1. Connection Watchdog: AT!MPCWSETUP

Assign: **AT!MPCWSETUP=<rxtime>,<dnstime>,<dnsport#>,<dnsname>,<max number of consecutive CW-triggered disconnects>,<PING IP>,<mode>**

Query: **AT!MPCWSETUP?**

Argument Description:

Arguments	Value	Description
<rxtime>	0 – 240 Default: 0	Receive packet count check interval (minutes)
<dnstime>	0 – 240 Default: 30	DNS check interval (minutes)
<dnsport#>	1 – 65535 Default: 7367	DNS port number for MP stack
<dnsname>	Max 128 char string Default: "www.sierrawireless.com"	Website name for DNS Host to resolve
<max number of consecutive CW-triggered disconnects>	1 – 65535 Default: 0	Number of consecutive CW-triggered disconnects until the MP will resets the AC
<PING IP>	X.X.X.X Where X = 0 - 255 Default: 0.0.0.0	IP address to PING when in PING mode
<mode>	0 - 1 Default: 0	0 = DNS mode 1 = PING mode

Note: By default the connection watchdog is disabled (ie rxtime = 0)

Brief description of connection watchdog algorithm:

The MP monitors the Rx byte count every <**rxtime**> minutes and checks if the Rx byte count has incremented. If it has incremented, the MP assumes that data is being received by the MP and that the connection is still valid. If the byte count has not changed, the MP sends a DNS Query to the DNS server assigned by the network or pings the <**PING IP**>, depending on the <**mode**> chosen. If the Rx byte count increases as a result of the action take, the MP assumes that the connection is still valid and keeps monitoring. If the Rx byte count has not changed as a result of the action taken, the MP assumes that the connection is invalid and proceeds to disconnect it. The 'always on' mode of the modem then takes care of establishing a new connection. If the MP reaches a <**max number of consecutive CW-triggered disconnects**>, the MP will reset the AC. If <**max number of consecutive CW-triggered disconnects**> is equal to zero, then this feature is disabled and regardless of the number of consecutive CW-triggered disconnects, the AC will not be reset.

When the modem has a new data connection, it verifies that the DNS server assigned to it is valid or that PINGs are possible (dependent on <**mode**>) before using it to test the validity of a data connection. If the action taken fails, the MP connection watchdog remains inactive and it keeps

testing the <**mode**> every <**dnstime**> minutes. Only when the DNS server is successfully tested will the MP begin to use it to test the validity of the existing data connection as described above.

The <**dnsport**> parameter is for internal MP usage and should be left at its default.

Example: AT!MPCWSETUP=15,30,7367,"www.sierrawireless.com",3

This command would resolve problems you may encounter when you already have a connection with the network.

2. Connection Reject Watchdog: AT!MPCONREJ

This command is used to enable/disable a feature that will reset the AC if a connection could not be established.

Assign: **AT!MPCONREJ=<max number of consecutive connection failures before AC shutdown and reset>**

Query: **AT!MPCONREJ?**

If the MP reaches a <**max number of consecutive connection failures before AC shutdown and reset**>, the MP will gracefully shutdown and reset the AC. If <**max number of consecutive connection failures before AC shutdown and reset**> is set to zero then the feature is disabled. By default it is disabled. The connection failures must be consecutive. The count is reset after a power-cycle.

Example: AT!MPCONREJ=3

3. Connection Watchdog Information: AT!MPCWINFO

Assign: **AT!MPCWINFO=<reset>**

Query: **AT!MPCWINFO?**

Argument Description:

Arguments	Value	Description
<reset>	1	Reset the following statistics: DNS checks (NV): CW-trig disconnect (NV): CW-trig AC resets (NV):)

This command is used to display the Connection Watchdog statistics. It can be used to reset the statistics that are permanently stored in NVRAM.