

EKI-6332 & EKI-136x-BE VCOM application setup example

Revision Date	Revision	Description	Author
May/2018	V1.0	Initial release	ICG AE Jacky.Lin

Abstract

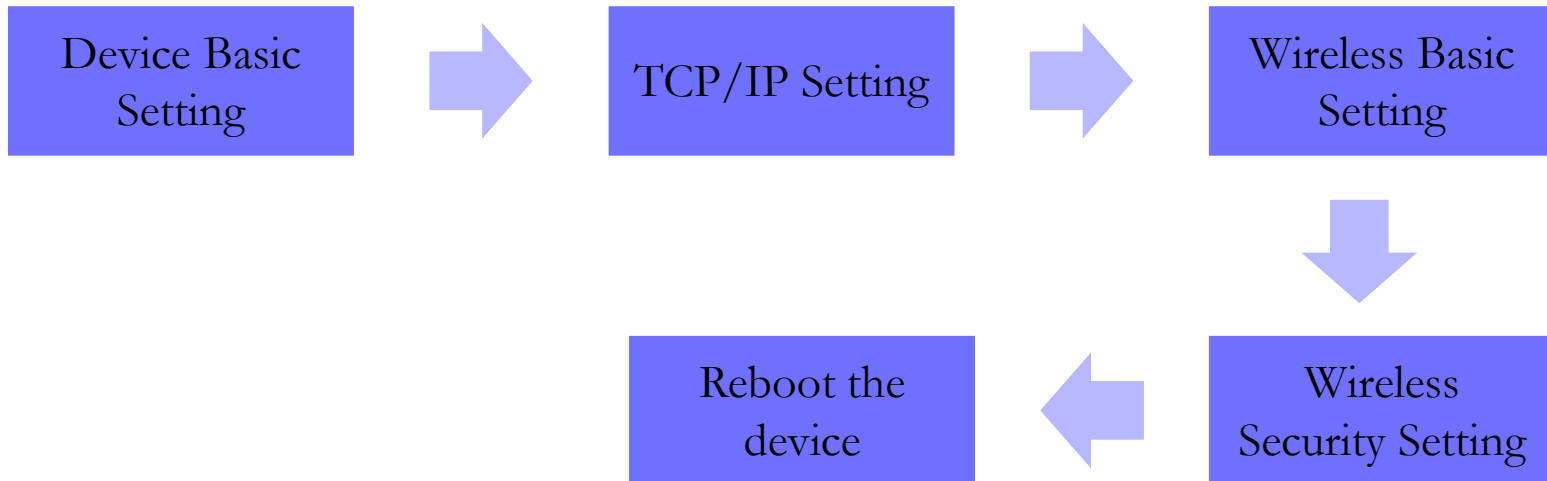
- ❖ **This SOP explains how to configure the EKI-6332 & EKI-136x-BE to build up the wireless connection and set the VCOM mode on EKI-136x-BE for collecting data from the SCADA PC**
- ❖ **Related products:**
EKI-6331, EKI-6332, EKI-136x-BE
- ❖ **Requirement:** EKI-6332 & EKI-136x-BE, PC install EKI utility



Topology



EKI-6332GN Configuration Flow chart



Device Basic Setting

ADVANTECH Industrial Wireless EKI-6332GN-AE

Status

System

Wireless

Management

Tools

Basic Settings

Network Settings ✕

Time Settings

RADIUS Settings

Network Settings

This page configures the IP address, subnet mask, DHCP, and other parameters for your local area network that is connected to the LAN port of the device.

Basic Settings

Network Mode:

Bridge

Use Default "Bridge" mode

Spanning Tree:

Enabled Disabled

STP Forward Delay:

1 (1~30 seconds)

Enable 802.1Q VLAN

Management VLAN ID:

0 (0~4094)

IP Address Assignment

DHCP Client

Static IP

IP Address:

192.168.1.1

Subnet Mask:

255.255.255.0

Gateway IP Address:

0.0.0.0

TCP/IP Setting

ADVANTECH Industrial Wireless EKI-6332GN-AE

Status

System

Wireless

Management

Tools

Basic Settings

Network Settings ✕

Time Settings

RADIUS Settings

Basic Settings

Network Mode:

Spanning Tree: Enabled Disabled

STP Forward Delay: (1~30 seconds)

Enable 802.1Q VLAN

Management VLAN ID: (0~4094)

IP Address Assignment

- DHCP Client
- Static IP

IP Address:

Subnet Mask:

Gateway IP Address:

DNS 1:

DNS 2:

IP Setting

Apply

Cancel

Wireless Basic Setting

Status

System

Wireless

Management

Tools

Basic Settings ✕

Profile Settings

Advanced Settings

Traffic Shaping

Access Control

WDS Settings

Basic Settings

Use this page to change the wireless mode as well as configure any associated wireless network parameters.

Disable Wireless LAN Interface

Operation Mode:

AP

Site Survey

Set to AP mode
Give SSID

SSID:

testing0523

(more...)

Broadcast SSID:

Enabled

Disabled

802.11 Mode:

802.11B/G/N

Channel Mode:

20 MHz

Channel:

2437MHz (6)

Select channel based on site survey result.

Extension Channel:

None

Data Rate:

Auto

HT Protect:

Enabled

Disabled

Antenna Gain:

0

8

0 dBi

Adjust the value as same as your Antenna gain (default antennas 5dBi)

Output Power:

12

20

12 dBm

Adjust the output power

Apply

Cancel

Wireless Basic Setting

Status

System

Wireless

Management

Tools

Basic Settings

Profile Settings ✕

Advanced Settings

Traffic Shaping

Access Control

WDS Settings

Profile Settings

Define each VAP's attribute.

Select the security profile

#	Enabled	Profile Name	SSID	Security	VLAN ID
1	<input checked="" type="checkbox"/>	Profile1	abcde	WPA2-PSK	0
2	<input type="checkbox"/>	Profile2	Wireless	Open System	0
3	<input type="checkbox"/>	Profile3	Wireless	Open System	0
4	<input type="checkbox"/>	Profile4	Wireless	Open System	0
5	<input type="checkbox"/>	Profile5	Wireless	Open System	0
6	<input type="checkbox"/>	Profile6	Wireless	Open System	0
7	<input type="checkbox"/>	Profile7	Wireless	Open System	0
8	<input type="checkbox"/>	Profile8	Wireless	Open System	0

Apply

Reset

Security Setting

ADVANTECH Industrial Wireless EKI-6332GN-AE

Status

System

Wireless

Management

Tools

Basic Settings

Profile Settings ✕

Advanced Settings

Traffic Shaping

Access Control

WDS Settings

Define the VAP's basic settings and security settings.

Basic Settings

Profile Name:	<input type="text" value="Profile1"/>
SSID:	<input type="text" value="abcde"/>
Broadcast SSID:	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled
Wireless Separation:	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled
WMM Support:	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled
IGMP Snooping:	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled
<input type="checkbox"/> Max. Station Num:	<input type="text" value="32"/> (1-32)
Kick STA RSSI:	<input type="text" value="80"/> (1~96)

Security Settings

Network Authentication:	<input type="text" value="WPA2-PSK"/>
Data Encryption:	<input type="text" value="AES"/>
WPA Passphrase:	<input type="text" value="*****"/>

Security setting

Reboot the Device

AP_192.168.1.1

Status System Wireless Management Tools

Configuration File

This page allows you to save current settings to a file or load the settings from the file which was saved previously. You may also reset the current configuration to factory default or reboot the device.

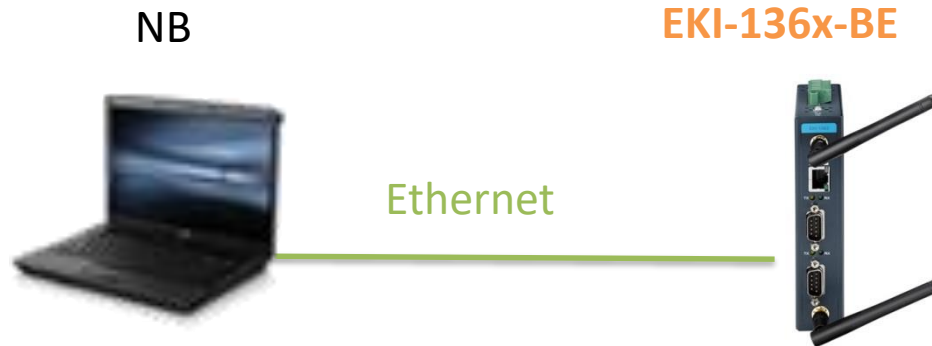
Save Settings to File: Save...
Load Settings from File: 選擇檔案 未選擇任何檔案
Reset Settings to Default: Reset
Reboot The Device: Reboot

Reboot the device and wait for starting the WiFi service

Youtube 登入 Google 地圖 Facebook ICIBA Adv... ch AD employee AD mail Yahoo 奇摩 Agile Product Lifec...

This device has been reboot, you have to login again.
Please wait for 36 seconds before attempting to access the device again...

EKI Setting flow chart



Step 1 :Connect the EKI-136x-BE via Ethernet cable to config EKI
Step 2 : follow the flow chart to set up EKI step by step.

LAN/WLAN Port
Configuration



Wireless Setting



Serial Port Setting



Serial Port
Operation Mode

LAN/WLAN configuration on Utility

1. EKI Utility will be able to scan the EKI-136x-BE

2. Config LAN/WLAN IP to be the same subnet as the PC. Then, press "apply" button.

3. Click on Launch browser to go the WebGUI.

- Note: Please make sure the Utility version is 3.01 upper. You can refer the following link for latest FW version information.
http://support.advantech.com/support/DownloadSRDetail_New.aspx?SR_ID=1-1FLDMSV&Doc_Source=Download
- Note: The LAN IP interface & WLAN IP interface are bridge together in the EKI-136x-BE. Therefore, there is only one IP (LAN Interface) you could set on the EKI utility. You won't see the WLAN IP setting interface.

LAN/WLAN Configuration on WebGUI

The screenshot displays the Advantech web configuration interface for the EKI-1362-BE device. The interface is divided into a left sidebar and a main content area. The sidebar contains navigation options: Overview, Network Settings, LAN (highlighted with a red box), Wireless Settings, Port Configuration, Monitor, Alarm, and Administration. The main content area shows the 'LAN Interface Setup' configuration page. The 'Network mode' is set to 'Static IP'. The 'IP Address' field contains '192.168.1.62' and the 'Subnet Mask' field contains '255.255.255.0', both of which are highlighted with a red box. The 'Default Gateway' is set to '0.0.0.0'. The 'DNS' section has 'Automatic' selected. The 'MAC Address' is '00:D0:C9:FC:A7:3B'. A red arrow points from the text 'Set static IP for the LAN/WLAN interface' to the 'Network mode' dropdown. Another red arrow points from the text 'Click apply on every config change, Note: config will only be activated after device reboot' to the 'Apply' button, which is also highlighted with a red box.

ADVANTECH EKI-1362-BE web configuration interface Logout

Home / Network Settings / LAN

LAN Interface Setup

Local Hostname

Network mode Static IP

IP Address 192.168.1.62

Subnet Mask 255.255.255.0

Default Gateway 0.0.0.0

DNS Automatic Specific

MAC Address 00:D0:C9:FC:A7:3B

Apply

Set static IP for the LAN/WLAN interface

Click apply on every config change,
Note: config will only be activated after device reboot

Wireless basic setting

ADVANTECH EKI-1362-BE web configuration interface

Home / Wireless Settings / Basic

Basic Wireless Settings

Wireless Network

Operation Mode: Client *Set it to Client mode.*

SSID: testing0523 *Make sure the SSID is as same as AP*

BSSID: 00:D0:C9:FC:A7:3C

Operation frequency

Country Code: US (United States)

Channel Selection: Auto

Apply

Navigation: Overview, Network Settings, Wireless Settings, Basic, Advanced, Security, Statistics, Site Survey, Log, Port Configuration, Monitor, Alarm, Administration

WiFi Security Setting

The screenshot displays the 'Wireless Security/Encryption Settings' page in the Advantech web configuration interface. The left sidebar shows the 'Security' menu item highlighted. The main content area is titled 'Security Policy' and contains the following settings:

- Security Mode:** WPA-Personal
- WPA Pre-shared Key:**
 - WPA Version:** WPA2
 - WPA Cipher:** TKIP+AES
 - Pass Phrase:** password
- Unmask
-

A red box highlights the Security Mode, WPA Version, WPA Cipher, and Pass Phrase fields. A red arrow points from a text box to the Pass Phrase field.

Make sure the security type and passphrase is as same as AP.

Serial Port Setting (1/2)

The screenshot displays the ADVANTECH EKI-1362-BE web configuration interface. The top navigation bar includes the ADVANTECH logo, the device name 'EKI-1362-BE web configuration interface', and a 'Logout' button. A left sidebar menu contains options: Overview, Network Settings, Wireless Settings, Port Configuration, Port 1 (highlighted with a red box), Port 2, Monitor, Alarm, and Administration. The main content area shows the breadcrumb 'Home / Port Configuration / Port 1' and three tabs: Basic (selected), Operation, and Advanced. Below the tabs is a 'Port Basic Configuration' section with a gear icon. The configuration fields are: Type (RS232), Baud Rate (9600), Parity (None), Data Bits (8), Stop Bits (1), and Flow Control (None). A red box highlights the 'Type', 'Baud Rate', 'Parity', 'Data Bits', 'Stop Bits', and 'Flow Control' fields, with a red arrow pointing to the text 'Com port setting'. Below these fields is an 'Apply' button, also highlighted with a red box.

Parameter	Value
Type	RS232
Baud Rate	9600
Parity	None
Data Bits	8
Stop Bits	1
Flow Control	None

Click save on every config change, but config will only be activated after device reboot

Serial Port Setting (2/2)

Overview

Network Settings

Wireless Settings

Port Configuration

Port 1

Port 2

Monitor

Alarm

Administration

Home / Port Configuration / Port 1

Basic **Operation** Advanced

Port Operation Configuration

Mode: Virtual COM Mode

Host Idle Timeout(s): 60 (0 - 65535)

Response Timeout(ms): 0 (100 - 65535, or 0)

Frame Break(ms): 0 (10 - 65535, or 0)

Pack conditions (Pack sent immediately when reach 1024 Bytes)

Port Data Buffering

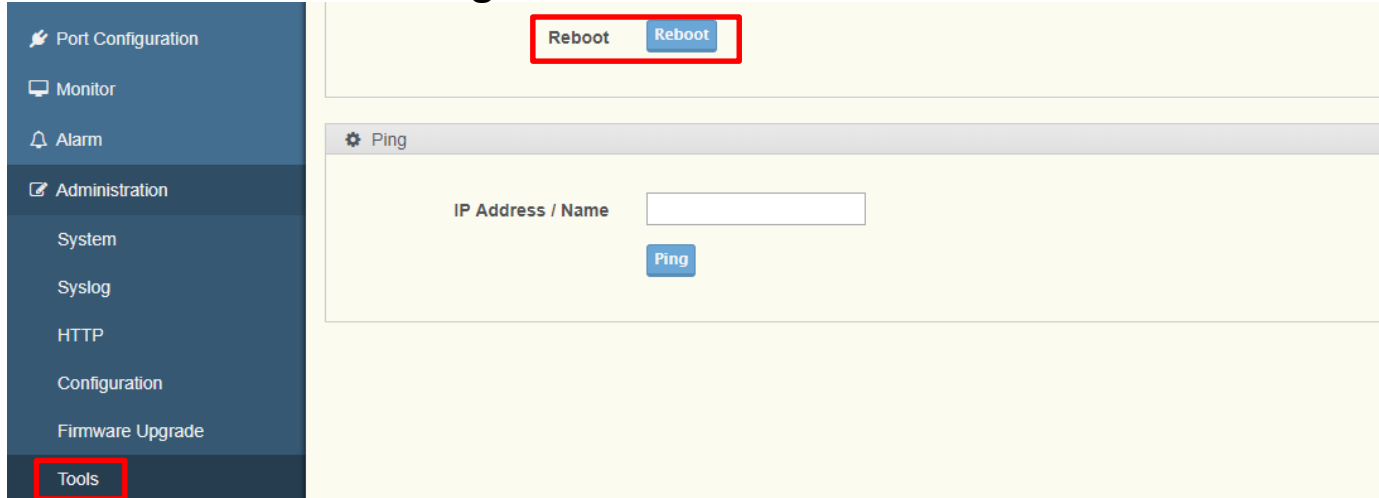
Media: NONE

When Data Full: Stop

Apply

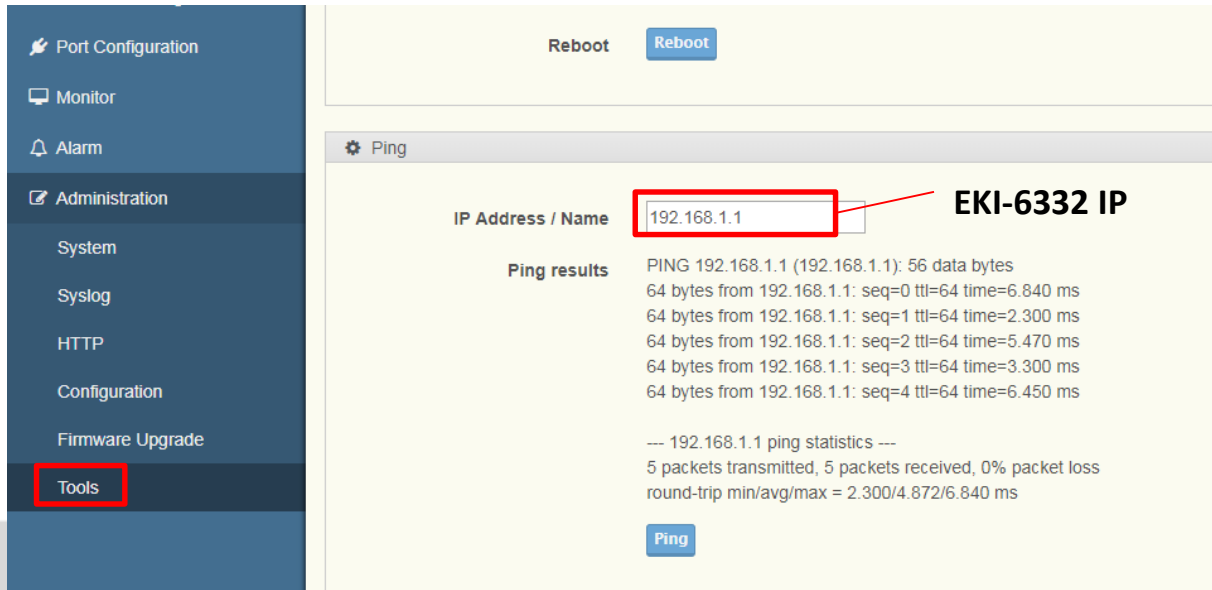
Reboot and Run the ping test

Step 1 :Reboot device after all setting done



The screenshot shows the configuration interface with a sidebar on the left containing menu items: Port Configuration, Monitor, Alarm, Administration, System, Syslog, HTTP, Configuration, Firmware Upgrade, and Tools. The Tools menu item is highlighted with a red box. The main content area has a yellow background and features a 'Reboot' button, also highlighted with a red box. Below the Reboot button is a 'Ping' section with a gear icon, an input field for 'IP Address / Name', and a 'Ping' button.

Step 2 : ping EKI-6332 to make sure the wireless connection is established



The screenshot shows the configuration interface with the same sidebar as in Step 1. The 'Tools' menu item is highlighted with a red box. The main content area shows the 'Reboot' button and the 'Ping' section. The 'IP Address / Name' input field contains '192.168.1.1' and is highlighted with a red box. A red arrow points from the text 'EKI-6332 IP' to this input field. Below the input field, the 'Ping results' are displayed:

```
Ping results
PING 192.168.1.1 (192.168.1.1): 56 data bytes
64 bytes from 192.168.1.1: seq=0 ttl=64 time=6.840 ms
64 bytes from 192.168.1.1: seq=1 ttl=64 time=2.300 ms
64 bytes from 192.168.1.1: seq=2 ttl=64 time=5.470 ms
64 bytes from 192.168.1.1: seq=3 ttl=64 time=3.300 ms
64 bytes from 192.168.1.1: seq=4 ttl=64 time=6.450 ms

--- 192.168.1.1 ping statistics ---
5 packets transmitted, 5 packets received, 0% packet loss
round-trip min/avg/max = 2.300/4.872/6.840 ms
```

A 'Ping' button is located at the bottom of the results section.

Wi-Fi connection check up

You may also check the Wi-Fi signal for AP/client on Web GUI

The screenshot shows the web GUI for EKI-6332. The top navigation bar includes 'System', 'Wireless', 'Management', and 'Tools'. On the left, a sidebar menu has 'Connections' highlighted with a red box. The main content area is titled 'Association List' and contains a table of associated devices. The 'Signal Strength' column for the first device is highlighted with a red box.

#	Interface	MAC Address	802.11 Mode	Signal Strength	Connected Time	Action
1	VAP1	00:d0:c9:f7:48:f0	802.11B/G/N	-32 dBm	24m:49s	Kick

The screenshot shows the web GUI for EKI-1361. The top navigation bar includes 'Home / Wireless Settings / Statistics'. On the left, a sidebar menu has 'Statistics' highlighted with a red box. The main content area is titled 'Overview' and contains two tables. The first table shows 'Information Name' and 'Information Value' for Mode, SSID, and Channel / Frequency. The second table shows 'Receive Statistics' for BSSID and Signal Level. The 'Signal Level' value is highlighted with a red box.

Information Name	Information Value
Mode	Client
SSID	testing0523
Channel / Frequency	channel 11 (2462 MHz)

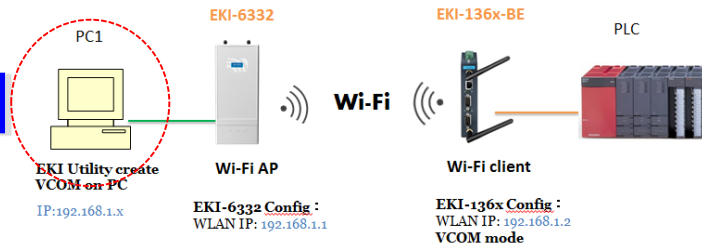
Information Name	Information Value
BSSID	00:D0:C9:F7:96:36
Signal Level	-35 dBm

VCOM Mapping via EKI Utility

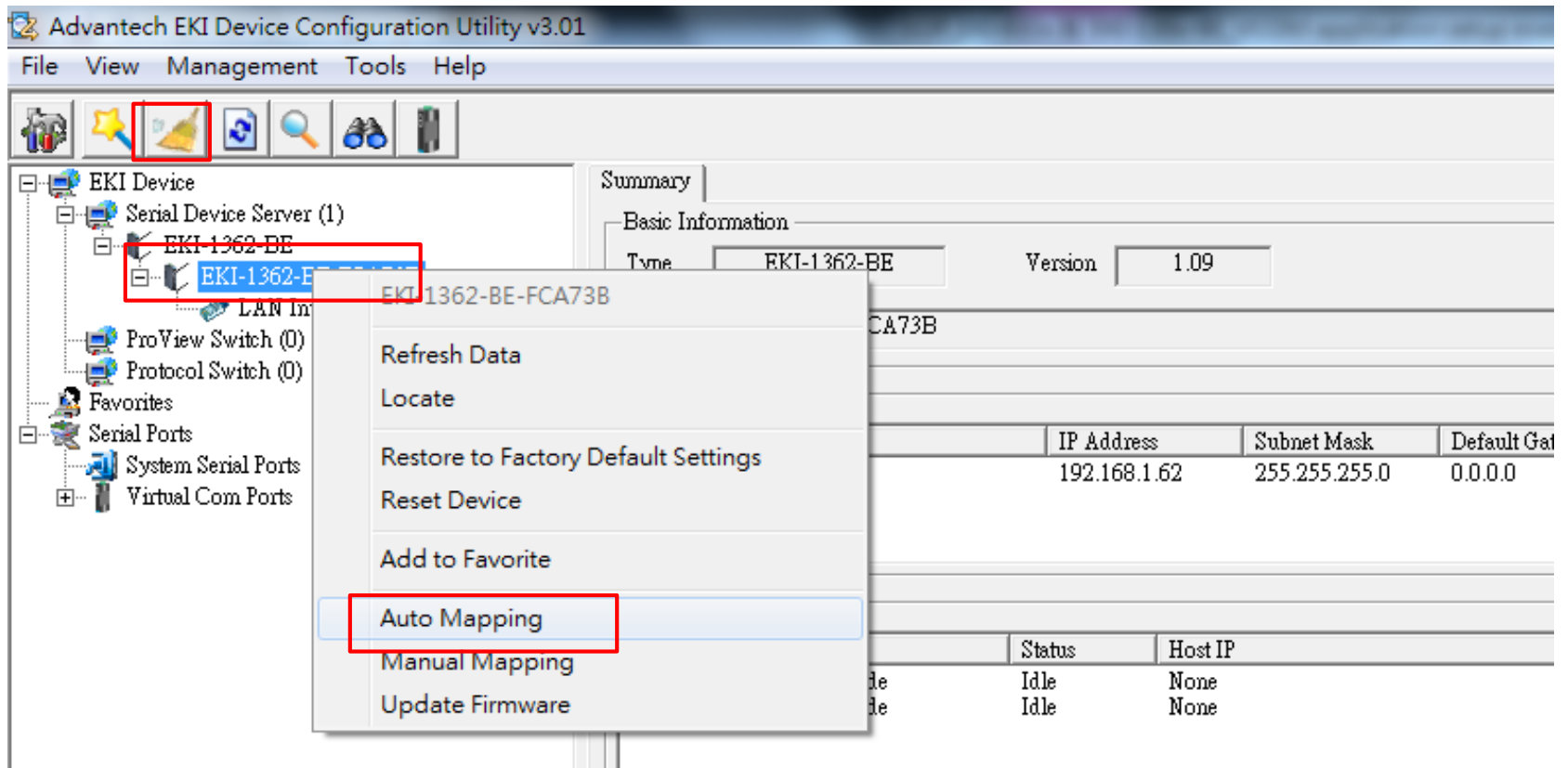
Topology



Mapping the VCOM on PC1

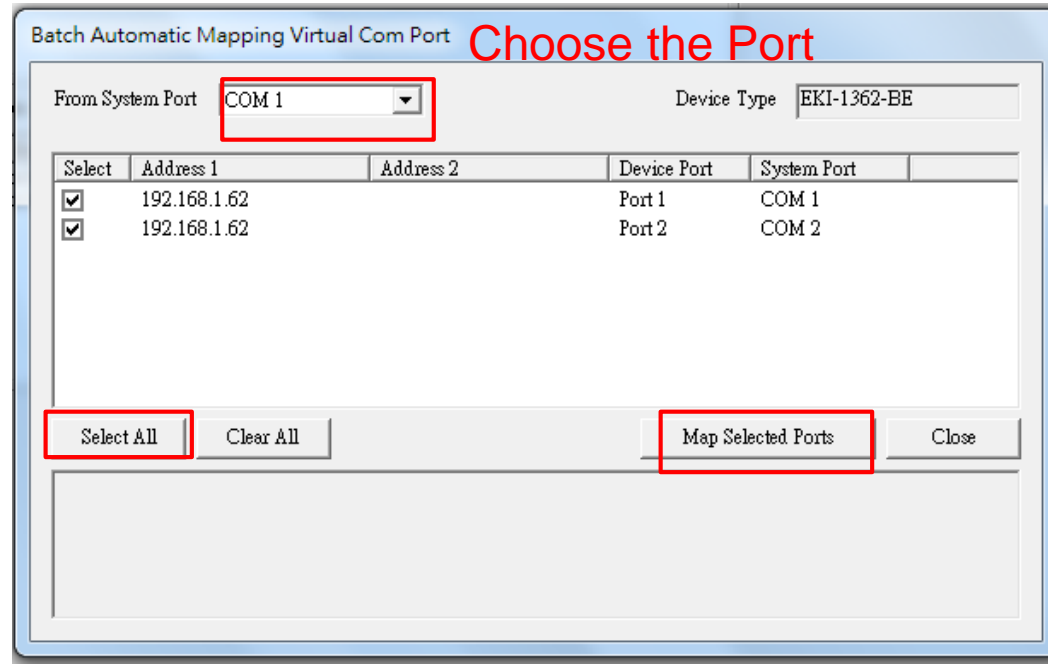


- Step 1 :Run the EKI utility on PC1 to scan the EKI-136x-BE.
- Step 2 :Right click the device and press “**auto mapping**”.



Mapping the VCOM on PC1 (2/2)

- Choose the VCOM port and click “Map Select Ports”



Double check the VCOM information

- If the VCOM is mapping successfully, you can see the VCOM port on Utility.
 - Click the COM port to double check the VCOM information

The screenshot displays the Advantech EKI Device Configuration Utility v3.01 interface. On the left, a tree view shows the device hierarchy, with 'Virtual Com Ports' expanded and 'COM1' selected. The main area is divided into two panels: 'Basic Com Port Information' and 'Virtual Com Port Information'. The 'Basic Com Port Information' panel shows fields for Name (COM1), Friendly Name (EDG VCOM Port 1 (COM1)), Manufacture (Advantech Co., Ltd), Hardware ID (AESPV2XP001), and Service (AESPV2X). The 'Virtual Com Port Information' panel, highlighted with a red border, shows fields for Model Name (EKI-1362-BE), Address 1 (192.168.1.62), Remote COM Port (Port1), Auto Reconnect (Enable), TCP Timeout (3000), Baud Rate (9600), Parity (None), Data Bits (8), Stop Bits (1), Flow Control (None), and Ignore Purge (Disable). An 'Update' button is located at the bottom right of this panel. Red annotations are present: 'See the VCOM port in utility' with a red box around 'COM1' in the tree view, and 'Double check the VCOM information' in the center of the main area.

Advantech EKI Device Configuration Utility v3.01

File View Management Tools Help

EKI Device

- Serial Device Server (1)
 - EKI-1362-BE
 - EKI-1362-BE-PCA73B
 - LAN Interface 1 (192.168.1.62)
- ProView Switch (0)
- Protocol Switch (0)
- Favorites
- Serial Ports
- System Serial Ports
- Virtual Com Ports
 - COM1
 - COM2
 - COM7
 - COM8
 - COM20
 - COM23
 - COM61

Basic Com Port Information

Name: COM1

Friendly Name: EDG VCOM Port 1 (COM1)

Manufacture: Advantech Co., Ltd

Hardware ID: AESPV2XP001

Service: AESPV2X

Virtual Com Port Information

Model Name: EKI-1362-BE

Address 1: 192.168.1.62

Remote COM Port: Port1

Auto Reconnect: Enable

TCP Timeout: 3000

Baud Rate: 9600

Parity: None

Data Bits: 8

Stop Bits: 1

Flow Control: None

Ignore Purge: Disable

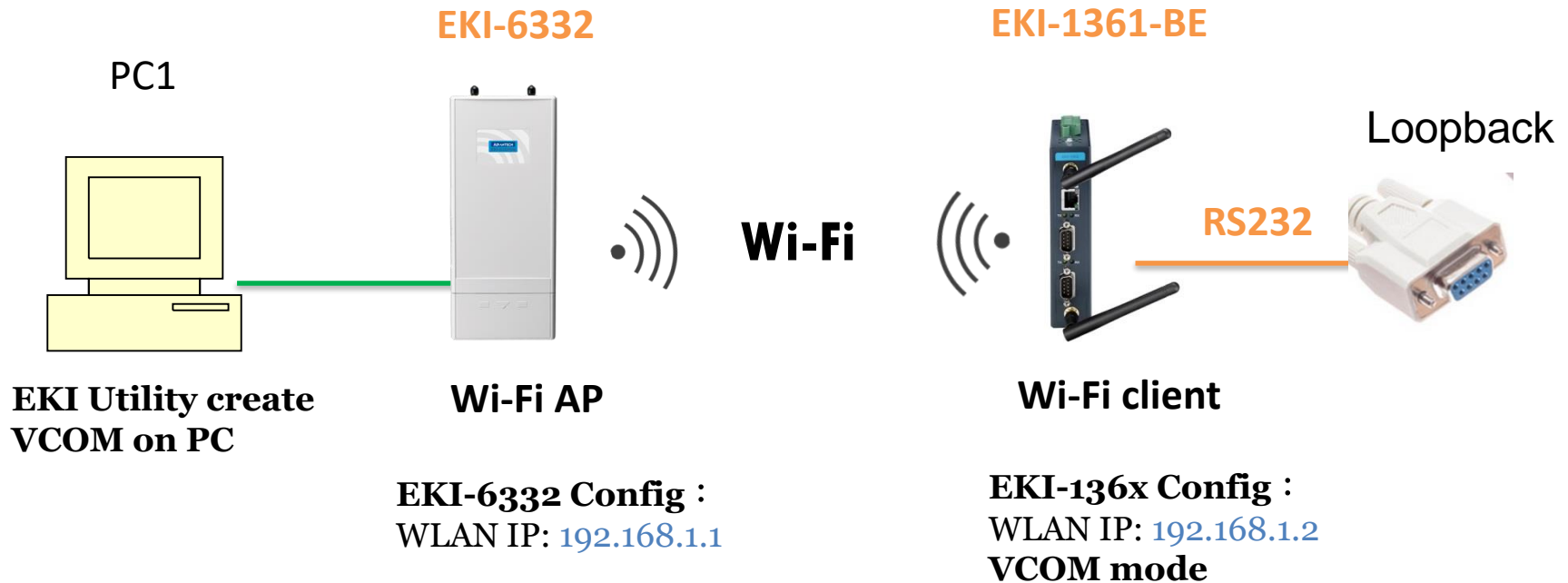
Update

See the VCOM port in utility

Double check the VCOM information

Test VCOM Mode by TestView

Topology

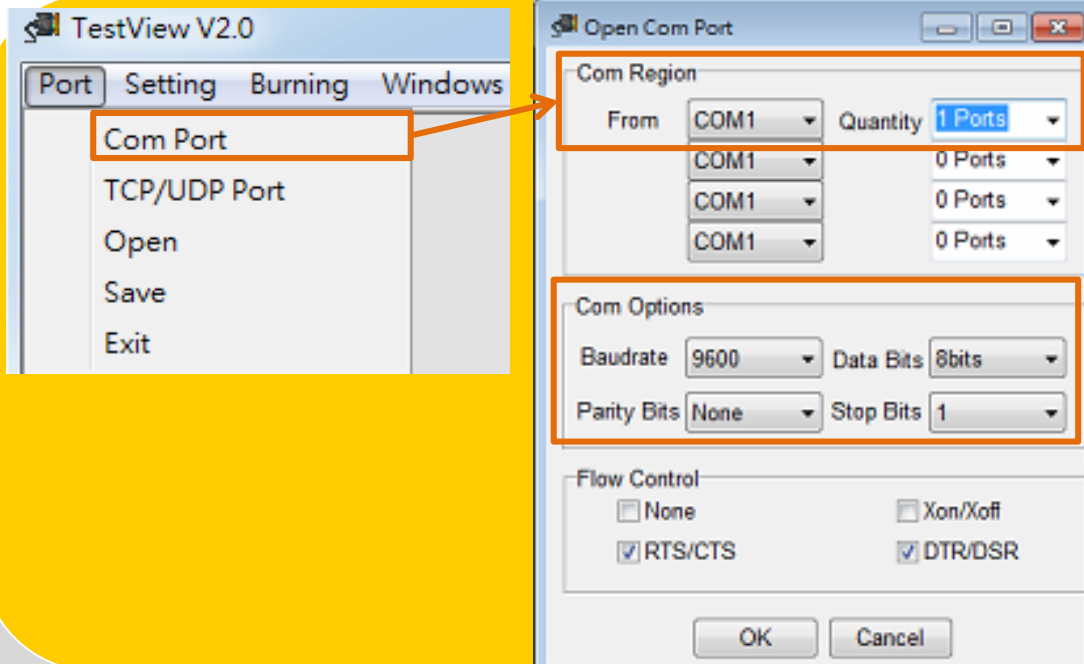
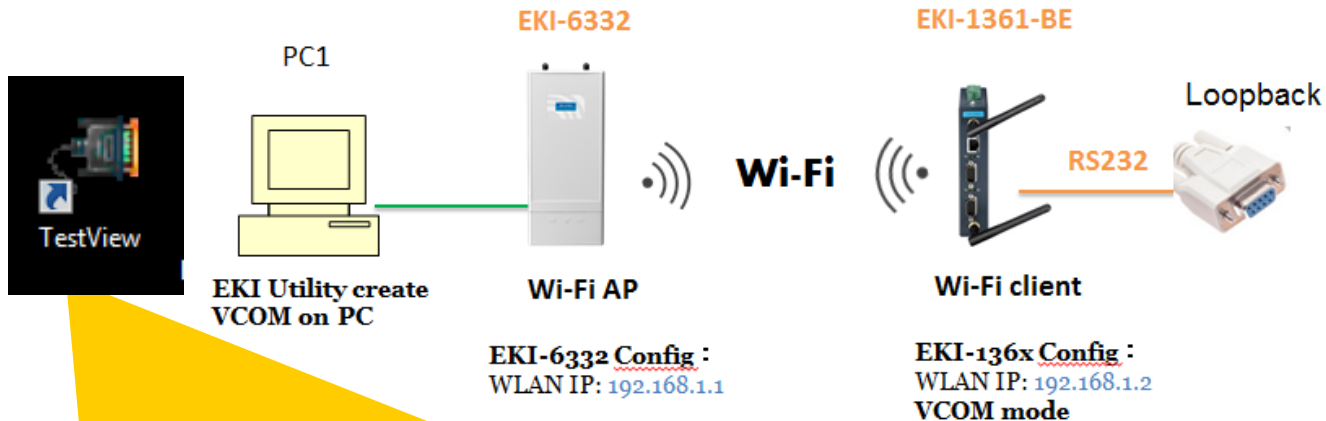


This is very important test way to check your device can work or not !!!

Connect the com port which you are mapping to and connected with **loopback connector** with the WLAN Device Server

Test Tool: Testview

- Simulate COM Port mode of the EKI device server.

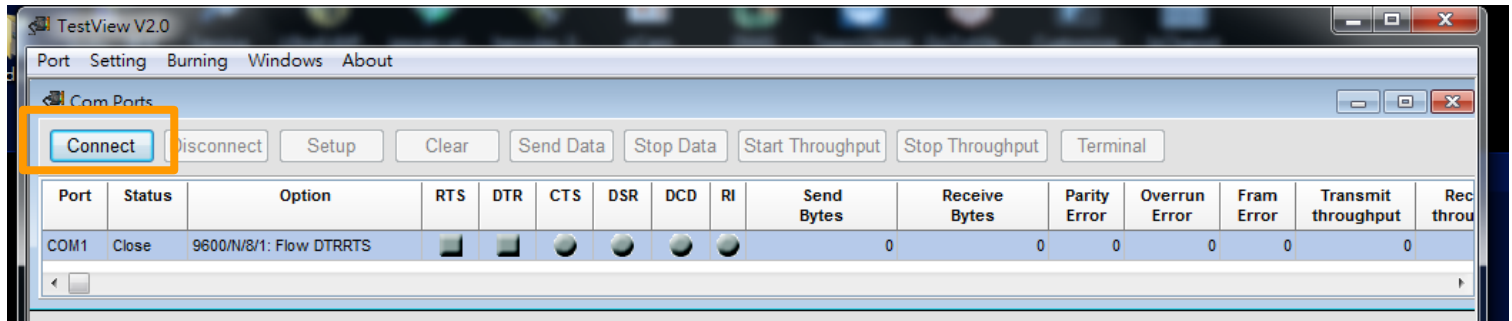


Step by Step

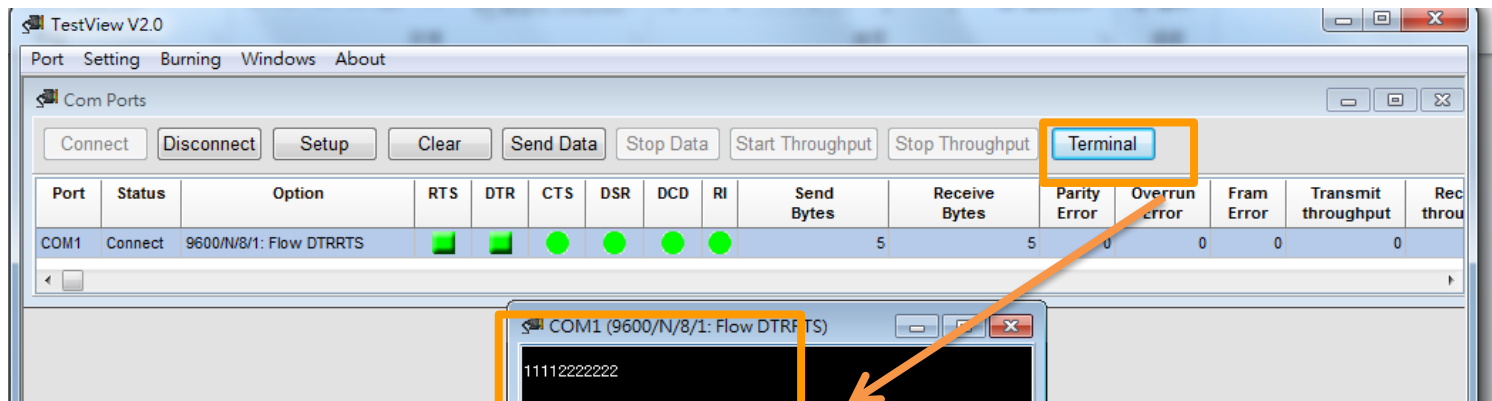
- Click Port -> Com Port to Open Com Port
- Set up your serial setting
- Select to the connected COM Port and set up option

Test Tool: Testview

4. Click **Connect** to enable VCOM Port



5. Click **Terminal** to send data. See the receive data in Terminal as well.



Send the data and see the receive data

Double check on the EKI WebGUI

- You can double check the Tx/Rx count on WebGUI

The screenshot displays the EKI-1362-BE web configuration interface. The top navigation bar includes the ADVANTECH logo, the title "EKI-1362-BE web configuration interface", and a "Logout" button. The left sidebar contains a menu with options: Overview, Network Settings, Wireless Settings, Port Configuration, Monitor (selected), Port 1, Port 2, Alarm, and Administration. The main content area shows the "Port Status" page with tabs for "Setting", "Statistic" (active), and "ConnectedIP". A "Port Statistic" table is displayed with the following data:

Port Statistic	
Tx Count	1020
Rx Count	1020
Total Tx Count	1020
Total Rx Count	1020
RTS	ON
CTS	ON
DTR	ON
DSR	ON
DCD	ON

Red annotations highlight the Tx and Rx counts. A red box encloses the values "1020" for both Tx Count and Rx Count. Red lines connect the text "Send to serial" to the Tx Count value and "Receive from the serial" to the Rx Count value.



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