Application Note

>> ANw8.1: Setting a TCP port to a listening mode

TARGET	B40h-09gg + eDsoft-W302 v1.0
NEED	Opening locally and listen to a TCP socket to accept incoming connections from remote TCP clients.
DESCRIPTION	The Wavecom product provides a TCP socket API that allows the user to open and listen to a TCP connection on a configurable TCP port. The IP address of the remote client can be filtered if necessary. Only one TCP session can be opened simultaneously. Once the TCP session is opened, the Wavecom product acts as a transparent bridge between the TCP connection and the serial connection. For a GPRS Internet connection, make sure that the operators allow to use the TCP port used by your application.

CONFIGURATION

TCP client address	Defines the IP address of the remote TCP client allowed to open the socket TCP. It must be configured as a 32-bit number in dotted-decimal notation - not a symbolic name. When this parameter is set to 255.255.255.255, the access is granted for all remote IP addresses.
AT#	TCPSERV
TCP server port	Defines the TCP port number of the listening TCP socket. It can be configured with a 5-digit number. For example, the TCP port assigned to Telnet is 23. It must be the same between the peers.
AT#	TCPPORT

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<center>**OPERATION**</center>

Launching the Listening TCP session	Once an IP link is established, this command instructs the Wavecom product to listen to the incoming connections on the TCP port specified in the `TCPPORT` parameter and issued by the allowed IP address defined in the `TCPSERV` parameter.
AT#	`LTCPSTART`
Opening the TCP session	Upon detection of an incoming TCP connection from an allowed IP address on the specified TCP port, the Wavecom product automatically opens the TCP session and issues a 'Ok_Info_WaitingForData' message over the serial port.
Data flow	Once the TCP socket has been successfully opened, all the data received from this session is sent over the serial port and all the data received on the serial port is sent to the remote host within TCP packets. Data received from the host are not echoed. This link is bi-directional and the flow is controlled through the selected flow control mechanism. If `DLEMODE` is set to 1, the attached host must send the [ETX] character as [DLE][ETX] and the [DLE] as [DLE][DLE]. On the other hand, an [ETX] character received in the TCP payload data will be transmitted over the serial port as a [DLE][ETX] and a [DLE] as a [DLE][DLE].
AT#	`DLEMODE`

Closing the TCP session from the remote	- If the remote ends the TCP session- (and if `DLEMODE` is set to 1)- the Wavecom product will also close the socket TCP session by sending an [ETX] character over the serial port to the host, then the message 'Ok_Info_SocketClosed'.
	
	 - If `DLEMODE` is set to 1, the attached host sends an [ETX] character to direct the Wavecom product to close the current TCP session.
	
	 In this case the 'Ok_Info_SocketClosed' message signals that the TCP socket has been closed. A 'OK' message then indicates that the TCP process is completely finished.
	
	 As soon as the socket TCP is closed, the TCP port is not anymore in a listening mode.
	
	 If `DLEMODE` is set to 0, it is not possible for the attached host to close the TCP session in data mode.
	
	 `[ETX]        CTRL+C sequence in a keyboard`
	 `[DLE]        CTRL+P sequence in a keyboard`

Closing the TCP session from the local host	When the Wavecom product is in TCP listening mode (launched by the `AT#LTCPSTART` command), this can be stopped by the `AT#LTCPSTOP` command. A 'OK' message then informs that the TCP process is completely finished. If `DLEMODE` is set to 0, it is not possible for the attached host to close the TCP session. `AT#LTCPSTOP`

<center>**LINKS**</center>

AT# PARAMETERS	`TCPSERV, TCPPORT, DLEMODE`
AT# COMMANDS	`LTCPSTART, LTCPSTOP, OTCP`
APP. NOTES	ANTCP_Socket (ANw8.2)