USB-2000 series compact I/O

USB-2084

4/8-channel Counter/Frequency/Encoder Module

Features

- 8-channel for Frequency and Up Counters Types.
- 4-channel for Up/Down, Dir/Pulse and A/B Phase Counters Types.
- Support digital filter (1~32767 us)
- 4kV ESD protection
- Wide operating temperature range:-25°C~+75°C
- No external power supply (USB Bus Powered)
- Plug-and-Play without driver installation
- Built-in dual watchdog (hardware/software)
- Module supported for Win2000/XP and Win7 (32/64 bit)

Introduction

The USB-2084 is a full-speed USB device with 8-channel for Frequency and Up Counters, or 4-channel for Up/Down, Dir/Pulse and A/B Phase Counters, and offers features for industrial control and manufacturing test applications, such as factory automation or embedded machine control. 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 a peripheral.

The USB I/O utility can help users to configure and test USB-2084 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-2084 is the perfect way to add measurement and control capability to any USB capable computer.

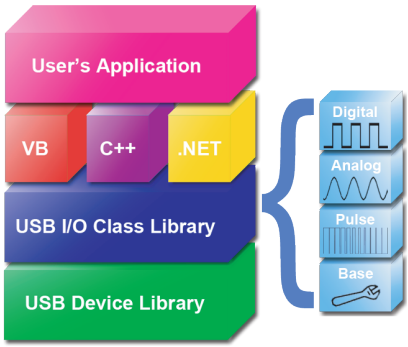
Application

- Counter measurement
- Frequency measurement
- Motion control

Software

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.



Pin Assignment

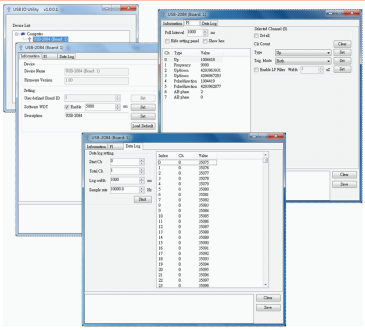
Terminal No.	Pin Assignment
01	C0A+
02	C0A-
03	C0B+
04	C0B-
05	C1A+
06	C1A-
07	C1B+
08	C1B-
09	C2A+
10	C2A-
11	C2B+
12	C2B-
13	C3A+
14	C3A-
15	C3B+
16	C3B-
17	GND
18	GND
19	N.C
20	N.C

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



Specification

Input		
Channels	4 channels for Up/Down, Dir/Pulse and A/B Phase types 8 channels for Up and Frequency types	
Input Type	Up, Frequency, Up/Down, Dir/Pulse, A/B Phase	
Resolution	32 bit	
Input Frequency	Non-isolated: 500KHz maximum Isolated: 250KHz maximum	
Digital Noise Filter	1~32767uS (Software programmable)	
Frequency Accuracy	±0.4%	
Isolated Input Level	On Voltage Level	+4.5V_{DC}~+30V_{DC}
	Off Voltage Level	+1V_{DC} maximum
Non-isolated Input Level (TTL)	On Voltage Level	+2V_{DC}~+5V_{DC}
	Off Voltage Level	0V_{DC}~+0.8V_{DC}
Intra-Module Isolation, Field-to-Logic	2500 V_{DC}	
Individual Channel Configuration	Yes	
Communication		
Interface	USB 2.0 Full-Speed	
Watchdog	1 Hardware watchdog (1.6 second) 1 Software watchdog (Programmable)	
LED Indicators		
System LED Indicators	3 LED as Power, Run and Error	
I/O LED indicators	8 LED for all channels	
EMS Protection		
ESD (IEC 61000-4-2)	4 kV contact for each terminal 8 kV air for random point	
Mechanical		
Dimensions(W×L×H)	33mm × 102mm × 107mm	
Environment		
Operating Temperature	-25 ~ +75℃	
Storage Temperature	-40 ~ +85℃	
Humidity	10 ~ 95% RH, non-condensing	
Power		
Power Consumption	Maximum: 1.11W	

Ordering Information

USB-2084	4/8-channel Counter/Frequency/Encoder Module (RoHS)