

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_{rms} Overvoltage Protection
- 3000 V_{oc} 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.

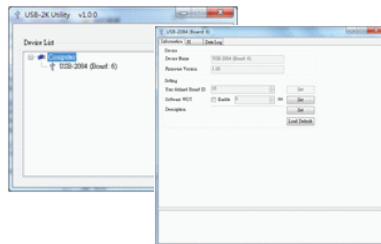
25-pin Female D-Sub Connector

Pin Assignment	Pin Assignment Name
CH 0+	CH 0+
CH 0-	CH 0-
CH 1+	CH 1+
CH 1-	CH 1-
CH 2+	CH 2+
CH 2-	CH 2-
CH 3+	CH 3+
CH 3-	CH 3-
CH 4+	CH 4+
CH 4-	CH 4-
CH 5+	CH 5+
CH 5-	CH 5-
CH 6+	CH 6+
CH 6-	CH 6-
CH 7+	CH 7+
CH 7-	CH 7-
AGND	AGND
AGND	AGND

Software

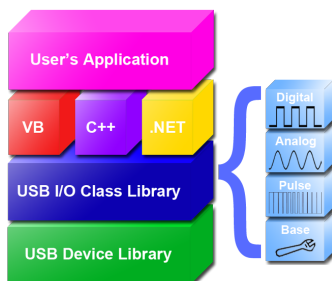
USB IO Utility

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 : ±15 mV, ±50 mV, ±100 mV, ±150 mV, ±500 mV, ±1 V, ±2.5 V, ±5 V, ±10 V	
	Current : ±20 mA, 0 ~ +20 mA, +4 ~ +20 mA (External resistor is required)	
	Thermocouple : J, K, T, E, R, S, B, N, C, L, M and LDIN43710	
Resolution	16 bit	
Accuracy	±0.1% FSR	
Sampling Rate	10 Hz (Total)	
Zero Drift	±20 μV/°C	
Span Drift	±25 ppm/°C	
Common Mode Rejection	86 dB Min.	
Normal Mode Rejection	100 dB	
Input Impedance	Voltage input : > 400 kΩ, Current input : 125Ω (An external resistor is required)	
Intra-Module Isolation, Field-to-Logic	3000 V _{DC}	
Overvoltage protection	240 V _{rms}	
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 × 78mm × 107mm
(W×L×H)	CN-1824	29mm × 43mm × 83mm
Environment		
Operating Temperature	-25 ~ +75°C	
Storage Temperature	-40 ~ +85°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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