Wireless LAN Application Notes (002) Implementation of Serial Tunneling through Wireless LAN

Version 1.2
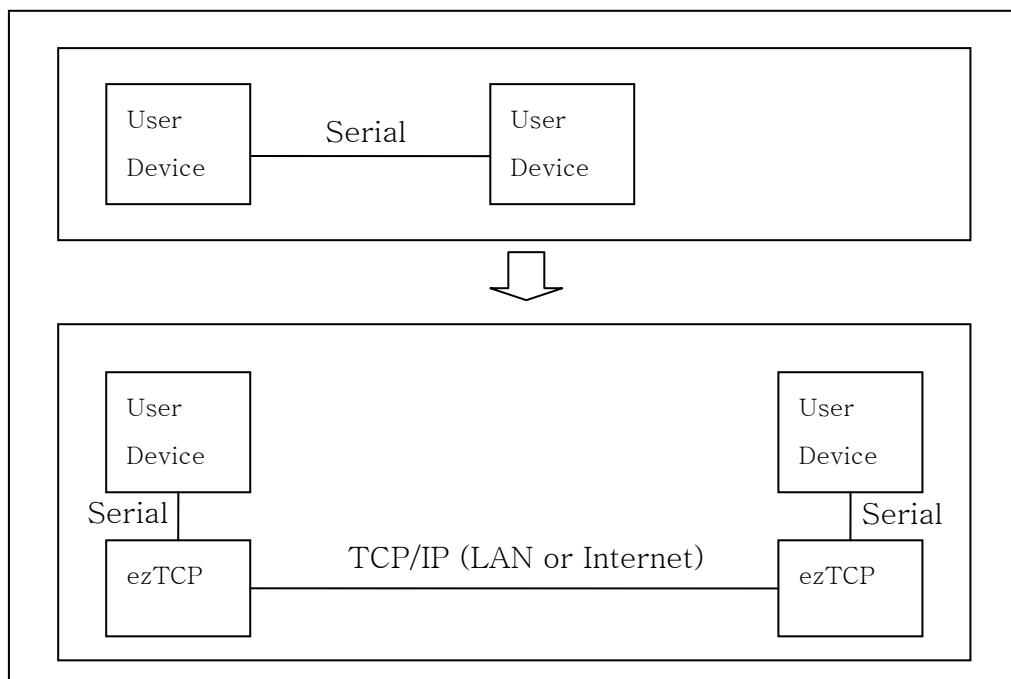

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1. Ad-hoc Wireless LAN Serial Tunneling

1.1.　Serial Tunneling

1.1.1.　What's 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.

1.1.2.　Advantages of Serial Tunneling

● No modification required for firmware of user device.
● Notably long communication distance.
● Ensured data integrity because of TCP.

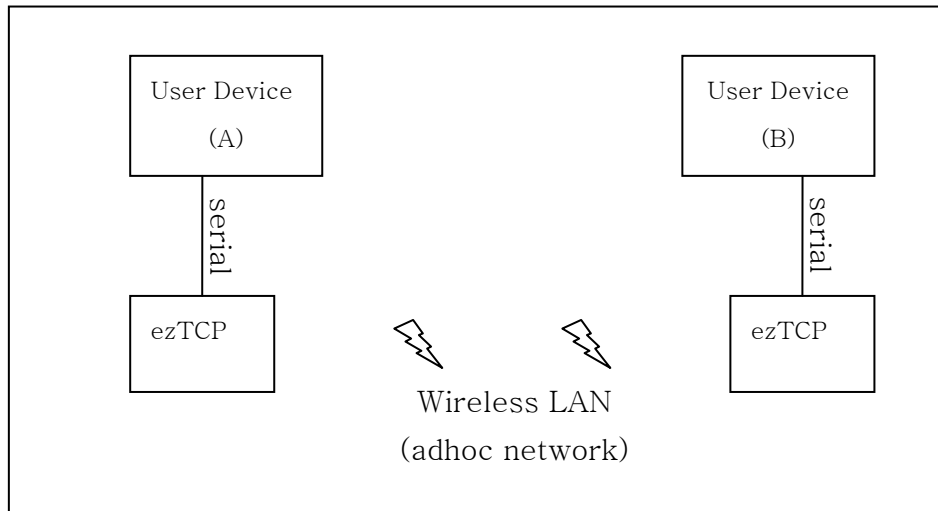## 1.2.　Configuring Serial Tunneling with Wireless LAN

Serial tunneling with wireless LAN can be implemented in two modes: infrastructure mode using AP and ad-hoc mode. In ad-hoc mode, you can

configure serial tunneling more simply.

This document describes only ad-hoc mode.

1.2.1. Network Configuration

Connect each serial device to corporate wireless LAN in series.

1.2.2. Features

In ad-hoc mode you can install the system more simply at a low cost because network is configured without AP.

1.3. Setting ezTCP

1.3.1. Serial Port

Configure the serial port to match the serial port of the existing user device.

1.3.2. Wireless LAN

- WLAN Mode

It should be configured as AD-HOC.

- SSID

Both Target SSID and Ad-Hoc Master SSID should be same value.

- Channel

You don't have to set Channel.

- WEP

Set WEP if you want to apply security; otherwise ignore WEP.

2. Configuration

2.1.　Configuration Example

### 2.1.1. Local IP Address, Subnet Mask, Gateway IP Address

Configure network with a different IP address for both sides. Since only two devices are configured into the network, you can configure them regardless of the adjacent devices.

The following configuration is recommended:

	A	B
Local IP Address	10.1.0.1	10.1.0.2
Subnet Mask	255.0.0.0	255.0.0.0
Gateway IP Address	0.0.0.0	0.0.0.0

2.1.2. ezTCP Mode

Set one eztcp to Server (T2S) and the other to Client (COD). The client connects to the server. Two-way communication is allowed after connection.
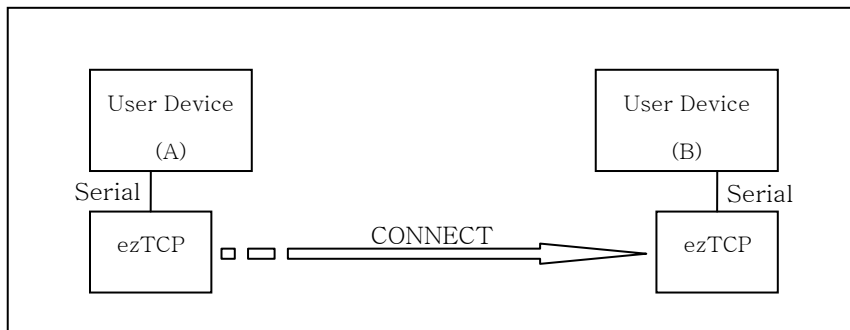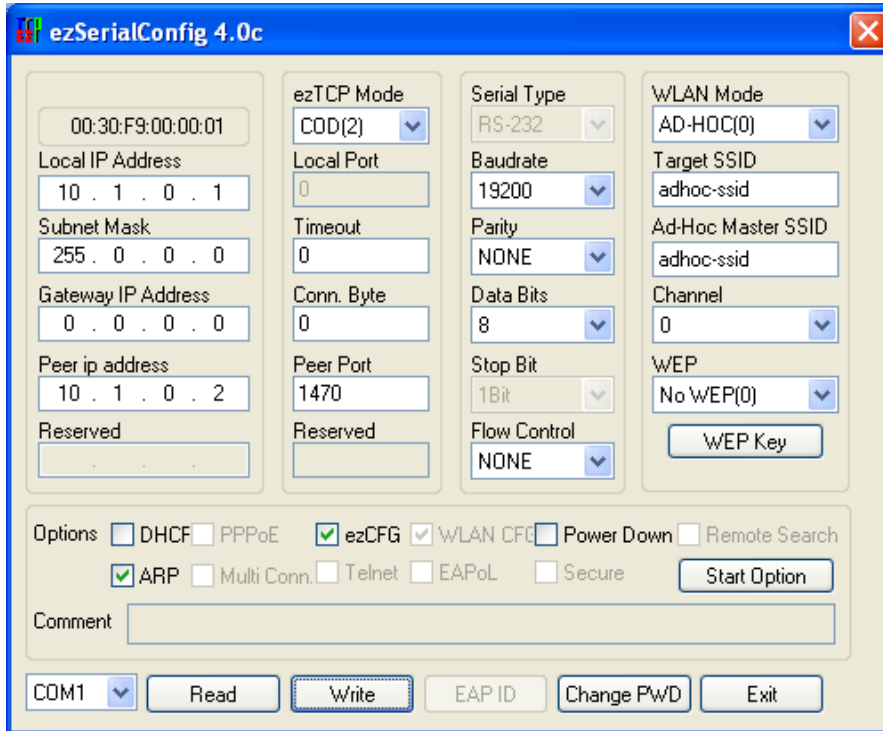

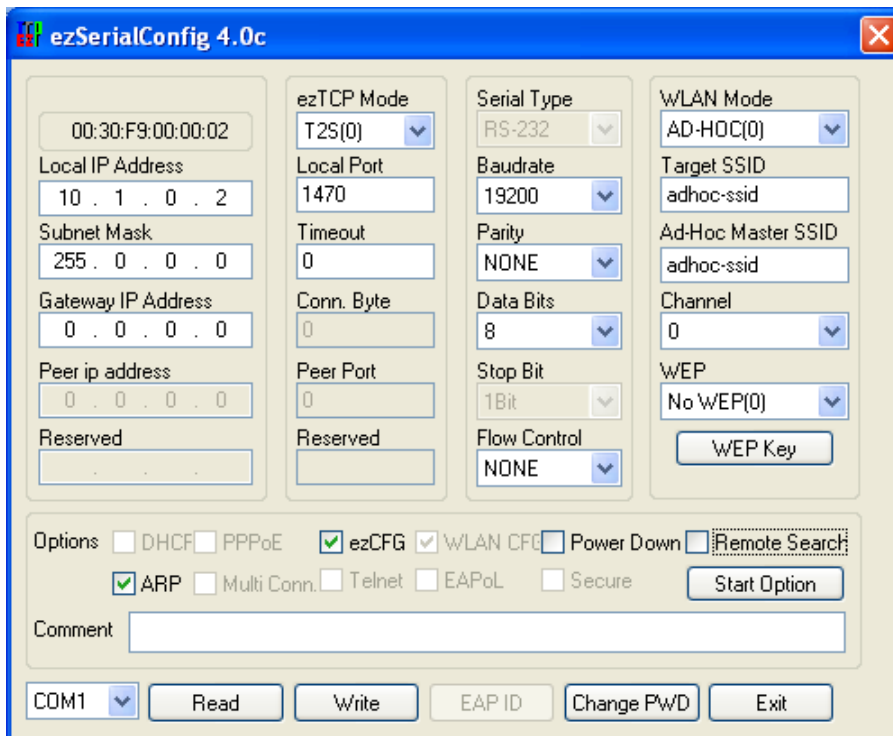|	A(10.1.0.1)	B(10.1.0.2)
ezTCP Mode	COD	T2S
Local Port	–	1470
Peer IP	10.1.0.2	0.0.0.0
Peer Port	1470	–
Conn. Byte	0	–
Timeout	0	0

Set other fields related to serial port in accordance with the user device.

2.1.3. ezSerialConfig Example

● Device A

● Device B

3. Revision History

Date	Version	Comments
Jun.17.2005	1.0	The first release
Oct.24.2005	1.1	Changed the SSID setting
Oct.10.2008	1.2	Added Revision History Changed product image