ET-2254/ET-2254P Quick Start

v1.2, May. 2018

What's in the box?

The package includes the following items:

ET-2254/ET-2254P Module x 1

Quick Start x1
(This Document)

Related Information

- ET-2200 Series Product Page:

http://www.icpdas.com/root/product/solutions/remote_io/ethernet_io/petl-7000_tpet_tet/petl_series_main_page.html

- Documentation & Firmware:

http://ftp.icpdas.com.tw/pub/cd/6000cd/napdos/et2200/

- NS-205/MDR-20-24 Product Page (optional):

http://www.icpdas.com/root/product/solutions/industrial_ethernet_switch/ns-205.html

http://www.icpdas.com/root/product/solutions/accessories/power_supply/mdr-20-24.html

1 Connecting the Power and Host PC

1) **Make sure your PC has workable network settings.**

Disable or well configure your Windows firewall and Anti-Virus firewall first, else the **"Search Servers"** on **Chapter 5** may not work. (Please contact with your system Administrator)

2) **Connect both the ET-2254(P) and your PC to the same sub network or the same Ethernet switch.**

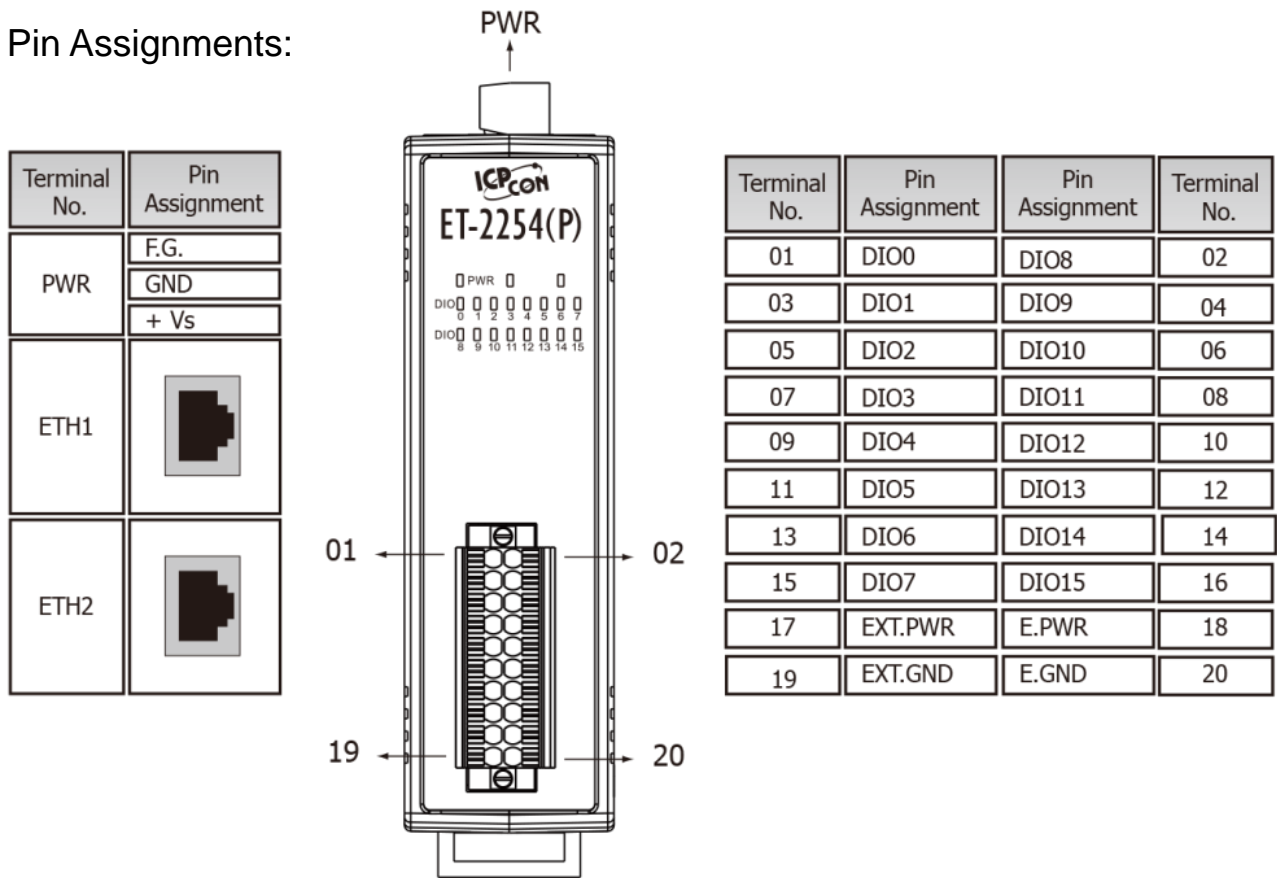**3)** **Supply power (+10~+30 V$_{DC}$) to the ET-2254(P).**

Ethernet Cable

GND

+Vs

**Power Supply
(e.g., MDR-20-24)**

**Hub/Switch
(e.g., NS-205)**

Host PC
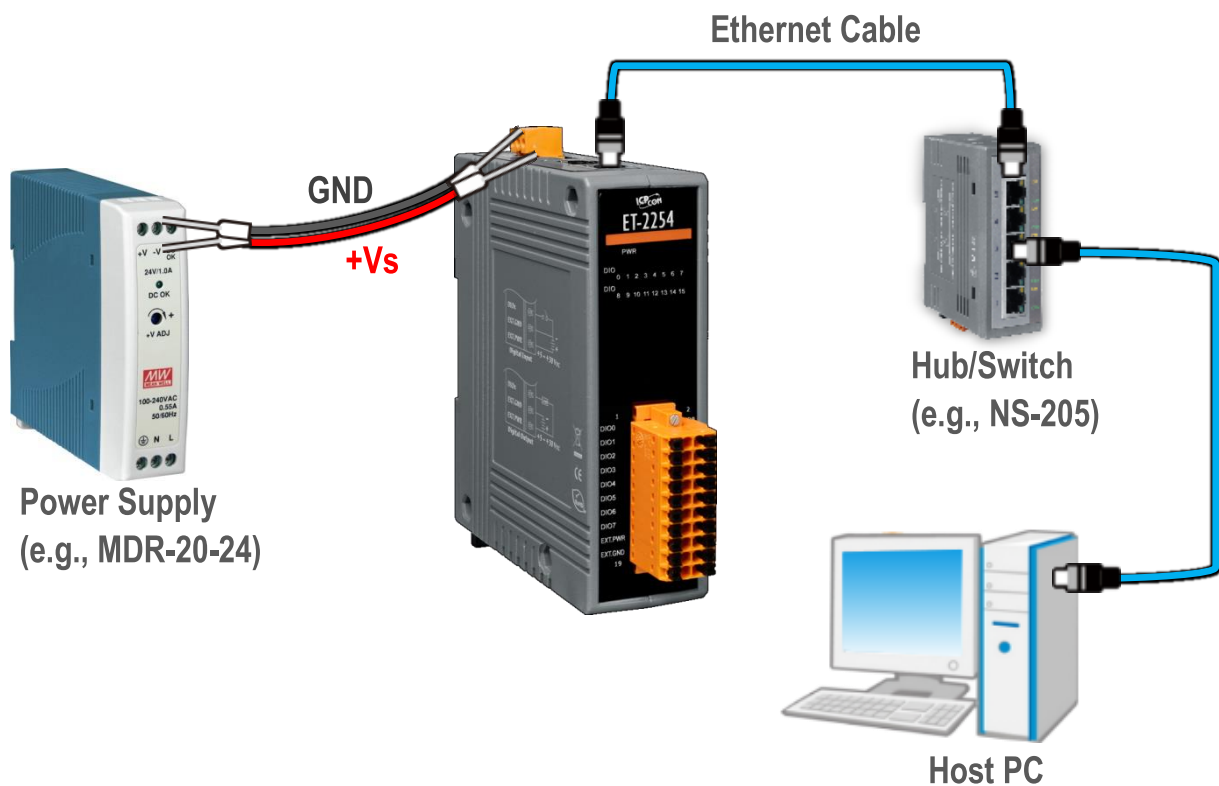
4) **Verify that the "PWR" LED indicator on the ET-2254(P) is flashing.**

Red, OK

2 Pin Assignments & Wiring Note

➢ Pin Assignments:

PWR

ICP CON
ET-2254(P)

Terminal No.	Pin Assignment
PWR	F.G.
	GND
	+ Vs
ETH1	
ETH2	

Terminal No.	Pin Assignment	Pin Assignment	Terminal No.
01	DIO0	DIO8	02
03	DIO1	DIO9	04
05	DIO2	DIO10	06
07	DIO3	DIO11	08
09	DIO4	DIO12	10
11	DIO5	DIO13	12
13	DIO6	DIO14	14
15	DIO7	DIO15	16
17	EXT.PWR	E.PWR	18
19	EXT.GND	E.GND	20

➢ Wire Connections:

Input Type	Readback as 1
Dry Contact	Close to GND
	DIOx / EXT.GND / EXT.PWR
	Readback as 0
	Open
	DIOx / EXT.GND / EXT.PWR

Output Type	Readback as 1 ON State	Readback as 0 OFF State
Drive Relay	DOx / EXT.GND / EXT.PWR	DOx / EXT.GND / EXT.PWR
Resistance Load	DOx / EXT.GND / EXT.PWR	DOx / EXT.GND / EXT.PWR

3 Wiring the DI and DO for Self-test

➢ **A tip for connecting the wire to the connector**

1. Use the blade of the flat-head screwdriver to push down the wire clamp.

2. While holding the screwdriver in place, insert the wire into the terminal block.

Insert the wire

Continue holding the screwdriver in place
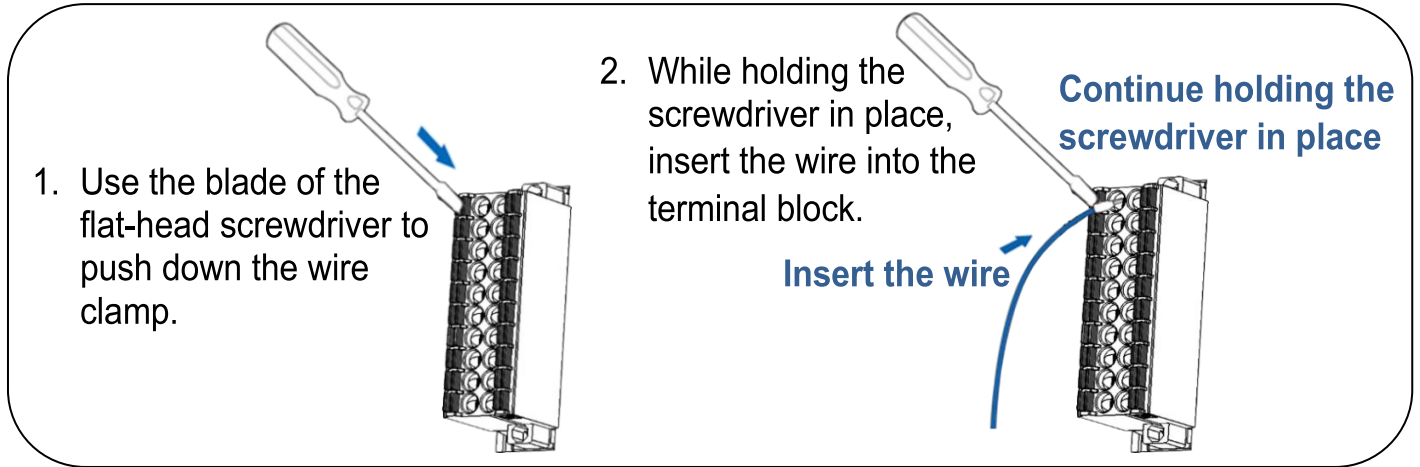
➢ **A tip for removing the wire from the connector**

1. Use the blade of a flat-head screwdriver to push down the wire clamp.

2. While holding the screwdriver in place, remove the wire from the terminal block.

Remove the wire

Continue holding the screwdriver in place
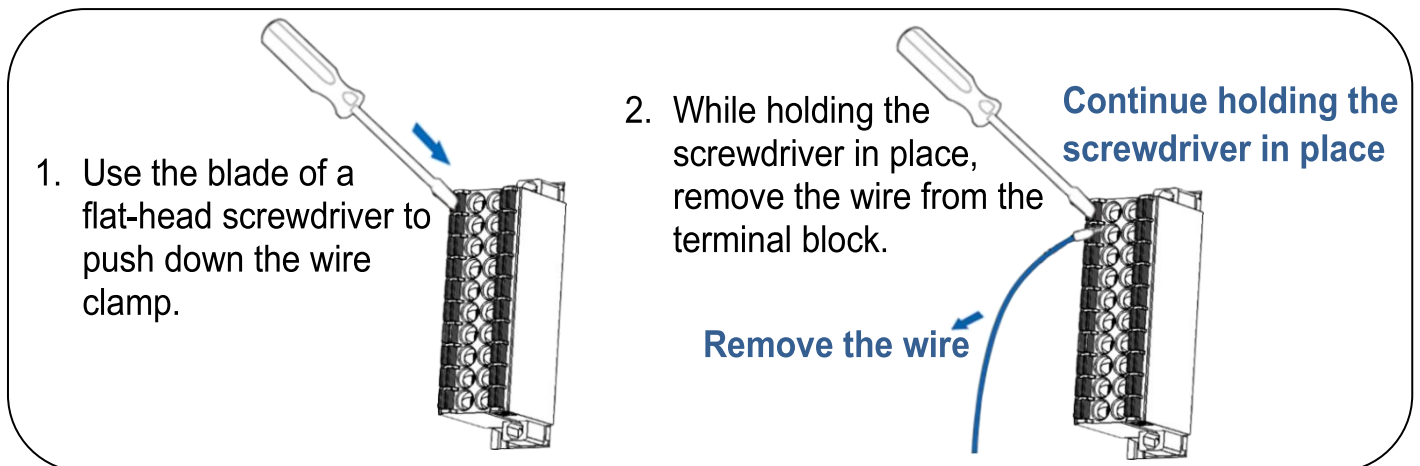
1) Connect the **DIO0 pin (Pin01)** to the **DIO1 pin (Pin03)**.
2) Connect the **External Power +24V** to the **EXT.PWR pin (Pin17)**.
3) Connect the **External Power GND** to the **EXT.GND (Pin19)**.

**Power Supply
(e.g., MDR-20-24)**

DIO0 01
DIO1 03

+Vs

GND

EXT.PWR 17
EXT.GND 19
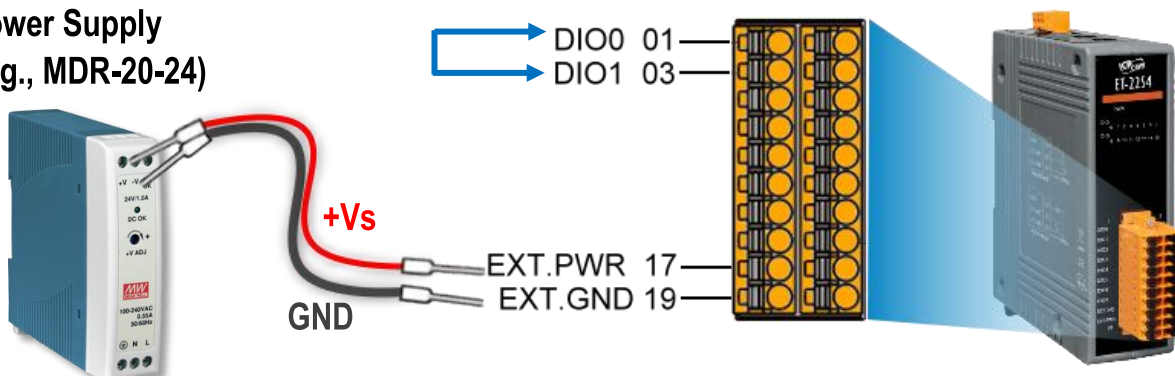
4 Modbus Address

The nDO parameters in the following Modbus Address Tables are as follows:

Mode Name	Universal DIO	Number of DO channels (nDO)	Number of DI channels (nDI)
ET-2254(P)	16	Depend on your configuration	Depend on your configuration

➢ **(0xxxx) DO address:**

Begin address	Points	Description	Bits Per Point	Range	Access Type
0 (0x0)	1~nDO	Digital Output Channels	1	0: OFF, 1: ON	R/W
.	.	.	.	.	.
.	.	.	.	.	.
.	.	.	.	.	.
299 (0x12B)	1	Force the DI/DO Mode. 0 = Dynamic I/O type based on DO requests. 1 = Static I/O type by configuration (web or Modbus).	1	0 = Dynamic 1= Static	R/W
300 ~315 (0x12C~0x13B)	1 ~ UDIO	Sets the Universal DIO channels to DI or DO Port	1	0 = DO, 1= DI	R/W

"R": Read; **"W"**: Write; **"F"**: Settings are recorded in flash memory by default

➢ **(1xxxx) DI address:**

Begin address	Points	Description	Bits Per Point	Range	Access Type
0 (0x0)	1~nDI	Digital Input	1	0: OFF, 1: ON	R
32 (0x20)	1~nDI	Digital latched status(high)	1	0:no, 1:latched	R
64 (0x40)	1~nDI	Digital latched status(low)	1	0:no, 1:latched	R

"R": Read

⚠ Note

For detail "DI/DO Modbus Address" information, refer to Section 6.3 Modbus Register Table of user's manual (http://ftp.icpdas.com/pub/cd/6000cd/napdos/et2200/document/).

5 Configuring Network Settings

1) Run the eSearch Utility.

The eSearch Utility is located at:

http://ftp.icpdas.com/pub/cd/6000cd/napdos/software/esearch/
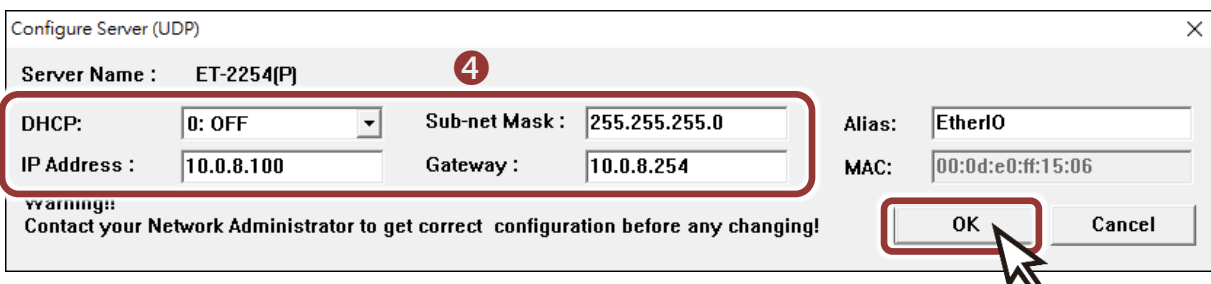
2) Click the **"Search Servers"** to search your ET-2254(P).

3) Double-click your ET-2254(P) to configure the settings
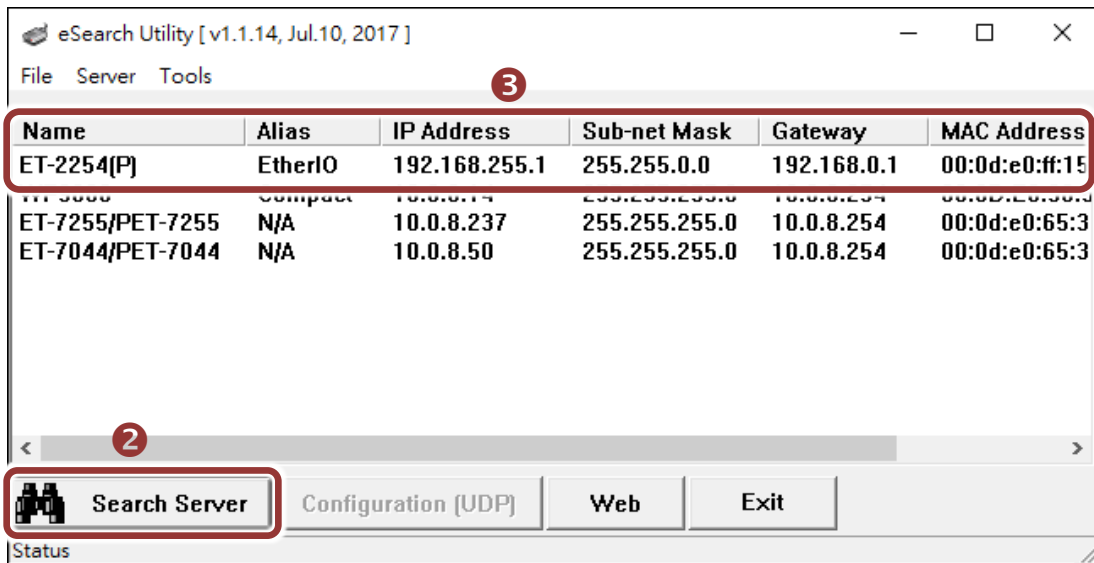
Factory Default Settings of ET-2254(P):

IP Address	192.168.255.1
Subnet Mask	255.255.0.0
Gateway	192.168.0.1

4) Contact your Network Administrator to obtain a correct network configuration (such as **IP/Mask/Gateway**). **Enter the network settings** and click **"OK"**. ⚠ **Note: The ET-2254(P) will use the new settings 2 seconds later.**

Technical support: service@icpdas.com   P6

6 Testing your Ethernet I/O Module

1) Wait 2 seconds and click **"Search Servers"** button again to ensure the ET-2254(P) is working well with new configuration.

2) Click the name of ET-2254(P) to select it.

3) Click the **"Web"** button to log in to the web configuration pages. (Or enter the URL address of the ET-2254(P) in the address bar of the browser.)
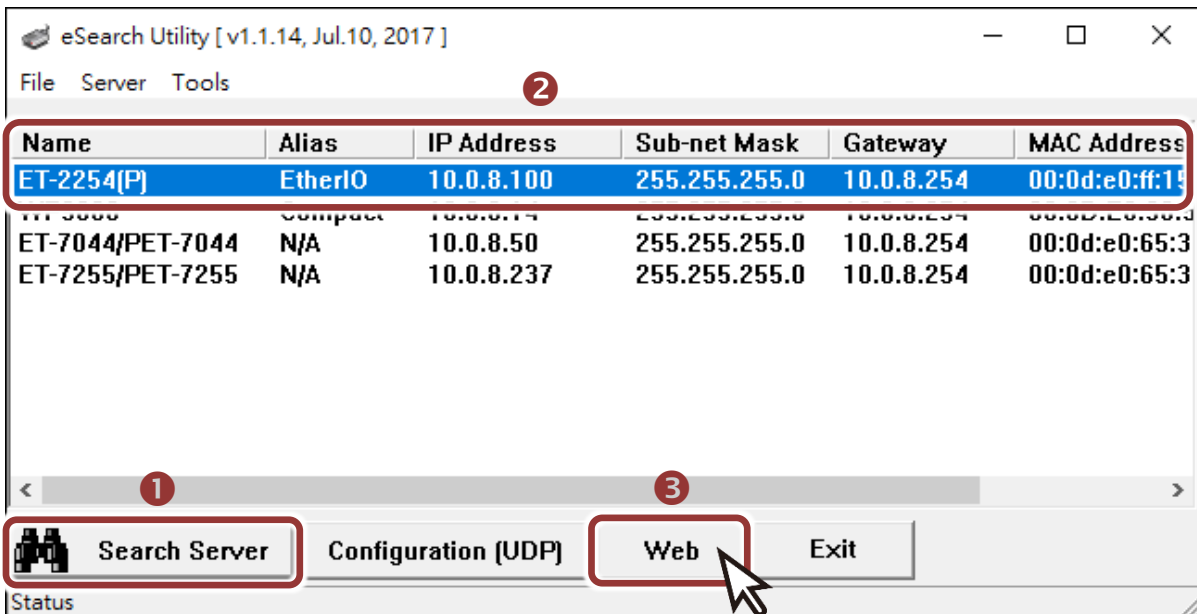
4) Enter the password (default: Admin)in the "login password" field and click **"Submit"**.
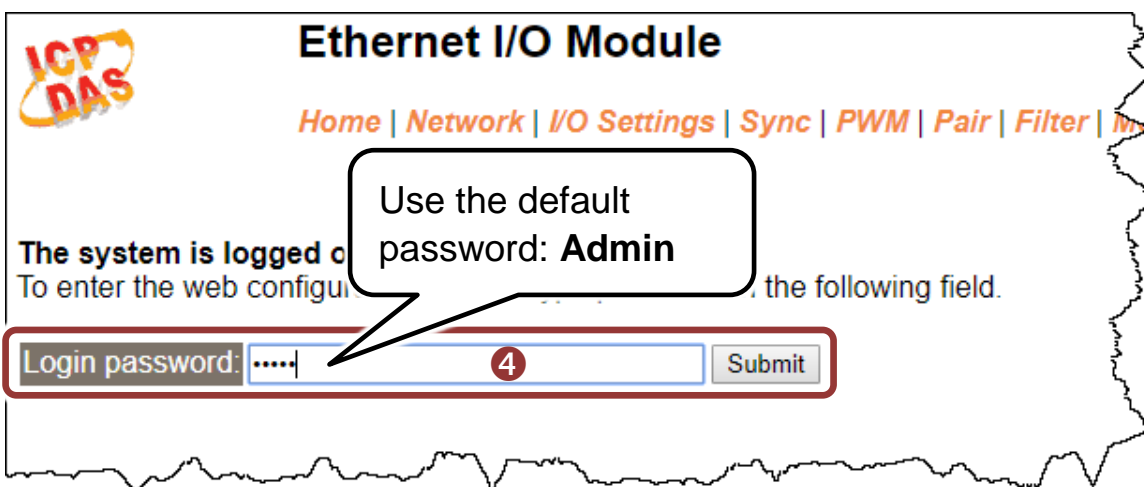
5) Click the **"I/O Settings"** tab to set the Universal DIO.

6) In the **"Force DI/DO Mode"** section, select the **"Static"** from the drop down options and check the checkbox for **"Ch0"** to set **Ch0 is DI Port** then click the **"Update Settings"** button to save the revised settings to the ET-2254(P) module.

7) Click the **"Home"** tag to allow a simple test to be performed to verify the Digital Input and Output functionality.

8) In the **"Digital I/O"** section, click the **"DO1"** button to **"ON"** (Red) and verify that the **"DI0"** LED status for **"high (green)"**.