USB-2064
USB I/O Module with 8-ch Power Relay

USB-2064-16
USB I/O Module with 16-ch Power Relay

Features

- 8/16-ch power relay output
- 5A maximum current contact rating for USB-2064
- Safety functionality when communication failed
- Wide operating temperature range
- 3000 VDC Intra-Module isolation for USB-2064-16
- USB 2.0 Full-Speed (12Mbps)
- USB Bus Powered
- Plug-and-Play without driver
- Lockable USB cable
- PWR / RUN / ERR LED indicators

Introduction

The USB-2064 and USB-2064-16 are full-speed USB device with 8-ch or 16-ch power relay output module, and offers features for industrial control and manufacturing test applications, such as factory automation or embedded machine control. The USB-2064/USB-2064-16 provides a power rated relay with 5A/3A maximum current contact rating for switching. Besides, the USB-2064/USB-2064-16 also features power-on value to customize the initial state. Moreover, the safety value can be used to secure the devices in the field. 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-2064/USB-2064-16.

The USB I/O utility can help users to configure and test USB-2064/USB-2064-16 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-2064/USB-2064-16 is the perfect way to add control capability to any USB capable computer.
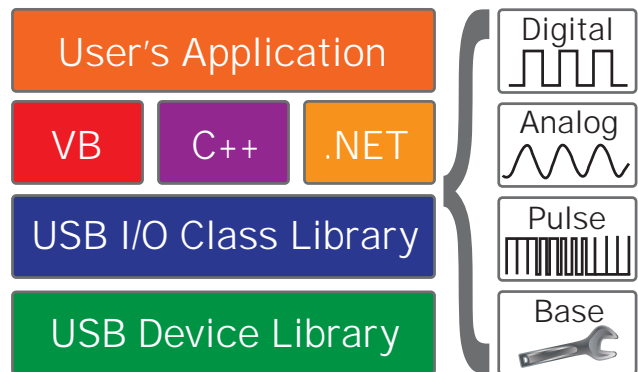
Software

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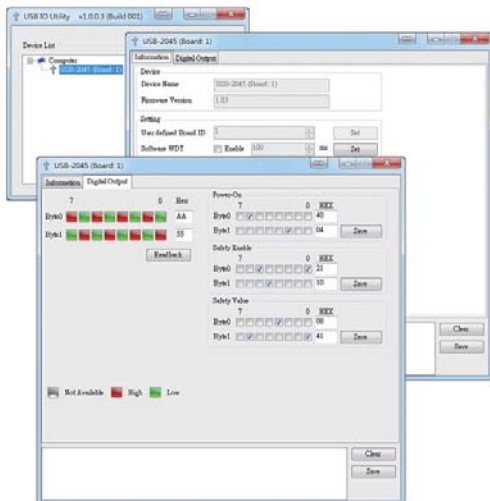
VB/C++/C#.NET/VB.NET SDK

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.

User's Application

VB | C++ | .NET

USB I/O Class Library

USB Device Library

Digital | Analog | Pulse | Base

Applications

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

■ System Specifications

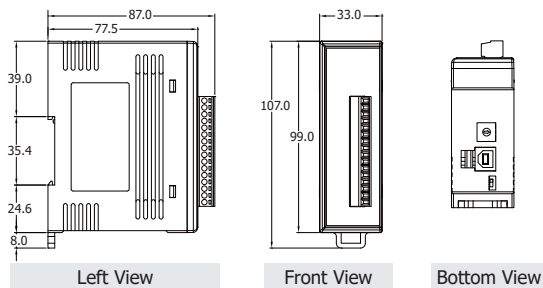| Model	USB-2064	USB-2064-16
USB		
Specification	USB 2.0 Full-Speed (12Mbps)	
CPU Module		
Watchdog Timer	1 Hardware watchdog (1.6 second) 1 Software watchdog (Programmable)	
Isolation		
Intra-module Isolation	-	3000 VDC
EMS Protection		
ESD (IEC 61000-4-2)	4 kV contact for each terminal 8 kV air for random point	
LED Indicators		
Status	3 x Power and Communication	
	8 x Power Relay	16 x Power Relay
Power		
Consumption	1.4 W	2.3 W (Max.)
Mechanical		
Dimensions (mm) (W x L x H)	33 x 107 x 87	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-2064	USB-2064-16
Relay Output		
Channels	8 x Form A (SPST-NO)	16 Form A (SPST-NO)
Contact Rating	5 A @ 250 VAC (47 ~ 63 Hz) 5 A @ 30 VDC	3 A @ 250 VAC (47 ~ 63 Hz) 3 A @ 30 VDC
Operate Time	10 ms (Max.)	
Release Time	5 ms (Max.)	
Electrical Endurance	1×10^5 ops	
Mechanical Endurance	2×10^7 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

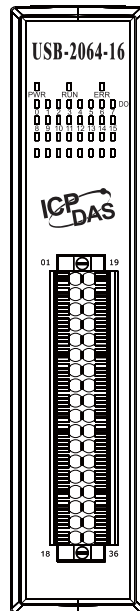## ■ Dimensions (Units: mm)

USB-2064

Left View   Front View   Bottom View

USB-2064-16

Left View   Front View   Bottom View
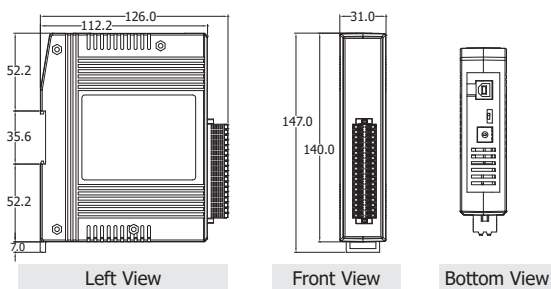
■ Pin Assignments

USB-2064
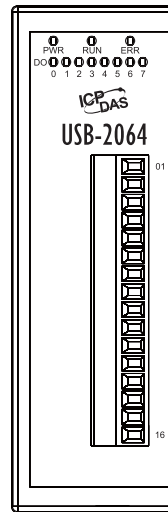
Pin Assignment	Terminal No.
RL0 NO	01
RL0 COM	02
RL1 NO	03
RL1 COM	04
RL2 NO	05
RL2 COM	06
RL3 NO	07
RL3 COM	08
RL4 NO	09
RL4 COM	10
RL5 NO	11
RL5 COM	12
RL6 NO	13
RL6 COM	14
RL7 NO	15
RL7 COM	16

USB-2064-16

Pin Assignment	Terminal No.		Pin Assignment
NO0	01	19	COM0
NO1	02	20	COM1
NO2	03	21	COM2
NO3	04	22	COM3
NO4	05	23	COM4
NO5	06	24	COM5
NO6	07	25	COM6
NO7	08	26	COM7
N/A	09	27	N/A
N/A	10	28	N/A
NO8	11	29	COM8
NO9	12	30	COM9
NO10	13	31	COM10
NO11	14	32	COM11
NO12	15	33	COM12
NO13	16	34	COM13
NO14	17	35	COM14
NO15	18	36	COM15

■ Wire Connections

Output	ON State LED ON Readback as 1	OFF State LED OFF Readback as 0
Relay Contact	RLx NO / RLx COM	RLx NO / RLx COM

■ Ordering Information

USB-2064 CR	USB I/O Module with 8-ch Power Relay (RoHS) Includes CA-USB15 Cable (USB 2.0 A-Male to B-Male Cable, w/Ferrite Core, 1.5 M)
USB-2064-16 CR	USB I/O Module with 16-ch Power Relay (RoHS) Includes CA-USB15 Cable (USB 2.0 A-Male to B-Male Cable, w/Ferrite Core, 1.5 M)