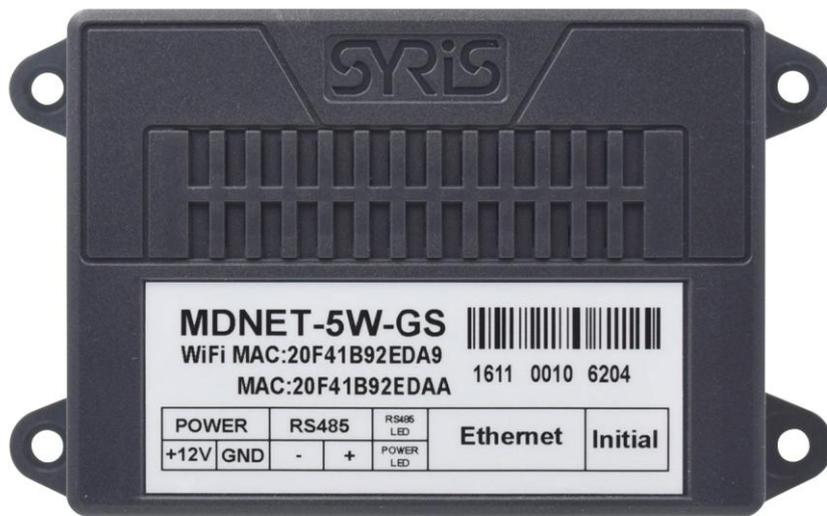


MDNET-5W

工控型 **Wi-Fi/網路/RS485** 轉換模組

操作手冊



Version 01.00

2016/03/24

I. 產品規格

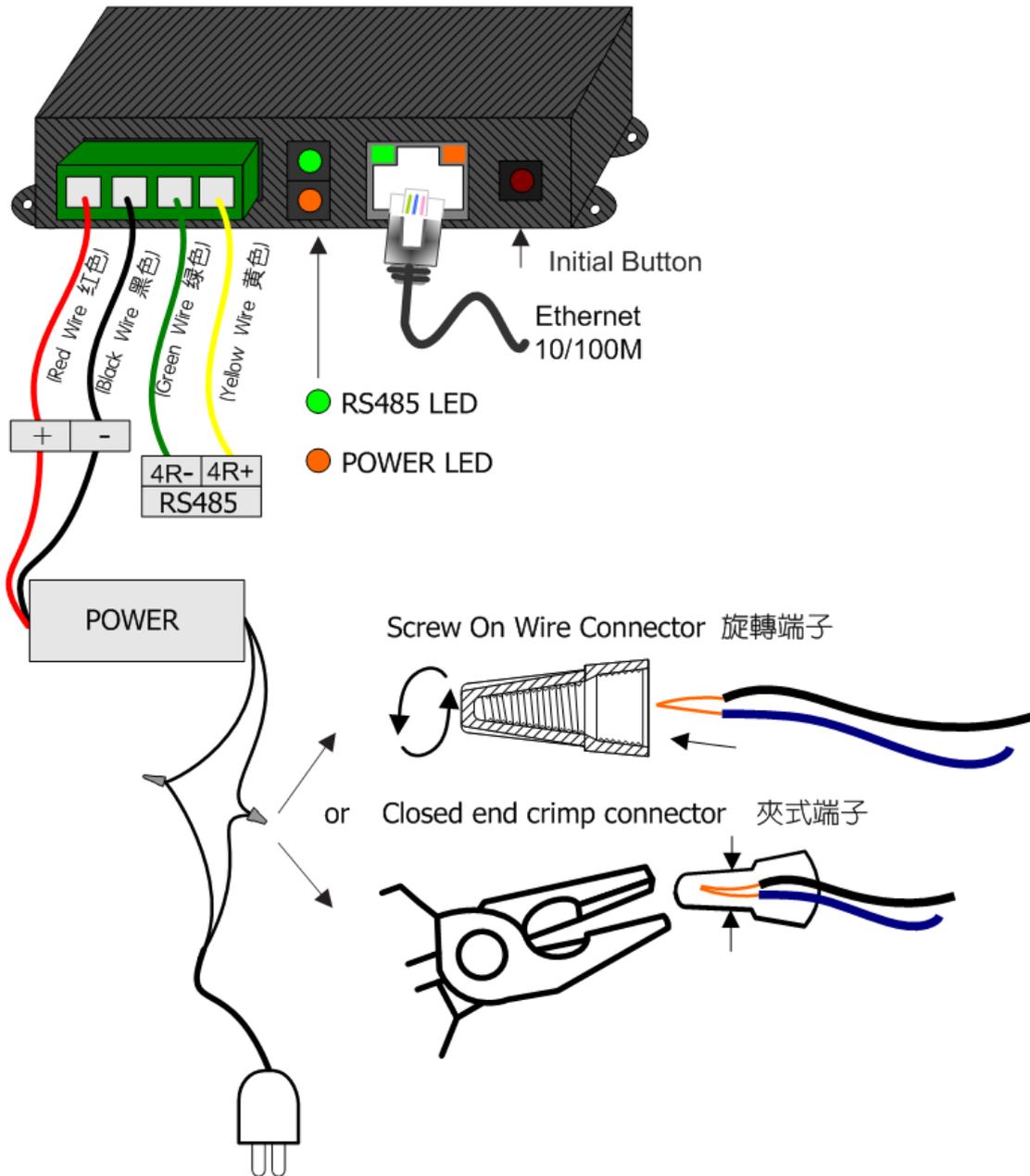
功能：

- 轉換 RS485 介面為網路或 Wi-Fi 介面
- 轉換網路介面為 Wi-Fi 介面
- 支援多台控制器連線
- 支援遠端設定與韌體更新

規格：

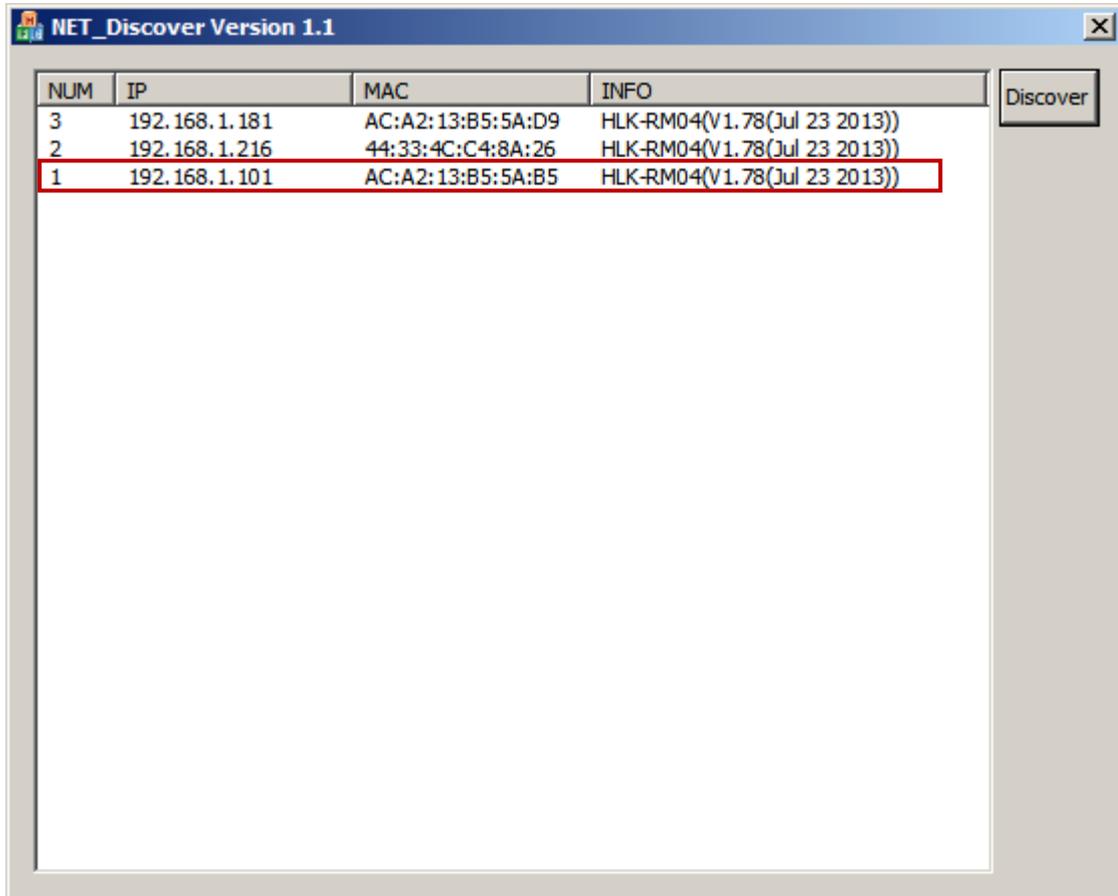
轉換介面	Ethernet ↔ RS485 Wi-Fi ↔ RS485 Ethernet ↔ Wi-Fi
通訊介面	Wi-Fi / Ethernet / RS485
Wi-Fi	802.11 b/g/n
Ethernet	10/100BaseT, RJ45 connector
運作模式	TCP Server, TCP Client, UDP
連接埠	4 PIN (RS485 + DC power)
RS485 傳輸速率	300 ~ 115,200 bps
Parity	None/ Even/ Odd
Data bits	8 / 7
Stop bits	1 / 2
設定工具	網頁瀏覽器, Windows 軟體工具.
恢復出廠預設	重設按鍵
狀態指示	4 LED
工作溫度	-20°C ~ 70°C
電源	8V ~ 28V DC / 1W ~ 2W
尺寸(mm)	77W x 59H x 22.5D

II. 接線圖



III. 網路參數設定

1. 開啟“NET_Discover_V0110.exe” 按下Discover搜尋環境中的MDNET-5W產品。
2. 出廠預設IP為 192.168.1.101，可對照MDNET-5W上蓋貼紙MAC位址，確認選取的IP設備正確無誤。



3. 雙擊IP (192.168.1.101)直接開啟網頁(<http://192.168.1.101>)
預設登入使用者名稱與密碼為: admin / admin

4. 進入後可在此頁更改網路模式與其他通訊參數，通訊模式預設值如下，若修改後造成無法通訊，可經由出廠按鍵重新設置下列參數。

HLK-RM04 Serial2Net Settings

NetMode:

IP Type:

IP Address:

Subnet Mask:

Default Gateway:

Primary DNS Server:

Secondary DNS Server:

	Current	Updated
Serial Configure:	230400,8,n,1	<input style="width: 150px;" type="text" value="230400,8,n,1"/> *
Serial Framing Lenth:	1050	<input style="width: 150px;" type="text" value="1050"/>
Serial Framing Timeout:	10 milliseconds	<input style="width: 50px;" type="text" value="10"/> milliseconds (< 256, 0 for no timeout)
Network Mode:	server	<input style="width: 80px;" type="text" value="Server"/>
Remote Server Domain/IP:	192.168.11.245	<input style="width: 150px;" type="text" value="192.168.11.245"/>
Locale/Remote Port Number:	5001	<input style="width: 80px;" type="text" value="5001"/>
Network Protocol:	tcp	<input style="width: 80px;" type="text" value="TCP"/>
Network Timeout:	0 seconds	<input style="width: 50px;" type="text" value="0"/> seconds (< 256, 0 for no timeout)

通訊參數	預設值
Serial Configure	230400,8,n,1
Serial Framing Length	1050
Locale/Remote Port Number	5001

IV. 網路 / RS485 轉換模式 (出廠預設)

1. 網路模式設定:

Default	Ethernet (DHCP) +Wi-Fi AP mode
ETH-SERIAL	Ethernet only (出廠預設模式)
WIFI(CLIENT)-SERIAL	Wi-Fi client mode
WIFI(AP)-SERIAL	Wi-Fi AP mode

HLK-RM04 Serial2Net Settings

NetMode: Default

SSID: _____

Password: _____

ETH-SERIAL : 出廠預設模式為**ETH-SERIAL**

修改正確IP資訊按下Apply之後，等候30秒讓設備重啟即可使用

HLK-RM04 Serial2Net Settings

NetMode: ETH-SERIAL

IP Type: STATIC

IP Address:

Subnet Mask:

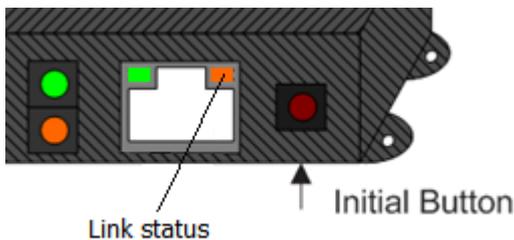
Default Gateway:

Primary DNS Server:

Secondary DNS Server:

2. 重設出廠按鍵:

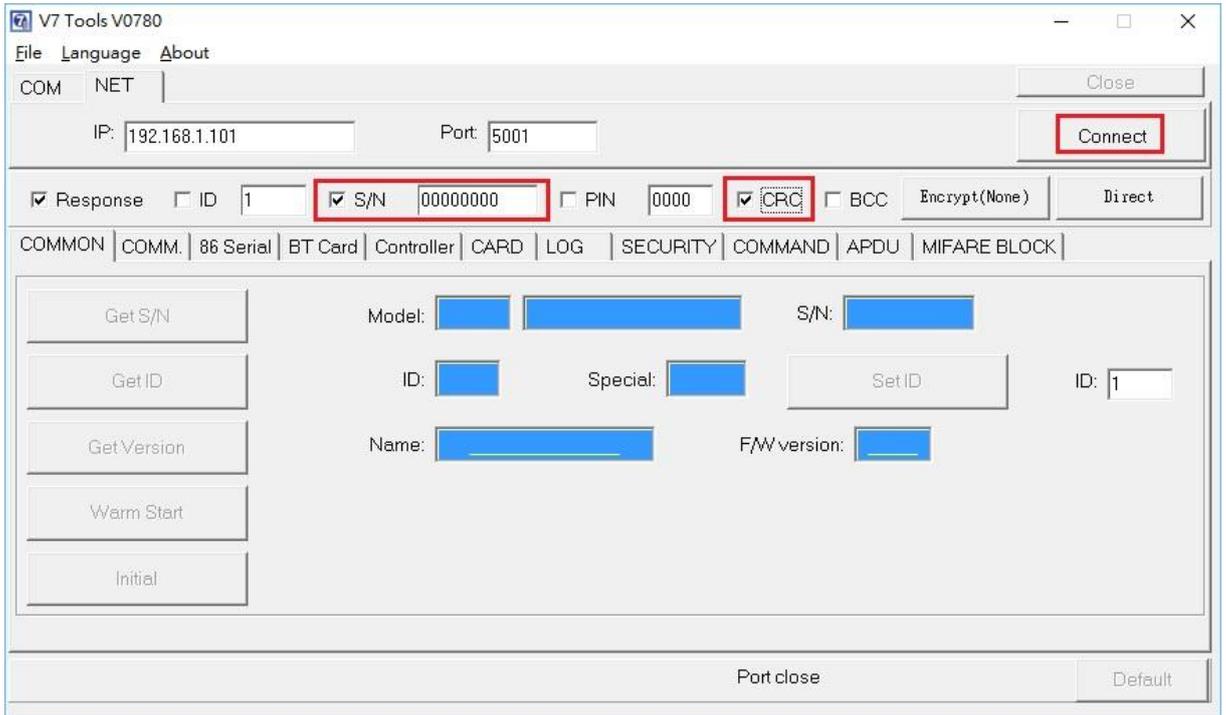
按住紅色出廠按鍵不放約15秒，直到連線狀態燈號開始閃爍即可放開。(有連接網路線時)



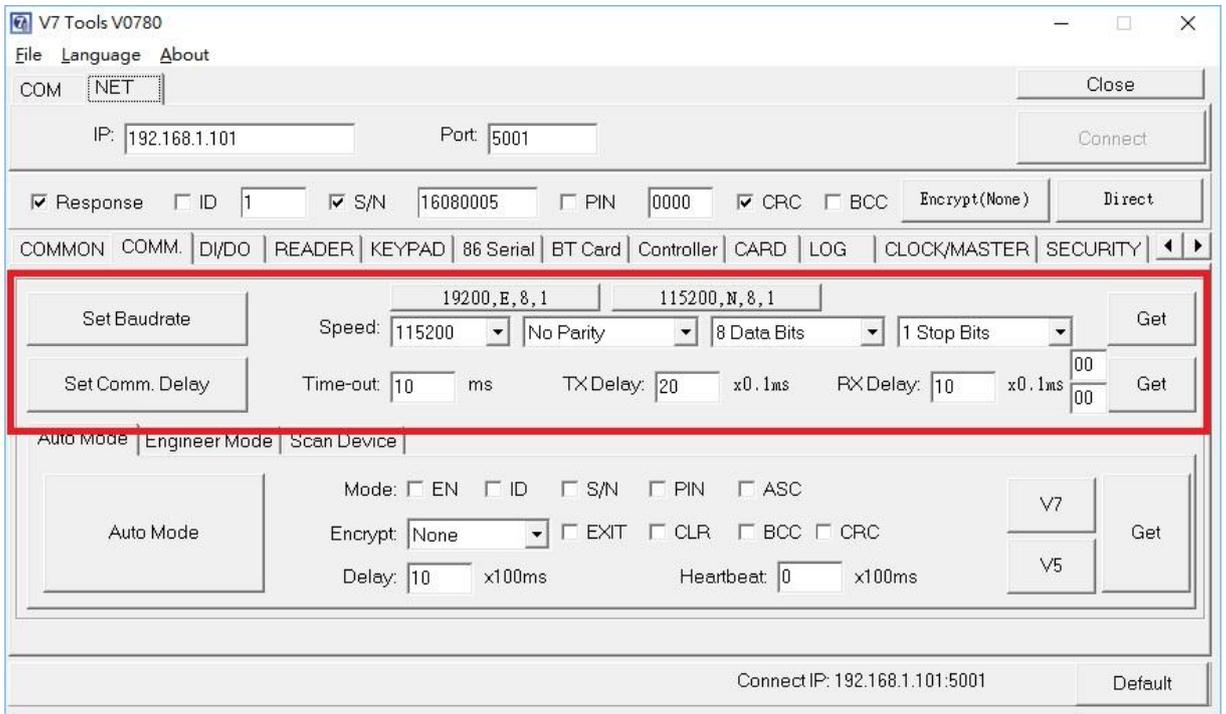
等待兩分鐘, MDNET-5W 會恢復出廠預設值。

3. RS485 傳輸速率設定

開啟 V7 Tools · 輸入正確網路IP位址與port連線後讀取序號 · 正確顯示後確認連線成功。

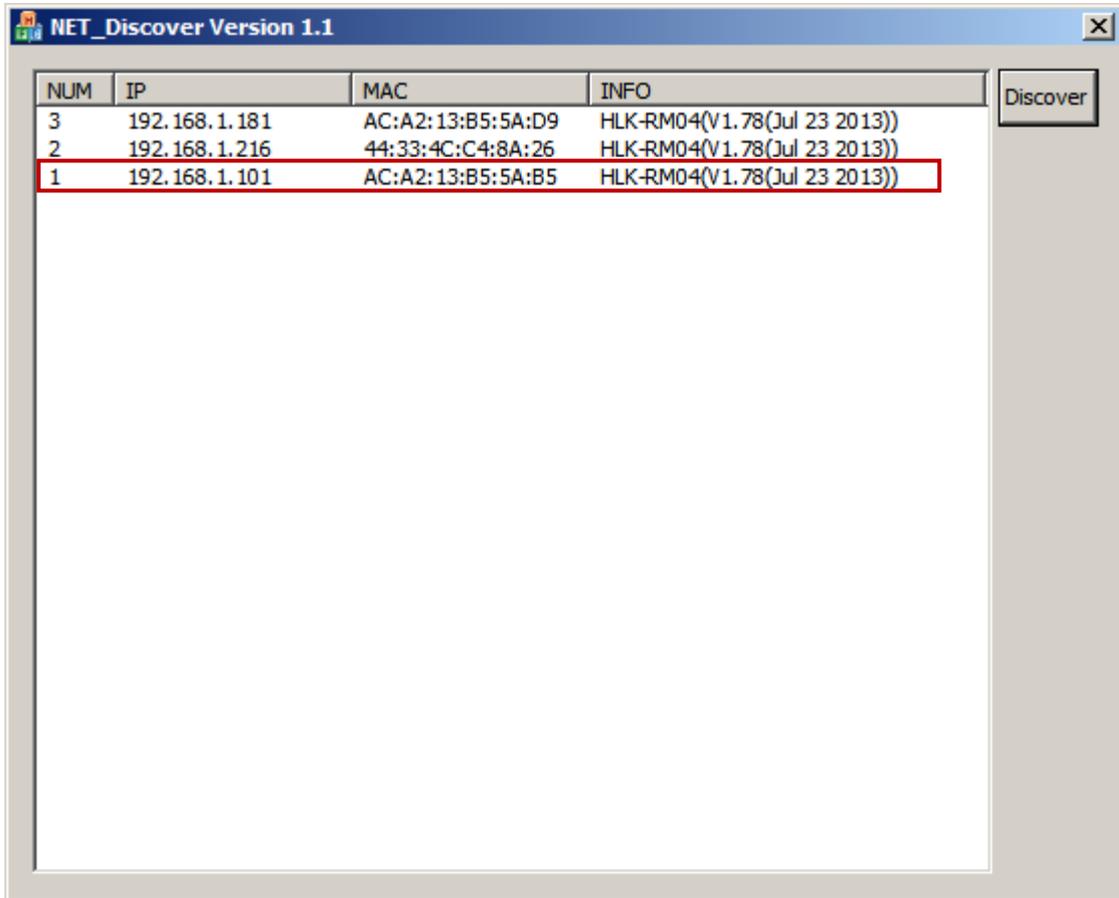


選取 "COMM." 頁面設定RS485通訊參數。



V. Wi-Fi / RS485 轉換模式

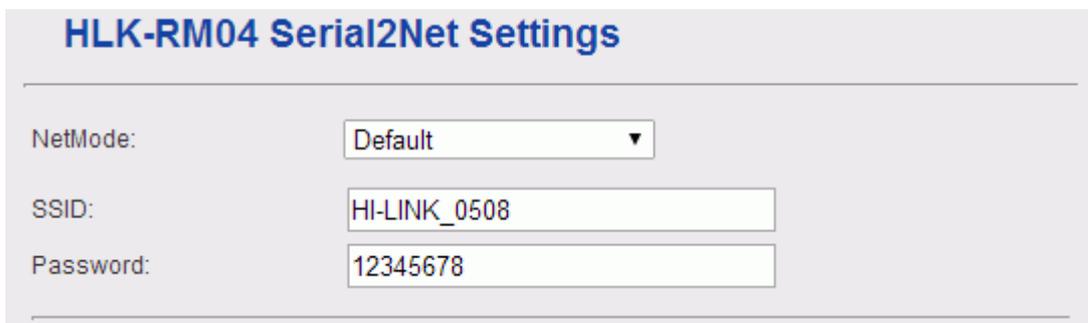
1. 開啟“NET_Discover_V0110.exe” 按下Discover搜尋環境中的MDNET-5W產品。
2. 出廠預設IP為 192.168.1.101，可對照MDNET-5W上蓋貼紙MAC位址，確認選取的IP設備正確無誤。



3. 雙擊IP (192.168.1.101)直接開啟網頁(<http://192.168.1.101>)
預設登入使用者名稱與密碼為: admin / admin



4. 更改 Net mode 為 "Default" · 按下Apply後 · 等候30秒讓設備重啟 · 啟用Wi-Fi功能 ·



5. 開啟" NET_Discover_V0110.exe" 按下Discover再次搜尋環境中的MDNET-5W ·

6. 更改 Net mode 為 “Wi-Fi(CLIENT)-SERIAL” 模式。

HLK-RM04 Serial2Net Settings

NetMode:

SSID: *

Encrypt Type:

Password:

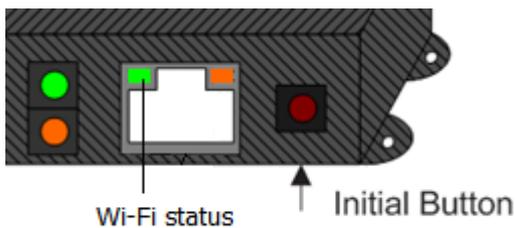
IP Type:

7. 按下 “Scan” 按鍵 掃描MDNET-5W範圍內的AP，選擇要連線的AP進行連線

Ch	SSID	BSSID	Security	Signal(%)	W-Moe	ExtCh	NT
<input type="radio"/>	1	SY-INT-1	04:8d:38:a4:02:39	WPA1PSKWPA2PSK/TKIPAES	100	11b/g/n	ABOVE In
<input type="radio"/>	1	HI-LINK_5A95	ac:a2:13:b5:5a:94	WPA1PSKWPA2PSK/AES	65	11b/g/n	NONE In
<input type="radio"/>	1	HI-LINK_5AAF	ac:a2:13:b5:5a:ae	WPA1PSKWPA2PSK/AES	50	11b/g/n	NONE In
<input type="radio"/>	1	P880	cc:5d:4e:e5:2d:2d	WPA2PSK/AES	29	11b/g/n	NONE In
<input type="radio"/>	6	RC-INT-1	c8:3a:35:5b:93:90	WPAPSK/AES	10	11b/g/n	NONE In
<input type="radio"/>	6	Chance-HTC-E9+	82:01:84:11:e2:fc	WPA2PSK/AES	29	11b/g/n	ABOVE In
<input type="radio"/>	9	SY-INT-2	04:8d:38:a4:02:42	WPA1PSKWPA2PSK/TKIPAES	96	11b/g/n	ABOVE In
<input type="radio"/>	9	HI-LINK_5A87	e8:de:27:40:4d:3e	WPA1PSKWPA2PSK/TKIPAES	100	11b/g/n	BELOW In
<input type="radio"/>	11	SY-GUEST-2	04:8d:38:a4:02:81	WPA1PSKWPA2PSK/TKIPAES	70	11b/g/n	BELOW In
<input type="radio"/>	11	SY-GUEST-1	04:8d:38:a4:02:30	WPA1PSKWPA2PSK/TKIPAES	91	11b/g/n	BELOW In

設定好按下Apply，等候30秒讓設備重啟

8. 確認 Wi-Fi status LED燈號 有正常閃爍。



9. 完成設定後可以透過Wi-Fi無線網路嘗試連接RS485設備進行通訊。

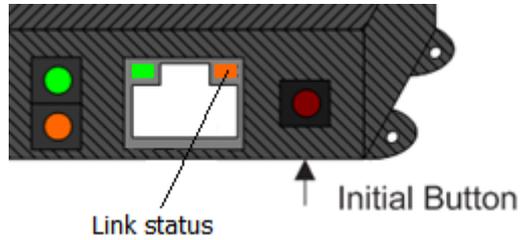
註: Wi-Fi MAC address 為背號貼紙尾碼減一。

Ex. Ethernet MAC : AC:A2:13:B5:5A:B5 · Wi-Fi MAC : AC:A2:13:B5:5A:B4

VI. Wi-Fi / Ethernet converter

1. 重設出廠按鍵:

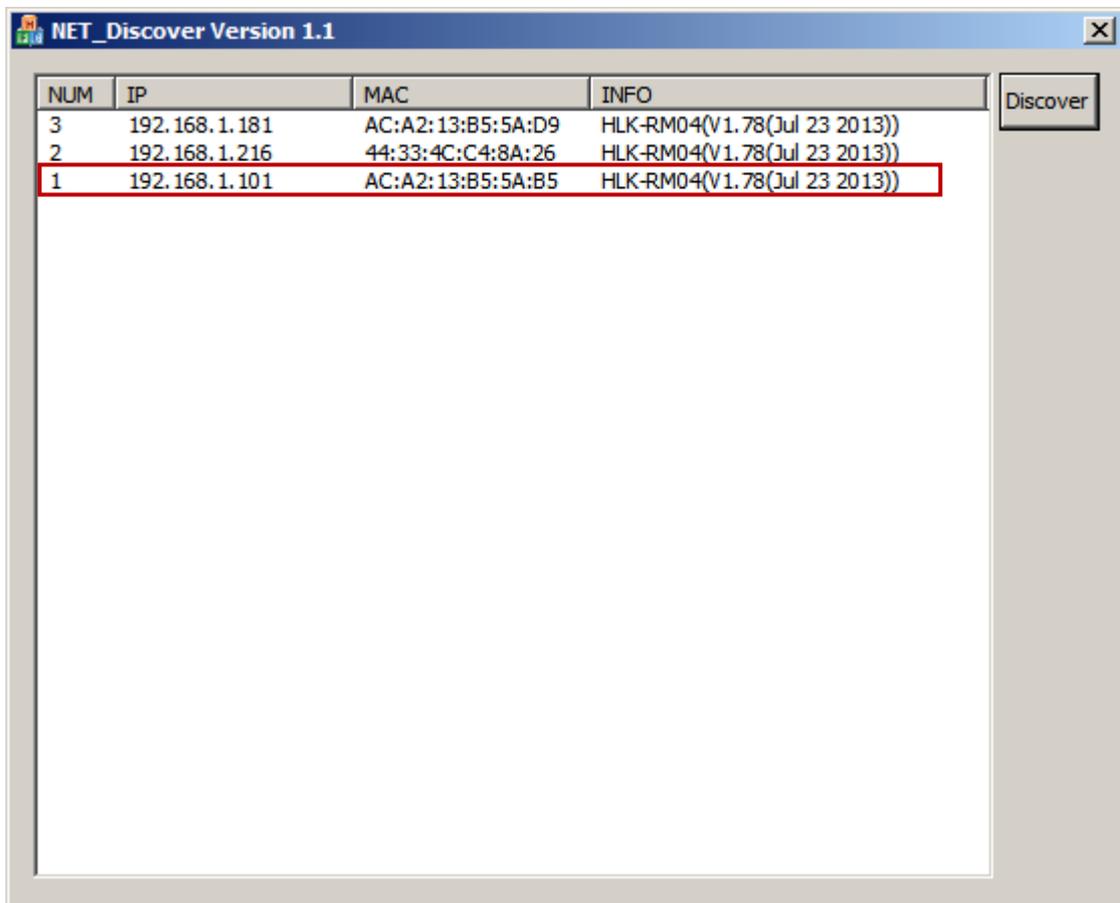
按住紅色出廠按鍵不放約15秒，直到連線狀態燈號開始閃爍即可放開。(有連接網路線時)



等待兩分鐘, MDNET-5W 會恢復出廠預設值。

2. 開啟“ NET_Discover_V0110.exe” 按下Discover搜尋環境中的MDNET-5W產品。

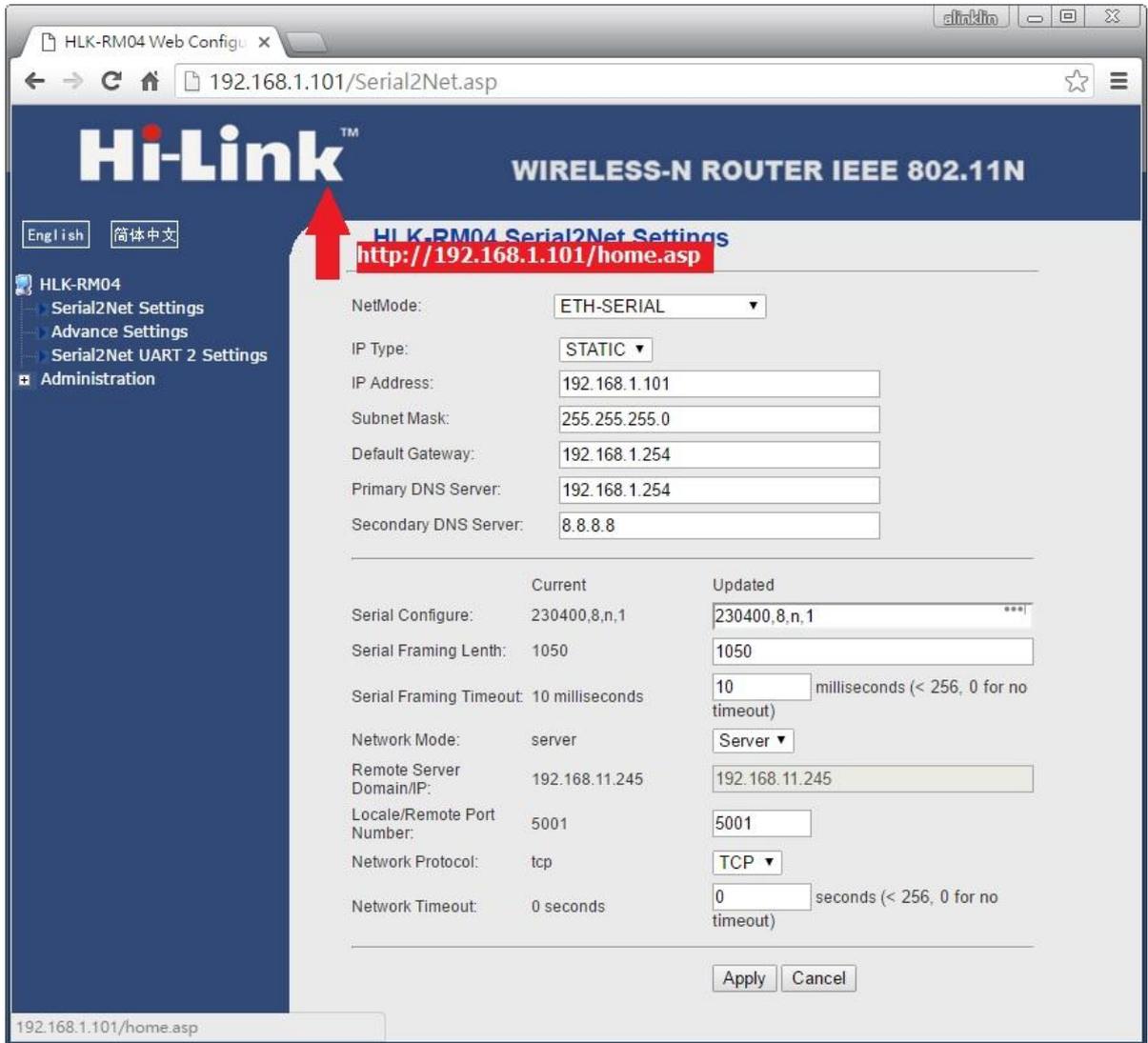
3. 出廠預設IP為 192.168.1.101，可對照MDNET-5W上蓋貼紙MAC位址，確認選取的IP設備正確無誤。



4. 雙擊IP (192.168.1.101)直接開啟網頁(<http://192.168.1.101>)
預設登入使用者名稱與密碼為: **admin / admin**



5. 點選 “Hi-Link” logo 直接開啟 “<http://192.168.1.101/home.asp>”



HLK-RM04 Web Configu x

192.168.1.101/Serial2Net.asp

Hi-Link™

WIRELESS-N ROUTER IEEE 802.11N

English 简体中文

HLK-RM04

- Serial2Net Settings
- Advance Settings
- Serial2Net UART 2 Settings
- Administration

HLK-RM04 Serial2Net Settings

<http://192.168.1.101/home.asp>

NetMode: ETH-SERIAL

IP Type: STATIC

IP Address: 192.168.1.101

Subnet Mask: 255.255.255.0

Default Gateway: 192.168.1.254

Primary DNS Server: 192.168.1.254

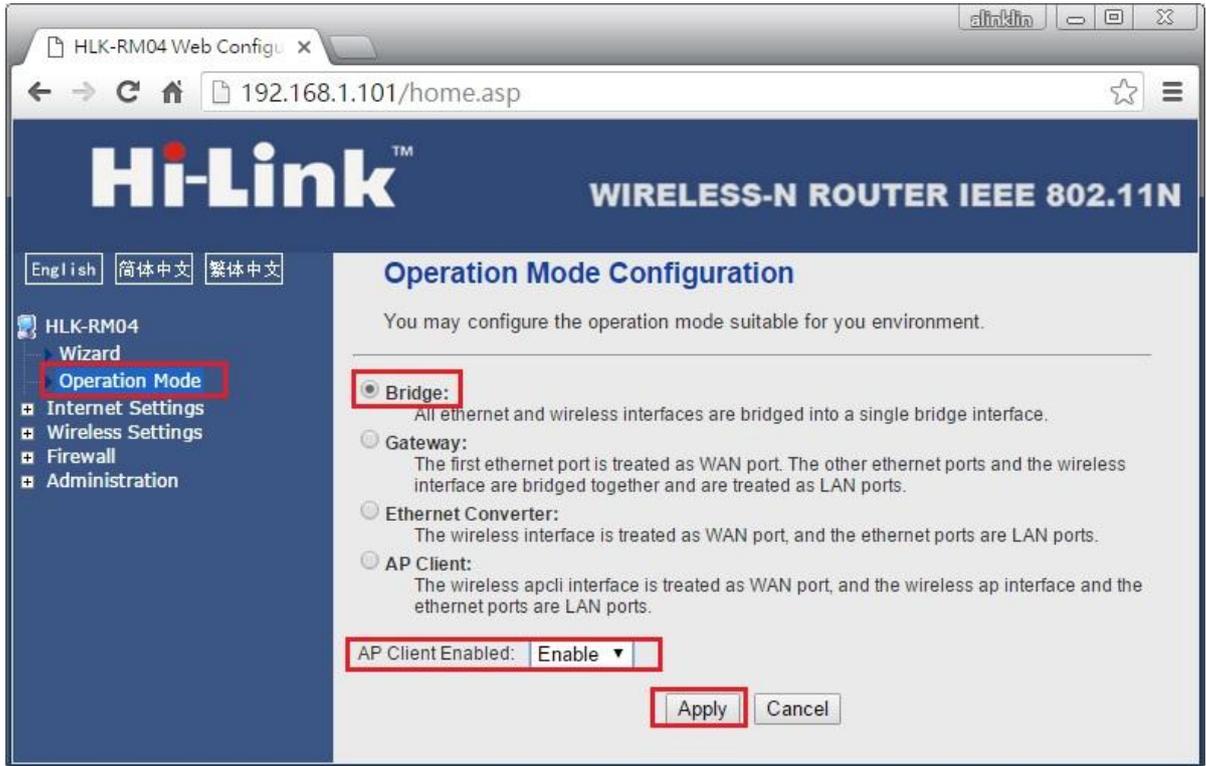
Secondary DNS Server: 8.8.8.8

	Current	Updated
Serial Configure:	230400,8,n,1	230400,8,n,1
Serial Framing Lenth:	1050	1050
Serial Framing Timeout:	10 milliseconds	10 milliseconds (< 256, 0 for no timeout)
Network Mode:	server	Server
Remote Server Domain/IP:	192.168.11.245	192.168.11.245
Locale/Remote Port Number:	5001	5001
Network Protocol:	tcp	TCP
Network Timeout:	0 seconds	0 seconds (< 256, 0 for no timeout)

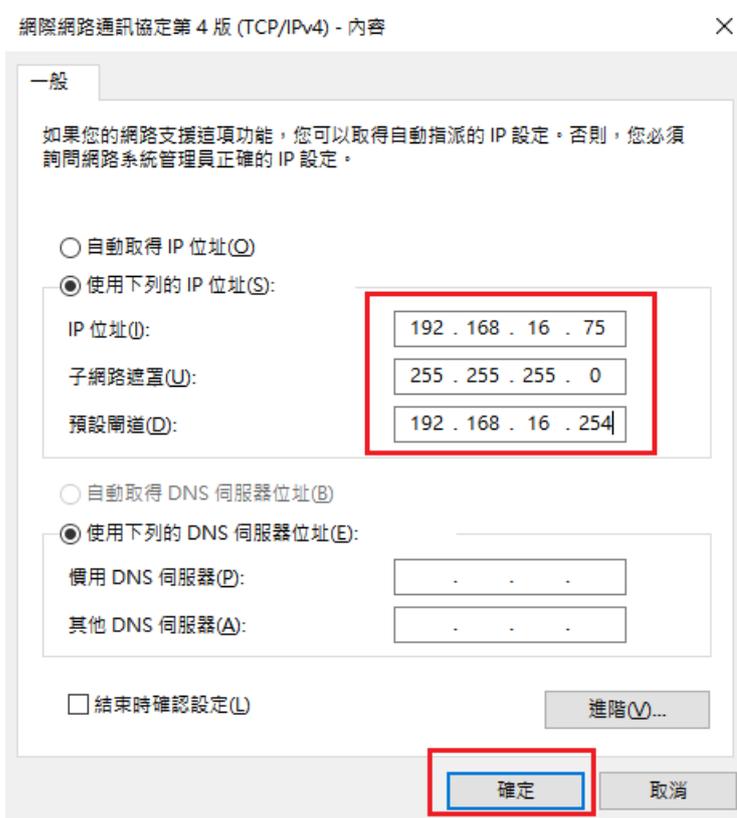
Apply Cancel

192.168.1.101/home.asp

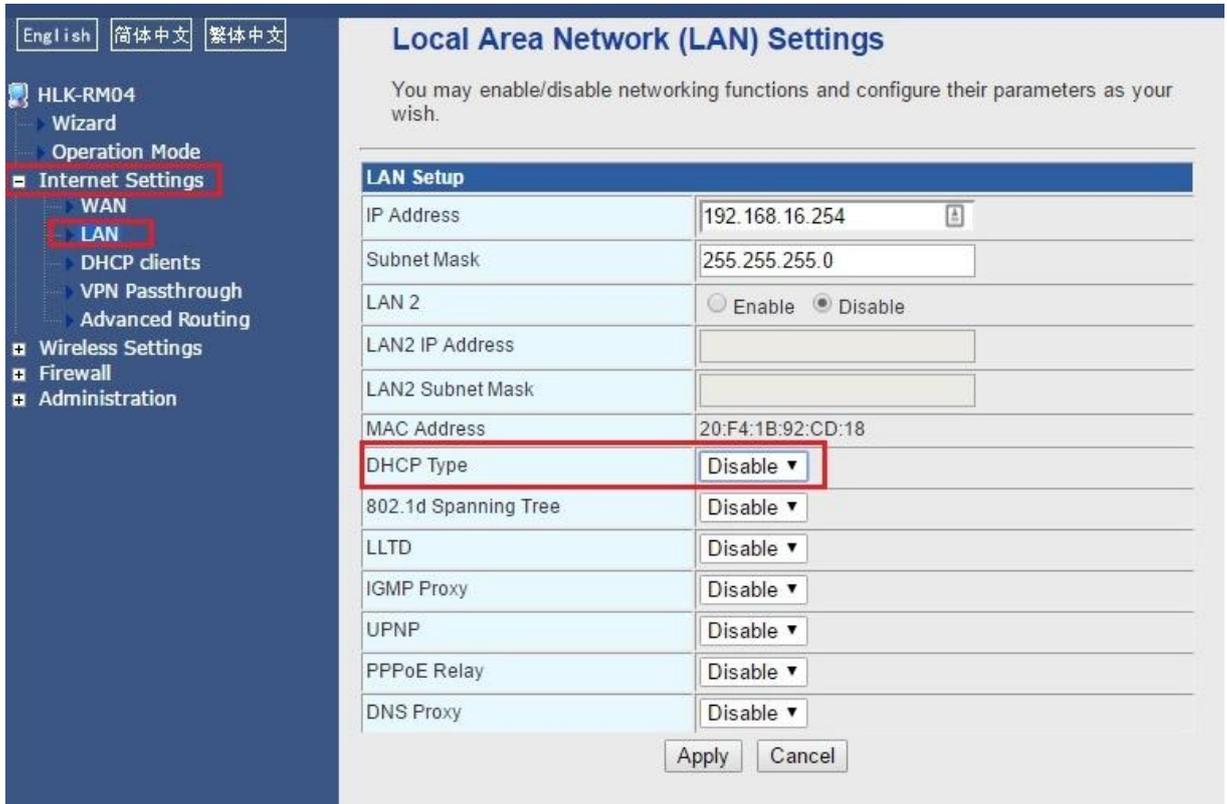
6. 更改運作模式為“Bridge” 模式並且啟用 “AP Client”
修改完後按下Apply 並且等候30秒讓設備重啟



7. MDNET-5W的預設IP位址會變更為“192.168.16.254”
請先將電腦的IP位址改為“192.168.16.75”



8. 重新執行“NET_Discover_V0110.exe” 搜尋 MDNET-5W(192.168.16.254)
找到後雙擊IP開啟網頁設定畫面
9. 點選“Hi-Link” logo 直接開啟“<http://192.168.16.254/home.asp>”
10. 到“Internet Settings” \ “LAN” 設定頁面下將DHCP type 設為Disable
修改完後按下Apply讓設備重啟

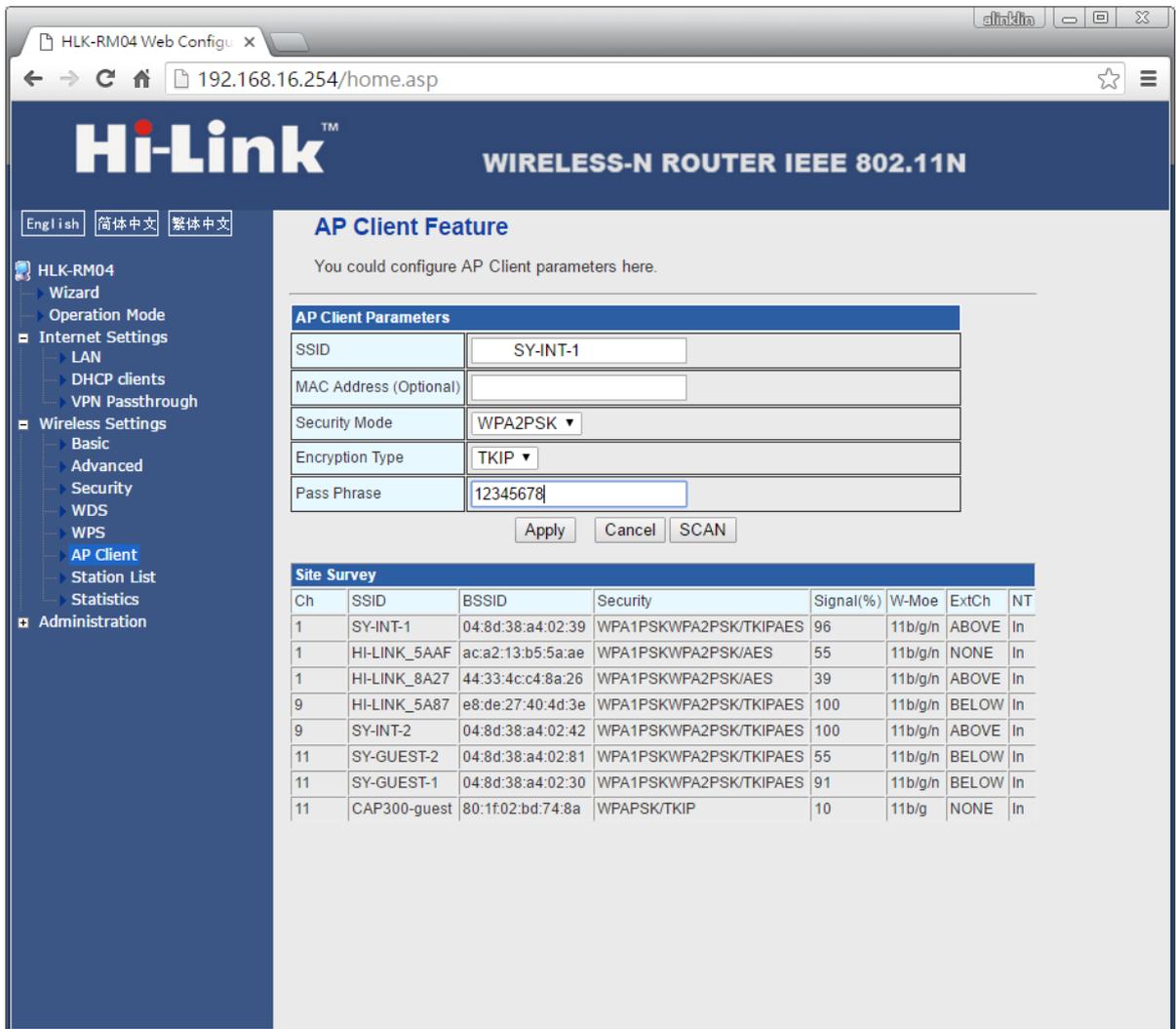


The screenshot displays the 'Local Area Network (LAN) Settings' page. The left sidebar shows a navigation menu with 'Internet Settings' expanded to 'LAN'. The main content area contains the following settings:

LAN Setup	
IP Address	192.168.16.254
Subnet Mask	255.255.255.0
LAN 2	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
LAN2 IP Address	
LAN2 Subnet Mask	
MAC Address	20:F4:1B:92:CD:18
DHCP Type	Disable
802.1d Spanning Tree	Disable
LLTD	Disable
IGMP Proxy	Disable
UPNP	Disable
PPPoE Relay	Disable
DNS Proxy	Disable

Buttons for 'Apply' and 'Cancel' are located at the bottom right of the settings area.

11. 到 “Wireless settings” \ “AP Client” 設定頁面下設定AP的SSID、加密方式、密碼..等。



The screenshot shows the web configuration interface for a Hi-Link WIRELESS-N ROUTER IEEE 802.11N. The page is titled "AP Client Feature" and includes a navigation menu on the left. The main content area is divided into two sections: "AP Client Parameters" and "Site Survey".

AP Client Parameters

SSID	SY-INT-1
MAC Address (Optional)	
Security Mode	WPA2PSK
Encryption Type	TKIP
Pass Phrase	12345678

Buttons: Apply, Cancel, SCAN

Site Survey

Ch	SSID	BSSID	Security	Signal(%)	W-Moe	ExtCh	NT
1	SY-INT-1	04:8d:38:a4:02:39	WPA1PSKWPA2PSK/TKIPAES	96	11b/g/n	ABOVE	In
1	HI-LINK_5AAF	ac:a2:13:b5:5a:ae	WPA1PSKWPA2PSK/AES	55	11b/g/n	NONE	In
1	HI-LINK_8A27	44:33:4c:c4:8a:26	WPA1PSKWPA2PSK/AES	39	11b/g/n	ABOVE	In
9	HI-LINK_5A87	e8:de:27:40:4d:3e	WPA1PSKWPA2PSK/TKIPAES	100	11b/g/n	BELOW	In
9	SY-INT-2	04:8d:38:a4:02:42	WPA1PSKWPA2PSK/TKIPAES	100	11b/g/n	ABOVE	In
11	SY-GUEST-2	04:8d:38:a4:02:81	WPA1PSKWPA2PSK/TKIPAES	55	11b/g/n	BELOW	In
11	SY-GUEST-1	04:8d:38:a4:02:30	WPA1PSKWPA2PSK/TKIPAES	91	11b/g/n	BELOW	In
11	CAP300-guest	80:1f:02:bd:74:8a	WPAPSK/TKIP	10	11b/g	NONE	In

修改完後按下Apply讓設備重啟

12. 設定好後可以透過Wi-Fi無線網路嘗試連接有線網路設備進行通訊。