ATEN *Tech Note*

Serial Tunneling Server and Client modes
for ATEN Secure Device Server

This tech note applies to the following ATEN Secure Device Server models:

Model	Product Name
SN3001	1-Port RS-232 Secure Device Server
SN3001P	1-Port RS-232 Secure Device Server with PoE
SN3002	2-Port RS-232 Secure Device Server
SN3002P	2-Port RS-232 Secure Device Server with PoE

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## A.   What are Serial Tunneling Server and Client modes?

Serial Tunneling Server and Client modes securely connect two SN (Secure Device Servers) over an Ethernet network for serial-to-serial communication. Serial Tunneling effectively overcomes the distance limitations in serial communication and realizes many new possibilities for serial-based device control.


1
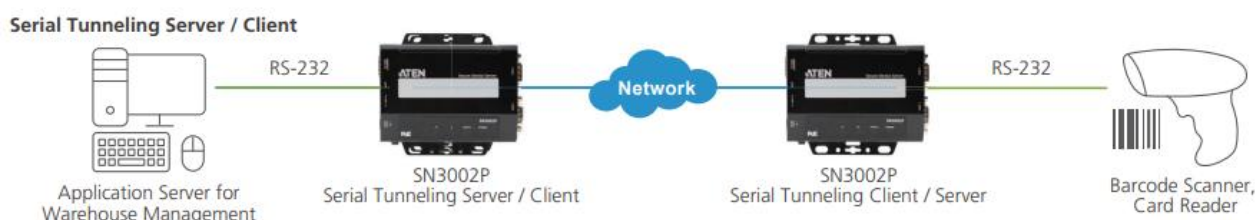
B. How to configure Serial Tunneling Server and Client modes?

The following procedures use two SN3002P as an example:

1. Using a null modem cable, connect the first SN's serial port 1 to a serial device (e.g. PC's COM port, CNC machine, etc.).

2. Using an Ethernet cable, connect the SN's LAN port to your local network.

3. On a host PC, use IP Installer utility (can be downloaded from SN's product page) to discover the IP address of the first SN3002P.
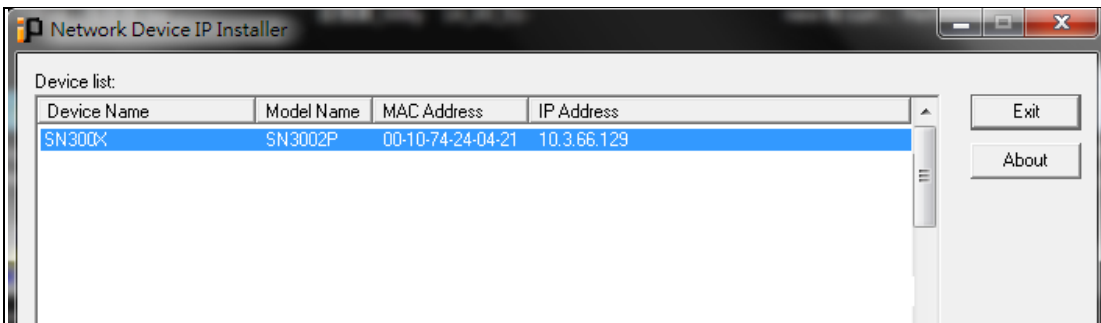

4. Using a web browser, enter the SN3002P's IP address, and log in.

5. Under *Serial Ports*, click the **EDIT** button of *Port 1*.
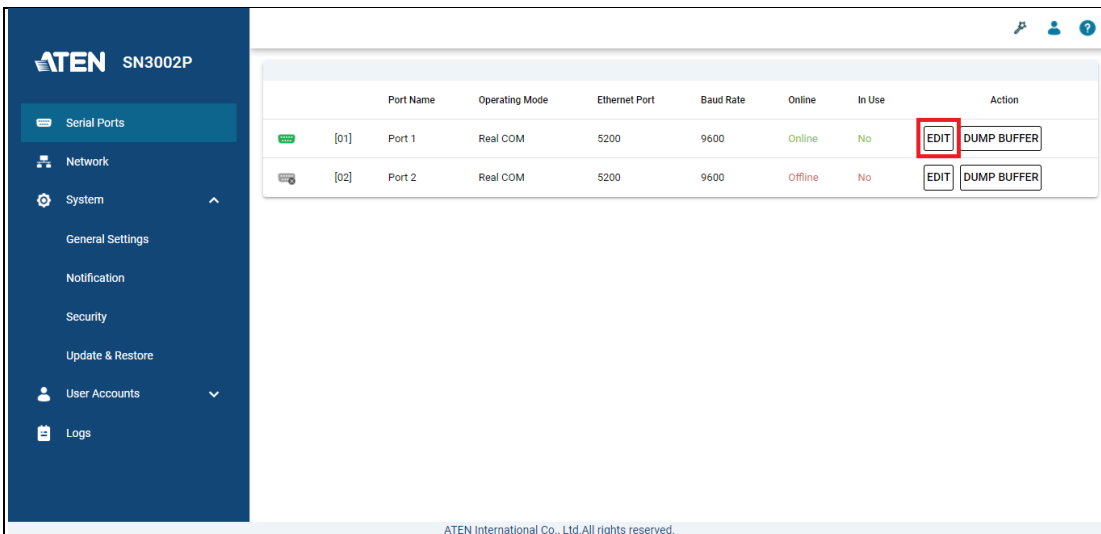
6. Under _PROPERTIES_, configure the necessary serial communication settings (e.g. baud rate, parity, etc.) to match with the connected serial device.
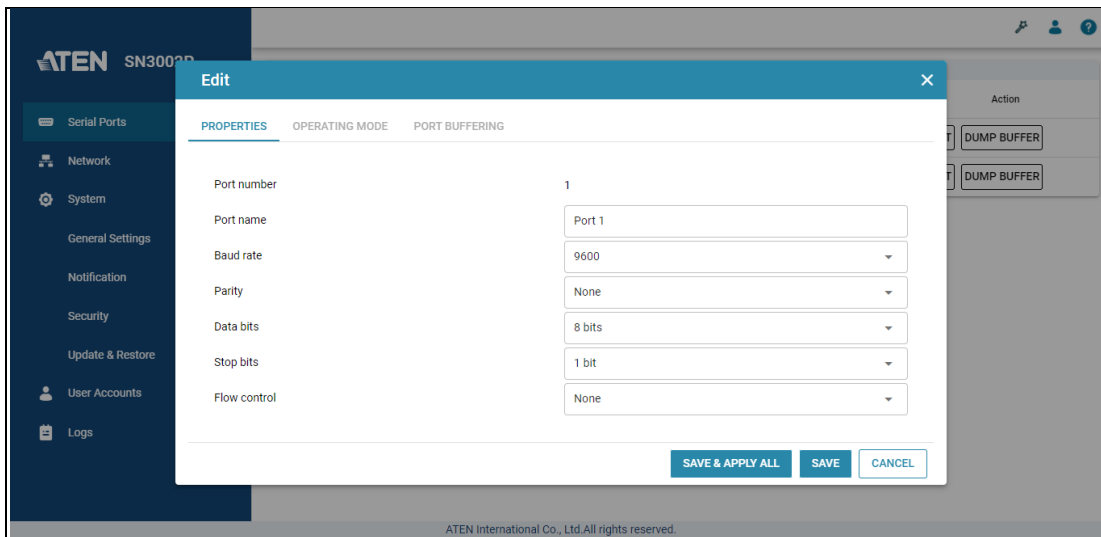
7. Under _OPERATING MODE_, select **Serial Tunneling Server** from the dropdown list. Optionally enable the **Secure transfer** option if you want the data to be encrypted and transmitted securely over a network.
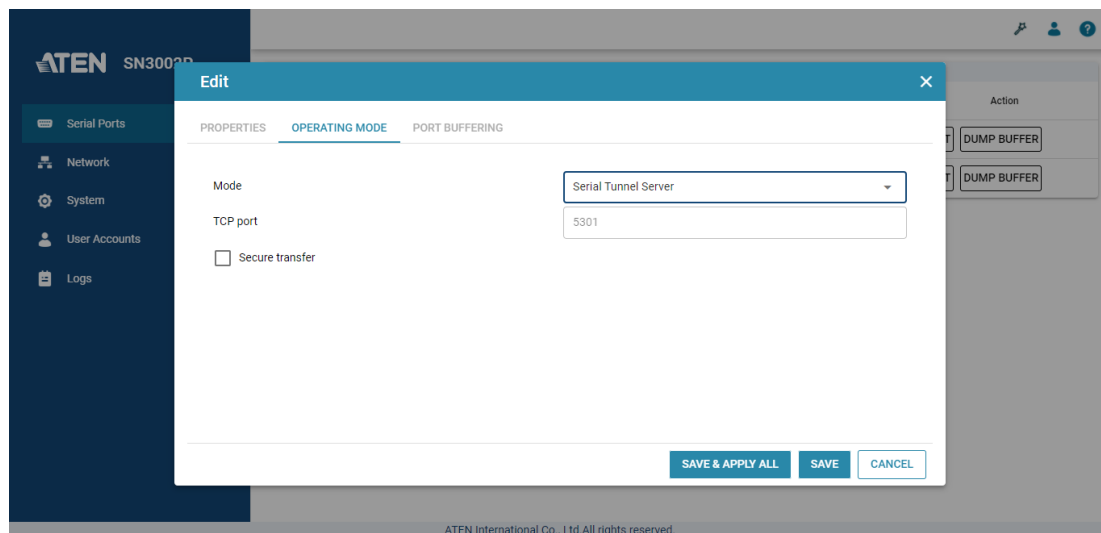
8. Once configured, the Ethernet port of SN3002P's port 1 is assigned to 5301, the port number for UDP communication.
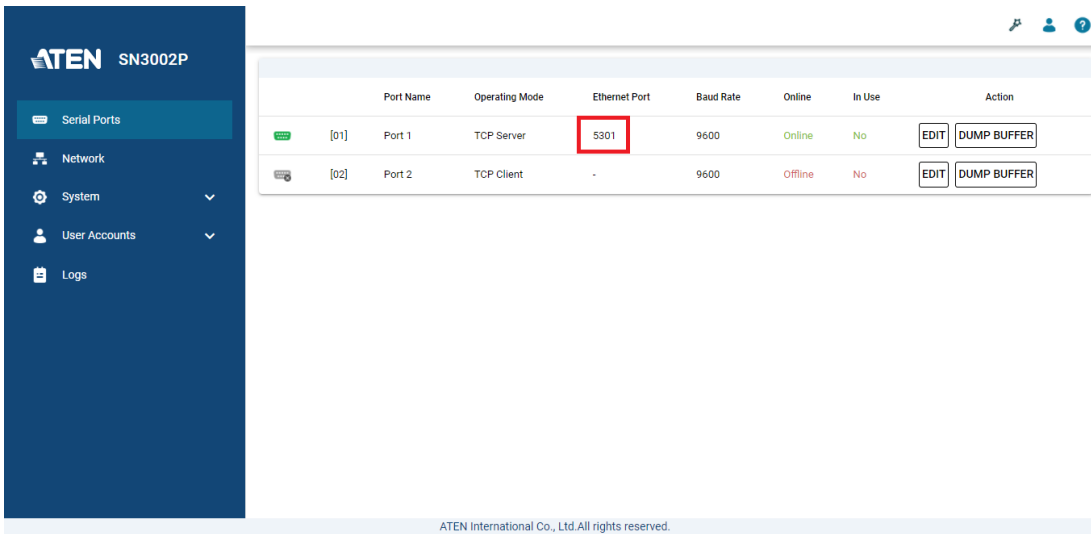
Note: The Ethernet port is assigned based on **base socket** settings in *System > General Settings > Service Ports.*

9. For the second SN3002P, repeat step 1-8 while selecting **Serial Tunneling Client** under the *OPERATING MODE* tab, instead of Serial Tunneling Server, and enter the IP address of the first SN3002P and its port number of 5301.

Note: If *Secure transfer* is enabled / disabled on the first SN3002P, make sure to also enable / disable it on the second SN3002P.
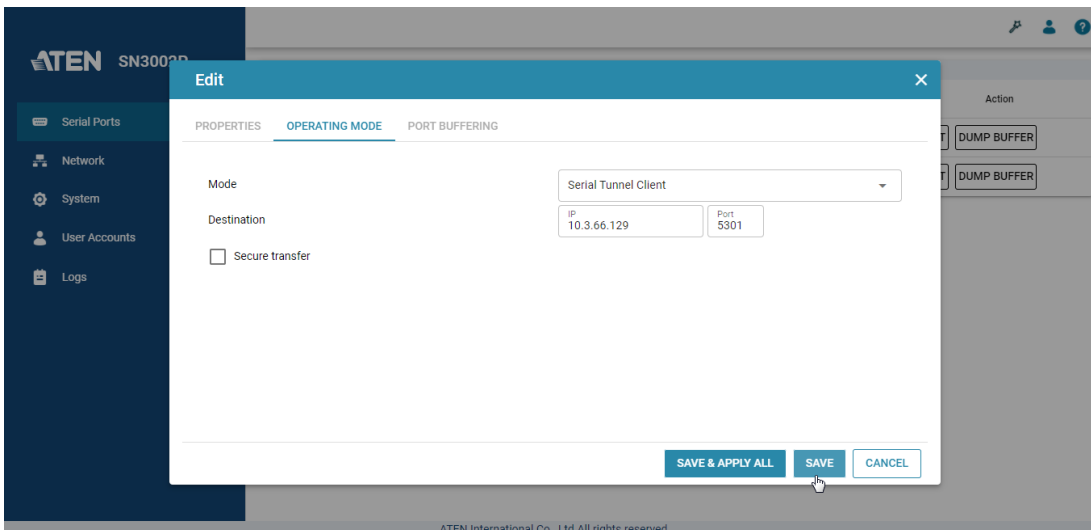
## C. How to test Serial Tunneling Server and Client modes?

Connect PC1's COM port to the first SN3002P, configured as Serial Tunneling Server, and connect PC2's COM port to the second SN3002P, configured as Serial Tunneling Client. Presume the settings of two SN3002P have been properly configured, as mentioned in the previous section.
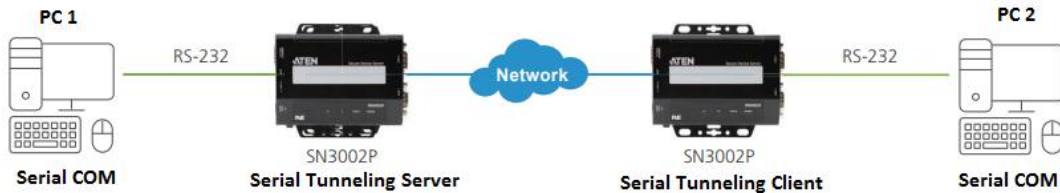
1. On PC1 and PC2, use Putty, a third-party utility, to configure their serial communication settings, as illustrated below.
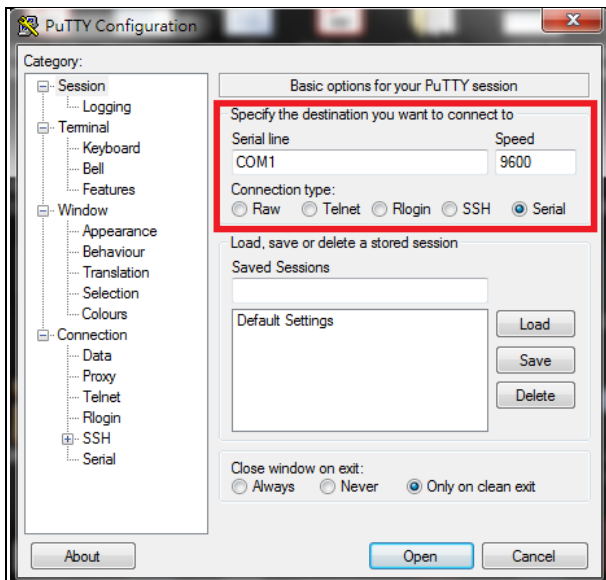
2. Using the Putty on PC2 (serial device), you can enter any text to test if it can be received by the Putty of PC1 (host), as exemplified below.
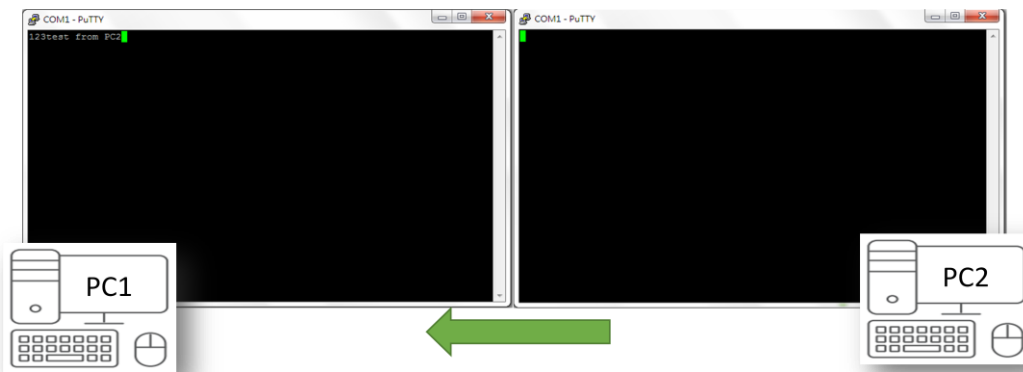
Note: Conversely, you can also enter any text on the Putty of PC1 to test if it can be received by the Putty of PC1.

D. Appendix

ATEN Secure Device Server Pin Assignment

Pin	Configuration
	RS-232
1	DCD
2	RxD
3	TxD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS