

## XB310

4-ch AI, 4-ch AO, 4-ch DI and 4-ch DO  
Expansion Board

### Features

- Multifunction (4 AI, 4 AO, 4 DI, 4 DO)
- Individual Channel Configuration
- Switch Selectable Voltage or Current Input/Output
- Open Wire Detection for Current Output
- Configurable Power-on Value Settings
- Digital Input Channels can be used as 32-bit Counters



### Introduction

The XB310 is a multifunction expansion board that includes 4 analog input channels, 4 analog output channels, 4 digital input channels and 4 digital output channels.

It provides a programmable input range on all analog input channels (+/-2.5 V, +/-5 V, +/-10 V, +/-20 mA, 0 ~ 20 mA or 4 ~ 20 mA), analog output channels are 12-bit at 0 ~ 10 V, 0 ~ 20 mA or 4 ~ 20 mA. Each analog input channel can be configured for an individual range and provides a high overvoltage protection of 60 VDC.

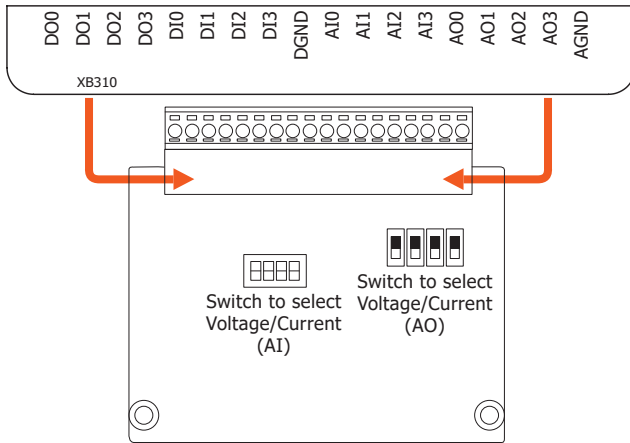
Voltage and current inputs/outputs are switch selectable.

### Specifications

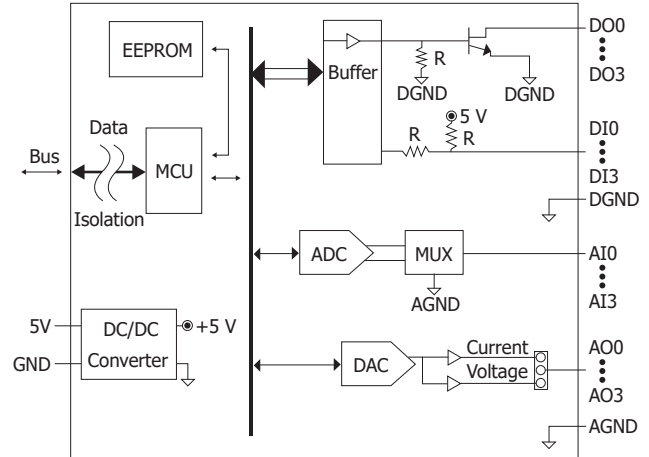
Isolation		
Intra-module Isolation	2000 VDC	
EMS Protection		
ESD (IEC 61000-4-2)	±4 kV Contact For Each Terminal	
	±8 kV Air For Random Terminal	
Analog Input		
Channels	4	
Type	±2.5 V, ±5 V, ±10 V, ±20 mA, 0 ~ 20 mA, 4 ~ 20 mA (Switch Selectable)	
Resolution	16-bit	
Accuracy	Normal Mode	±0.1%
	Fast Mode	±0.5%
Sampling Rate	Normal Mode	10 Hz
	Fast Mode	500 KHz(Total)
Overvoltage Protection	60 VDC	
Individual Channel Configuration	Yes	
Analog Output		
Channels	4	
Type	0 V ~ +10 V, 0 mA ~ +20 mA, +4 mA ~ +20 mA (Switch Selectable)	
Resolution	12-bit	
Accuracy	±0.3%	
Voltage Output Capability	10 V @ 20 mA	
Current Load Resistance	500 Ω	
Individual Channel Configuration	Yes	

Digital Input/Counter		
Channels	4	
Dry Contact	Type	Source
	ON Voltage Level	Close to GND
	OFF Voltage Level	Open
Max. Counts	32-bit (0~4,294,967,285)	
Frequency	50 Hz	
Min. Pulse Width	10 ms	
Overvoltage Protection	60 VDC	
Digital Output		
Channels	4	
Type	Sink	
Load Voltage	+3.5 to +50 VDC	
Max. Load Current	700 mA/Channel	
Overvoltage Protection	60VDC	
Overload Protection	Yes	
Short-circuit Protection	Yes	
Power-on Value	Yes, Programmable	
USB		
Specification	USB 2.0 Full-Speed (12 Mbps)	
Power		
Consumption	1.9 W Max.	
Powered from Terminal Block	5 VDC	
Mechanical		
Dimensions (mm)	59 mm x 82 mm x 13 mm (W x L x H)	
Environmental		
Operating Temperature	-25 ~ +75 °C	
Storage Temperature	-30 ~ +80 °C	
Humidity	10 ~ 90% RH, Non-condensing	

## Pin Assignments



## Internal I/O Structure



## Wire Connections

Voltage Input		
Current Input		
Voltage Output		
Current Output		
Digital Input/Counter	ON State Readback as 1	OFF State Readback as 0
Dry Contact (Source)		
Digital Output	ON State Readback as 1	OFF State Readback as 0
Open Drain (Sink)		

## Ordering Information

<b>XV310 CR</b>	4-ch AI, 4-ch AO, 4-ch DI (Dry) and 4-ch DO (Sink,NPN,3.5~50VDC) Expansion Board (RoHS)
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