

Application Note

Sending MAC Address Function

Version 1.0
2009-09-04

#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14
'0'	'0'	'3'	'0'	'f'	'9'	'0'	'0'	'0'	'0'	'2'	'5'	CR	LF
0x30	0x30	0x33	0x30	0x66	0x39	0x30	0x30	0x30	0x30	0x32	0x35	0x0d	0x0a

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1 Overview

1.1 Overview

When your system contains two or more ezTCP and a server, identification for each device is needed sometimes. To solve this problem, you should choose one of following systems.

- Using unique ID for serial devices
- Using IP address of ezTCP
- Using MAC address of ezTCP

1.2 Using Unique ID for Serial Devices

If a unique ID is assigned for each serial device and it sends it, the server can identify all the data from its multiple devices. However, most of serial devices don't have any ID or they can not send it.

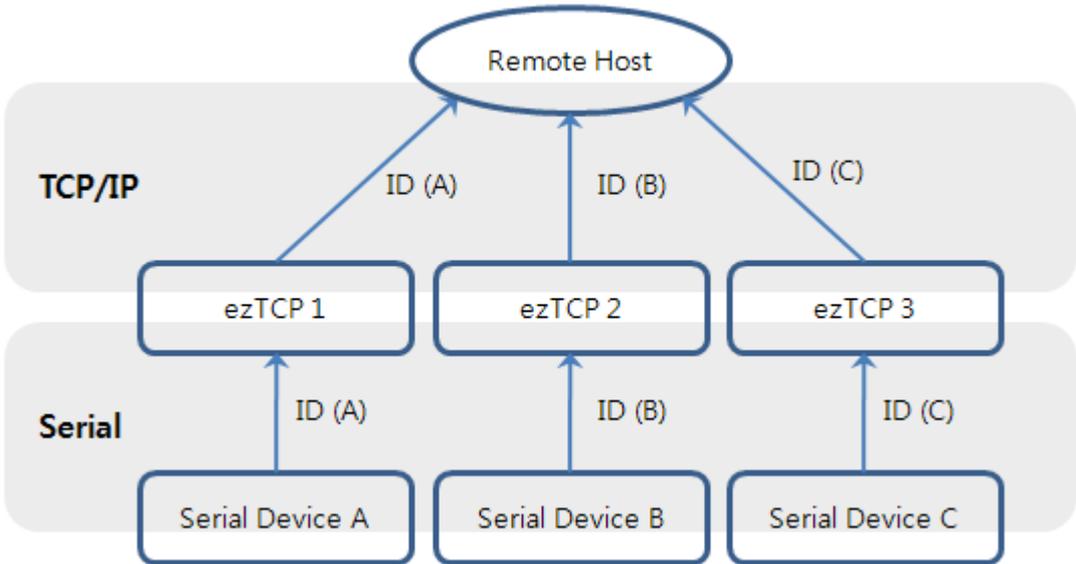


Fig 1-1 Using unique ID for serial devices

1.3 Using IP Address of ezTCP

When TCP connection is established between server and ezTCP, the server can find out the IP address of ezTCP from the socket information. This lets users distinguish their devices. However, it should solve a problem if ezTCP is under network using dynamic IP address through DHCP or PPPoE.

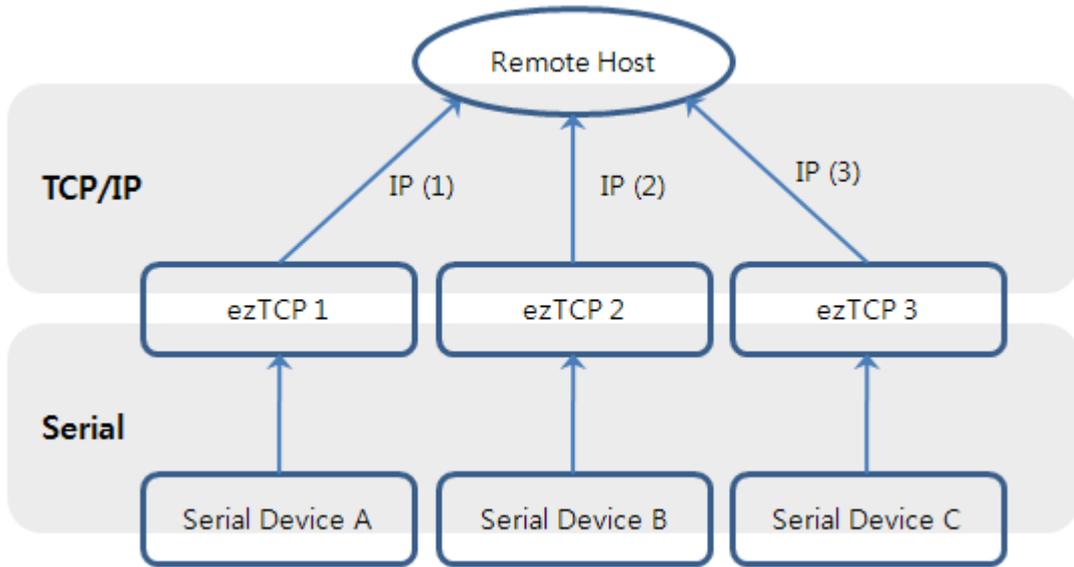


Fig 1-2 Using IP Address of ezTCP

1.4 Using MAC Address of ezTCP

Each ezTCP has a MAC address which is independent each other. The address called hardware address and it has to be unique value. By using this MAC address, serial devices can be distinguished.

Usage and setting is quite simple.

2 Description

2.1 Sending MAC Address

One MAC address has to be assigned one network device. MAC address is formed 6 Byte in hexadecimal. Institute of Electrical and Electronics Engineers (IEEE) allocate the first 3 Bytes and the other 3 Bytes are allotted by manufacturer without duplication. So, a MAC address is for only one network device in the world.

6 Bytes of MAC address are followed.

00	30	F9	00	00	01
Company ID			Serial Number		

Fig 2-1 Form of a MAC Address

By using sending MAC address option, ezTCP send remote host its MAC address. Because of this, connected host (PC) can notice ezTCP's MAC address. Look at the figure 2-2.

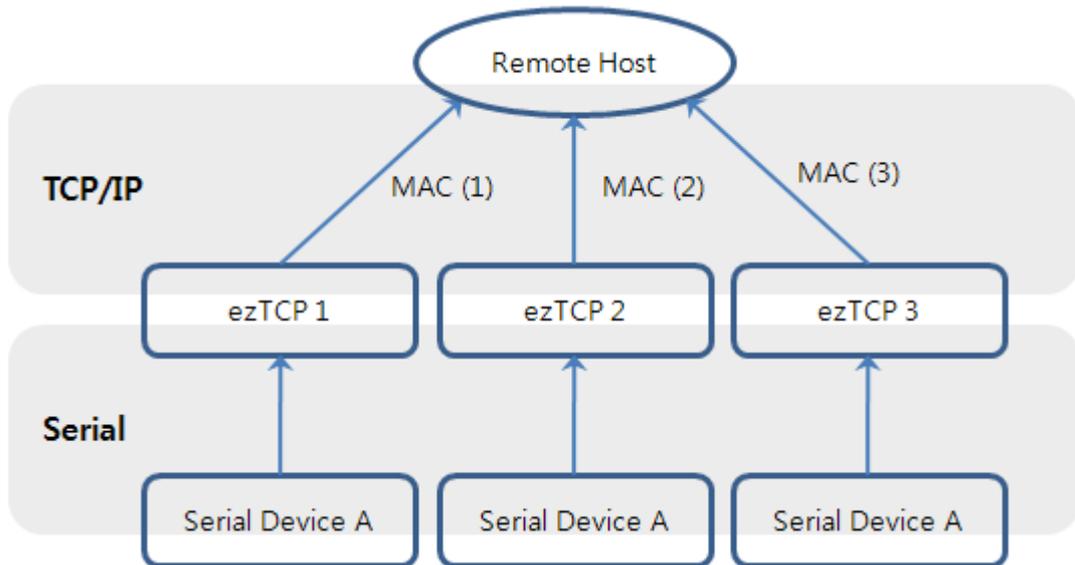


Fig 2-2 Using MAC address of ezTCP

2.2 Performance

2.2.1 TCP Connection with Remote Host

This option is available on TCP modes only. There are two TCP connection modes. The one is TCP server (T2S). In this case, ezTCP wait for request packet of TCP connection opening one TCP port (Local Port). The other one is TCP client (COD). In this mode, ezTCP sends request packet of TCP connection to the remote host. The peer IP address and port should be set.

2.2.2 Sending MAC Address

ezTCP sends its MAC address to the remote host right after the connection is established. Figure 2-3 is presenting sequence of making a TCP connection and sending MAC address as a time chart when ezTCP is set to TCP client mode.

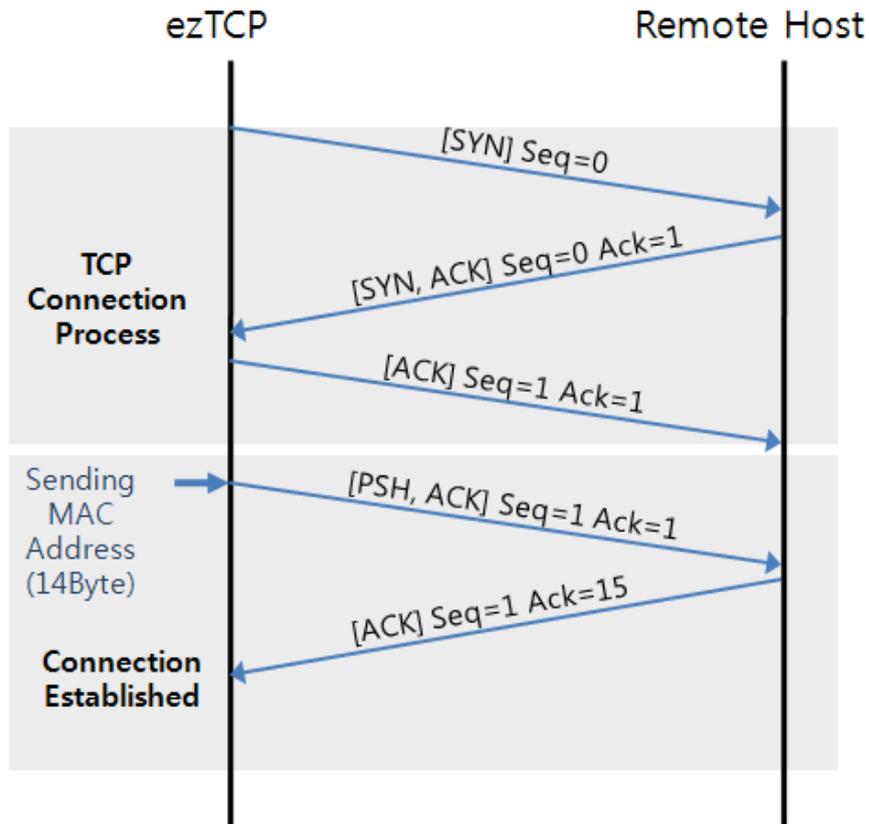


Fig 2-3 Sending MAC address after TCP connection

2.3 Data Format

6 Bytes of MAC address are presented in hexadecimal. ezTCP changes the data format to ASCII code. In addition, carriage return and line feed (<CR>, <LF>) are added in the last of the data. Therefore, total length of data is 14 Bytes.

Figure 2-4 is an example that presents MAC address as ASCII code when the MAC address is “0030f9000001”.

# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	# 14
'0'	'0'	'3'	'0'	'f'	'9'	'0'	'0'	'0'	'0'	'0'	'1'	CR	LF
0x30	0x30	0x33	0x30	0x66	0x39	0x30	0x30	0x30	0x30	0x30	0x31	0x0d	0x0a

Figure 2-4 Data Format of sent MAC address

3 Setting

To use sending MAC address function, configuration is needed. The setting can be implemented by each configuration tool. (Except for EZL-200F)

3.1 Products which use ezManager

- CSE-M32 / M73 / H20 / H21 / H25 / CIE-H10 / M10 / CSW-H80

Search ezTCP after the running ezManager. Press the [Option] tab and check the [Send MAC Address] option. Click [Write] button to store it.

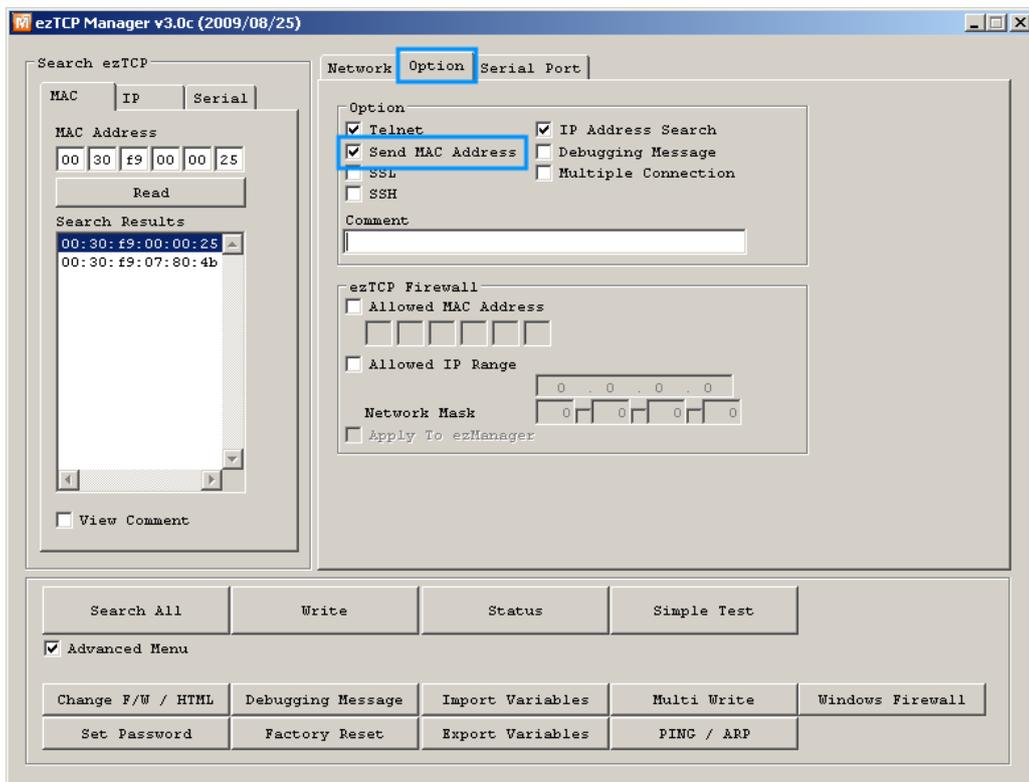


Fig 3-1 [Send MAC Address] on ezManager

☞ In case the [Send MAC Address] option is not visible, please download the latest released version of ezManager on our web site.

☞ In case the [Send MAC Address] option is disabled, please upgrade firmware to the latest released version on your ezTCP.

☞ In case of CSW-H80, the firmware contains this option will be released soon.

3.2 Products which use ezConfig

- EZL-50L / 50M / 60L / 60M / 70 / 200L

Search ezTCP after run ezConfig. Check the [Send MAC Address] option in the option panel and store it with [Write] button.

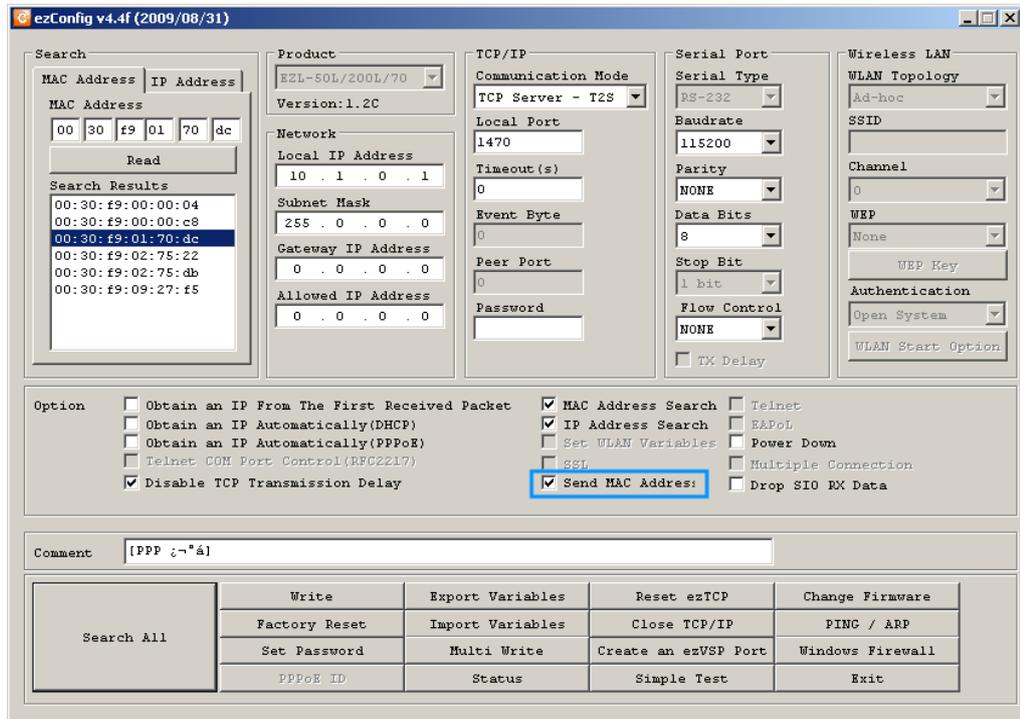


Fig 3-2 [Send MAC Address] on ezConfig

This option will be available when the new version of firmware and ezConfig will have been released. The firmware of these products which using ezConfig will be released in a few weeks.

- EZL-200F

Sending MAC address option of EZL-200F can be set by using TELNET connection or entering console mode. For the details, please refer to the document about the MAC ID function.

4 Revision History

Date	Version	Comments
Sep. 04. 2009	1.0	Created