Application Note

>> ANw8.2: Opening a TCP socket

TARGET	B40h-09gg + eDsoft-W302 v1.0
NEED	Opening and using a TCP socket to a remote TCP server
DESCRIPTION	The Wavecom product provides a TCP socket API that allows the user to open a TCP session with a remote host. The user can freely configure the IP address and TCP port of the remote server. Only one TCP socket 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 port. For a GPRS Internet connection, make sure that the operators allow to use the TCP port used by your application.

CONFIGURATION

TCP server address	Defines the IP address of the remote TCP server. It must be configured as a 32-bit number in dotted-decimal notation or as a symbolic name. AT# TCPSERV
TCP server port	Defines the TCP port number of the remote TCP server. It can be configured with a 5-digit number. For example the TCP port assigned to Telnet is usually 23. It must be the same between the peers. AT# TCPPORT
Closing mechanism and DLE ETX coding	Once the TCP connection is opened, either side can close it (the Wavecom module's ability to do this depends on the DLEMODE parameter setting). When the attached equipment wants to close the session, it must send an [ETX] character over the serial port. In this case a coding mechanism (DLE based) must be applied to allow the attached equipment to send [ETX] characters in the payload data. The DLEMODE parameter defines if [ETX] characters received on the serial port must be interpreted by the Wavecom product as a close command. When the DLEMODE parameter is set to 0, an open TCP session can only be closed by the remote TCP server. DLEMODE AT# *[ETX] CTRL+C sequence in a keyboard* *[DLE] CTRL+P sequence in a keyboard*

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OPERATION	
Opening the TCP session	Once an IP link is established, this command instructs the Wavecom product to open a connection to the remote TCP server as specified in the TCPSERV/TCPPORT parameters. A 'Ok_Info_WaitingForData' message means that the operation has succeeded. AT# OTCP
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 from the host to the remote is not echoed. This link is bi-directional and the flow is controlled through the hardware 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].
Closing the TCP session	If DLEMODE is set to 1, the attached host sends an [ETX] character to direct the Wavecom product to close the current TCP session. This character is echoed 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. If DLEMODE is set to 0, it is not possible for the attached host to close the TCP session. *[ETX] CTRL+C sequence in a keyboard* *[DLE] CTRL+P sequence in a keyboard*

LINKS	
AT# PARAMETERS	DLEMODE, TCPPORT, TCPSERV
AT# COMMANDS	LTCPSTART, LTCPSTOP, OTCP
APP. NOTES	ANTCP_ListeningSocket (ANw8.1)