/O configuration
- Log Data analysis
- Easy to test



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.



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
Power	
Consumption	2.2 W Max.
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

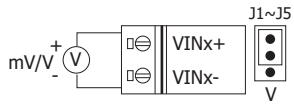
Pin Assignments

Pin Assignment	Terminal No.		Pin Assignment
VIN0+	01	11	VIN0-
VIN1+	02	12	VIN1-
VIN2+	03	13	VIN2-
VIN3+	04	14	VIN3-
VIN4+	05	15	VIN4-
VOUT0+	06	16	AGND
VOUT1+	07	17	AGND
DI0	08	18	DO0
DI1	09	19	DO1
DGND	10	20	DGND

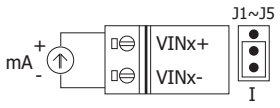
Wire Connections

Analog Input

Voltage

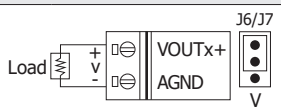


Current

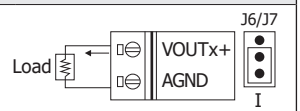


Analog Output

Voltage



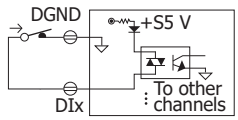
Current



Digital Input

Dry Contact

ON



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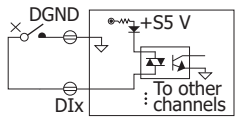
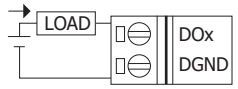


Digital Input

Load

ON



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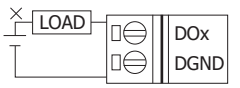
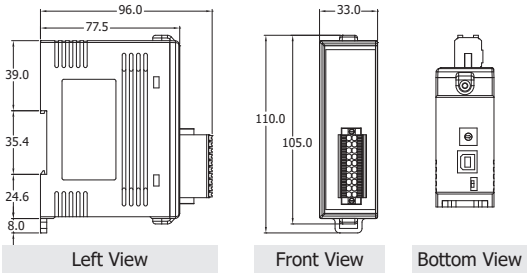


I/O Specifications

Analog Input		
Channels		5 Differential
Type		Voltage, Current
Range	Voltage	±1 V, ±2.5 V, ±5 V, ±10 V
	Current	±20 mA, 0 ~ 20 mA, 4 ~ 20 mA
Resolution	Normal Mode	14-bit
	Fast Mode	12-bit
Accuracy	Normal Mode	±0.1% FSR
	Fast Mode	±0.5 % FSR
Sampling Rate	Normal Mode	10 Hz
	Fast Mode	200 Hz
Input Impedance	Voltage	20 MΩ
	Current	135 Ω
Overvoltage Protection	Voltage	120 VDC
	Current	N/A
Overcurrent Protection	Voltage	N/A
	Current	Yes, 50 mA at 110 VDC
Zero Drift		±20 μV/°C
Span Drift		±25 ppm/°C
Analog Output		
Channels		2
Range	Voltage	+0 ~ +5 VDC, +0 ~ +10 VDC, ±5 VDC, ±10 VDC
	Current	+0 ~ +20 mA, +4 ~ +20 mA
Resolution		12-bit
Accuracy		±0.1% of FSR
Open Wire Detection		Yes, for 4 ~ 20 mA only
Voltage Output Capability		10 V @ 20 mA
Power on Value		Yes
Safe Value		Yes
Digital Input/Counter		
Channels		2
Type		Dry Contact, Source
ON Voltage Level		Close to GND
OFF Voltage Level		Open
Max. Counts		32-bit
Frequency		100 Hz
Min. Pulse Width		10 ms
Input Impedance		10 KΩ, 0.5 W
Overvoltage Protection		±57 VDC
Digital Output		
Channels		2
Type		Isolation Open Collector (Sink)
Load Voltage		+3.5 ~ +50 VDC
Max. Load Current		700 mA/Channel
Overvoltage Protection		±60 VDC
Overload Protection		1.4 A (with short-circuit protection)
Short-Circuit Protection		Yes
Power on Value		Yes, Programmable
Safe Value		Yes, Programmable

Dimensions (Units: mm)



Ordering Information

USB-2026 CR	USB I/O Module with 5-ch AI, 2-ch AO, 2-ch DI and 2-ch DO (RoHS) Includes 1.5M USB Cable (CA-USB15)