

UDP mode 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 is UDP mode?

UDP mode is a faster, simpler, and more efficient way to unicast or multi-unicast data from a serial device to one or multiple host computers and vice versa. UDP mode does not undergo any error checking nor data encryption and is suitable for message display-related applications.

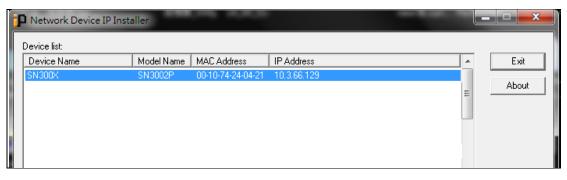




B. How to configure UDP mode?

The following procedures use SN3002P as an example:

- 1. Using a null modem cable, connect the SN's serial port 1 to a serial device (e.g. PC's COM port, LED signboard, etc.).
- 2. Using an Ethernet cable, connect the SN's LAN port to your local network.
- On a host PC, use IP Installer utility (can be downloaded from SN's product page) to discover the IP address of the 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.

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|----------|------------------|---|----------|-----------|---------------------------|----------------------|-----------|---------|--------|------------------|
| | TEN SN3002P | | | | | | | | | |
| | Serial Ports | | | Port Name | Operating Mode | Ethernet Port | Baud Rate | Online | In Use | Action |
| | Network | | [01] | Port 1 | Real COM | 5200 | 9600 | Online | No | EDIT DUMP BUFFER |
| | | | [02] | Port 2 | Real COM | 5200 | 9600 | Offline | No | EDIT DUMP BUFFER |
| ¢ | System | | | | | | | | | |
| | General Settings | | | | | | | | | |
| | Notification | | | | | | | | | |
| | Security | | | | | | | | | |
| | Update & Restore | | | | | | | | | |
| ÷ | User Accounts | ~ | | | | | | | | |
| Ë | Logs | | | | | | | | | |
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6. Under *PROPERTIES*, configure the necessary serial communication settings (e.g. baud rate, parity, etc.) to match with the connected serial device.

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|---|------------------|--------------|----------------|------------------|----------------------------------|---------------------------|-----|--------|
| | TEN 5N300 | Edit | | | | | × | Action |
| - | Serial Ports | PROPERTIES | OPERATING MODE | PORT BUFFERING | | | | |
| | Network | | | | | | | |
| ٥ | System | Port number | | | 1 | | | |
| | General Settings | Port name | | | Port 1 | | | |
| | Notification | Baud rate | | | 9600 | • | | |
| | | Parity | | | None | • | | |
| | Security | Data bits | | | 8 bits | • | | |
| | Update & Restore | Stop bits | | | 1 bit | • | | |
| - | User Accounts | Flow control | | | None | * | | |
| Ë | Logs | | | | | | | |
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7. Under *OPERATING MODE*, select **UDP** from the dropdown list. Enter the *IP address(es)* of the host computers you want to send or receive data to or from, with a UDP port number of 5301.

| | | | | | P 🕹 😧 |
|----------------|--|----------------------------|-----------------------|--------------|---------------|
| | Edit | | | | Action |
| 📟 Serial Ports | PROPERTIES OPERATING MODE PORT BUFFERING | | | | |
| 🛃 Network | | | | | |
| 🙆 System | Mode | UDP | | • | T DUMP BUFFER |
| Luser Accounts | Destination host 1 | Start IP 10.3.200.22 | End IP 10.3.200.22 | Port 5301 | |
| 🖆 Logs | Destination host 2 | Start IP | End IP | Port 0 | |
| | Destination host 3 | Start IP | End IP | Port 0 | |
| | Destination host 4 | Start IP | End IP | Port 0 | |
| | Destination host 5 | Start IP | End IP | Port 0 | |
| | | | SAVE & APPLY ALL | SAVE CANCE | |
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8. Once configured, the Ethernet port of SN3002P's port 1 is assigned to 5301, the port number for UDP communication.

| | | | | | | | | | ۶ 🛓 🍳 |
|----------------|---------|----------|-----------|--------------------------|------------------------|-----------|---------|--------|--------|
| ATEN | SN3002P | | Port Name | Operating Mode | Ethernet Port | Baud Rate | Online | In Use | Action |
| 📟 Serial Ports | | [01] | Port 1 | UDP | 5301 | 9600 | Online | Yes | |
| 🕂 Network | | [02] | Port 2 | TCP Client | | 9600 | Offline | No | |
| 🗿 System | | | | | | | | | |
| 💄 User Accou | ints 🗸 | | | | | | | | |
| 😑 Logs | | | | | | | | | |
| | | | | | | | | | |
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Note: The Ethernet port is assigned based on **base socket** settings in *System > General Settings > Service Ports.*

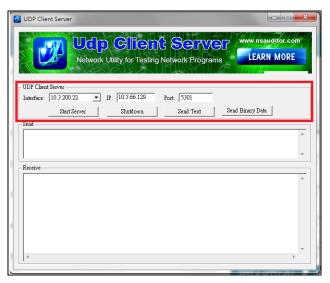


C. How to test UDP mode?

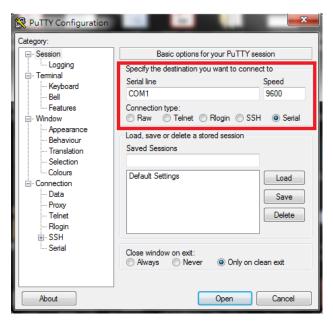
Using PC1 as UDP server / client, and PC2's COM port as a serial device, presume the settings of SN3002P have been properly configured, as mentioned in the previous section.



1. On PC1, enter the IP address of SN3002P and port 5301 on UDP Client Server, a third-party utility, to send and/or receive data to and/or from PC2, as illustrated below.



2. On PC2, use Putty, a third-party utility, to configure its serial communication settings, as illustrated below.



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All information, documentation and specifications contained in this media are subject to change without prior notice by the manufacturer. Please visit our website to find the most up-to-date version.



3. On the UDP Client Server of PC1, you can enter any text to test if it can be received by the Putty of PC2, as exemplified below.

| UCD Client Server Interface: 10320022 IP: 110366.129 Port: 5301 Start Server Shutdown Send Text Send - Send hello | |
|--|-----|
| Network Utility for Testing Network Programs UDP Client Server Interface: 10.3.200.22 IP: 10.3.66.129 Port: 5301 Start Server Shutdown Send Send | |
| UDP Client Server Interface: 10.3.200 22 IP: 10.3.66.129 Port: 5301 Start Server Shutdown Send Text Server | |
| Interface: 10.3.200.22 IP: 10.3.66.129 Port. 5301 Start Server Shutdown Send Text Send | |
| Interface: 10.3.200.22 TP: 10.3.66.129 Port 5301 Start Server Shutslown Send Send Send | |
| Start Server Shutdown Send Text Se | |
| | |
| hello | |
| | |
| | |
| PC1 | PC2 |
| | |
| | |

Note: Conversely, you can also enter any text on the Putty of PC2 to test if it can be received by the UDP Client Server 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 |