

HART-710 Quick Start User Guide

1. Introduction

This manual introduces the HART-710's basic setting and operation. The user can refer to the user manual in the ICP DAS companion CD-ROM (Path: "CD:\hart\gateway\hart-710>manual\hart-710 user manual.pdf") for detail.

The manual is intended to help users quickly understanding and easily using of HART-710. We use a HART-710 (as a HART master), one HART slave and one PC to make a simple application here, as shown in figure 1. The PC is prepared for setting and operating the HART-710.

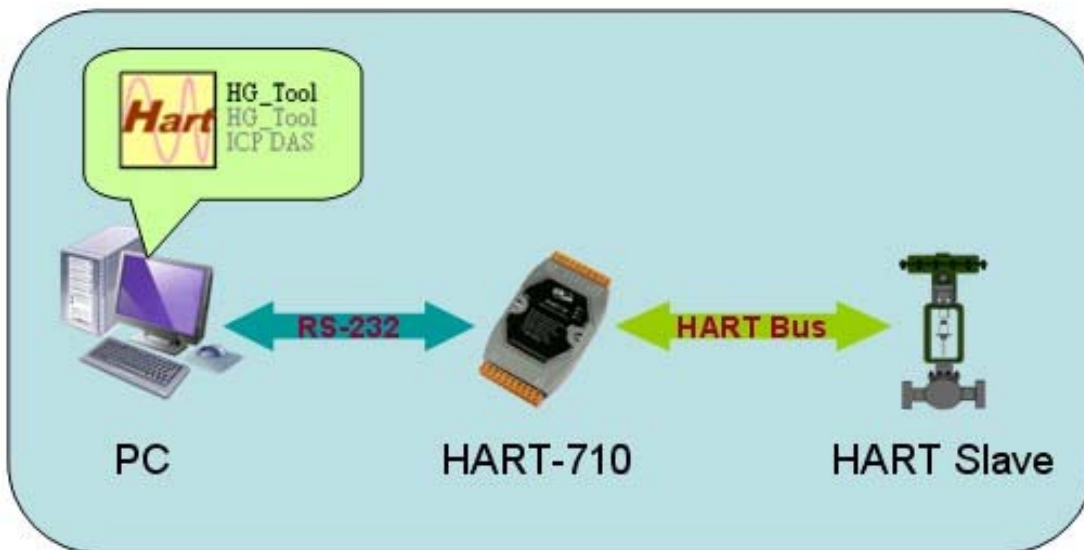


Figure 1: Application example

2. Hardware configuration

Pin Assignment:



Pin	Name	Description
1	HART+	Positive of HART
2	HART-	Negative of HART
3	-	N/A
4	-	N/A
5	-	N/A
6	-	N/A
7	-	N/A
8	-	N/A
9	+VS	V+ of Power Supply(+10 ~ +30 V _{DC})
10	GND	GND of Power Supply
11	TXD	Transmit Data of RS-232
12	RXD	Receive Data of RS-232
13	GND	GND of RS-232
14	RX+	Receive Data+ of RS-422
15	RX-	Receive Data- of RS-422
16	TX+	Transmit Data+ of RS-422
17	TX-	Transmit Data- of RS-422
18	-	N/A
19	D+	Data+ of RS-485
20	D-	Data- of RS-485

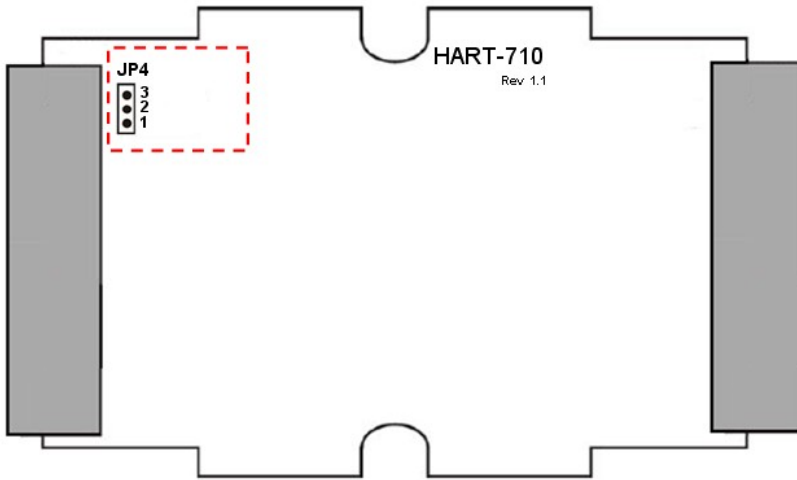
DIP Switch:

The user can sets the DIP switch to the “Default” position for default settings.

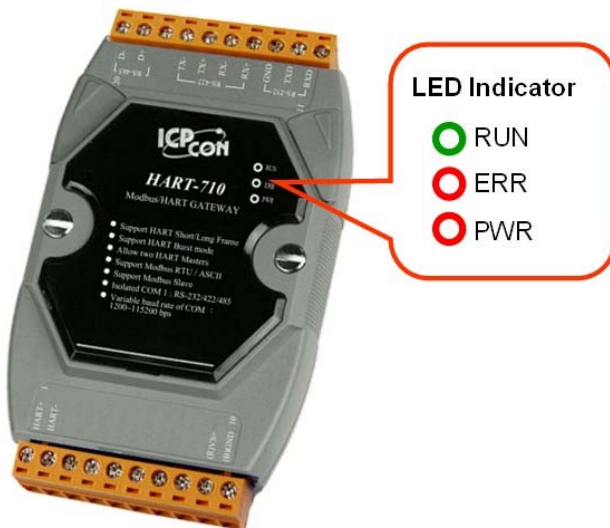


Jumper:

When the pin 1&2 of JP4 is closed, 250 Ω (1/4 W) resistor will connect to HART network. By default, the pin1&2 of JP4 is closed.



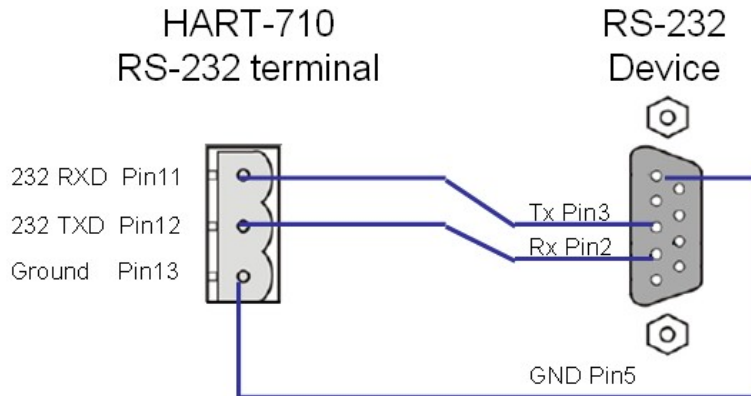
LED Indicator:



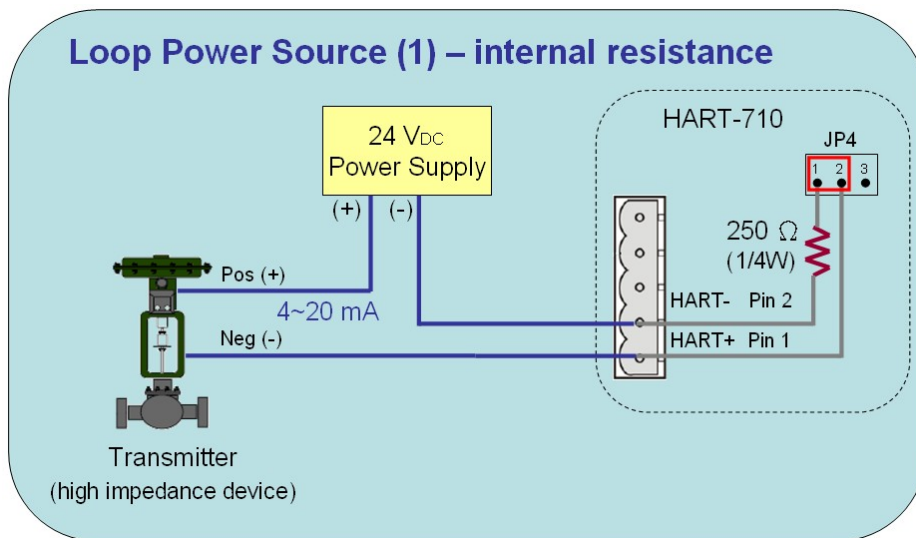
LED Name	Status	Description
PWR	on	Power supply is ok.
	off	Power supply has failed.
ERR	flash	Communication error
	off	No error
RUN	flash	Flash once about 1 s: It is at initial mode. Flash once about 500 ms: It had received the burst frame.
	on	It is at normal operation

LED Name	Status	Description
	off	Firmware has not loaded yet

RS-232 connection:



HART connection:



3. Install Utility

Install .NET Compact Framework

a. It needs the runtime environment with .NET Framework 2.0 or above to execute the utility in the PC. If there has .NET Framework 2.0 or above in the PC, this step can be omitted.

b. Please setup .NET Compact Framework, the user can get the setup file from the following website.

◆ Microsoft .Net Framework Version 2.0:

<http://www.microsoft.com/downloads/details.aspx?FamilyID=0856eacb-4362-4b0d-8edd-aab15c5e04f5&DisplayLang=en>

◆ Microsoft .Net Framework Version 3.5:

<http://www.microsoft.com/downloads/details.aspx?familyid=333325FD-AE52-4E35-B531-508D977D32A6&displaylang=en>

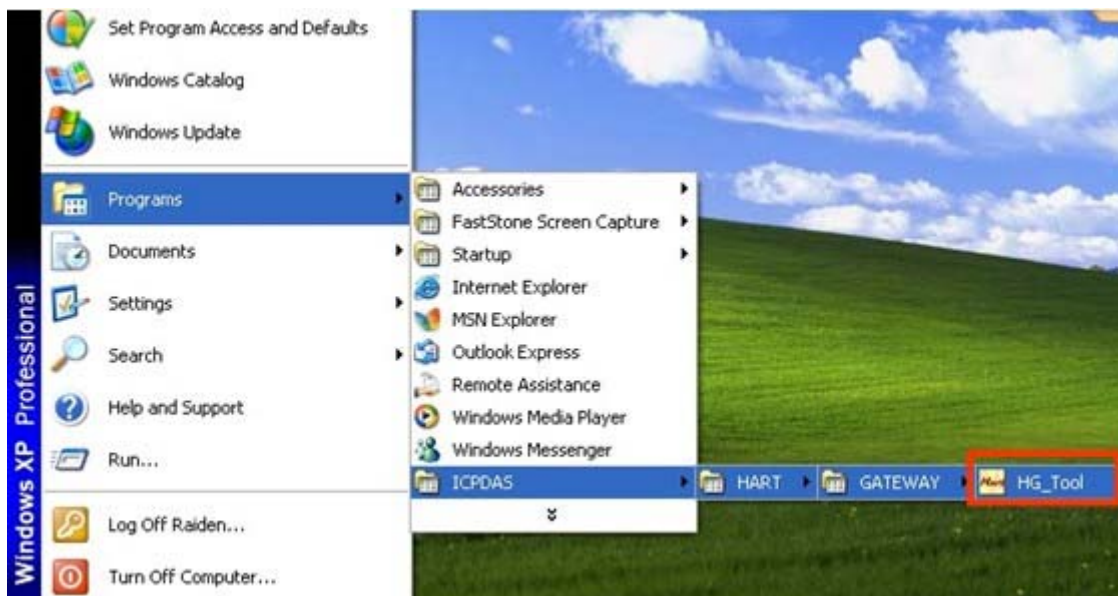
Install HG_Tool.exe

a. Download the setup file of “HG_Tool” from the CD-ROM disk following the path of “CD:\hart\gateway\utilities\hg_tool\” or the web site:

“ftp://ftp.icpdas.com.tw/pub/cd/fieldbus_cd/hart/gateway/utilities/hg_tool/”

b. Execute the Setup.exe file to install the “HG_Tool” Utility.

c. After finishing the installation of the HG_Tool, users can find the utility as shown in the following screen shot.



4. Communication test

Step 1: Connect PC, HART-710 and HART slave device according to figure1.

Step 2: Turn the DIP Switch to default position.

Step 3: Turn the power of the HART-710 on.

Step 4: Wait the “RUN” led indicator changes into continued on. If the led is

always flash, please recheck the hardware connection. It means the HART-710 module can't connect with HART slave device.

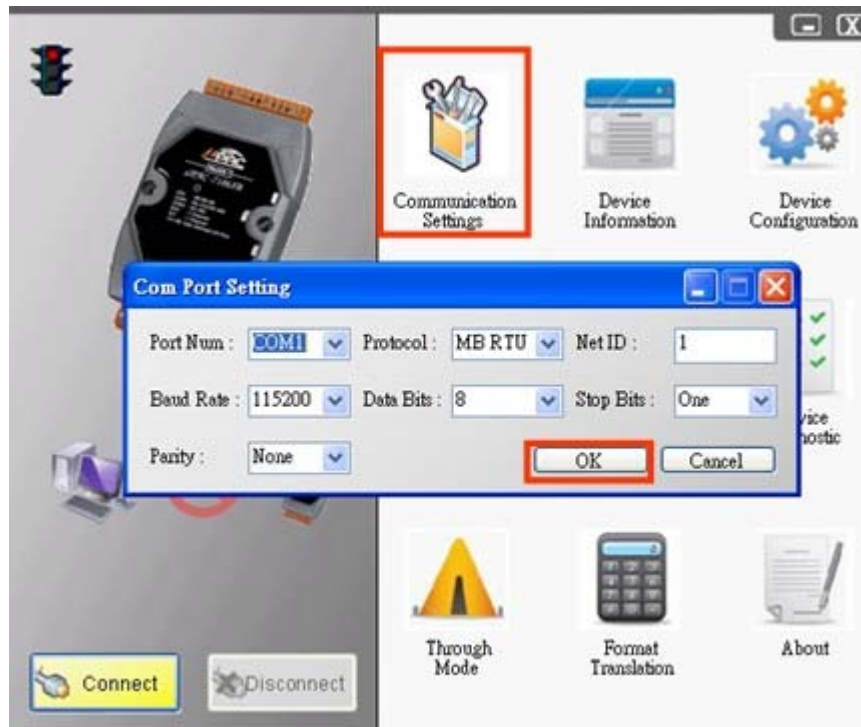
Step 5: Open the utility (HG_Tool.exe).

Step 6: Set the communication settings.

When the DIP Switch is at default position, the HART-710 module will have the follow settings:

- a. Protocol: MB RTU
- b. Net ID: 1
- c. Baud Rate: 115200 bps
- d. Data Bits: 8
- e. Stop Bits: 1
- f. Parity: None

So the utility must have the same settings with the HART-710 module, as shown in the below.

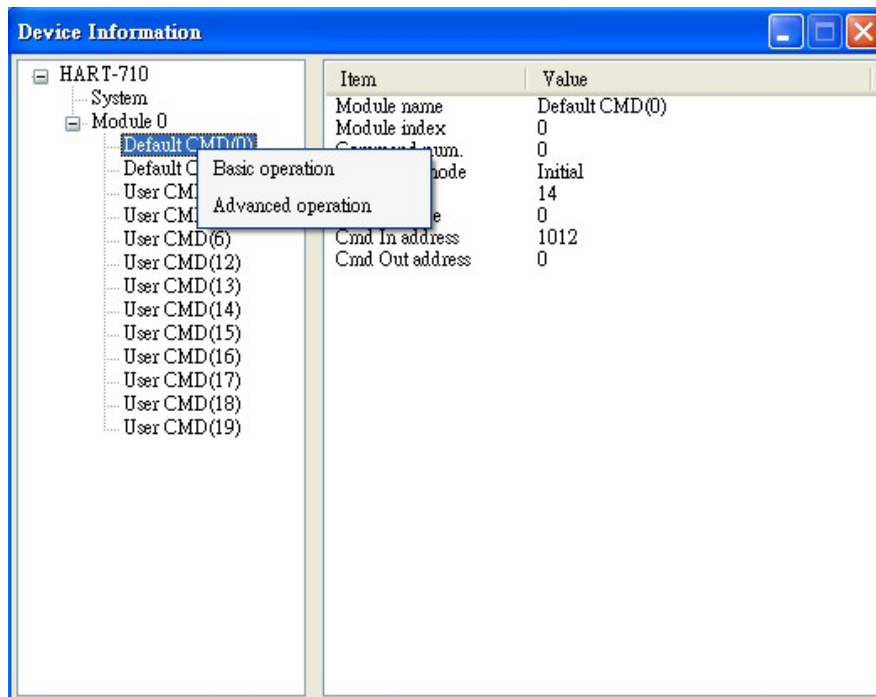


Step 7: Click “Connect” button.

Step 8: Wait the traffic light changes into “green”. If the traffic light is always “yellow”, it means the PC can't connect to HART-710 module, please recheck the RS-232 connection.

Step 9: Click “Device Information”.

Step 10: The user can select default command or user command and then click “Basic Operation” on the right-click menu to get the information of the HART command.



Ex: The information of HART command 0 is shown in the below.

