

# Universal Analog Input Module

USB-2019



## USB-2019

8-channel Universal Analog Input Module with High Voltage Protection

### Features

- 8 Differential Universal Analog Input Channels
- 4kV ESD protection
- Wide Operating Temperature Range
- 240 V<sub>rms</sub> Overvoltage Protection
- 3000 V<sub>oc</sub> Intra-Module Isolation
- USB 2.0 Full-Speed
- USB Bus Powered
- Lockable USB cable
- Driver Free



### Introduction

USB-2019 is a universal analog input module with 8 differential universal analog input channels and compatible 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.

### Pin Assignment

Pin Assignment	Terminal	No.	Pin Assignment
+5V	01	14	AGND
CJC	02	15	CH 0+
CH 0-	03	16	CH 1+
CH 1-	04	17	CH 2+
CH 2-	05	18	CH 3+
CH 3-	06	19	CH 4+
CH 4-	07	20	CH 5+
CH 5-	08	21	CH 6+
CH 6-	09	22	CH 7+
CH 7-	10	23	N.C.
N.C.	11	24	N.C.
N.C.	12	25	N.C.
N.C.	13		Shield F.G.

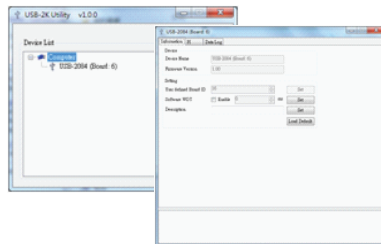
25-pin Female D-Sub Connector

CH 0/24	Pin Assignment Name
CH0+	CH 0+
CH0-	CH 0-
CH1+	CH 1+
CH1-	CH 1-
CH2+	CH 2+
CH2-	CH 2-
CH3+	CH 3+
CH3-	CH 3-
CH4+	CH 4+
CH4-	CH 4-
CH5+	CH 5+
CH5-	CH 5-
CH6+	CH 6+
CH6-	CH 6-
CH7+	CH 7+
CH7-	CH 7-
AGND	AGND
AGND	AGND

### Software

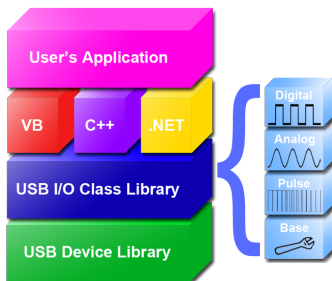
#### USB IO Utility

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



#### .NET / VC / BCB / VB

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 various environments.



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## Specification

Input	
Channels	8 differential
Input Type	Voltage : $\pm 15$ mV, $\pm 50$ mV, $\pm 100$ mV, $\pm 150$ mV, $\pm 500$ mV, $\pm 1$ V, $\pm 2.5$ V, $\pm 5$ V, $\pm 10$ V Current : $\pm 20$ mA, 0 ~ $+20$ mA, $+4 \sim +20$ mA (External resistor is required) Thermocouple : J, K, T, E, R, S, B, N, C, L, M and LDIN43710
Resolution	16 bit
Accuracy	$\pm 0.1\%$ FSR
Sampling Rate	10 Hz ( Total )
Zero Drift	$\pm 20$ $\mu$ V/ $^{\circ}$ C
Span Drift	$\pm 25$ ppm/ $^{\circ}$ C
Common Mode Rejection	86 dB Min.
Normal Mode Rejection	100 dB
Input Impedance	Voltage input : $> 400$ k $\Omega$ , Current input : 125 $\Omega$ (An external resistor is required)
Intra-Module Isolation, Field-to-Logic	3000 V <sub>DC</sub>
Overvoltage protection	240 V <sub>rms</sub>
Individual Channel Configuration	Yes
Open Wire Detection	Yes (Software programmable)
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
EMS Protection	
ESD ( IEC 61000-4-2 )	4 kV contact for each terminal 8 kV air for random point
Mechanical	
Dimensions	Body      33mm $\times$ 78mm $\times$ 107mm
( W $\times$ L $\times$ H )	CN-1824    29mm $\times$ 43mm $\times$ 83mm
Environment	
Operating Temperature	-25 ~ +75 $^{\circ}$ C
Storage Temperature	-40 ~ +85 $^{\circ}$ C
Humidity	10 ~ 95% RH, non-condensing
Power	
Power Consumption	Maximum: 1.45W

## Ordering Information

USB-2019	8-channel Universal Analog Input Module with High Voltage Protection (RoHS), include CN-1824
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