

CHAPTER 19 - QUALCOMM DEFINED AT COMMANDS FOR CDMA OPERATION

This section contains AT commands that are specified and developed by Qualcomm.

Note: Mobile IP related AT commands work only on the modems that supported the MIP features.

Transition to Diagnostics Monitor \$QCDMG

Description: This command returns “OK” and then transitions the phone serial port to DM mode. DM mode runs at 38.4 Kbps and uses a proprietary half-duplex protocol.

Syntax: Command syntax: AT\$QCDMG

Command	Possible Responses
AT\$QCDMG Note: Transition to DM port	OK Note: Command is valid

Quick Net Connect \$QCQNC

Description: This command is used to enable or disable the Quick Net Connect (QNC) feature.

Values: <Val>

- 0:** Disable QNC capability. This means that packet Originations will use the Packet Data Service Option number.
- 1:** Enable QNC capability. This means that Packet Originations will use the Async Data Service Option number.

Syntax: Command syntax: AT\$QCQNC=<Val>

Command	Possible Responses
AT\$QCQNC? Note: Display the current setting	\$QCQNC: 0 OK Note: Command is valid
AT\$QCQNC=? Note: Display the range of values	\$QCQNC: (0-1) OK Note: Command is valid
AT\$QCQNC=1 Note: Enable QNC compatibility	OK Note: Command is valid

Protocol Revision in Use \$QCPREV

Description: This command is used to query the protocol revision in use.

Values: The command will return one of the following codes:

- 1: JST008
- 3: IS-95A
- 4: IS-95B
- 6: IS-2000

Syntax: Command syntax: AT\$QCPREV

Command	Possible Responses
AT\$QCPREV?	ERROR Note: Command is not valid
AT\$QCPREV Note: Display the of value	\$QCPREV: 6 OK Note: Command is valid

Originate M-to-M Packet Data Call \$QCMTOM

Description: This command is used to originate a Mobile-to-Mobile Packet Data call using the QUALCOMM proprietary Service Option number.

Values: <number>

where <number> is the phone number to dial. This command will originate a Mobile-to-Mobile Packet data call using the QUALCOMM-proprietary Service Option number 0x8003. This is a Rate Set 1 call.

Syntax: Command syntax: AT\$QCMTOM = "<number>"

Command	Possible Responses
AT\$QCMTOM? Note: Display the current setting	\$QCMTOM: "" OK Note: Command is valid
AT\$QCMTOM =? Note: Display the range of values	\$QCMTOM: (20,21,23-7E) OK Note: Command is valid
AT\$QCMTOM ="#777" Note: Packet data call to the number	OK Note: Command is valid

Dump RLP Protocol Statistics \$QCRLPD

Description: This command is used to dump the RLP statistics in ASCII format to the DTE. This does not apply to RLP 3 statistics (see \$QCRL3D).

Syntax: Command syntax: AT\$QCRLPD

Command	Possible Responses
AT\$QCRLPD? Note: Display the current setting	ERROR Note: Command is not valid
AT\$QCRLPD Note: Dump RLP statistics data	\$QCRLPD: Rx Data Cnt :0000 Tx Data Cnt :0000 OK Note: Command is valid

Reset RLP Protocol Statistics \$QCRLPR

Description: This command is used to zero all the RLP statistics counters. This does not apply to RLP 3 statistics (see \$QCRL3R).

Syntax: Command syntax: AT\$QCRLPR

Command	Possible Responses
AT\$QCRLPR? Note: Display the current setting	ERROR Note: Command is not valid
AT\$QCRLPR Note: Reset RLP statistics counter	\$QCRLPR: OK Note: Command is valid

Dump PPP Protocol Statistics \$QCPPPDD

Description: This command is used to dump the PPP statistics in ASCII format to the DTE.

Syntax: Command syntax: AT\$QCPPPDD

Command	Possible Responses
AT\$QCPPPDD? Note: Display the current setting	ERROR Note: Command is not valid
AT\$QCPPPDD Note: Dump PPP statistics information	\$QCPPPDD: In LCP :0000 Out LCP :0000 OK Note: Command is valid

Reset PPP Protocol Statistics \$QCPPPR

Description: This command is used to zero all of the PPP statistics counters.

Syntax: Command syntax: AT\$QCPPPR

Command	Possible Responses
AT\$QCPPPR? Note: Display the current setting	ERROR Note: Command is not valid
AT\$QCPPPR Note: Reset PPP statistics counter	\$QCPPPR: OK Note: Command is valid

Dump IP Protocol Statistics \$QCIPD

Description: This command is used to dump the IP statistics in ASCII format to the DTE.

Syntax: Command syntax: AT\$QCIPD

Command	Possible responses
AT\$QCIPD? Note: Display the current setting	ERROR Note: Command is not valid
AT\$QCIPD Note: Dump IP statistics information	\$QCIPD: IP: InReceives :0000 InHdrErrors :0000 OK Note: Command is valid

Reset IP Protocol Statistics \$QCIPR

Description: This command is used to zero all of the IP statistics counters.

Syntax: Command syntax: AT\$QCIPR

Command	Possible Responses
AT\$QCIPR? Note: Display the current setting	ERROR Note: Command is not valid
AT\$QCIPR Note: Reset IP statistics counter	\$QCIPR: OK Note: Command is valid

Dump UDP Protocol Statistics \$QCUDPD

Description: This command is used to dump the UDP statistics in ASCII format to the DTE.

Syntax: Command syntax: AT\$QCUDPD

Command	Possible Responses
AT\$QCUDPD? Note: Display the current setting	ERROR Note: Command is not valid
AT\$QCUDPD Note: Dump UDP statistics information	\$QCUDPD: InDatagrams :0000 OutDatagrams :0000 OK Note: Command is valid

Reset UDP Protocol Statistics \$QCUDPR

Description: This command is used to zero all of the UDP statistics counters.

Syntax: Command syntax: AT\$QCUDPR

Command	Possible Responses
AT\$QCUDPR? Note: Display the current setting	ERROR Note: Command is not valid
AT\$QCUDPR Note: Reset UDP statistics counter	\$QCUDPR: OK Note: Command is valid

Dump TCP Protocol Statistics \$QCTCPD

Description: This command is used to dump the TCP statistics in ASCII format to the DTE.

Syntax: Command syntax: AT\$QCTCPD

Command	Possible Responses
AT\$QCTCPD? Note: Display the current setting	ERROR Note: Command is not valid
AT\$QCTCPD Note: Dump TCP statistics information	\$QCTCPD: ActiveOpens :0000 PassiveOpens :0000 OK Note: Command is valid

Reset TCP Protocol Statistics \$QCTCPR

Description: This command is used to zero all of the TCP statistics counters.

Syntax: Command syntax: AT\$QCTCPR

Command	Possible Responses
AT\$QCTCPR? Note: Display the current setting	ERROR Note: Command is not valid
AT\$QCTCPR Note: Reset TCP statistics counter	\$QCTCPR: OK Note: Command is valid

Set Data Service Option \$QCSO

Description: This command is used to Set Data Service Option number set; saves to non-volatile memory.

Values: <Val>

- 0** : pre-707 SO numbers (RS 1: Async 4, G3 Fax 5, packet 7; RS 2: Async 12, G3 Fax 13, packet 15)
- 1** : proprietary SO numbers (RS 1: Async 4, G3 Fax 5, packet 7; RS 2: Async 0x8021, G3 Fax 0x8022, packet 0x8020)
- 2** : IS-707 SO numbers (RS 1: Async 0x1004, G3 Fax 0x1005, packet 0x1007; RS 2: Async 12, G3 Fax 13, packet 15)

Syntax: Command syntax: AT\$QCSO=<Val>

Command	Possible Responses
AT\$QCSO? Note: Display the current setting	\$QCSO: 2 OK Note: Command is valid
AT\$QCSO=? Note: Display the range of values	\$QCSO: (0-2) OK Note: Command is valid
AT\$QCSO=1 Note: Set proprietary SO numbers.	OK Note: Command is valid

Clear Mobile Error Log \$QCCLR

Description: This command is used to clear the mobile error log.

Syntax: Command syntax: AT\$QCCLR

Command	Possible Responses
AT\$QCCLR? Note: Display the current setting	ERROR Note: Command is not valid
AT\$QCCLR Note: Clear the mobile error log	\$QCCLR: OK Note: Command is valid

Answer Incoming Voice Call \$QCCAV

Description: This command is used to provide a means to answer an incoming voice call via an AT command.

Syntax: Command syntax: AT\$QCCAV

Command	Possible Responses
AT\$QCCAV Note: Answer incoming voice call	OK +WCNT: 3 Note: Command is valid

Automatic Packet Detection \$QCPKND

Description: This command is used to enable or disable Automatic Packet Detection after a dial command.

Values: <Val>

- 0 : Disable Packet No Dial. If a PPP packet is received by the mobile without a just prior dial command (that is, ATD#nnn e.g. ATD#777), then the mobile will originate a Packet (or QNC) data call.
- 1 : Enable Packet No Dial. Reception of a PPP packet without a just prior dial command will NOT Originate a PPP packet (or QNC) call.

Syntax: Command syntax: AT\$QCPKND=<Val>

Command	Possible Responses
AT\$QCPKND? Note: Display the current setting	\$QCPKND: 0 OK Note: Command is valid
AT\$QCPKND=? Note: Display the range of values	\$QCPKND: (0-1) OK Note: Command is valid
AT\$QCPKND=1 Note: Enable Packet No Dial	OK Note: Command is valid

Pre-arrangement Setting \$QCVAD

Description: This command is used to respond to a page message that has a voice service option with a page response that has a data service option.

Values: <Val>

- 0 : Off
- 1 : Fax for next call
- 2 : Fax for all calls
- 3: Async for next call
- 4: Async for all calls

Syntax: Command syntax: AT\$QCVAD= <Val>

Command	Possible Responses
AT\$QCVAD? Note: Display the current setting	\$QCVAD: 0 OK Note: Command is valid
AT\$QCVAD=? Note: Display the range of values	\$QCVAD: (0-4) OK Note: Command is valid
AT\$QCVAD=1 Note: Set fax for next call	OK Note: Command is valid

Set DM Baud Rate \$QCDMR

Description: This command is used to set the DM baud rate.

Values: <Val> value should be one of the following: 19200, 38400, 57600, 115200

Syntax: Command syntax: AT\$QCDMR= <Val>

Command	Possible Responses
AT\$QCDMR? Note: Display the current setting	\$QCDMR: 19200 OK Note: Command is valid
AT\$QCDMR=? Note: Display the range of values	\$QCDMR: (19200, 38400, 57600, 115200, 230400, 460800) OK Note: Command is valid
AT\$QCDMR=115200 Note: Set DM baud rate to 115200	OK Note: Command is valid

Set Medium Data Rate \$QCMDR

Description: This command is used to Set Medium Data Rate (MDR) (also known as HSPD) setting.

Values: <Val>

- 0: MDR Service Only. The mobile will originate with SO 22 or SO 25. The mobile will not negotiate to any other service option if SO 22 and SO 25 are unavailable.
- 1: MDR Service, if available. The mobile will originate with SO 22 or SO 25, but will negotiate to a Low-Speed Packet service option if MDR is not available. The mobile will not negotiate to SO 33.
- 2: LSPD only. The mobile will originate a Low-Speed Packet call only. The mobile will not negotiate to SO 22, SO 25, or SO 33.
- 3: SO 33, if available. The mobile will negotiate to MDR or Low-Speed Packet service options if SO 33 is not available.

Syntax: Command syntax: AT\$QCMDR=<Val>

Command	Possible Responses
AT\$QCMDR? Note: Display the current setting	\$QCMDR: 3 OK Note: Command is valid
AT\$QCMDR=? Note: Display the range of values	\$QCMDR: (0-3) OK Note: Command is valid
AT\$QCMDR=1 Note: Set value to 1	OK Note: Command is valid

Dump RLP 3 Protocol Statistics \$QCRL3D

Description: This command is used to dump the RLP 3 statistics in ASCII format to the DTE. This does not apply to other versions of RLP (see \$QCRLPD).

Syntax: Command syntax: AT\$QCRL3D

Command	Possible Responses
AT\$QCRL3D? Note: Display the current setting	ERROR Note: Command is not valid
AT\$QCRL3D Note: Dump RLP 3 statistics information	\$QCRL3D: Rx Data Cnt :00000000 Tx Data Cnt :00000000 OK Note: Command is valid

Reset RLP 3 Protocol Statistics \$QCRL3R

Description: This command is used to reset the RLP 3 protocol statistics.

Syntax: Command syntax: AT\$QCRL3R

Command	Possible Responses
AT\$QCRL3R? Note: Display the current setting	ERROR Note: Command is not valid
AT\$QCRL3R Note: Reset TCP statistics counter	\$QCRL3R: OK Note: Command is valid

SCRM'ing Selection \$QCSCRM

Description: This command is used to enable or disable the mobile from SCRM'ing.

Values: <Val>

- 0 : Mobile never SCRM's.
- 1 : Mobile can SCRM as needed.

Note: Command only applies to SO 33 calls. This value is stored in NV. The default is 1.

Syntax: Command syntax: AT\$QCSCRM= <Val>

Command	Possible Responses
AT\$QCSCRM? Note: Display the current setting	\$QCSCRM: 1 OK Note: Command is valid
AT\$QCSCRM =? Note: Display the range of values	\$QCSCRM: (0-1) OK Note: Command is valid
AT\$QCSCRM =0 Note: Set value to 0	OK Note: Command is valid

R-SCH Selection \$QCTRLT

Description: This command is used to enable or disable mobile R-SCH throttling.

Values: <Val>

- 0: Mobile never throttles R-SCH
- 1: Mobile can throttle R-SCH as needed.

Note: Command only applies to SO 33 calls. This value is stored in NV. The default is 1. For MSM500, MSM5105, and MSM5100 ASICs only.

Syntax: Command syntax: AT\$QCTRLT=<Val>

Command	Possible Responses
AT\$QCTRLT? Note: Display the current setting	\$QCTRLT: 1 OK Note: Command is valid
AT\$QCTRLT =? Note: Display the range of values	\$QCTRLT: (0-1) OK Note: Command is valid
AT\$QCTRLT =0 Note: Set value to 0	OK Note: Command is valid

R-SCH Selection \$QCMIP

Description: This command is used to enable or disable mobile IP.

Values: <Val>

0: Mobile IP disabled, Simple IP only.

1: Mobile IP preferred. In the initial MIP registration, if the network does not support Mobile IP, then the mobile automatically reverts to Simple IP (force a PPP renegotiation by sending a LCP C-Req).

However, if a Mobile IP session is registered, and then enters a network that does not support Mobile IP, the mobile will drop the session and inform the upper layers of the failure (for example, by dropping DCD to a laptop).

2: Mobile IP only. The mobile will make data calls only when Mobile IP is supported in the network. During a MIP session, if the mobile hands off to a network that does not support MIP, then the mobile will drop the session and inform the upper layers of the failure (for example, by dropping DCD to a laptop). This value is stored in NV. The default value is 0.

Note 1: When the AT\$QCMIP value is changed to 1 or 2, this modifies the value of AT+CRM to 2. AT+CRM with a value of 2 enables network model operation. Changing the value to 0 will reset the AT+CRM to its original value.

Note 2: This change is *not* supported by DMSS 5105 Release 1.0 Commercial.

Note 3: When the AT\$QCMIP value is changed to 1 or 2, this modifies the value of AT\$QCMDR to 3. AT\$QCMDR=3 means that the mobile tries Service Option 33 when it is in a cdma2000 network that advertises P_REV 6 or higher. When AT\$QCMIP >0 and an attempt is made to set AT\$QCMDR to less than 3, the mobile will return ERROR.

Note 4: When the AT\$QCMIP value is set to 1 or 2, this changes the value of AT\$QCPKND to 0. This means that the mobile must see a dial string (such as ATDT#777) on the serial interface before it will originate packet data calls. When AT\$QCMIP >0 and an attempt is made to set AT\$QCPKND to 1, the mobile returns ERROR.

Note 5: This AT command is for test purposes only and should not be changed by the mobile phone user.

Syntax:

Command syntax: AT\$QCMIP=<Val>

Command	Possible Responses
AT\$QCMIP? Note: Display the current setting	\$QCMIP: 1 OK Note: Command is valid
AT\$QCMIP=? Note: Display the range of values	\$QCMIP: (0-2) OK Note: Command is valid
AT\$QCMIP=0 Note: Set value to 0	OK Note: Command is valid

MIP Selection \$QCMIIPP

Description: This command is used to select and activate an MIP user profile.

Syntax: Command syntax: AT\$QCMIIPP

Command	Possible Responses
AT\$QCMIIPP? Note: Display the current setting	\$QCMIIPP: 0 Note: User profile 1 is currently used
AT\$QCMIIPP=2 Note: Set to user profile 2	OK Note: Command is valid
AT\$QCMIIPP=? Note: Display the range of values	\$QCMIIPP: (0-5) OK Note: Command is valid

Note: Takes a profile number between 0 and 5. This value is stored in NV. This AT command is used to configure Dial-Up Networking.

RFC2002bis Selection \$QCMIPT

Description: This command is used to enable or disable the use of rfc2002bis authentication.

Values: <Val>

- 0: Use of rfc2002bis authentication is disabled. Rfc2002 style authentication is used instead.
- 1: Use of rfc2002bis authentication is enabled.

Note: This AT command is for test purposes only and should not be changed by the mobile phone user.

Syntax: Command syntax: AT\$QCMIPT=<Val>

Command	Possible Responses
AT\$QCMIPT? Note: Display the current setting	\$QCMIPT: 1 OK Note: Command is valid
AT\$QCMIPT=? Note: Display the range of values	\$QCMIPT: (0-3) OK Note: Command is valid
AT\$QCMIPT=0 Note: Set value to 0	OK Note: Command is valid

Current Active Profile \$QCMIPEP

Description: This command is used to enable or disable the currently active profile.

Values: <Val>

- 0: Disable the currently active profile (profile is unavailable until it is re-enabled).
- 1: Enable the currently active profile.

Syntax: Command syntax: AT\$QCMIPEP=<Val>

Command	Possible Responses
AT\$QCMIPEP? Note: Display the current setting	\$QCMIPEP: 1 OK Note: Command is valid
AT\$QCMIPEP=? Note: Display the range of values	\$QCMIPEP: (0-1) OK Note: Command is valid
AT\$QCMIPEP=0 Note: Set value to 0	OK Note: Command is valid

Return Profile Information \$QCMIPGETP

Description: This command is used to return all information corresponding to the specified profile number.

Values: <Val>
(0-5): Profile #

Note: If no profile number is entered, all information corresponding to the currently active profile is returned. If there is no profile associated with the specified number, an error is returned.

Syntax: Command syntax: AT\$QCMIPGETP=<Val>

Command	Possible Responses
AT\$QCMIPGETP?	ERROR Note: Command is not valid
AT\$QCMIPGETP=?	\$QCMIPGETP: (0-5) OK Note: Command is valid
AT\$ CMIPGETP=0	Profile:0 Enabled OK Note: Command is valid
Note: Set value to 0	

Set NAI for Active Profile \$QCMIPNAI

Description: This command is used to set the network access identifier (NAI) for the currently active profile.

Values: <String> The network access identifier text to be stored.
<Val>
0: Do not commit to NV
1: Commit to NV

Note 1: Double quotes are only required if the string contains a command.

Note 2: If the value provisioned is not committed to NV, the temporary value will be deleted at the end of the following call if \$QCMIPP is called.

Syntax: Command syntax: AT\$QCMIPNAI=<String>,<Val>

Command	Possible Responses
AT\$QCMIPNAI? Note: Display the current setting	User1@myprovider.com.1 OK Note: Command is valid
AT\$QCMIPNAI=? Note: Display the range of accepted character values.	\$QCMIPNAI: (20,21,23-7E),(0-1) OK Note: ASCII hexadecimal character range supported by this command. (All non-control codes.)
AT\$QCMIPNAI=myName@myDomain.com.0 Note: Non-committed value set	OK Note: NAI is now: myName@MyDomain.com

Set Reverse Tunneling \$QCMIPRT

Description: This command is used to set the reverse tunneling currently active profile.

Values: <Val1>

- 0: Do not request reverse tunneling
- 1: Request reverse tunneling

<Val2>

- 0: Do not commit to NV
- 1: Commit to NV

Note: If the value provisioned is not committed to NV, the temporary value will be deleted at the end of the following call if \$QCMIPP is called.

Syntax: Command syntax: AT\$QCMIPRT=<Val1>, <Val2>

Command	Possible Responses
AT\$QCMIPRT? Note: Display the current setting	\$QCMIPRT: 1,1 OK Note: Command is valid
AT\$QCMIPRT=? Note: Display the range of values	\$QCMIPRT: (0-1), (0-1) OK Note: Command is valid
AT\$QCMIPRT=1,1 Note: Set value to 1 and commit	OK Note: Command is valid

Set MN-AAA Shared Secrets \$QCMIPMASS

Description: This command is used to set MN-AAA shared secrets for the currently active profile.

Values: <String> The shared secret text to be stored.

<Val>

- 0: Do not commit to NV
- 1: Commit to NV

Note 1: Double quotes are only required if the string contains a command.

Note 2: If the value provisioned is not committed to NV, the temporary value will be deleted at the end of the following call if \$QCMIPP is called.

Syntax: Command syntax: AT\$QCMIPMASS =<String>,<Val>

Command	Possible Responses
AT\$QCMIPMASS? Note: Display the current setting	\$QCMIPMASS: Set OK Note: Command is valid
AT\$QCMIPMASS=? Note: Display the range of accepted character values.	\$QCMIPMASS: (20,21,23-7E),(0-1) OK Note: ASCII hexadecimal character range supported by this command. (All non-control codes.)
AT\$QCMIPMASS= my5secretC0de,0 Note: Non-committed value set	OK Note: MN-AAA is now: my5secretC0de

Set MN-HA Shared Secrets \$QCMIPMHSS

Description: This command is used to set MN-HA shared secrets for the currently active profile.

Values: <String>The shared secret text to be stored.

<Val>

- 0: Do not commit to NV
- 1: Commit to NV

Note 1: Double quotes are only required if the string contains a command.

Note 2: If the value provisioned is not committed to NV, the temporary value will be deleted at the end of the following call if \$QCMIPP is called.

Syntax:

Command syntax: AT\$QCMIPMHSS=<String>,<Val>

Command	Possible Responses
AT\$QCMIPMHSS? Note: Display the current setting	\$QCMIPMHSS: Set OK Note: Command is valid
AT\$QCMIPMHSS=? Note: Display the range of values	\$QCMIPMHSS: (20,21,23-7E),(0-1) OK Note: Command is valid
AT\$QCMIPMHSS=20,0 Note: Set value to 20, 0	OK Note: Command is valid

Set MN-AAA Shared Secrets \$QCMIPMASSX

Description: This command is used to set MN-AAA shared secret for the currently active profile in HEX.

Values: <HEX> Hex value from 0 to FFFFFFFF

<Val>

- 0: Do not commit to NV
- 1: Commit to NV

Note: If the value provisioned is not committed to NV, the temporary value will be deleted at the end of the following call if \$QCMIPP is called.

Syntax:

Command syntax: AT\$QCMIPMASSX=<HEX>,<Val>

Command	Possible Responses
AT\$QCMIPMASSX? Note: Display the current setting	\$QCMIPMASSX: Set OK Note: Command is valid
AT\$QCMIPMASSX=? Note: Display the range of values	\$QCMIPMASSX: (0-FFFFFFFF),(0-1) OK Note: Command is valid
AT\$QCMIPMASSX=FF,0 Note: Set value to 0xFF, but not commit	OK Note: Command is valid

Set MN-HA Shared Secrets \$QCMIPMHSSX

Description: This command is used to set MN-HA shared secret for the currently active profile in HEX.

Values: <HEX> Hex value from 0 to FFFFFFFF

<Val>

0: Do not commit to NV

1: Commit to NV

Note: If the value provisioned is not committed to NV, the temporary value will be deleted at the end of the following call if \$QCMIPP is called.

Syntax: Command syntax: AT\$QCMIPMHSSX=<HEX>,<Val>

Command	Possible Responses
AT\$QCMIPMHSSX? Note: Display the current setting	\$QCMIPMHSSX: Set OK Note: Command is valid
AT\$QCMIPMHSSX=? Note: Display the range of values	\$QCMIPMHSSX: (0-FFFFFFFFFF),(0-1) OK Note: Command is valid
AT\$QCMIPMHSSX=FF,0 Note: Set value to 0xFF, but not commit	OK Note: Command is valid

Set MN-AAA Shared Secrets \$QCMIPMASPI

Description: This command is used to set MN-AAA SPIs for the currently active profile.

Values: <SPI> SPI value from 0 to 4294967295

<Val>

0: Do not commit to NV

1: Commit to NV

Note: If the value provisioned is not committed to NV, the temporary value will be deleted if the modem is power cycled or if the \$QCMIPP command is used.

Syntax: Command syntax: AT\$QCMIPMASPI=<SPI>,<Val>

Command	Possible Responses
AT\$QCMIPMASPI? Note: Display the current setting	\$QCMIPMASPI: 1234,1 OK Note: Command is valid
AT\$QCMIPMASPI=? Note: Display the range of values	\$QCMIPMASPI: (0-4294967295),(0-1) OK Note: Command is valid
AT\$QCMIPMASPI=2300,0 Note: Set value to 2300, but not commit	OK Note: Command is valid

Set MN-HA Shared Secrets \$QCMIPMHSPI

Description: This command is used to set MN-HA SPIs for the currently active profile. Two arguments – SPI value and one of the values: 0 and 1.

Values: <SPI> SPI value from 0 to 4294967295

<Val>

- 0: Do not commit to NV
- 1: Commit to NV

Note: If the value provisioned is not committed to NV, the temporary value will be deleted if the modem is power cycled or if the \$QCMI\$PP command is used.

Syntax: Command syntax: AT\$QCMIPMHSPI=<SPI>,<Val>

Command	Possible Responses
AT\$QCMIPMHSPI? Note: Display the current setting	\$QCMIPMHSPI: 1234,1 OK Note: Command is valid
AT\$QCMIPMHSPI=? Note: Display the range of values	\$QCMIPMHSPI: (0-4294967295),(0-1) OK Note: Command is valid
AT\$QCMIPMHSPI=5500,0 Note: Set value to 5500, but not commit	OK Note: Command is valid

Set Primary HA IP Address \$QCMI\$PPHA

Description: This command is used to set the primary HA address of the mobile for the currently active profile. The command takes two arguments, a string corresponding to the IP address of the HA to be stored and a number (either 0 or 1) indicating whether or not to commit this value to NV. The IP address should be formatted in standard dotted-decimal notation, e.g. “10.1.1.20”.

Values: <IP> IP address in standard dotted-decimal notation, e.g. “10.1.1.20”.

<Val>

- 0: Do not commit to NV
- 1: Commit to NV

Note: If the value provisioned is not committed to NV, the temporary value will be deleted if the modem is power cycled or if the \$QCMI\$PP command is used.

Syntax: Command syntax: AT\$QCMI\$PPHA=<IP>,<Val>

Command	Possible Responses
AT\$QCMI\$PPHA? Note: Display the current setting.	\$QCMI\$PPHA: 10.1.1.20, 0 OK
AT\$QCMI\$PPHA=? Note: Display the range of values.	\$QCMI\$PPHA: ((0-255).(0-255).(0-255).(0-255)),(0-1) OK
AT\$QCMI\$PPHA=10.1.2.15,1 Note: Set to 10.1.2.15, and commit to NV.	OK

Set Secondary HA IP Address \$QCMIPSHA

Description: This command is used to set the secondary HA address of the mobile for the currently active profile. The command takes two arguments, a string corresponding to the IP address of the HA to be stored and a number (either 0 or 1) indicating whether or not to commit this value to NV. The IP address should be formatted in standard dotted-decimal notation, e.g. “10.1.1.20”.

Values: <IP> IP address in standard dotted-decimal notation, e.g. “10.1.1.20”.

<Val>

0: Do not commit to NV

1: Commit to NV

Note: If the value provisioned is not committed to NV, the temporary value will be deleted if the modem is power cycled or if the \$QCMIPP command is used.

Syntax:

Command syntax: AT\$QCMIPSHA=<IP>,<Val>

Command	Possible Responses
AT\$QCMIPSHA? Note: Display the current setting.	\$QCMIPSHA: 10.1.1.20, 0 OK
AT\$QCMIPSHA=? Note: Display the range of values.	\$QCMIPSHA: ((0-255).(0-255).(0-255).(0-255)),(0-1) OK
AT\$QCMIPSHA=10.1.2.15,1 Note: Set to 10.1.2.15, and commit to NV.	OK

Set Home HA IP Address \$QCMIPHA

Description: This command is used to set the home HA address of the mobile for the currently active profile. The command takes two arguments, a string corresponding to the IP address of the HA to be stored and a number (either 0 or 1) indicating whether or not to commit this value to NV. The IP address should be formatted in standard dotted-decimal notation, e.g. “10.1.1.20”.

Values: <IP> IP address in standard dotted-decimal notation, e.g. “10.1.1.20”.

<Val>

0: Do not commit to NV

1: Commit to NV

Note: If the value provisioned is not committed to NV, the temporary value will be deleted if the modem is power cycled or if the \$QCMIPP command is used.

Syntax:

Command syntax: AT\$QCMIPHA=<IP>,<Val>

Command	Possible Responses
AT\$QCMIPHA? Note: Display the current setting.	\$QCMIPHA: 10.1.1.20, 0 OK
AT\$QCMIPHA=? Note: Display the range of values.	\$QCMIPHA: ((0-255).(0-255).(0-255).(0-255)),(0-1) OK
AT\$QCMIPHA=10.1.2.15,1 Note: Set to 10.1.2.15, and commit to NV.	OK