Data handling using Esc Sequences

(WizFi 210 Application Notes)

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1. Data Handling

In AT Command mode, data transfers are managed using various escape sequences. Each escape sequence starts with the ASCII character 27(0x1B); this is equivalent to the ESC key. The encoding of data and related commands are described in the following pages. This encoding is used for both transmitted and received data.

The network destination, or destination source, for a given data packet is established by means of a Connection Identifier, and represented as a single hexadecimal number. Data is transferred on a per CID basis. Data is normally buffered until the end-of-data escape sequence is received. However, if the amount of data exceeds the size of the data buffer, the data received, thus far, is sent immediately. The data buffer size depends on the implementation, but is usually one MTU.

2. Escape Sequences

Escape Sequence	*Description*
<Esc>S<CID><data><Esc>E	This escape sequence selects the specified Connection ID as the current connection. Use this sequence to send data from a TCP server, TCP client or UDP connection. Example: To send user data (e.g. Hello) on CID 1, the format will be: <Esc>S1Hello<Esc>E
<Esc>Z<CID><data length><data>	To improve data transfer speed , one can use this bulk data transfer. This sequence is used to send and receive data on TCP client, TCP server, or UDP connection. Example: To send a 5 byte user data (e.g. Hello) on CID 1, the format will be: <Esc>Z10005Hello
<Esc>U<CID><IP Address>:<port>:<data><Esc>E	When this command is used, the remote address and remote port is transmitted. WizFi210 expects to receive the following data sequence from Host: <Esc>U<CID><IP Address>:<port>:<data><Esc>E Example: When WizFi210 sends data (e.g. Hello) on CID 0, the format will be: Example: `<Esc>U0192.168.1.1:52:Hello<Esc>E`
<Esc>O	"OK": This sequence is sent to the serial host by the Serial2WiFi Adapter upon successful completion of the commands.
<Esc>F	"FAILURE": This sequence is sent to the host by the Serial2WiFi Adapter if an command failed.