

Advantech SE Technical Share Document

Date	2019 / 05 / 01	Related Product	WebAccess/CNC, WebAccess/SCADA	
Category	<input type="checkbox"/> FAQ <input checked="" type="checkbox"/> SOP <input type="checkbox"/> Driver Tech Note			
Abstract	WebAccess CNC FANUC FOCAS Connection Manual			
Keyword	WebAccess/CNC, WebAccess/SCADA, CNC Driver, Runtime Driver, FANUC Oi/A/B/C/D/F, 16i-B, 18i-B, 21i-B, 30i, 31i, 32i			
Related OS	Windows 7, Windows 8.1, Windows 10			
Revision History				
Date	Version	Author	Reviewer	Description
2019/05/01	V1.0	JosephSun		

■ **Problem Description & Architecture:**

此份文件可協助首次進行 CNC 控制器連線的使用者，從控制器的設定當中找到網路 IP 設定。以利後續 WebAccess/CNC 相關應用與資料擷取。

*在此強烈建議，請讓現場相關操作人員來操作控制器的所有動作

■ **Brief Solution - Step by Step:**

說明:

FANUC FOCAS is a set of library files that can use to access the information from FANUC CNC controller.

The available information:

1. CNC status
2. Part count information
3. Program (name, number, size, modified date)
4. Spindle load
5. Position data
6. Tool & work offsets
7. Alarm number & text
8. PMC data
9. Feed Rate Overrides
10. and more....

FOCAS library is installed on the most FANUC i-series controllers and for some older version that is an option.

Rare	Option	Standard
0i-A	0i-B/C	0i-D
16i-A	16i-B	30i
18i-A	18i-B	31i
21i-A	21i-B	32i
	160i	300i
	180i	310i
	210i	320i

Step1: 確認控制器有無安裝 FOCAS



針對 **0i-A/B/C, 16i, 18i, 21i, 160i, 180i, 210i** 系列的控制器要先判斷控制器出廠有無安裝 FOCAS

- 按 **SYSTEM** 後,右鍵尋找 **ETHPRM**, 若沒有此參數即代表控制器不支持網路介面
- 在 **ETHPRM** 下有 **EMBED**, 按下後即應出現 **TCP/IP** 選項,切換下頁應會出現 **FOCAS** 參數
- 在 **ETHPRM** 下沒有 **EMBED**, 但是有 **BOARD** 的選項, 按下後即應出現 **TCP/IP** 選項,執行下頁尋找 **FOCAS** 參數, 如果未找到該參數即代表出廠沒有安裝 **FOCAS**, 可以尋求 **FANUC** 原廠購買 **FOCAS OPTION**
- 在 **ETHPRM** 下僅有 **PCMCIA** 即代表出廠沒有安裝 **FOCAS**, 可以尋求 **FANUC** 原廠購買 **FOCAS OPTION**

Step2: FOCAS2/Ethernet Setting



EMBED ->COMMON & FOCAS2

FOCAS2 ->COMMON & FOCAS2

```

EMB_ETH [EMB_PORT]          00000 N00000
COMMON: Setting [EMBEDDED]
BASIC
MAC ADDRESS                 00E0E4000001
IP ADDRESS                  192.168.0.100
SUBNET MASK                 255.255.255.0
ROUTER IP ADDRESS          192.168.0.253

AVAILABLE DEVICE           EMBEDDED 1 / 2
A) _

MDI ***** **          12:00:00
(COMMON) FOCAS2 FTPTRNS (OPRT) +
    
```

Item	Description
MAC ADDRESS	Embedded Ethernet MAC address
IP ADDRESS	Specify the IP address of the embedded Ethernet.
SUBNET MASK	Specify a mask address for the IP addresses of the network.
ROUTER IP ADDRESS	Specify the IP address of the router. Specify this item when the network contains a router
AVAILABLE DEVICE	Enabled device of the embedded Ethernet. Either the embedded Ethernet port or the PCMCIA Ethernet card is displayed.

```

EMB_ETH [EMB_PORT]          00000 N00000
FOCAS2/Ethernet:Setting [EMBEDDED]
BASIC
PORT NUMBER (TCP)          8193
PORT NUMBER (UDP)         0
TIME INTERVAL              0

AVAILABLE DEVICE           EMBEDDED 1 / 1
A) _

MDI ***** **          12:00:00
(COMMON) FOCAS2 FTPTRNS (OPRT) +
    
```

Item	Description
PORT NUMBER (TCP)	Specify a port number to be used with the FOCAS2/Ethernet function. The valid input range is 5001 to 65535.
PORT NUMBER (UDP)	Set this item to 0 when it is used as the FOCAS2/Ethernet function.
TIME INTERVAL	Set this item to 0 when it is used as the FOCAS2/Ethernet function. Note: The unit of the time interval is 10ms. The allowable range is between 10 and 65535. A time interval less than 100ms cannot be set.
AVAILABLE DEVICE	Enabled device of the embedded Ethernet. Either the embedded Ethernet port or the PCMCIA Ethernet card is displayed.

Related NC parameters

	#7	#6	#5	#4	#3	#2	#1	#0
14880								ETH

[Input type] Setting input
[Data type] Bit

0 **ETH** The embedded Ethernet function (embedded Ethernet port or PCMCIA Ethernet card) is:
0: Used.
1: Not used.

Note:

The parameters for the embedded Ethernet port and the parameters for the PCMCIA Ethernet card are independent of each other.

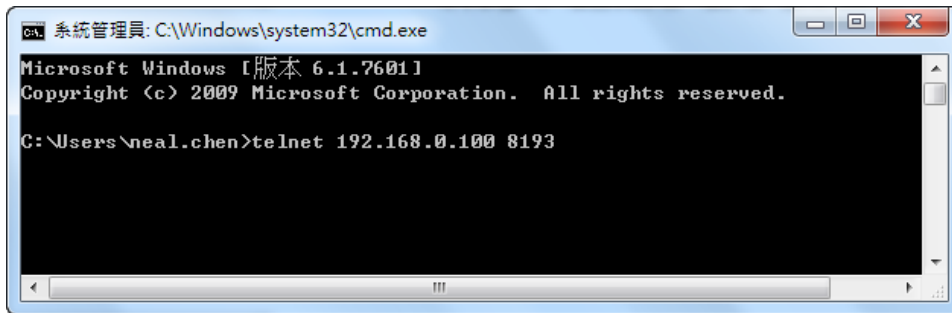
<Please make sure the available device is EMBEDDED if you use the embedded network interface>

Step3: FANUC FOCAS 網路連線測試

- 先使用 Telnet 工具測試 FOCAS 端口是否開啟

telnet **IP address** **port number**

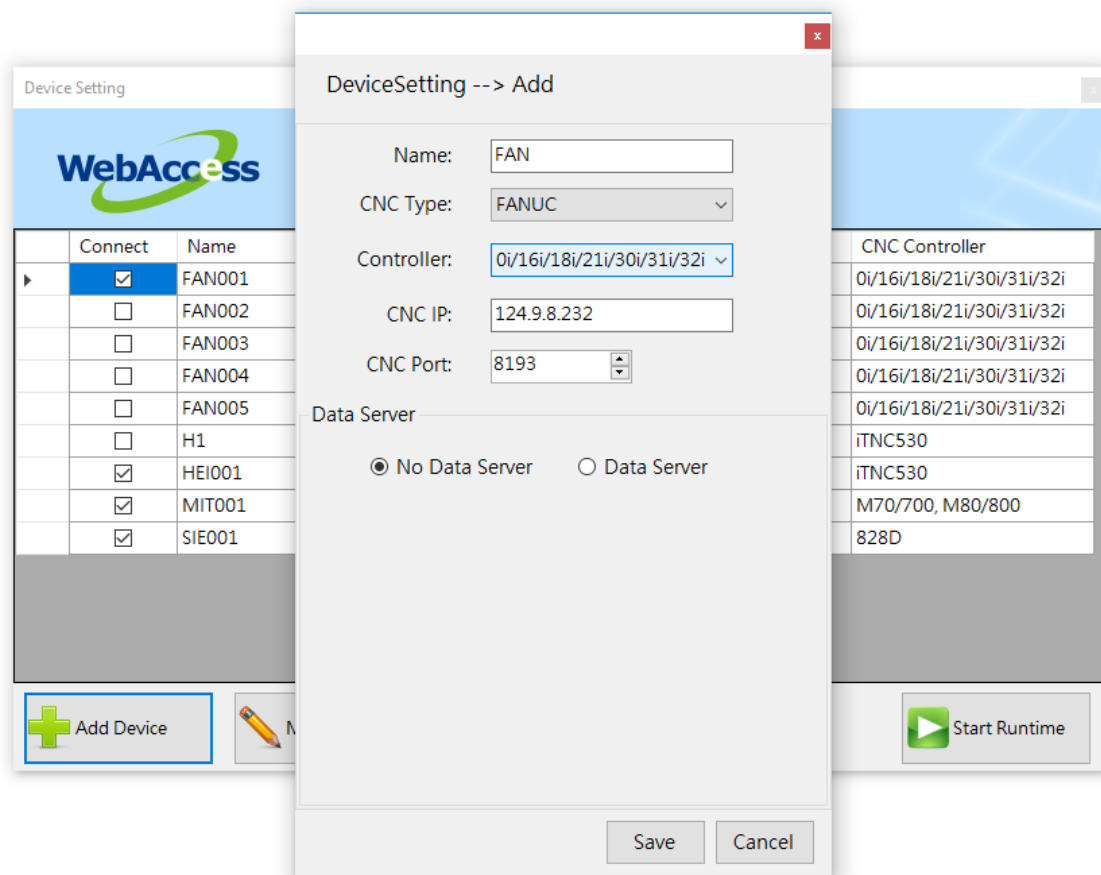
EX: telnet 192.168.0.100 8193

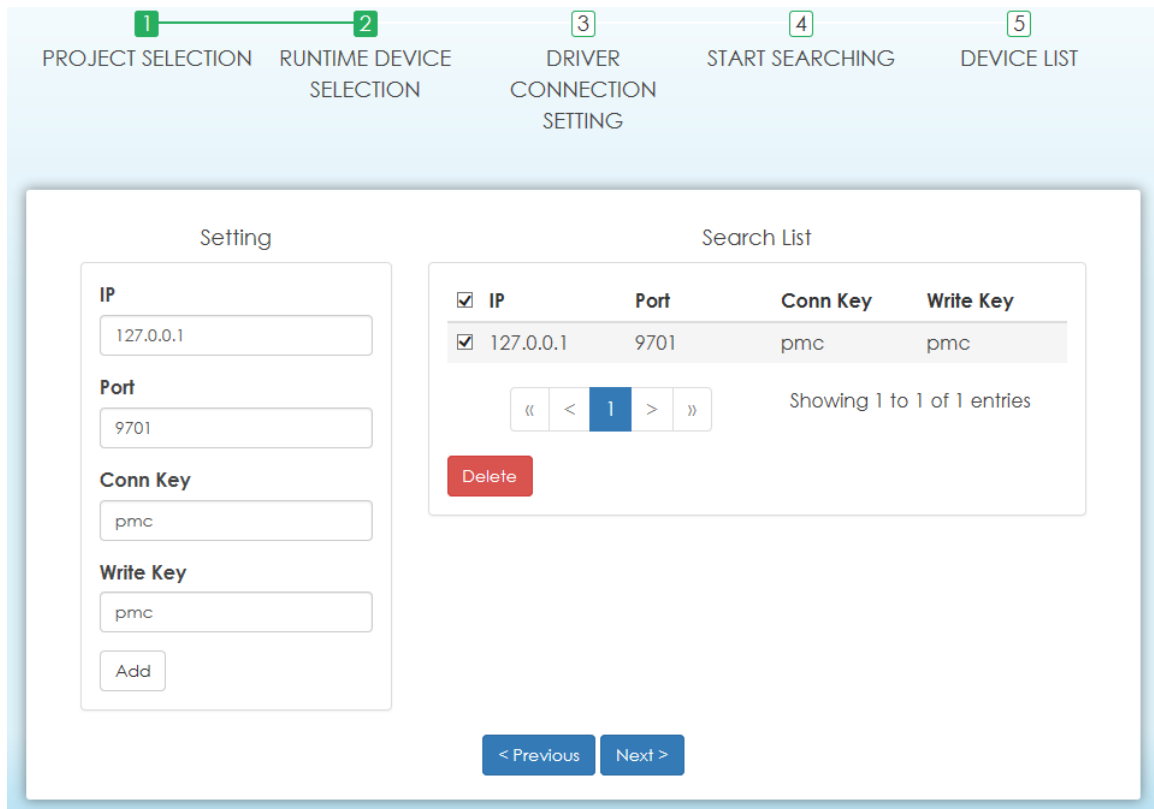


Step4: WebAccess/CNC 專案建立

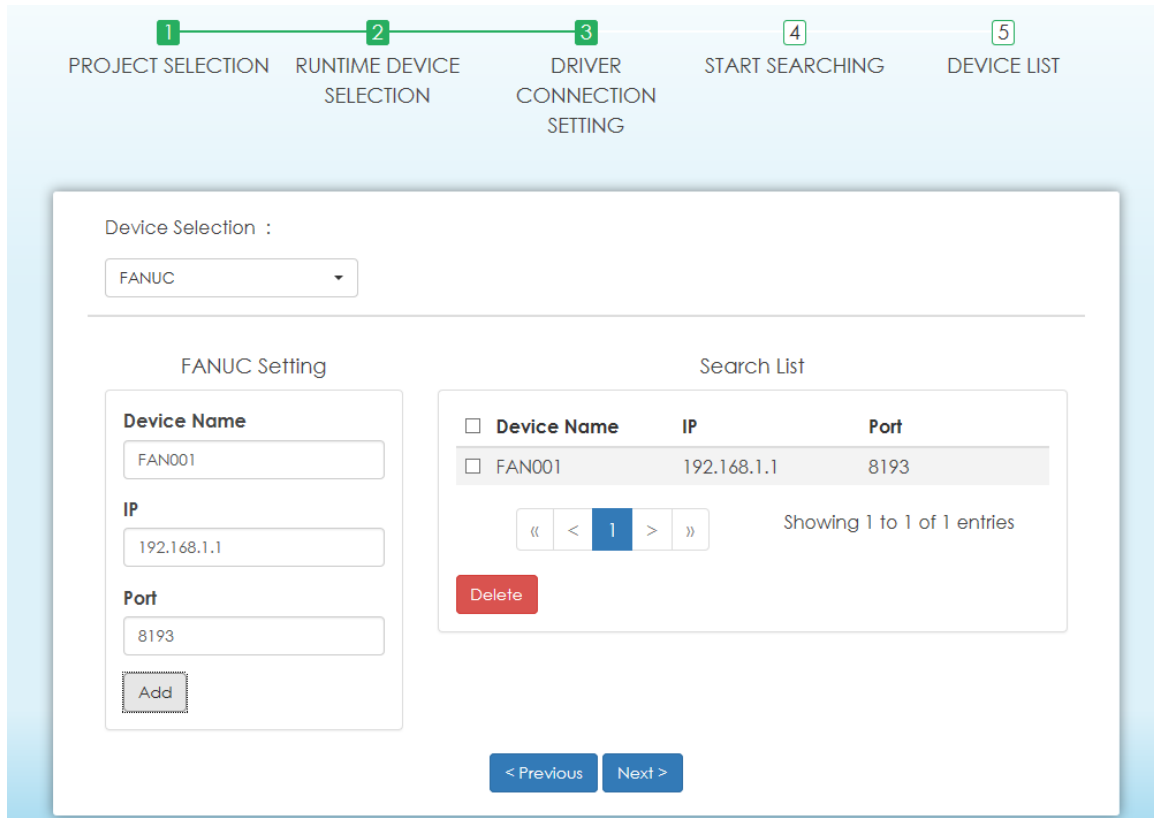
確認連線配置沒問題後，根據選用不同的 WebAccess/CNC 授權軟體 Driver 版本，會有不同的建立流程。

- 使用 **Runtime Driver**：請先透過"Device Setting"配置連線設定畫面(如下圖)，接著請按下"Start Runtime"運行；接續再開啟 WebAccess/ CNC Explorer 工具，在步驟 2 的頁面進行 Runtime 設定來建立專案(如下圖)。





- 使用 **CNC Driver**：直接開啟 WebAccess/CNC Explorer 工具，請跳過步驟 2(Runtime Driver 配置頁面)，進入步驟 3 的頁面進行機台連線設定來建立專案(如下圖)。



- **Reference:**
FANUC Series Oi Model D MAINTENANCE MANUAL (B64305EN)