How to Configure Virtual COM Port in EKI-1500 series

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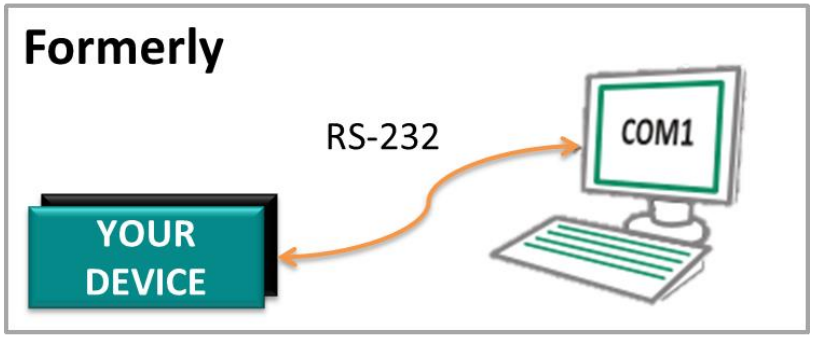
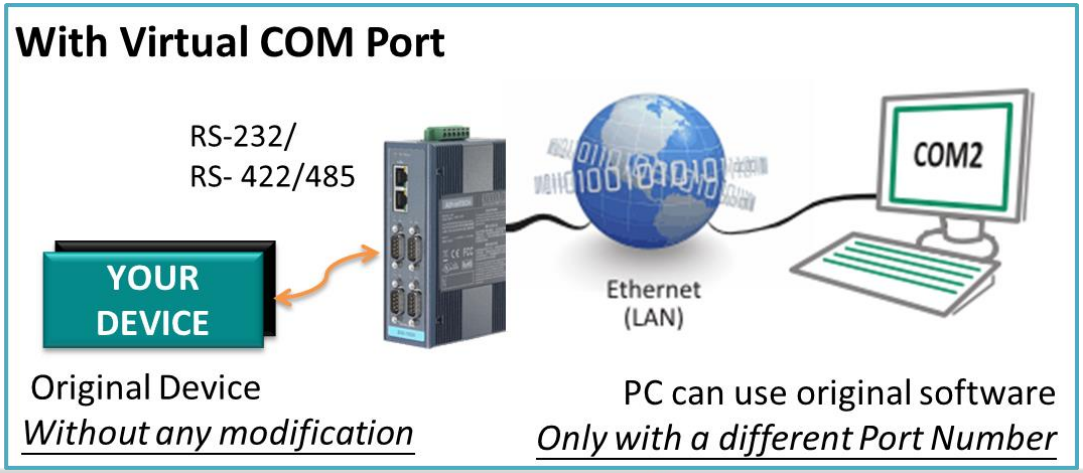
Overview

- **Check EKI-1500 serial PIN Assignment**
  - Make sure the pin assignment is correct
- **Install EKI Utility to run VCOM driver**
  - PC that need to have VCOM driver to run in VCOM mode
- **Using Utility to Map a new Virtual COM Port**
  - Using EKI Utility can map it
- **Check EKI-1500 Web Server Setting**
  - We also provide USDG Data TCP, UDP different operation mode, make sure choosing the correct one
- **Loopback Test**
  - Verified the mapped VCOM can work success!

What Virtual COM Port works?

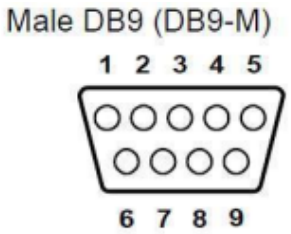
- **Quickly and easily replace limited distance serial connection with an anywhere/anytime access**
  - **Leverage existing Ethernet and IP networking infrastructure**
  - **Access anywhere if there's network connection**
  - **No distance limitations!**
  - **Without changing original SCADA programming**





PIN Assignments of Device Server

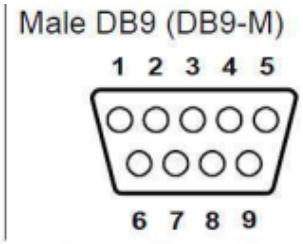
EKI-1500 series that can software configure RS-232 / RS-422 / RS-485.
Each different interface that use its own pin define



Pin	1	2	3	4	5	6	7	8	9
RS-232	DCD	RX	TX	DTR	GND	DSR	RTS	CTS	RI
RS-422	TX-	-	-	TX+	GND	-	RX+	-	RX-
RS-485	DATA-	-	-	DATA+	GND	-	-	-	-

Support for
EKI-1521, 1522, 1524, 122x, 132x 135x, 136x

RJ45



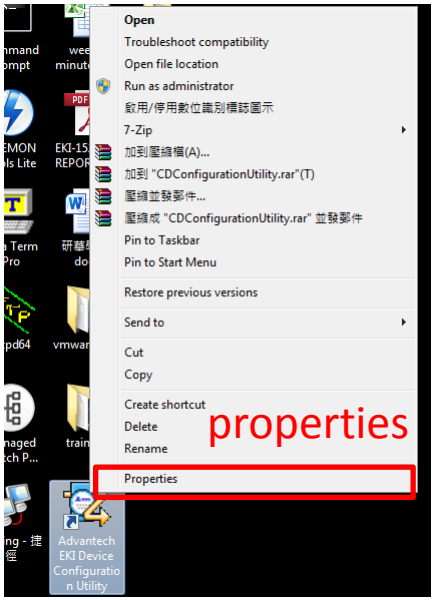
Pin	1	2	3	4	5	6	7	8
RS-232	DCD	RX	TX	DTR	GND	DSR	RTS	CTS
RS-422	TX-	TX+	RX+	RX-	GND	-	-	-
RS-485	Data-	Data+	-	-	GND	-	-	-

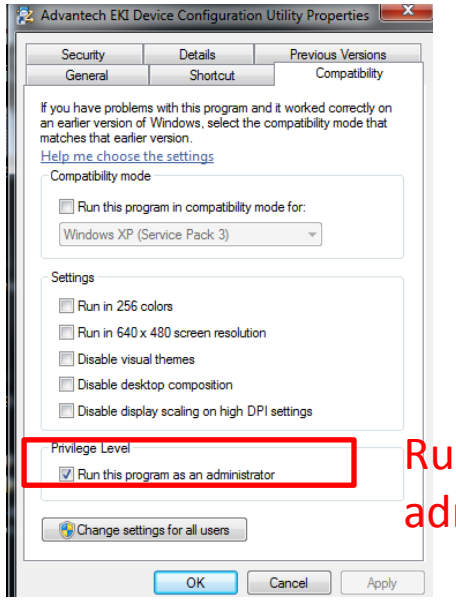
Support for
EKI-1526, EKI-1528

EKI Utility Installation & Ethernet Connection Setting

Utility Installation

- Download “Utility” from **Advantech website**
- Make sure you use administrator to access **Utility**





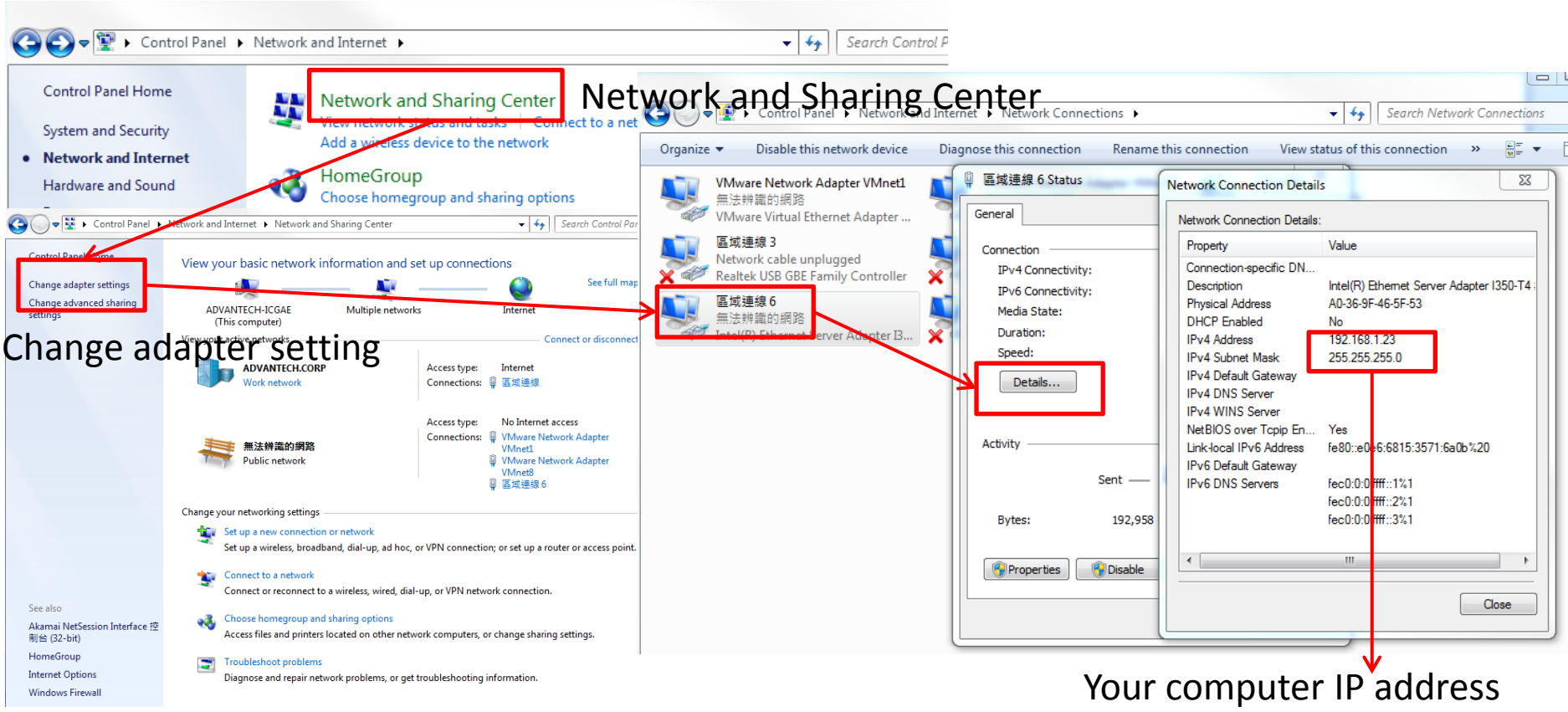
Run this program as an administrator

Attention: Change privilege as Administrator after installation.

Ethernet Setting (1/2)

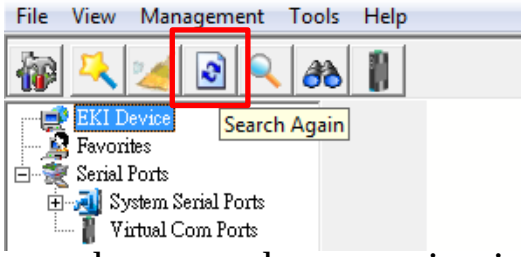
- Check your PC network IP address.

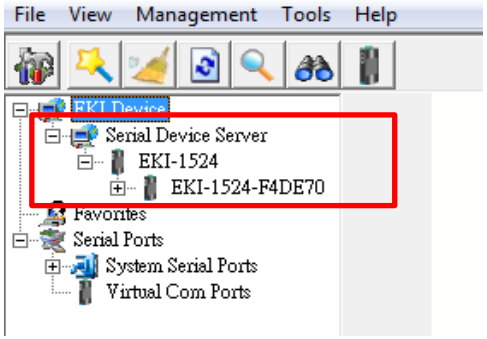
Start → Control Panel → Network and Internet



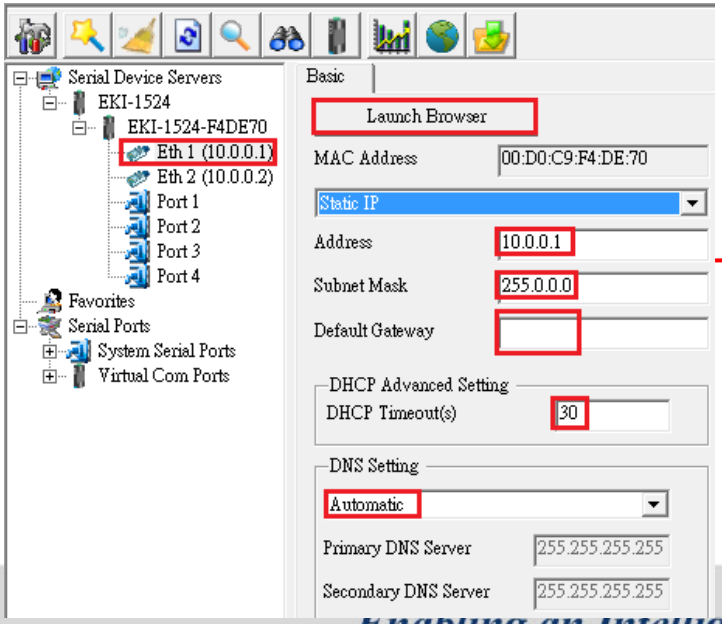
Ethernet Setting (2/2)

- Turn on Utility and change EKI Device Server to work in the same subnet network
  - Find your device

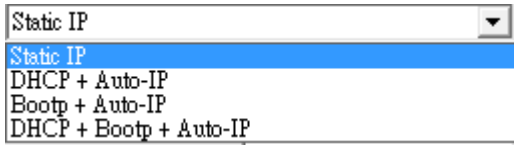




  - Make sure the network connection is working



Which way to obtain the IP address



Address may in the same subnet with your computer !!

How to use Virtual COM Port

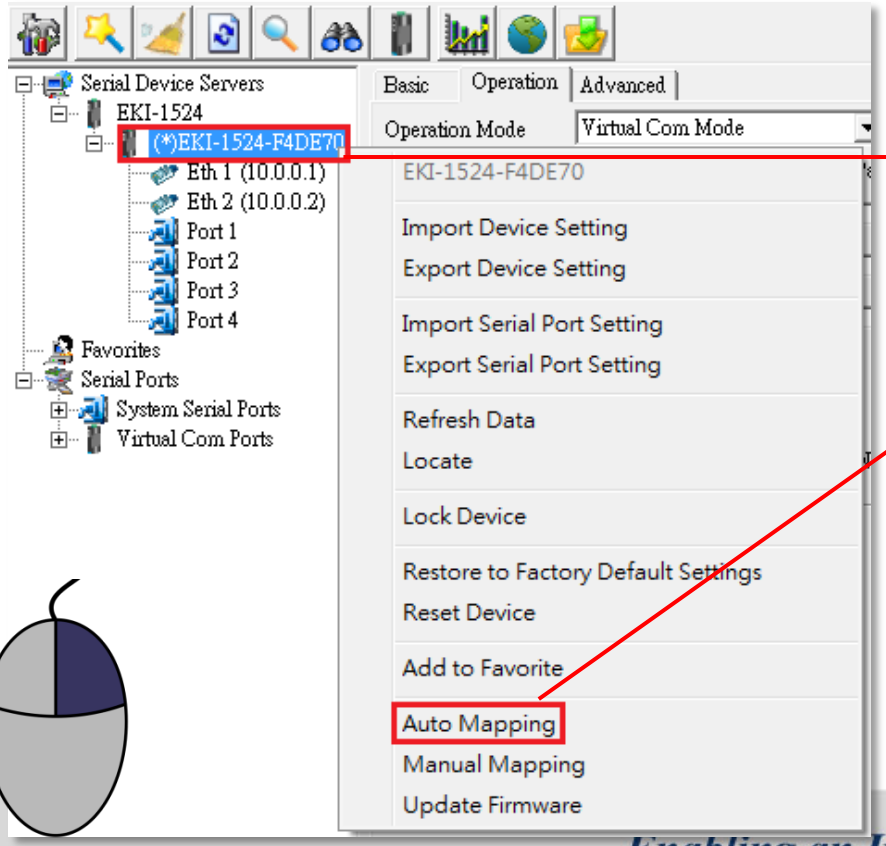
- VCOM Port Mapping
  - Auto Mapping
  - Manual Mapping
  - Configuration Wizard
- Remove VCOM
- Loopback test

Tip for VCOM mode

- In Utility (choose one of three way to map VCOM)
  - ➢Auto Virtual COM Port Mapping
  - ➢Manual Virtual COM Port Mapping
  - ➢Configuration Wizard Mapping
- On WebGUI (firmware setting)
  - ➢Port configuration
    - Basic (serial setting… e.g. RS-232/422/485)
    - Operation (e.g. VCOM/USDG data mode)

Auto Mapping - Step 1

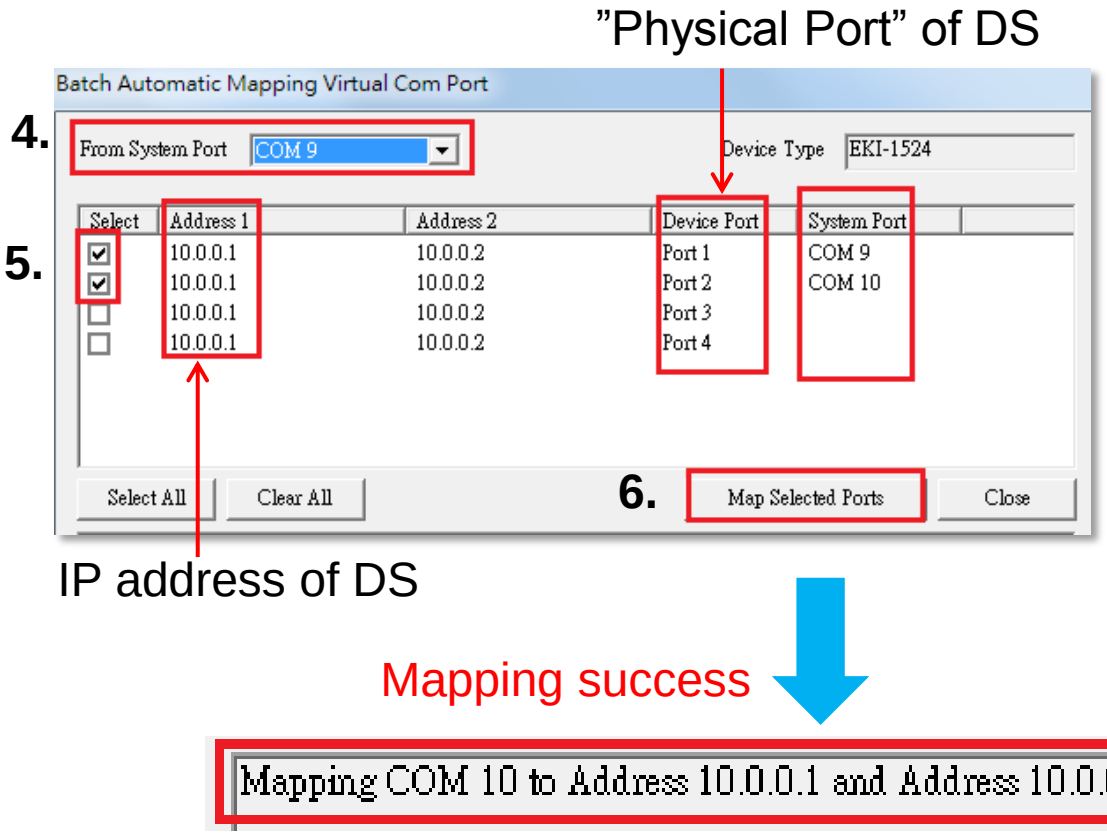
1. Double Click the Installed " Advantech EKI Device Configuration Utility"



2. Right Click on the Device Model Name

3. Select the Auto Mapping and pop up the next step

Auto Mapping - Step 2



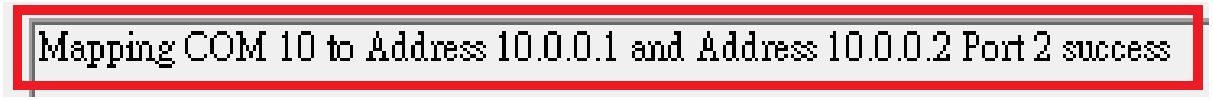
4. Drag down to select port number can be mapped on your host

5. Choose the physical port which you want to map

6. Mapping selected Ports

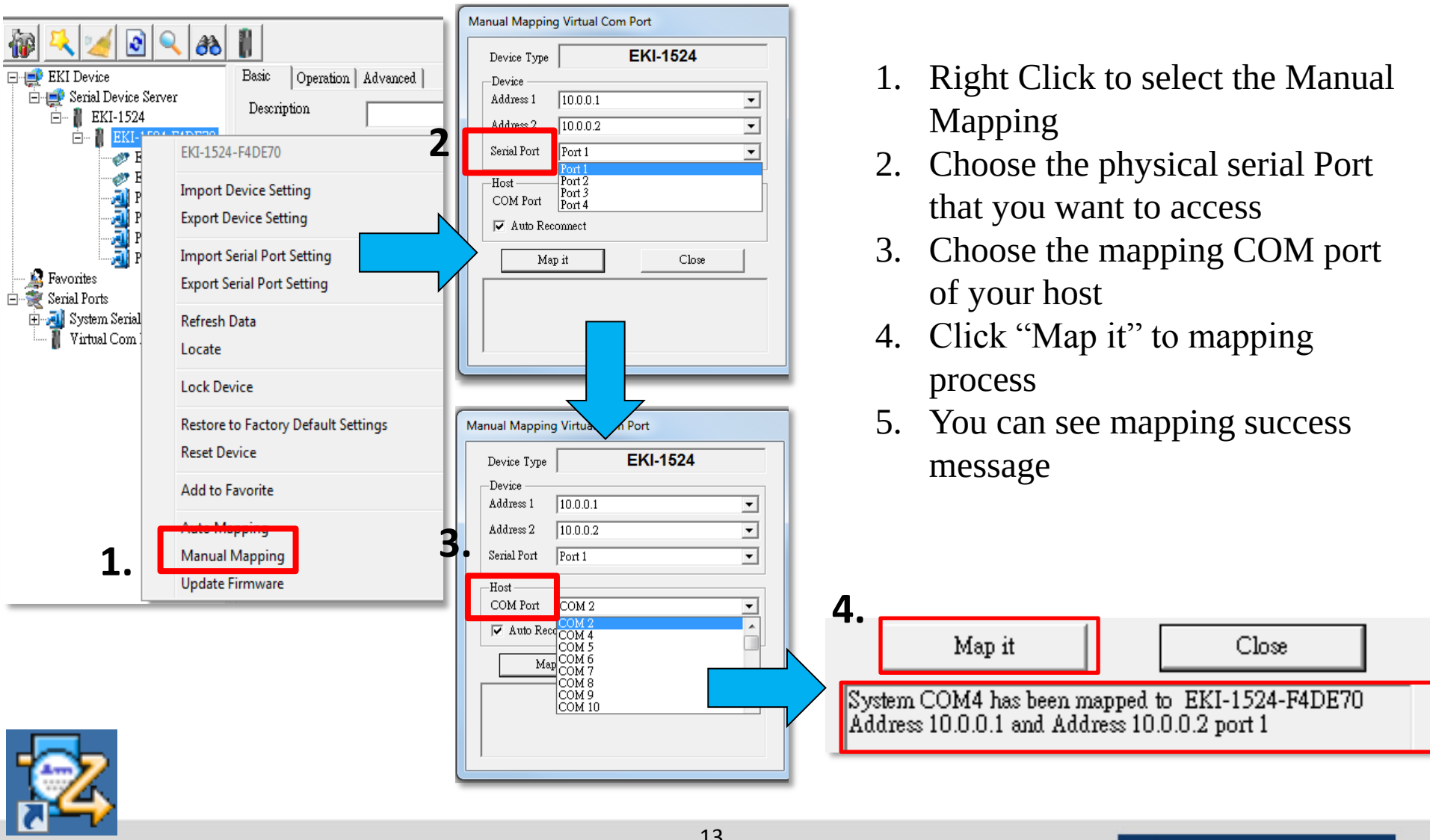
7. you can see the message mapping success

Mapping success



TIP !! – Modified Device Server IP first to make sure in the same domain as your PC

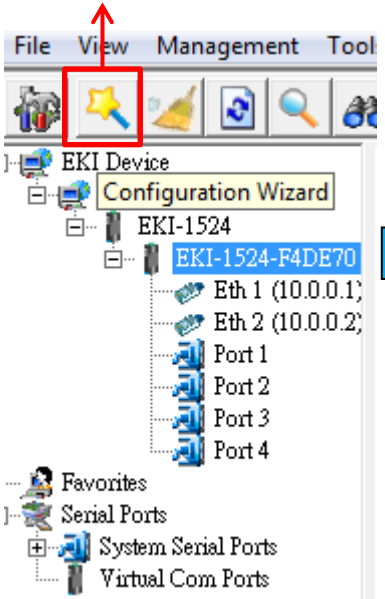
Manual Mapping

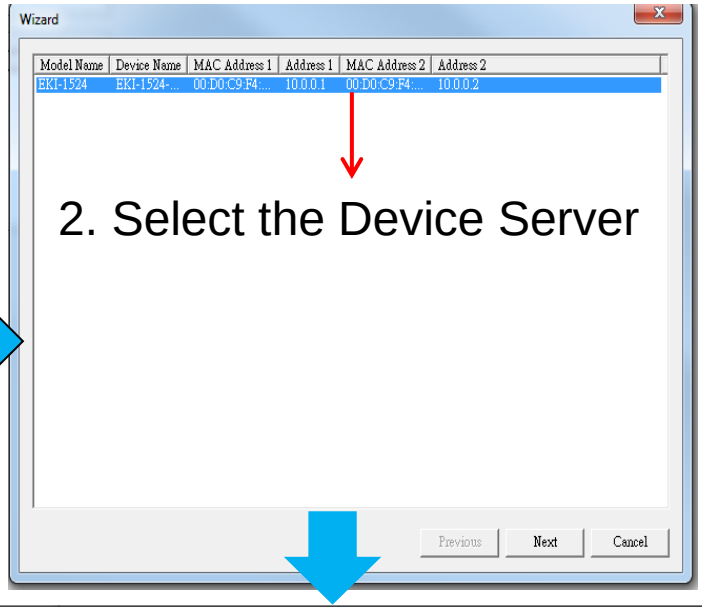


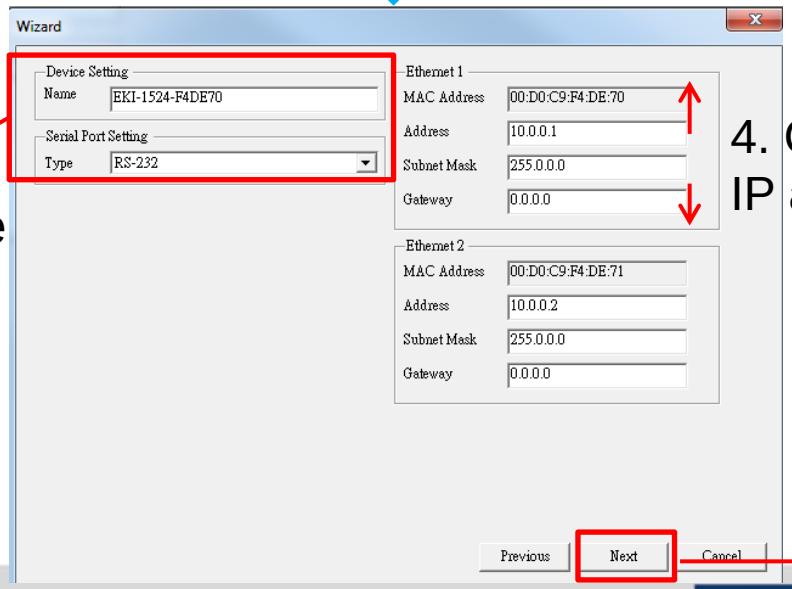
1. Right Click to select the Manual Mapping
2. Choose the physical serial Port that you want to access
3. Choose the mapping COM port of your host
4. Click “Map it” to mapping process
5. You can see mapping success message

Configuration Wizard - Step 1

1. Configuration Wizard







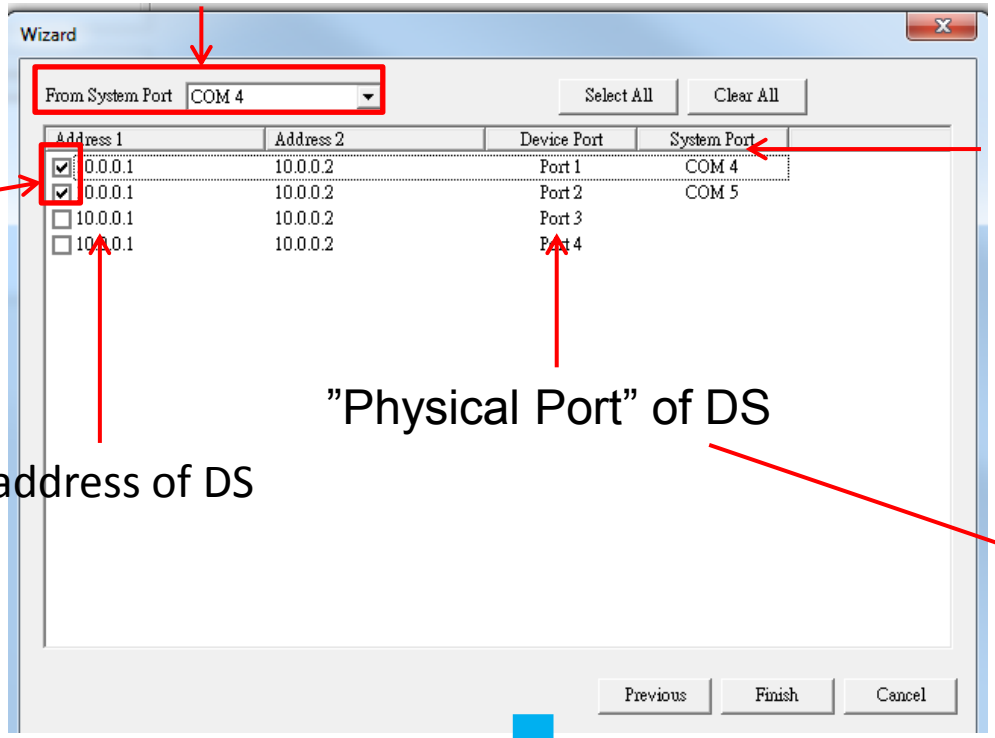
3. Confirm the Device Setting and RS-Type

4. Confirm the IP address setting

5. Next

Configuration Wizard - Step 2

6. Which port you want to mapping on your Host

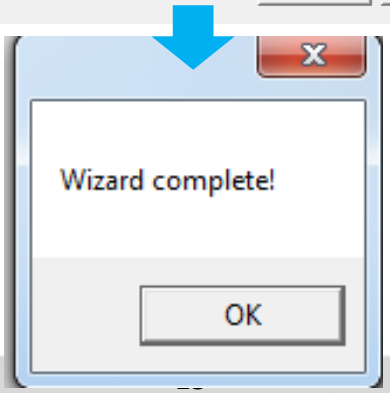


VCOM of the Host after mapping

7. Select the port you want to map

IP address of DS

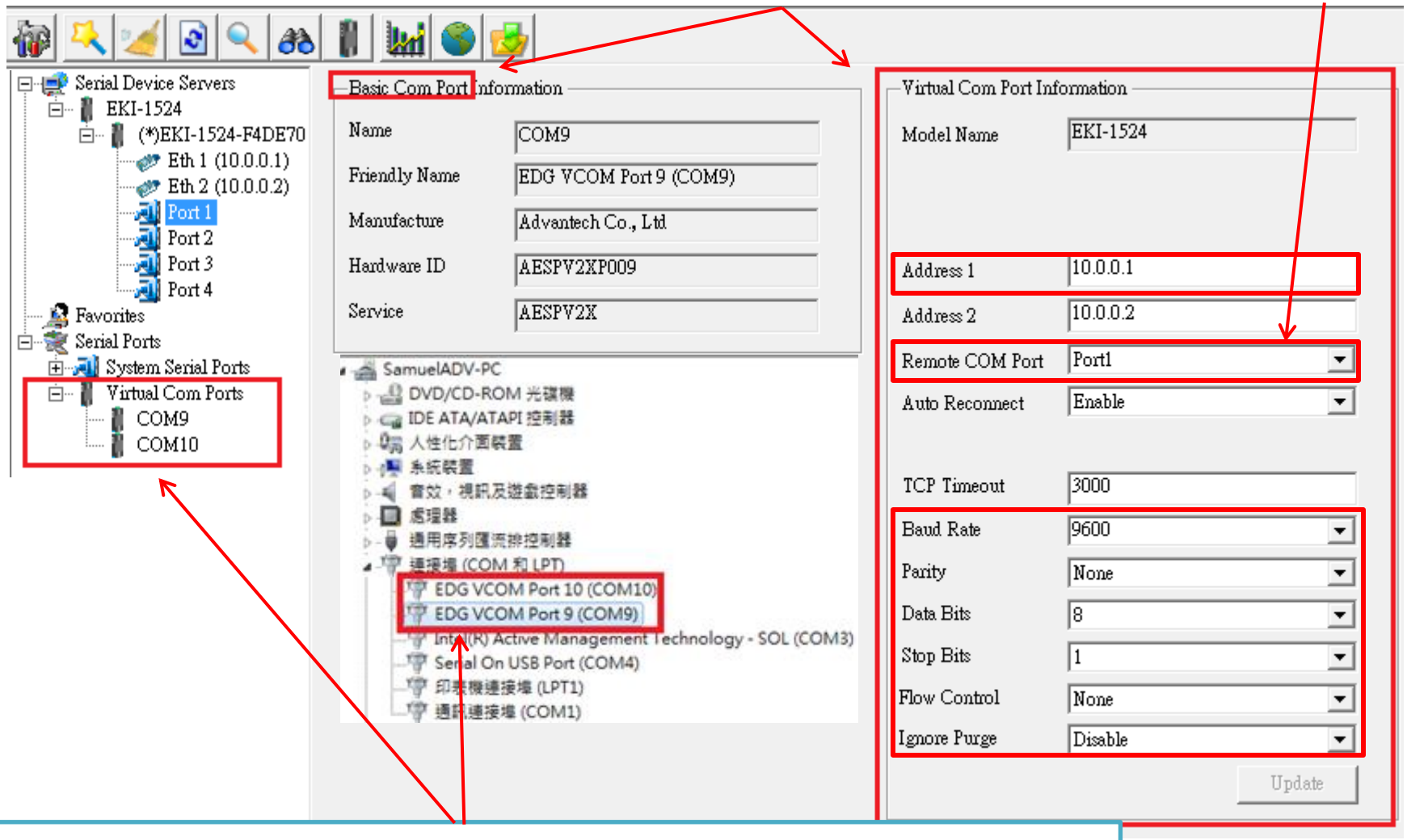
”Physical Port” of DS



8. Mapping success

Confirm VCOM Setting

1. Confirm the VCOM Setting "Physical Port" of DS

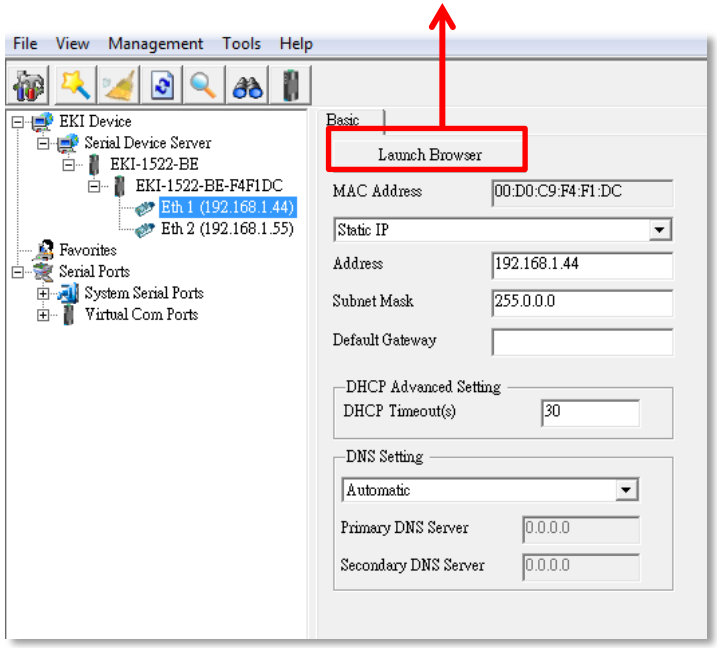


2. Double check VCOM in device management of host

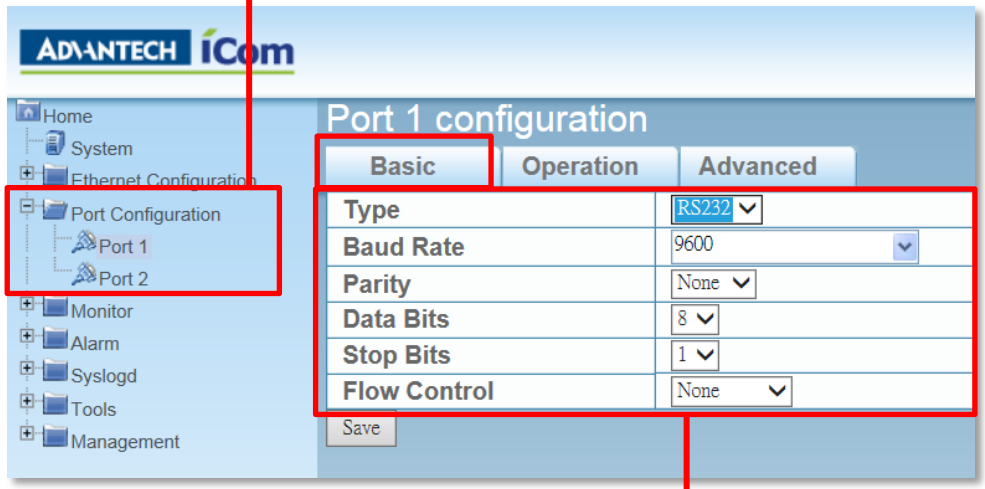
On WEBGUI – Port Configuration (1/3)

- After set up VCOM driver, check the port setting in EKI

1. Launch Browser

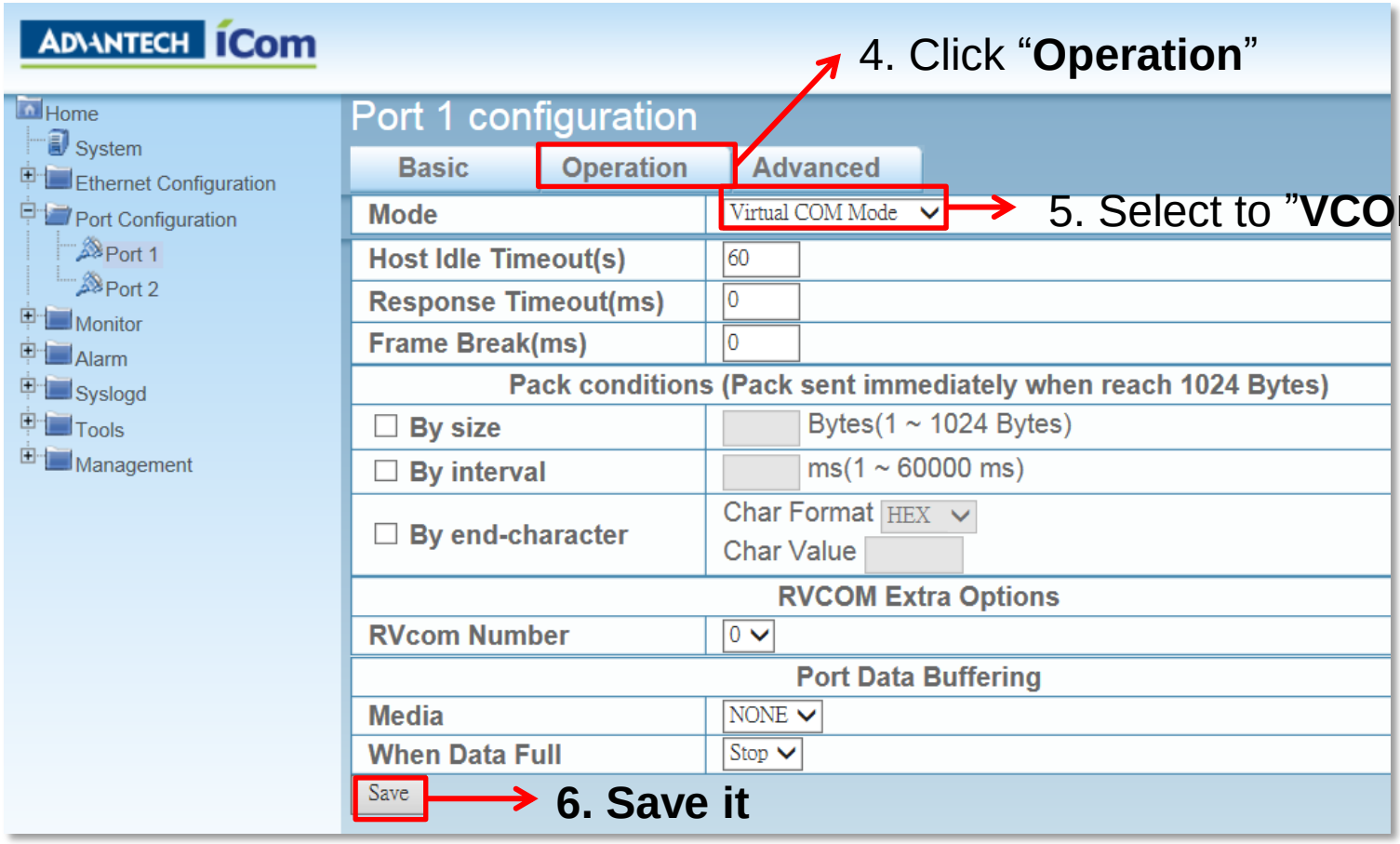


2. Choose "**Physical Port**" of Device Server

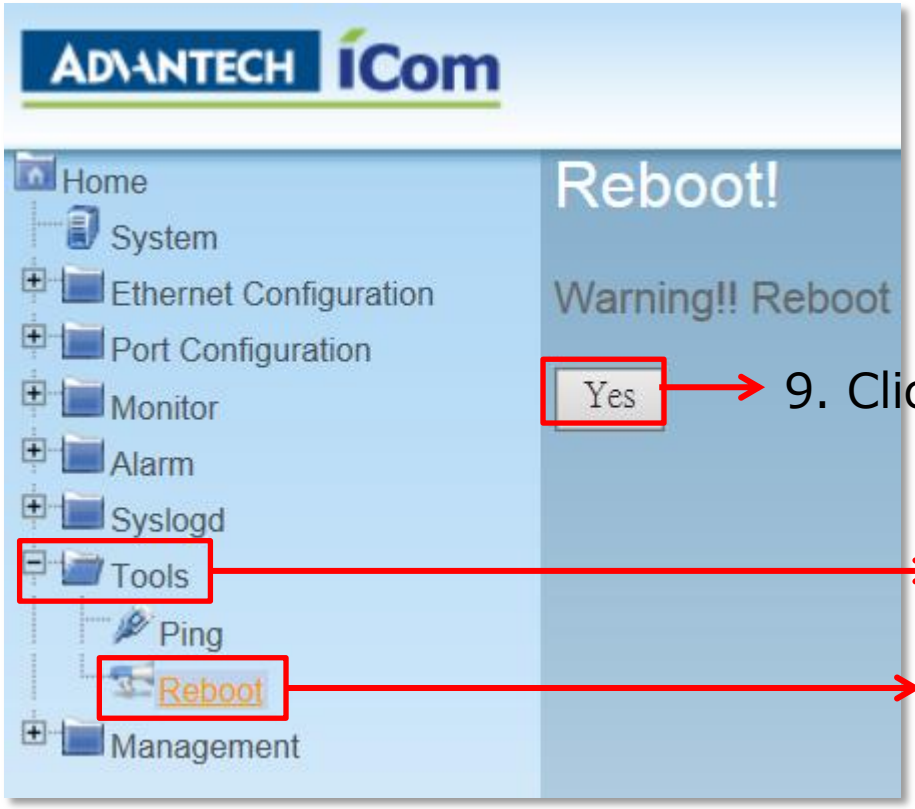


3. To configure your **serial protocol**

On WEBGUI –Port Configuration(2/3)



On WEBGUI – Make configuration works (3/3)



9. Click "**Yes**" to reboot the DS

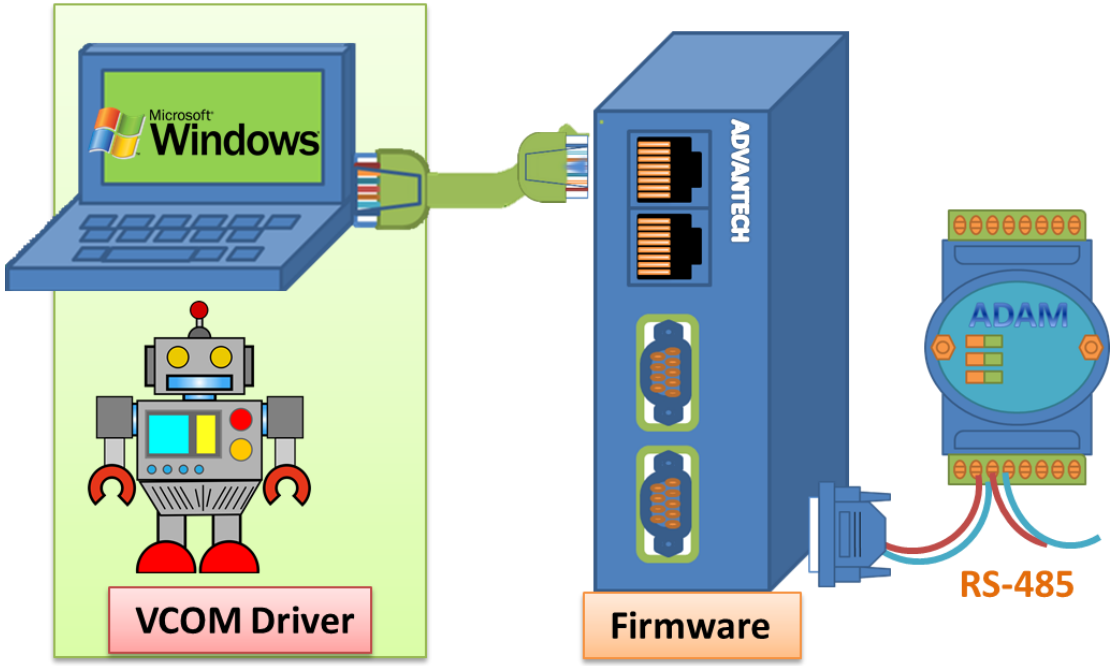
7. Click "**Tools**"

8. Click **"Reboot"**

VCOM Port Mapping Successful

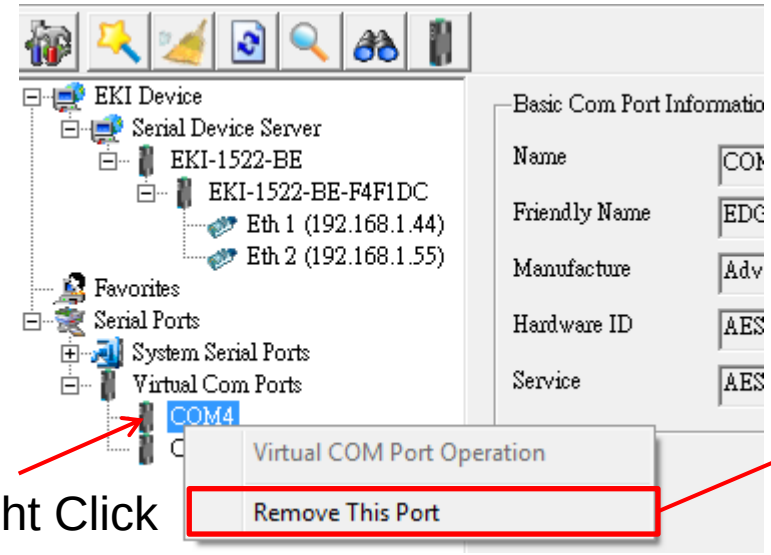
- VCOM Port Mapping is a way to define a physical interface in the device server by creating a virtual interface in the computer

Device Manager on PC



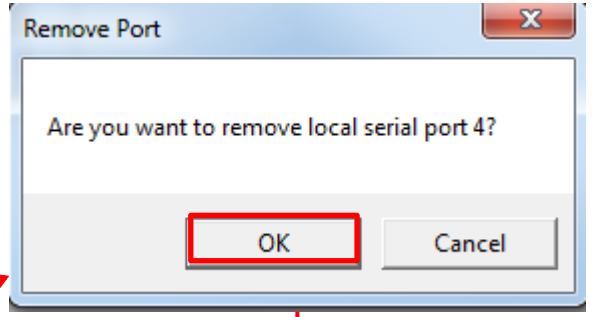
Remove Virtual COM Port

You can simply remove the virtual com port that not needed

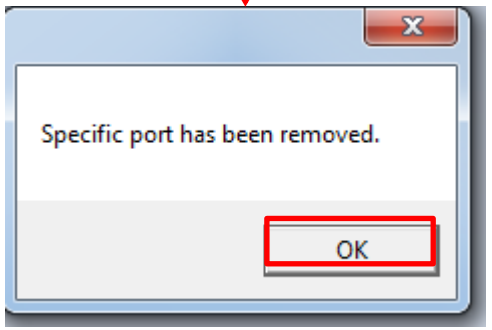


1. Right Click

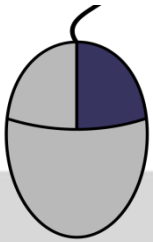
2. Remove This COM Port



3. Click “Ok”



4. Remove Complete

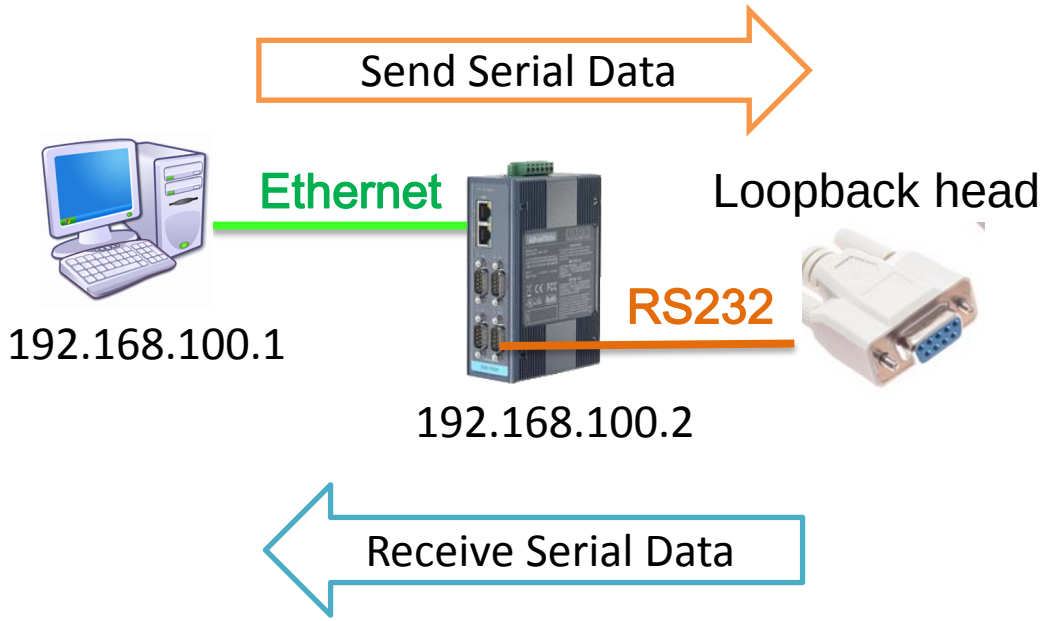


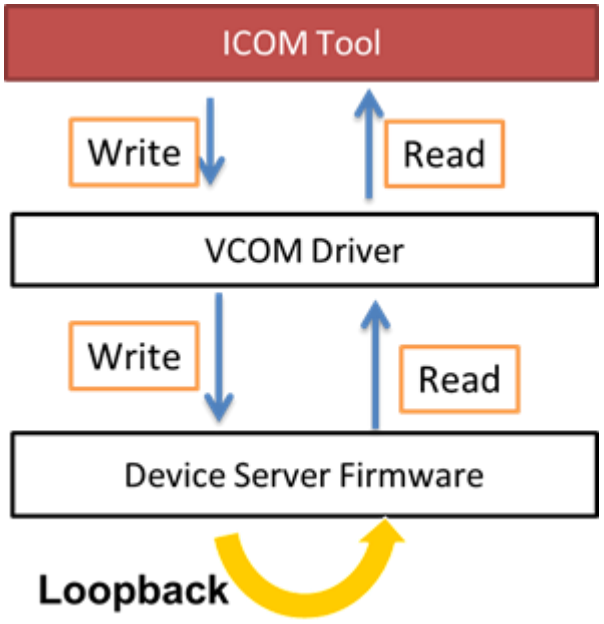
Virtual COM Port Verification - Loopback test

Loopback Test (RS-232 only)

- In Device Server Package that has one loopback head that can do simply trouble shooting.

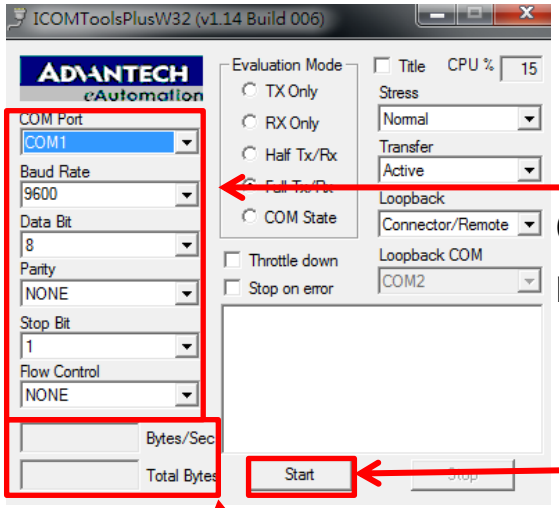
Topology





Loopback Test (RS-232 only)

- Performing the ICOMToolsPlus.exe and choose the com port for verified then click “Start”



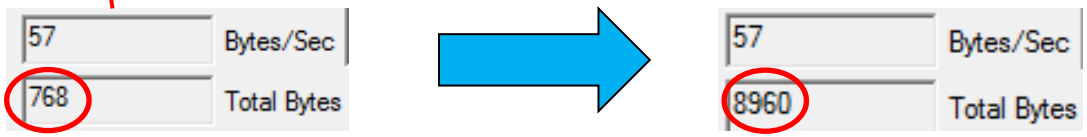
COM Port setting must the same

VCOM Configuration

Baud Rate	9600
Parity	None
Data Bits	8
Stop Bits	1
Flow Control	None
Ignore Purge	Disable

2. After setting, click “Start”

- If the counter is still increment, the VCOM port has been created successfully




Enabling an Intelligent Planet