前置作業

在進行手動校正前需要準備輸出穩定的電源供應器與電表各一台。 (愈精密的電表校正的效果愈好)

接著將 AI 與電表、電源供應器並連,如下圖:



步驟1:輸入IP與Port後,點選Connect。

💀 Form1			- 🗆 X
1. 3. 2. IP 10.1.1.123 Connect	Gain 🗸		
Firmware DisConnect	Meter 1 Point_1	Meter 2 Point_2	ShowGainOffset
Step 1: Input IP ,Port and click 'Connect' button			
exit clear	clear	clear	clear

連線成功後會讀回 Firmware 版本。

步驟 2:輸出電壓(5V~0V)到 ch0~ch7 與電表。

步驟3:選擇要校正的 Gain Range、將電表的數值輸入於 Meter 1 並點選 Point 1。

🖳 Form1									-		×
IP	10.1.1.123	Connect	1. Gain <mark>+/- 5</mark> V	~							
Port	9999	DisConnect	2.	3.							
Firmware	02		Meter 1 4.7990	Point_1	Meter 2	Poir	nt_2	Show	GainOff	iset	
Step 1: Ing *Connect	put IP ,Port and clic server successful	k 'Connect' button									
Step 2: Ot	utput a voltage to ch	10~ch7 and voltage meta	r								
and (click Point 1	The monitor of the mete	•								
anit		oleer		clear]	cli	ear	L		cle	er
exit		clear		01001			~~~			CR	:01

*輸入越接近 Range 上限的電壓校正的效果越好.

按下 Point 1 後會顯示每個 Channel 讀到的 Raw Data.

💀 Form1		×
	FT7	
IP 10.1.1.123 Connect Gain +/- 5	-	
Port 9999 DisConnect		
Firmware 02 Meter 1 4.799	990 Point_1 Meter 2 Point_2 ShowGainOffset	
Step 1: Input IP, Port and click 'Connect' button Ch 0 + 4-5 V Re *Connect server successful Ch 0 + 4-5 V Re Step 2: Output a voltage to ch0-ch7 and voltage meter and click 'Point 1' Step 3: Step 5: Step 5: Input the number of the meter and click 'Point 2	Raw Data 7996 Raw Data 7995 Raw Data 7995 Raw Data 7997 Raw Data 7996 Raw Data 7996 Raw Data 7996	
exit	clear clear cl	ar

步驟 4:輸出電壓(-5V~0V)到 ch0~ch7 與電表。 步驟 5:於 Meter 2 輸入電表的值,然後點選 Point 2。

🖳 Form1	- 🗆 X
IP 10.1.1.123 Connect	Gain +/- 5V
Firmware 02 DisConnect	Meter 1 4.7990 Point_1 Meter 2 -4.7916 Point_2 ShowGainOffset
 Step 1: Input IP ,Port and click 'Connect' button *Connect server successful Step 2: Outputs a voltage to ch0-ch7 and voltage meter Step 3: elect the gain, input the number of the meter and click 'Point 1' Step 4: Outputs minus voltage to ch0-ch7 and voltage meter Step 5: Input the number of the meter and click 'Point 2 	ch 0 +/- 5V Raw Data 7996 ch 1 +/- 5V Raw Data 7991 ch 2 +/- 5V Raw Data 7995 ch 3 +/- 5V Raw Data 7992 ch 5 +/- 5V Raw Data 7997 ch 6 +/- 5V Raw Data 7990 ch 7 +/- 5V Raw Data 7990
exit	clear clear clear

*輸入越接近 Range 下限的電壓校正的效果越好.

按下 Point 2 後會顯示每個 Channel 讀到的 Raw Data.

🖶 Form1				- 🗆 X
IP	10.1.1.123 Connect	Gain +/- 5∀ ~		
Port	9999			
Firmware	02 DisConnect	Meter 1 4.7990 Point_1	Meter 2 -4.7916 Point_2	ShowGainOffset
Step 1: Inp *Connect: Step 2: Ou Step 3: Sel and c Step 4: Ou and v Step 5: Inp +A 5V Wn Choose an	ut IP, Port and click 'Connect' button server successful tput a voltage to ch0-ch7 and voltage meter cithe gain, input the number of the meter lick Toint 1' tput a minus voltage to ch0-ch7 oltage meter ut the number of the meter and click Toint 2 the Gain Offset Finished!! other gain and repeat Step 2 ~ Step 5	ch 0 +/- 5Y Raw Data 7996 ch 1 +/- 5Y Raw Data 7991 ch 2 +/- 5Y Raw Data 7997 ch 3 +/- 5Y Raw Data 7997 ch 4 +/- 5Y Raw Data 7992 ch 5 +/- 5Y Raw Data 7997 ch 6 +/- 5Y Raw Data 7990 ch 7 +/- 5Y Raw Data 7990	ch 0 +/- 57 Raw Data 86A1 ch 1 +/- 57 Raw Data 86A2 ch 2 +/- 57 Raw Data 86A2 ch 3 +/- 57 Raw Data 86A2 ch 3 +/- 57 Raw Data 86A2 ch 5 +/- 57 Raw Data 86A2 ch 6 +/- 57 Raw Data 86A2 ch 7 +/- 57 Raw Data 869C	
exit	clear	clear	clear	clear

IP 10.1.1.123 Connect Gain +/+ 10V Port 9999 DisConnect Meter 1 9.8020 Point_1 Meter 2 9.7991 Point_2 ShowGainOffset Step 1: Input IP, Port and click Connect' button *Connect server successful ch 0 +/- 5V Raw Data 7996 ch 0 +/- 5V Raw Data 66A2 ch 1 +/- 5V Raw Data 66A2 ch 2 +/- 5V Raw Data 66A2 Step 2: Output a voltage to ch0-ch7 and voltage meter and click Point 1' ch 0 +/- 5V Raw Data 7997 ch 3 +/- 5V Raw Data 66A2 ch 2 +/- 5V Raw Data 66A2 ch 4 +/- 5V Raw Data 66A2 Step 3: Digut the number of the meter and click Point 1' ch 4 +/- 5V Raw Data 7997 ch 4 +/- 5V Raw Data 66A2 ch 4 +/- 10V Raw Data 66A2 ch 4 +/- 10V Raw Data 66A2 ch 4 +/- 10V Raw Data 66A2 ch 4 +/- 5V Raw Data 66A2 ch 4 +/- 5V Raw Data 66A2 ch 4 +/- 10V Raw Data 83DE ch 5						
IP 101.1.123 Connect Port 9999 DisConnect Firmware 02 DisConnect Step 1: Input IP, Port and click Connect' button Meter 1 9.8020 Point_1 Meter 2 9.7991 Point_2 ShowGainOffset Step 1: Input IP, Port and click Connect button Connect server successful Ch 0 + / 5V Raw Data 7996 Ch 0 + / 5V Raw Data 7995 Ch 2 + / 5V Raw Data 86A2 Ch 2 + / 5V Raw Data 86A2 Step 2: Output a voltage to ch0-ch7 and voltage meter and click Foin11 Ch 4 + / 5V Raw Data 7995 Ch 3 + / 5V Raw Data 86A2 Ch 2 + / 5V Raw Data 86A2 Step 3: Select the gain, input the number of the meter and click Foin12 Ch 4 + / 5V Raw Data 7995 Step 3: Input the number of the meter and click Foin12 Ch 4 + / 10V Raw Data 7C22A Ch 1 + / 10V Raw Data 820C Ch 1 + / 10V Raw Data 830C + / 5V Write Gain Offset Finished!! Choes an Offset Finished!! Ch 2 + / 10V Raw Data 7C22B Ch 1 + / 10V Raw Data 830C Ch 1 + / 10V Raw Data 830C Chbration Finished!!!!!!! Check ShowGainOffset' Dution to check Gain Offset Check Ceax Cleax Cleax	🖳 Form1				- 0	×
Firmware DisConnect Meter 1 9.8020 Point_1 Meter 2 9.7991 Point_2 ShowGainOffset Step 1: Input IP, Port and click 'Connect' button "Connect server successful ch 0+/- 5V Raw Data 7096 ch 1+/- 5V Raw Data 7096 ch 2+/- 5V Raw Data 7095 ch 2+/- 10V Raw Data 7020 ch 2+/- 10V Raw Data 83DC ch 2+/- 10V Raw Data 83DC ch 5+/- 10V Raw Data 83DC Clear Clear	IP Port	10.1.1.123 Connect	Gain +/- 10V 🗸			
Step 1: Input IP, Port and click Connect' button ch 0 +/- 5V Raw Data 806A1 *Connect server successful ch 0 +/- 5V Raw Data 806A1 *Connect server successful ch 1 +/- 5V Raw Data 806A1 Step 2: Output a voltage to ch0-ch7 and voltage meter ch 3 +/- 5V Raw Data 804P2 and click Foint 1' ch 2 +/- 5V Raw Data 806PC Step 4: Output a minus voltage to ch0-ch7 ch 3 +/- 5V Raw Data 804P2 and click Foint 1' ch 3 +/- 5V Raw Data 804P2 Step 5: Input the number of the meter and click Foint 2 ch 1 +/- 10V Raw Data 702P6 ch 1 +/- 10V Raw Data 702P ch 1 +/- 10V Raw Data 804P2 ch 1 +/- 10V Raw Data 702P ch 1 +/- 5V Raw Data 804P2 ch 1 +/- 10V Raw Data 702P ch 2 +/- 5V Raw Data 804P2 ch 1 +/- 10V Raw Data 702P ch 2 +/- 5V Raw Data 804P2 ch 1 +/- 10V Raw Data 702P ch 2 +/- 10V Raw Data 702P ch 1 +/- 10V Raw Data 702P ch 1 +/- 10V Raw Data 702P ch 2 +/- 10V Raw Data 702P ch 2 +/- 10V Raw Data 83DC ch 3 +/- 10V Raw Data 702P ch 4 +/- 10V Raw Data 83DC ch 4 +/- 10V Raw Data 702P ch 4 +/- 10V Raw Data 83DC ch 4 +/- 10V Raw Data 702P ch 6 +/- 10V Raw Data 83DC ch 4 +/- 10V Raw Data 702P ch 6 +/- 10V Raw Data 83DC ch 4 +/- 10V Raw Data 702P ch 6 +/- 10V Raw Data 83DC ch 5 +/- 10V Raw Data 83DC ch 6 +/- 1	Firmware	02 DisConnect	Meter 1 9.8020 Point_1	Meter 2 -9.7991 Point_2	ShowGainOffset	
exit clear clear clear	Step 1: Enp *Connects Step 2: Ou Step 3: Step 4: Ou and v Step 5: Enp +A - 57W Wri Calibration Click Show	ut IP "Port and click 'Connect' button server successful tput a voltage to ch0~ch7 and voltage meter cit the gain , input the number of the meter lick Point I tput a minus voltage to ch0~ch7 oltage meter ut the number of the meter and click Point 2 the Gain Offset Finished!! other gain and repeat Step 2 ~ Step 5 to Gain Offset Finished!! .Finished !!!!!! wGainOffset' button to check Gain Gffset	ch 0 +/- 5V Raw Data 7996 ch 1 +/- 5V Raw Data 7991 ch 2 +/- 5V Raw Data 7995 ch 3 +/- 5V Raw Data 7997 ch 4 +/- 5V Raw Data 7997 ch 5 +/- 5V Raw Data 7997 ch 6 +/- 5V Raw Data 7990 ch 7 +/- 5V Raw Data 7990 ch 0 +/- 10V Raw Data 7020 ch 1 +/- 10V Raw Data 7C2A ch 1 +/- 10V Raw Data 7C2B ch 3 +/- 10V Raw Data 7C2B ch 5 +/- 10V Raw Data 7C2C ch 5 +/- 10V Raw Data 7C2C ch 6 +/- 10V Raw Data 7C20 ch 5 +/- 10V Raw Data 7C20 ch 6 +/- 10V Raw Data 7C20 ch 7 +/- 10V Raw Data 7C20	ch 0 +/- 5Y Raw Data 86A1 ch 1 +/- 5Y Raw Data 86A2 ch 2 +/- 5Y Raw Data 86A2 ch 3 +/- 5Y Raw Data 86A2 ch 3 +/- 5Y Raw Data 869C ch 6 +/- 5Y Raw Data 869C ch 6 +/- 5Y Raw Data 869C ch 0 +/-10Y Raw Data 83DC ch 1 +/-10Y Raw Data 83DD ch 3 +/-10Y Raw Data 83DD ch 3 +/-10Y Raw Data 83DD ch 4 +/-10Y Raw Data 83DC ch 6 +/-10Y Raw Data 83DF ch 7 +/-10Y Raw Data 83DF ch 7 +/-10Y Raw Data 83DF		
	exit	clear	clear	clear	cle	ar

接著請切換另一個 Gain Range 並重複步驟 2~步驟 5

當兩個 Gain Range 皆校正過後,待訊息出現 <u>Calibration Finished !!!</u>,即完成校正。

校正完成後	, 1	「以點選	ShowGainOffset	讀取	Gain (Offset
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🖳 Form1			- 🗆 X
IP 10.1.1.123 Connect	Gain +/- 10V 🗸		
Port 9999			
Firmware 02	Meter 1 9.8020 Point_1 M	Meter 2 -9.7991 Point_2	ShowGainOffset
 Step 1: Input IP, Port and click 'Connect' button *Connect server successful Step 2: Output a voltage to ch0~ch7 and voltage meter and click Point 1! Step 4: Output a minus voltage to ch0~ch7 and voltage meter Step 5: Input the number of the meter and click Point 2 +/- 5V Write Gain Offset Finished!! Choose another gain and repeat Step 2 ~ Step 5 +/-10V Write Gain Offset Finished!! Calibration Finished !!!!!! Calibration Finished !!!!!! Click ShowGainOffset' button to check Gain Gffset 	ch 0 +/- 5V Raw Data 7996 ch 1 +/- 5V Raw Data 7991 ch 2 +/- 5V Raw Data 7995 ch 3 +/- 5V Raw Data 7997 ch 4 +/- 5V Raw Data 7992 ch 5 +/- 5V Raw Data 7990 ch 7 +/- 5V Raw Data 7990 ch 0 +/-10V Raw Data 7200 ch 0 +/-10V Raw Data 7C28 ch 1 +/-10V Raw Data 7C28 ch 3 +/-10V Raw Data 7C28 ch 5 +/-10V Raw Data 7C29 ch 6 +/-10V Raw Data 7C29 ch 7 +/-10V Raw Data 7C29 ch 7 +/-10V Raw Data 7C24	ch 0 +/- 5V Raw Data 86A1 ch 1 +/- 5V Raw Data 86A2 ch 2 +/- 5V Raw Data 86A2 ch 3 +/- 5V Raw Data 86A2 ch 4 +/- 5V Raw Data 86A2 ch 5 +/- 5V Raw Data 86A2 ch 7 +/- 5V Raw Data 83DC ch 0 +/-10V Raw Data 83DD ch 2 +/-10V Raw Data 83DD ch 3 +/-10V Raw Data 83DC ch 5 +/-10V Raw Data 83DF ch 5 +/-10V Raw Data 83DF ch 7 +/-10V Raw Data 83DF	+/- 5V ch0 User Gain 33112 Offset -3 Default Gain 33115 Offset -1 Default Gain 33113 Offset -1 Default Gain 33113 Offset -1 Default Gain 33108 Offset -3 Default Gain 33100 Offset -3 Default Gain 33100 Offset -1 Default Gain 33100 Offset -1 Default Gain 33102 Offset -1 Default Gain 33108 Offset -1 Default Gain 33108 Offset -1 Default Gain 33108 Offset -1 Default Gain 33108 Offset -1 Default Gain 33109 Offset -1 Default Gain 33109 Offset -1 User Gain 33102 Offset -3 Default Gain 33102 Offset -3 Default Gain 33109 Offset -4 ch7 User Gain 33112 Offset 3 Default Gain 33109 Offset 1
exit clear	clear	clear	clear

訊息中的 User Gain XXXX Offset XXXX 為校正後的數值, 而 Default Gain XXXX Offset XXXX 為原廠校正的值.