

# USB I/O Quick Start

## 1 Module Overview

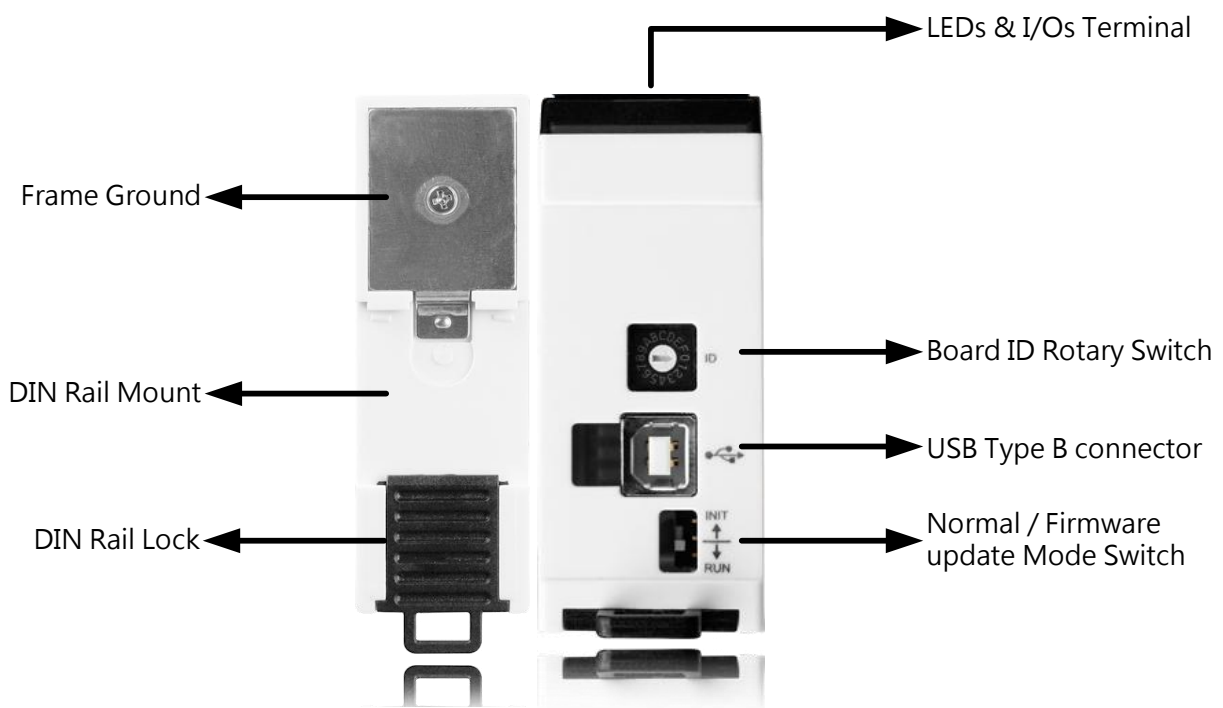


Figure 1-1 Module Overview

### Board ID Rotary Switch

0 : User defined (Software Programmable)

1 ~ 15 : Fix board ID

### Normal / Firmware Update Mode Switch

INIT : Firmware update mode

RUN : Normal mode

## 2 Product Check List

The package includes the following items:

- One ICP DAS USB I/O module
- One Quick Start
- One USB cable with lockable kit

It is highly recommended to read the Quick Start first before using ICP DAS USB I/O modules. There is some useful information in the Quick Start:

- How to install hardware and use utility

## 3 LED Indicators

### 3.1 Normal Mode

LED Indicators	LED Status	Causes
PWR (Yellow)	Blink	HW WDT triggered
	Solid	Normal Operation
	Off	Power Off
RUN (Green)	Blink	USB Bus Communicating
	Off	USB Bus Idle
ERR (Red)	Blink (Less frequent)	Warning ( <b>Does not</b> affect the operation)
	Blink	Minor Error ( <b>Does not</b> affect the operation)
	Solid	Major Error ( <b>Does</b> affect the operation)
	Off	No Error

### 3.2 Firmware Update Mode

LED Indicators	LED Status	Causes
ALL	Blink	Waiting for firmware to update

# 4 Hardware Installation

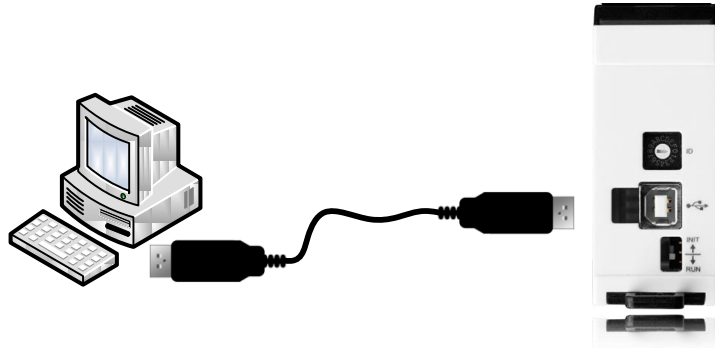


Figure 4-1 Connection diagram

## 4.1 Connect to ICP DAS USB I/O series module

1. Turning on the PC you are preparing to configure ICP DAS USB I/O modules.
2. Connecting the ICP DAS USB series I/O modules to USB 2.0 port or higher on the PC by using cable in the box.
3. Once you first time connect the USB I/O module to PC. There will be few messages in system bar in bottom right side to inform new hardware is detected and installed successfully. After the message is shown as figure 3-2, then the ICP DAS USB series I/O modules are ready to use.

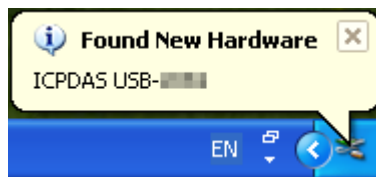


Figure 4-2 The system detects the ICPDAS USB series I/O modules has plugged in

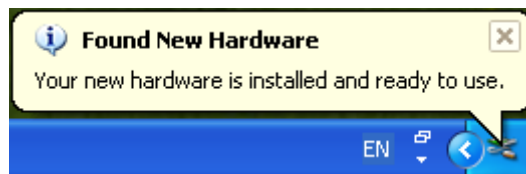


Figure 4-3 The ICPDAS USB series I/O modules are ready to use

# 5 Software Installation

The software installer includes libraries, samples and Utility, and can be found in web site. You can install the package by double clicking the file "ICPDAS USB IO X.X.X.exe". Then follow the instruction during installation.

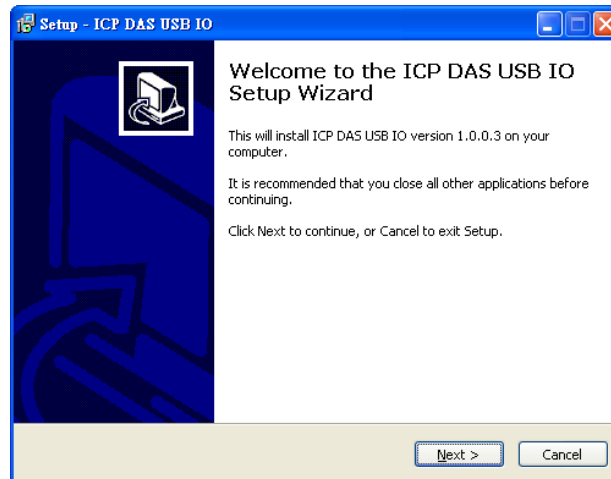


Figure 5-1 The welcome message of the ICP DAS USB series I/O installer

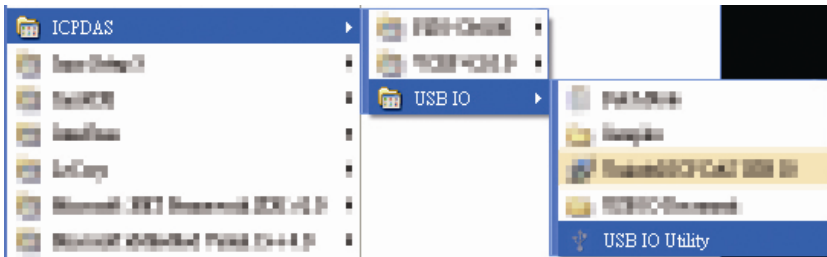
After the installation, the window will indicate the installation has completed as the figure below. Users can check the patch note to see the change or ignore.



Figure 5-2 The installation has complete

### 5.1.1 Utility

The USB I/O Utility provides a simple way to test and acquire data easily and instantly for all ICP DAS USB series I/O modules without programming. You will find this program in “Start\Programs\ICPDAS\USB IO\USB IO Utility” or the path “C:\ICPDAS\USB IO\USB IO Utility\USB IO Utility.exe”. The detail of how to use USB-2K Utility can be referred to user’s manual in section 3.2.1.



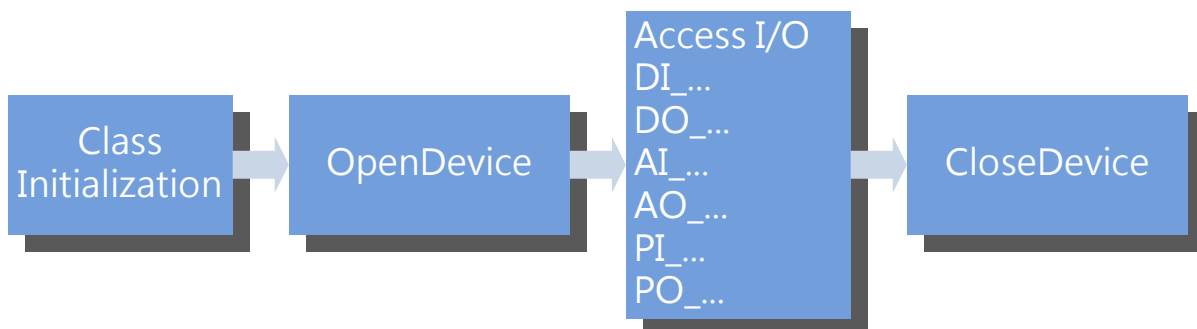
### 5.1.2 ICP DAS USB I/O SDK

The USB I/O libraries are the way to access ICP DAS USB series I/O modules. It supports various IDE like C#/VB.NET/VB/VC/BCB. Users can choose any IDE you familiar with. Before starting up project, you need to do some configuration to integrate the SDK into your IDE. The following section will indicate you how to integrate the SDK into your IDE.

### 5.1.3 Samples

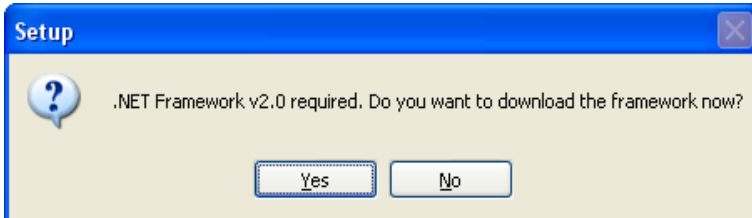
There are several samples to help user to develop project smoothly. The samples can be found in “Start\Programs\ICPDAS\USB IO\Samples” or the path “C:\ICPDAS\USB IO\Samples”

## 6 Software Development Diagram



# 7 Troubleshooting

1. Cannot install ICP DAS USB I/O package with the message like the following figure.



Because the ICP DAS USB I/O requires .NET Framework v2.0, the package will automatically detect the .NET Framework v2.0 installed as well or not. Users can click “Yes” to download and install the .NET Framework v2.0 via internet. If users can not access internet, the other way is install .NET Framework v2.0 in the folder “net\_framework ” in the root path of the CD.

2. **Returning timeout error code (65792) after calling set methods or read value.**

There are some possible reasons as follow:

- USB modules connected to USB hub not local USB port on computer, and communication timeout is too low to communicate.  
(Note: We strong recommended connecting USB modules to local USB port on computer to prevent unexpected problem.)
- Module is failure caused by unknown reason. You can refer to LED indicators section.

## 8 Related Link

- The main page of the USB I/O

[http://www.icpdas.com.tw/product/solutions/pc\\_based\\_io\\_board/usb\\_io/usb\\_io\\_introduction.html](http://www.icpdas.com.tw/product/solutions/pc_based_io_board/usb_io/usb_io_introduction.html)

- The product selection guide of the USB I/O

[http://www.icpdas.com.tw/product/solutions/pc\\_based\\_io\\_board/usb\\_io/usb\\_io\\_selection.html](http://www.icpdas.com.tw/product/solutions/pc_based_io_board/usb_io/usb_io_selection.html)