




ezTCP Technical Documents

LAN Serial Tunneling

Version 1.0

 ***Caution: Specifications of this document may be changed without prior notice for improvement***

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1 Overview

1.1 Serial Tunneling

Serial tunneling means long-distance communication between two serial devices connected over TCP/IP protocol. Using serial tunneling, you can extend communication distance between two serial devices.

And modification is not required for firmware of user device.



Figure 1-1 Serial Communication

1.1.1 Wired Serial Tunneling

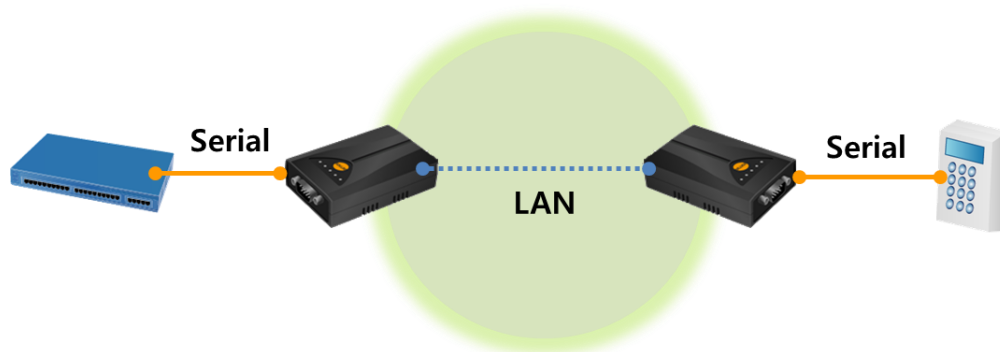


Figure 1-2 Wired Serial Tunneling

1.1.2 Wireless Serial Tunneling

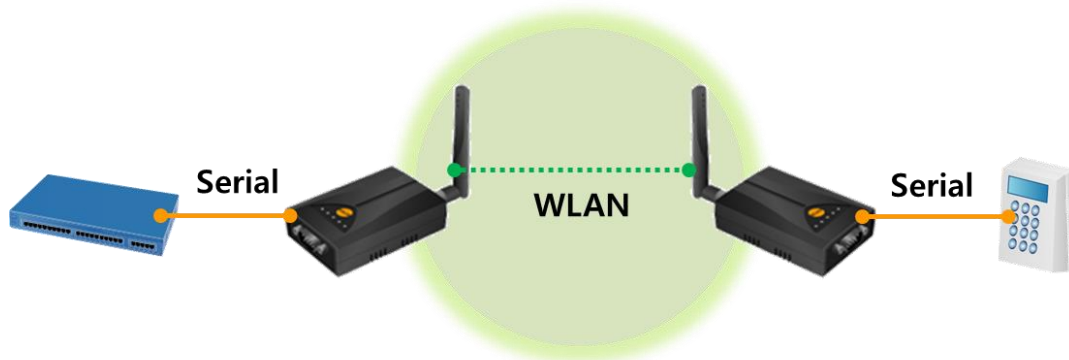


Figure 1-3 Wireless Serial Tunneling

2 LAN Serial Tunneling

2.1 LAN Serial Tunneling

Serial tunneling can be implemented in two ways: one way is using Network and the other is connect to products each other directly. If you use the Network, it is easier to debug than 1:1 connection. But If you can not connect to network, 1:1 connection is also possible.

2.1.1 Network connection

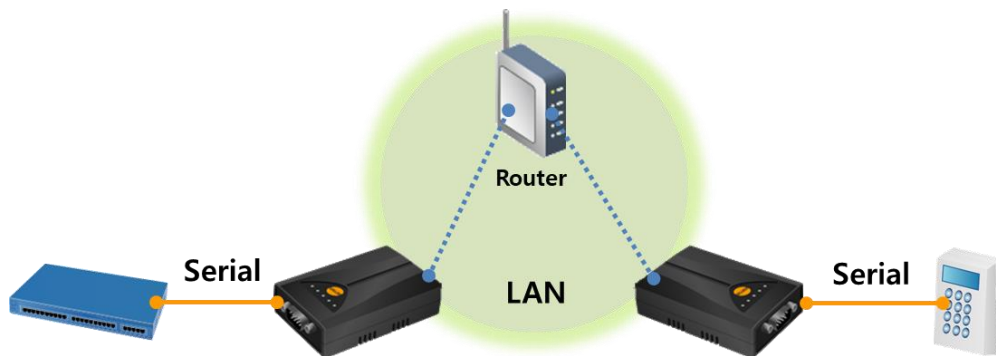


Figure 2-1 Connection through the router

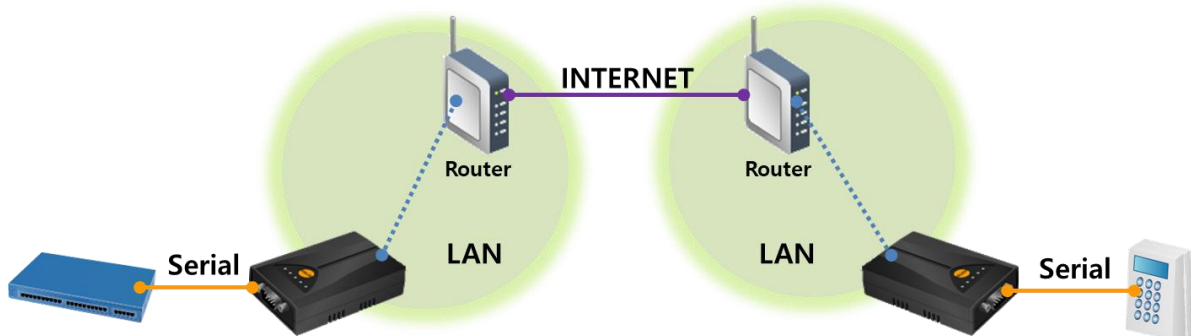


Figure 2-2 Connection on the Internet

2.1.2 1:1 Connection

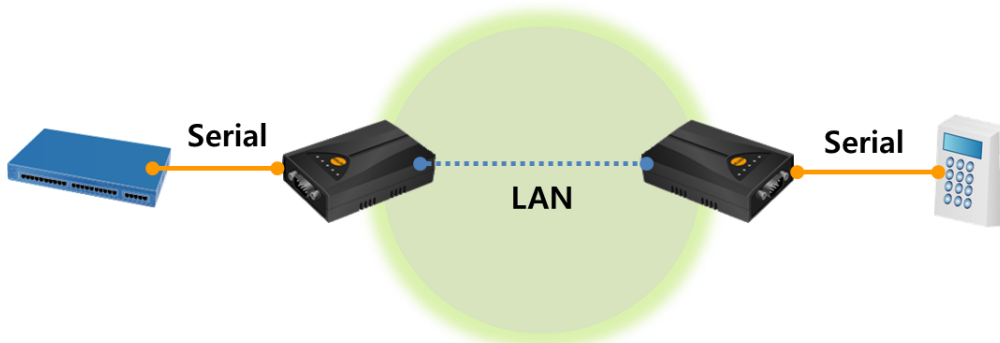


Figure 2-3 1:1 Connection

3 Configuration

3.1 Settings of ezTCP

3.1.1 Network Tab

- Settings of Local IP address, Subnet Mask, Gateway IP Address, DNS IP address.

① Obtain an IP Automatically (DHCP)

Receive its IP address from a DHCP server automatically.

② Use Static IP address

When the product has an IP address from the router(DHCP) and it operates as a server, Local IP address could be changed. So you have to check the IP address from [Status] of ezManager, and select [Use Static IP address] and set that IP address directly.

3.1.2 Serial port Tab

- Serial Port settings

Configure the Type of Serial, Baudrate, Parity, Data bits, Stop bit and Flow control of Serial port to match the serial port of the existing user device.

- TCP/IP Communication settings

① T2S-TCP Server

In this mode, the product listens to a TCP connection request from remote host as a server. It has the Local port to listen.

② COD-TCP Client

The product sends request segments to a TCP server as a client. It has to configure Peer IP address(the IP address of Server) and Peer Port(the Local port of Server).

3.2 Example of Local network communication

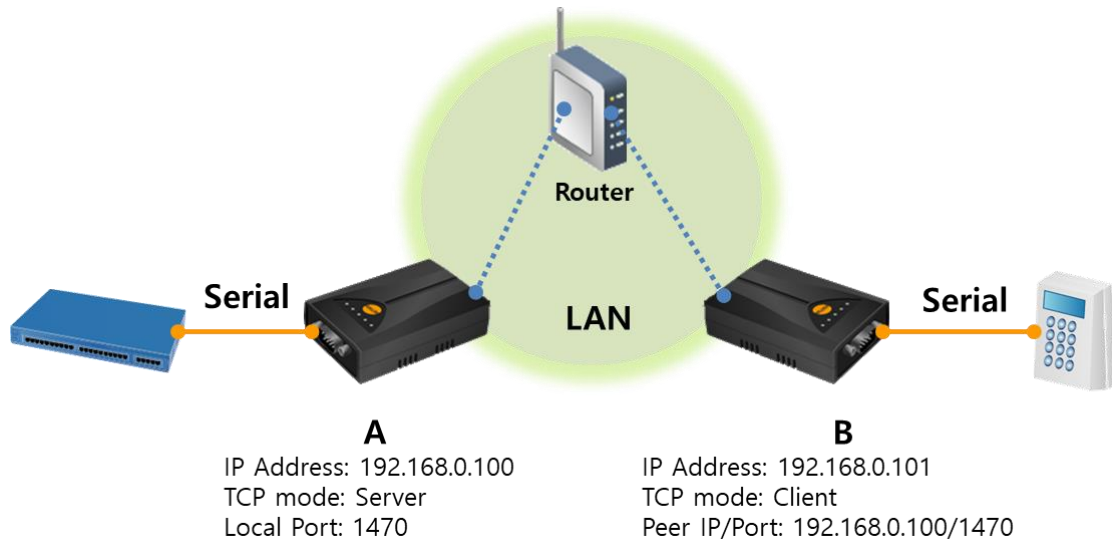


Figure 3-1 Diagram of Local network communication

3.2.1 Network settings

Items	Product A	Product B
Local IP Address	Assigned IP address from the router (e.g.: 192.168.0.100)	Assigned IP address from the router (e.g.: 192.168.0.101)
Communication Mode	T2S – TCP Server	COD – TCP Client
Local Port	1470	-
Peer Address	-	IP address of Product A (e.g.: 192.168.0.100)
Peer Port	-	1470

Table 3-1 Local network settings

3.3 Example of 1:1 network communication

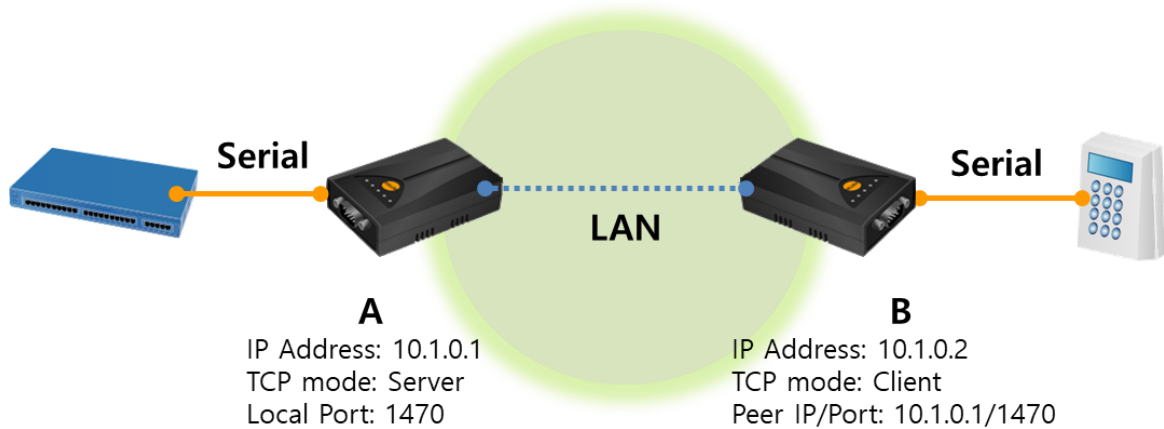


Figure 3-2 1:1 network communication

3.3.1 Network settings

Items	Product A	Product B
Local IP Address	10.1.0.1	10.1.0.2
Communication Mode	T2S – TCP Server	COD – TCP Client
Local Port	1470	-
Peer Address	-	IP address of Product A (10.1.0.1)
Peer Port	-	1470

Table 3-2 1:1 network settings

4 Revision History

Date	Version	Description	Author
2020.02.14	1.0	○ Initial release	Amy Kim