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

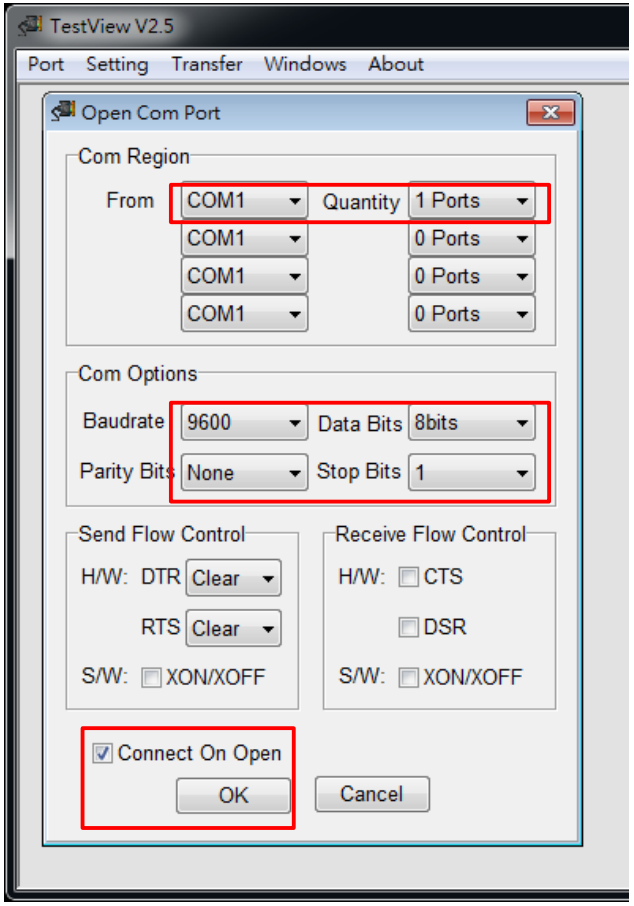
TestView Tool

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

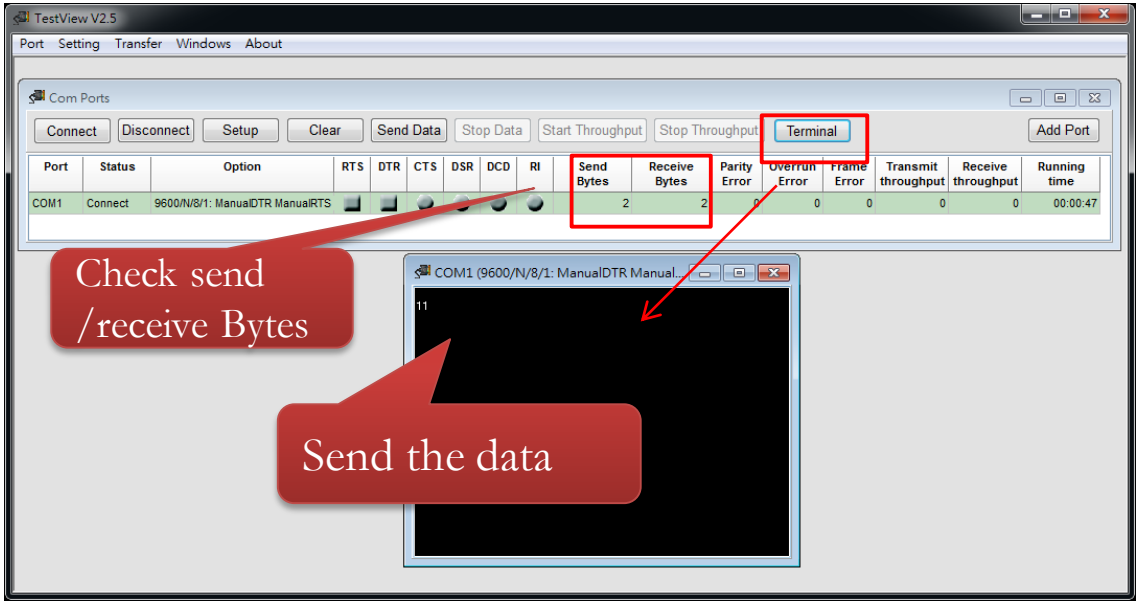
TestView – Create COM port

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



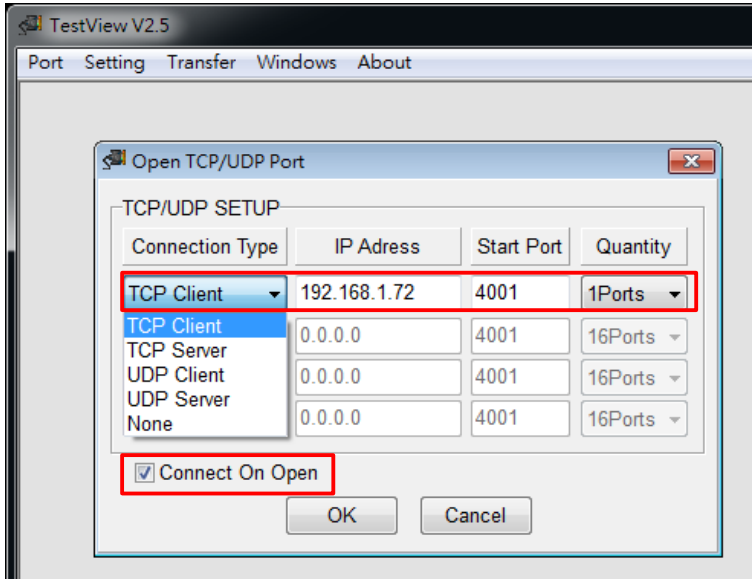
- **Step 4:** Use "Terminal" to send the data. And check the send/ Receive Bytes

Note: Here we use loopback test.



TestView – Create TCP/UDP port

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



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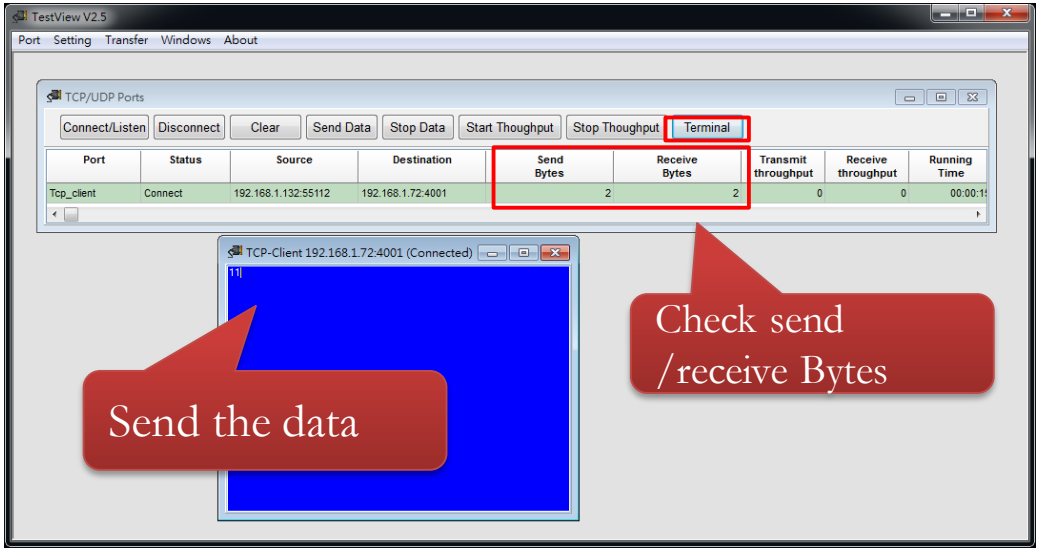


AccessPort Tool

Port Monitor tool – AccessPort

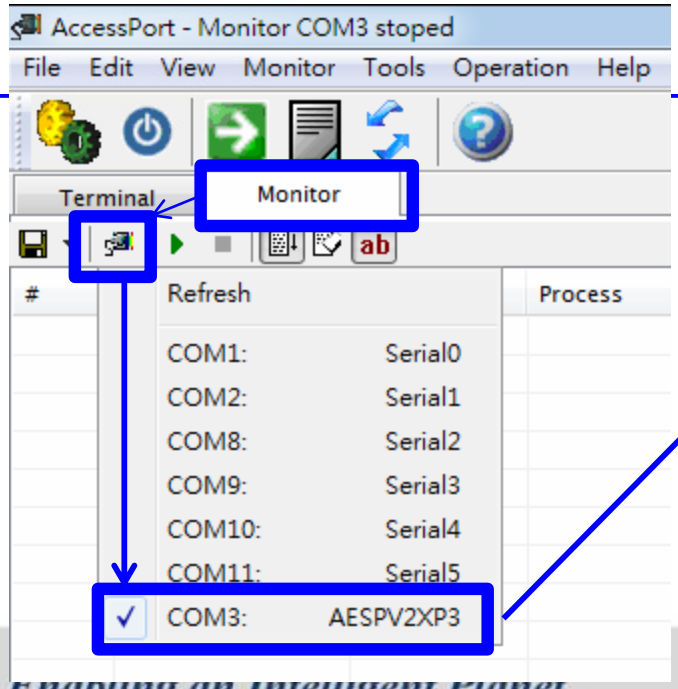
- **You can find the download URL here:**
  - http://www.sudt.com/en/ap/

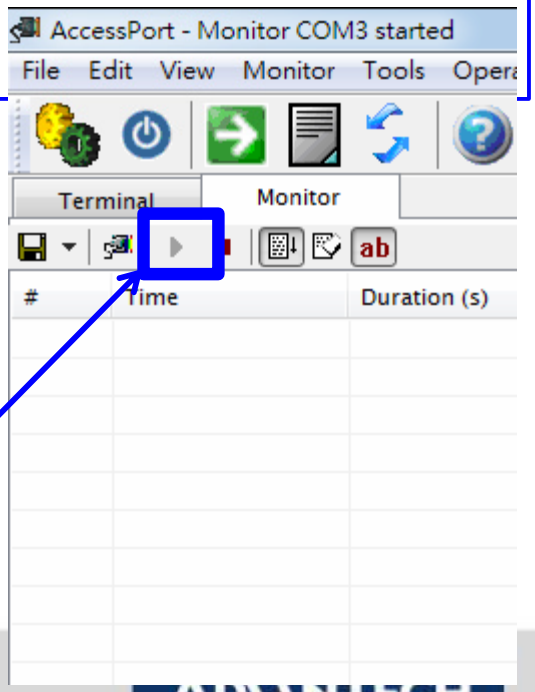
Port Monitor tool – AccessPort (1/2)

- 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





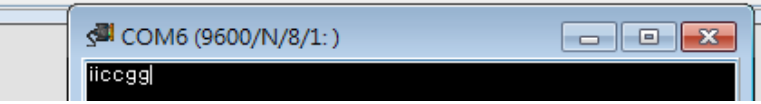
Port Monitor tool – AccessPort (2/2)

➢ 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:	■	■	●	●	●	●	3	3	0	0



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

1. Open Port

2. Port Setting

3. Data Transmission

4. Close the Port

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.

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