

# Testing Tool for Device Server & Modbus Gateway

Revision Date	Revision	Description	Author
June/2019	V1.0	Initial release	ICG AE Jacky.Lin
April/2023	V1.1	Wording modification	ICWG AE Calvin.Lin

# Abstract

- ❖ **This SOP introduces how to use the Third party tool (TestView, AccessPort, ModScan/ModSim) for serial device troubleshooting.**
- ❖ **Related products:**  
EKI-15xx series, & EKI-12xx series
- ❖ **Requirement:**  
Please check the following page.



# Trouble Shooting Tool-Guide

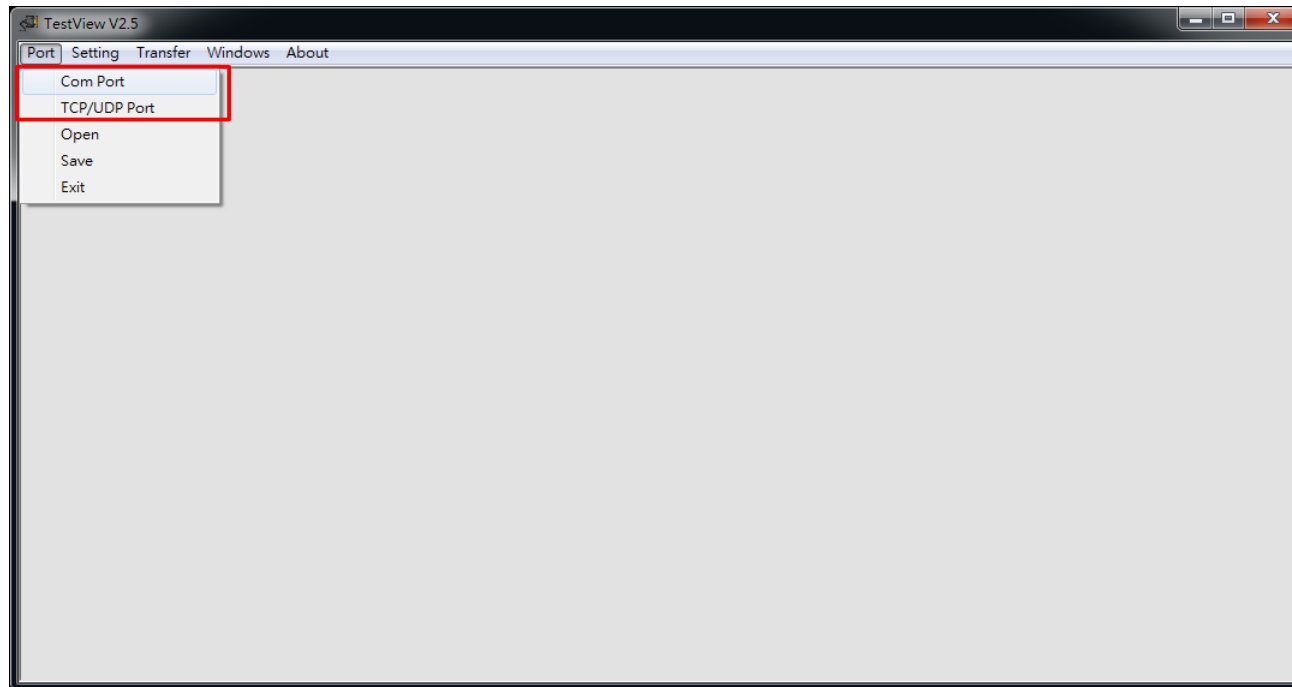
➤ Here is the test tool for data communication & packet monitor

	Operation Mode	Application Tool	Monitor Tool
Device Server (EKI-152x)	VCOM Mode	Testview	Accessport/ Wireshark
	USDG Data Mode (TCP Client/Server)	Testview	Wireshark
Modbus Gateway (EKI-122x)	Modbus Server Mode	Modscan/Modsim	Wireshark
	Modbus Client Mode	Modscan/Modsim	Wireshark

# TestView Tool

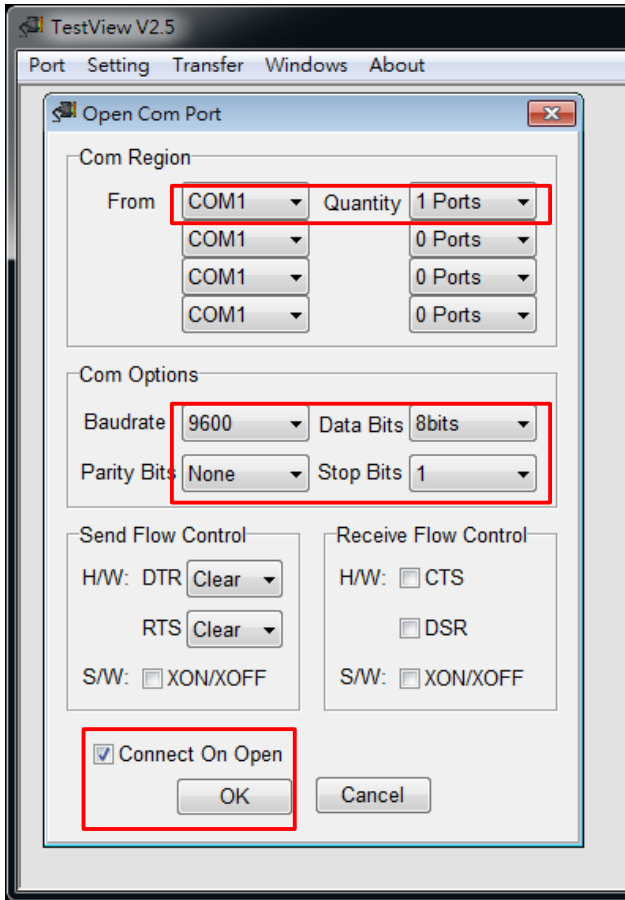
# TestView

- Use the TestView to open COM/TCP/UDP port
- Step 1 : download from the website
  - <https://www.sysbas.com/en/download/?mod=document&uid=165>
  - <https://www.sysbas.com/en/download/?mod=document&uid=164>
- Step 2: Create **COM/TCP/UDP** port, and set the parameters

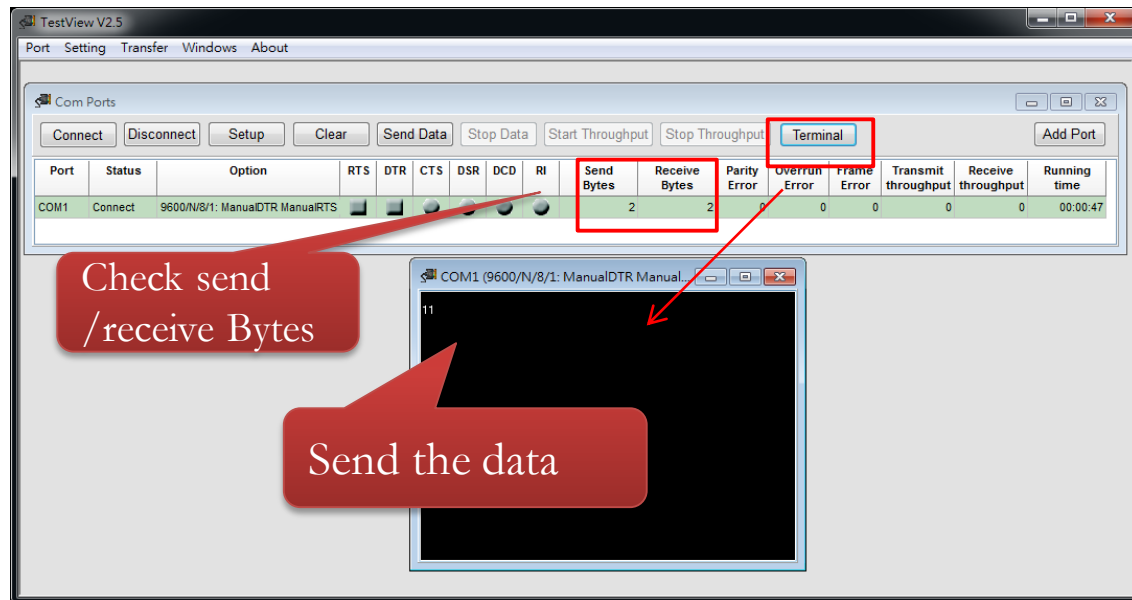


# TestView – Create COM port

- **Step 3:** set the COM port parameters

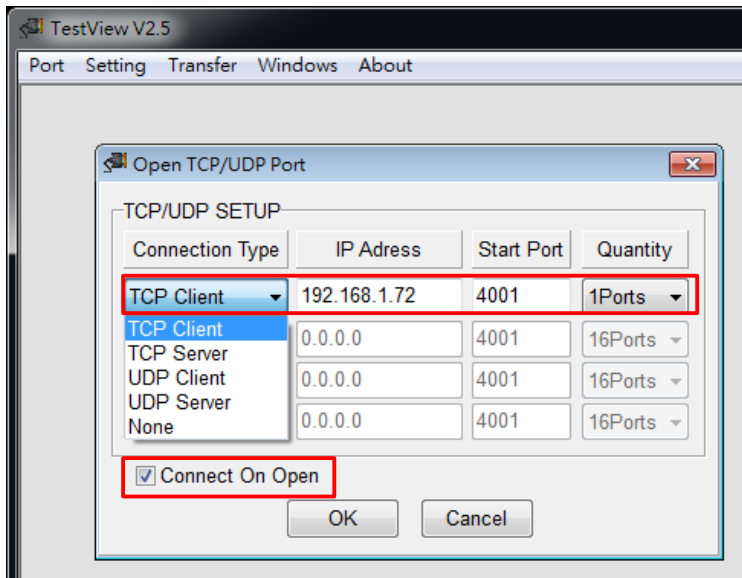


- **Step 4:** Use “Terminal” to send the data. And check the send/ Receive Bytes
- Note: Here we use loopback test.



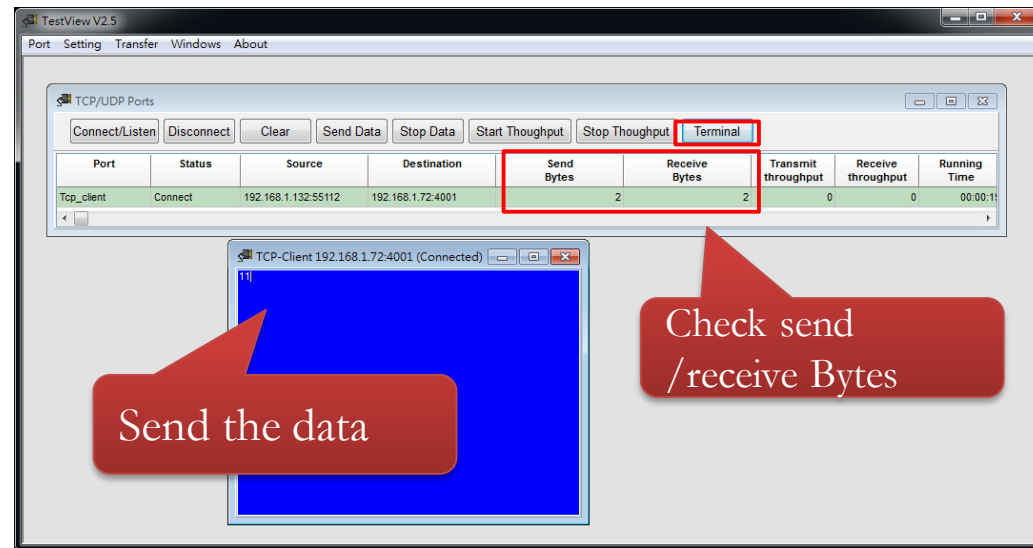
# TestView – Create TCP/UDP port

- **Step 3:** set the TCP/UDP port parameters



- **Step 4:** Use “Terminal” to send the data. And check the send/ Receive Bytes

Note: Here we use loopback test.



# AccessPort Tool



# Port Monitor tool – AccessPort

- You can find the download URL here:
  - <http://www.sudt.com/en/ap/>



The screenshot displays the SUDT.COM website interface. At the top, the header includes the SUDT.COM logo, navigation links for English and Chinese, and a language selector for SUDT Aisa Language (中文版). The main content area features a sidebar with navigation links (Home, Products, Purchase, Support, Download) and a central section for SUDT AccessPort. The AccessPort section includes a large image of the software's interface, which shows a list of hex data and a terminal window. To the right of the image, there is a description of AccessPort as a serial port monitoring tool for technicians, engineers, and software developers. Below the description, there are four bullet points listing features: Support RS232 / Serial port related projects, Powerful monitor & terminal function, Support custom baud rate & dynamic parameter, and International version support multi language. A prominent green 'Download' button with a downward arrow is located at the bottom right of the AccessPort section.

**SUDT.COM**

SUDT.com | English | Chinese

SUDT Aisa Language: 中文版

**SUDT Software**

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- Products
- Purchase
- Support
- Download

**SUDT AccessPort**

- Overview
- Download
- What's new
- Online Support
- FAQs

**AccessPort®**  
Serial Port Debugger  
(Freeware)

AccessPort is serial port monitoring tool for technicians, engineers and software developers designing or debugging serial port related projects.


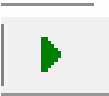
- Support RS232 / Serial port related projects.
- Powerful monitor & terminal function.
- Support custom baud rate & dynamic parameter.
- International version support multi language.

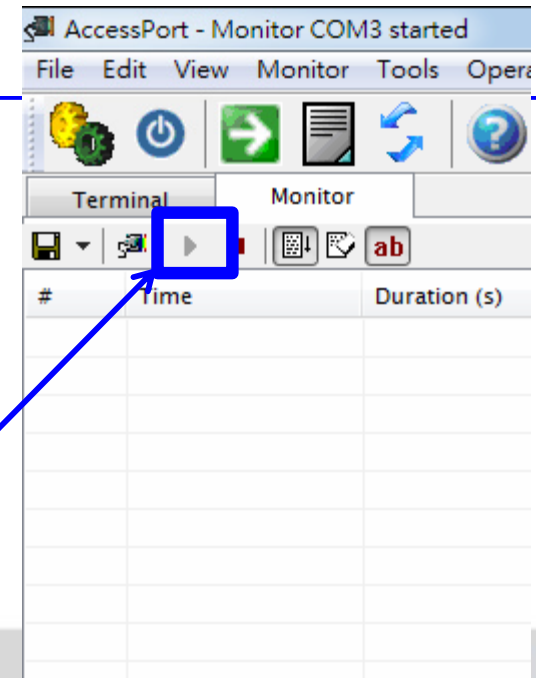
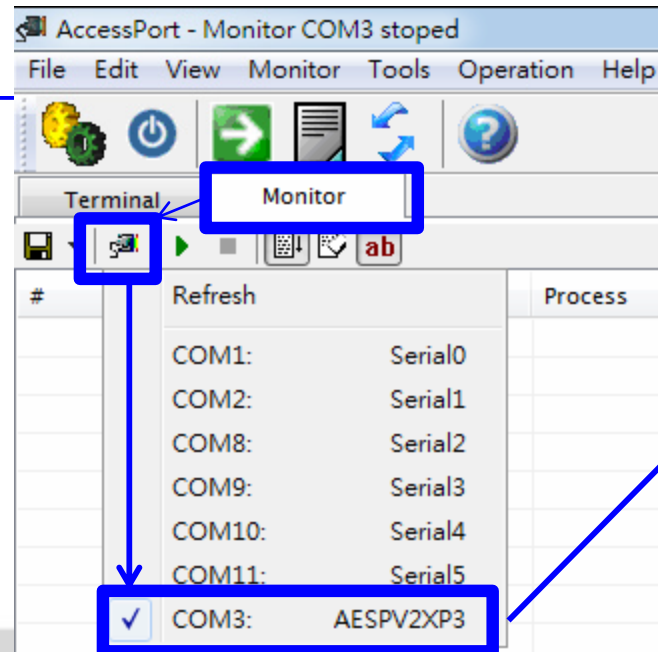
[Download](#)

# Port Monitor tool – AccessPort (1/2)

- Port Monitor that shows the COM port behavior, includes open port, port setting, read/write...

## Step by Step

1. Turn on AccessPort Programming and then change to Monitor page
2. Click  to pop up the option and choose the COM Port to be monitored
3. Click  to run



# Port Monitor tool – AccessPort (2/2)

- Use **Testview** to open the COM Port (Data transmission) & Observe COM Port behavior by **Access Port**
- Note: Please **make sure to start the AccessPort Monitoring before COM port opened**. Otherwise, the COM port will be occupied first, and you will see nothing on AccessPort tool.

Testview

Port	Status	Option	RTS	DTR	CTS	DSR	DCD	RI	Send Bytes	Receive Bytes	Parity Error	Overrun Error
COM6	Connect	9600/N/8/1:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3	3	0	0

COM6 (9600/N/8/1:)
iiicgg

1. Open Port

2. Port Setting

3. Data Transmission

4. Close the Port

Access  
Port

Request	Port	Result	Data ( Hex )
IRP_MJ_CREATE	COM4	SUCCESS	Port Opened
IOCTL_SERIAL_SET_QUEUE_SIZE	COM4	SUCCESS	InSize: 4096, OutSize: 4096
IOCTL_SERIAL_SET_BAUD_RATE	COM4	SUCCESS	Baud Rate: 9600
IOCTL_SERIAL_SET_RTS	COM4	SUCCESS	
IOCTL_SERIAL_SET_DTR	COM4	SUCCESS	
IOCTL_SERIAL_SET_LINE_CONTROL	COM4	SUCCESS	StopBits: 1, Parity: No, DataBits: 8
IOCTL_SERIAL_SET_CHARS	COM4	SUCCESS	EofChar: 0x0, ErrorChar: 0x0, BreakChar: 0x0, EventChar: 0x0, XonChar: 0x1
IOCTL_SERIAL_SET_HANDFLOW	COM4	SUCCESS	ControlHandShake: 0x1, FlowReplace: 0x40, XonLimit: 1024, XoffLimit: 1024
IOCTL_SERIAL_SET_TIMEOUTS	COM4	SUCCESS	ReadIntervalTimeout: -1, ReadTotalTimeoutMultiplier: 0, ReadTotalTimeoutCo
IOCTL_SERIAL_SET_WAIT_MASK	COM4	SUCCESS	Mask: RXCHAR RXFLAG TXEMPTY CTS DSR RLSD BREAK ERR RING RX80FULL
IOCTL_SERIAL_WAIT_ON_MASK	COM4	SUCCESS	
IRP_MJ_WRITE	COM4	SUCCESS	Length: 1, Data: 31
IOCTL_SERIAL_WAIT_ON_MASK	COM4	SUCCESS	
IRP_MJ_READ	COM4	SUCCESS	Length: 1, Data: 10
IOCTL_SERIAL_WAIT_ON_MASK	COM4	SUCCESS	
IOCTL_SERIAL_WAIT_ON_MASK	COM4	CANCELLED	
IOCTL_SERIAL_PURGE	COM4	SUCCESS	Purge: TXABORT RXABORT
IRP_MJ_CLOSE	COM4	SUCCESS	Port Closed

# ModScan/ModSim

# ModScan/ModSim

- You can find the download URL here:
  - <https://www.win-tech.com/html/demos.htm>
- Use ModScan as Modbus Client, and ModSim as Modbus Server.



The screenshot displays the WinTECH Software website. On the left is a vertical navigation menu with buttons for 'Spy/Monitor Tools', 'Modbus Test & Simulation', 'modbus/TCP Bridge', 'OPC Tools', 'Modbus ActiveX', 'Modbus Source Code', 'Additional Info', 'WinTECH News', 'User Manuals', and 'E-Mail Support'. The main content area has a header 'Win32 Modbus Applications' and a paragraph stating: 'Specializing in testing and diagnostic tools for Developers, WinTECH Software offers several products designed for the integration and trou applications available from this site are fully functional time-limited demos, and may be freely downloaded and distributed for evaluation pu Windows Developer, for professional use, each application comes complete with an unconditional 30-day money-back guarantee. It is the go term working relationships with software developers via the world-wide-web, and to have no unsatisfied customers.' Below this, it says 'To download an evaluation copy of a WinTECH Software application, select it below. The size of each file and the date it was last updated is'. The applications listed are: 'ControlPak.zip (1252K)' with a note '(ControlPak contains the complete modbus application suite, minus the two ocx controls.)', 'ModScan32.zip (1.2M)' updated to Version 8.A00-10 (March 20, 2014), 'ModScan64.zip (1.3M)' x64 Version for Windows 7 updated to Version 1.A00-12 (Dec. 8, 2015), 'ModSim32.zip (251K)' updated to Version 4.A00-04 (March 25, 2008), and 'ModSim64.zip (816K)' x64 Version for Windows 7 (July 3, 2013).

Win32 Modbus Applications

[ControlPak.zip \(1252K\)](#)  
(ControlPak contains the complete modbus application suite, minus the two ocx controls.)

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