



AT Commands For GSM/GPRS Wireless Modems

Reference Guide

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GENERAL AT COMMANDS

Manufacturer Identification +CGMI

Description: Displays the manufacturer identification.

Values: No parameters

Command syntax: AT+CGMI

Command	Possible responses
AT+CGMI	WAVECOM MODEM OK
<i>Note: Get manufacturer identification</i>	<i>Note: Command valid, Wavecom modem</i>

Request Model Identification +CGMM

Description: Displays the supported frequency bands. With multi-band products the response may be a combination of different bands.

Values: No parameters

Command syntax: AT+CGMM

Command	Possible responses
AT+CGMM <i>Note: Get hardware version</i>	MULTIBAND 900 E 1800 OK <i>Note: Multiband: GSM 900 MHz extended band and DCS 1800</i>
AT+CGMM <i>Note: Get hardware version</i>	MULTIBAND G850 1900 OK <i>Note: Multiband: GSM 850 and PCS</i>

Request Revision Identification +CGMR

Description: Displays the revised software version.

Values: No parameters

Syntax: AT+CGMR

Command	Possible responses
AT+CGMR <i>Note: Get software version</i>	640b09gg.Q2406A 1266500 070403 17:06 OK <i>Note: Software release 6.40b, generated on the 4th of July 2003</i>

Product Serial Number +CGSN

Description: Allows the user application to get the IMEI (International Mobile Equipment Identity, 15-digit number) of the product.

Values: No parameters

Syntax: AT+CGSN

Command	Possible responses
AT+CGSN	012345678901234 OK <i>Note: Get the IMEI</i>
AT+CGSN	+CME ERROR: 22 <i>Note: IMEI not found in EEPROM</i>

Select TE Character Set +CSCS

Description: Informs the ME which character set is used by the TE. The ME can convert each character of entered or displayed strings. This is used to send, read or write short messages. See also +WPCS for the phonebooks' character sets.

Values: <Character Set>

GSM GSM default alphabet.
PCCP437 PC character set code page 437.
CUSTOM User defined character set (cf. +WCCS command).
HEX Hexadecimal mode. No character set used; the user can read or write hexadecimal values.

Default: GSM alphabet

Syntax: AT+CSCS=<Character Set>

Command	Possible responses
AT+CSCS="GSM" <i>Note: GSM default alphabet</i>	OK <i>Note: Command valid</i>
AT+CSCS="PCCP437" <i>Note: PC character set code</i>	OK <i>Note: Command valid</i>
AT+CSCS=? <i>Note: Get possible values</i>	+CSCS: ("GSM","PCCP437","CUSTOM","HEX") OK <i>Note: Possible values</i>

Phonebook Character Set +WPCS

Description: Informs the ME which character set is used by the TE for the phonebooks. The ME can convert each character of entered or displayed strings. This is used to read or write phonebook entries. See also +CSCS for the short messages character sets.

Values: <Character Set>

TRANSPARENT Transparent mode. The strings are displayed and entered as they are stored in SIM or in ME.
CUSTOM User defined character set (cf. +WCCS command).
HEX Hexadecimal mode. No character set used; the user can read or write hexadecimal values.

Syntax: AT+WPCS=<Character Set>

Command	Possible responses
AT+WPCS="TRANSPARENT" <i>Note: Transparent mode</i>	OK <i>Note: Command valid</i>
AT+WPCS="CUSTOM" <i>Note: Custom character set</i>	OK <i>Note: Command valid</i>
AT+WPCS=? <i>Note: Get possible values</i>	+WPCS: ("TRANSPARENT","HEX","CUSTOM") OK <i>Note: Possible values</i>

Request IMSI +CIMI

Description: Reads and identifies the IMSI (International Mobile Subscriber Identity) of the SIM card. The PIN may need to be entered before reading the IMSI.

Values: No parameters

Syntax: AT+CIMI

Command	Possible responses
AT+CIMI Note: Read the IMSI	208200120320598 OK Note: IMSI value (15 digits), starting with MCC (3 digits) / MNC (2 digits, 3 for PCS 1900)

Card Identification +CCID

Description: Orders the product to read the EF-CCID file on the SIM card.

Values: No parameters

Syntax: AT+CCID

Command	Possible responses
AT+CCID Note: Get card ID	+CCID: "123456789AB111213141" Note: EF-CCID is present, hexadecimal format
AT+CCID? Note: Get current value	+ CCID: "123456789AB111213141" Note: Same result as +CCID
AT+CCID= ? Note: Get possible value	OK Note: No parameter but this command is valid

Note: If there is no EF-CCID file present on the SIM, the +CCID answer will not be sent, but the OK message will be returned.

Capabilities List +GCAP

Description: Displays the complete list of capabilities.

Values: No parameters

Syntax: AT+GCAP

Command	Possible responses
AT+GCAP Note: Get capabilities list	+GCAP: +CGSM +FCLASS OK Note: Supports GSM and FAX commands

Repeat Last Command A/

Description: Repeats the previous command. Only the A/ command itself cannot be repeated.

Values: No parameters

Syntax: A/

Command	Possible responses
A/ Note: Repeat last command	

Power Off +CPOF

Description: Stops the GSM software stack as well as the hardware layer. The AT+CFUN=0 command is equivalent to +CPOF.

Values: No parameters

Syntax: AT+CPOF

Command	Possible responses
AT+CPOF Note: Stop GSM stack	OK Note: Command valid

Alarm Management +CALA

Description: Sets the alarm date/time in the ME. The maximum number of alarms is 16.

Values: <date and time string> String format for alarms: "yy/MM/dd,hh:mm:ss" (see +CCLK)
Note: Seconds are taken into account.

<index> Offset in the alarm list, range 1 to 16

Syntax: AT+CALA=<date and time string> (set alarm)

AT+CALA="",<index> (delete alarm)

Command	Possible responses
AT+CALA="00/06/09,07:30" Note: set an alarm for June 9 th , 2000 at 7:30 am	OK Note: Alarm stored
AT+CALA="99/03/05,13:00:00" Note: set an alarm for March 5 th , 1999 at 1:00 pm	+CME ERROR 3 Note: Invalid alarm (date/time expired)
AT+CALA? Note: list all alarms	+CALA: "00/06/08,15:25:00",0 +CALA: "00/06/09,07:30:00",1 +CALA: "00/06/10,23:59:00",2 Note: three alarms are set (index 0, 1, 2)
	+CALA: "00/06/08,15:25:00",0 Note: an alarm occurs (index 0)
AT+CALA="",2 Note: delete alarm index 2	OK Note: Alarm index 2 deleted
AT+CALA? Note: list all alarms	+CALA: "00/06/09,07:30:00",1 Note: Only one alarm (index 1)

Report Mobile Equipment Errors +CMEE

Description: Disables or enables the use of the "+CME ERROR: <xxx>" or "+CMS ERROR:<xxx>" result code instead of simply "ERROR". See Appendix A for +CME ERROR result codes description and +CMS ERROR result codes.

Values: <error reporting flag>
0: Disable ME error reports; use only ERROR
1: Enable +CME ERROR: <xxx> or +CMS ERROR: <xxx>

Syntax: AT+CMEE=<error reporting flag>

Command	Possible responses
AT+CMEE=0 Note: Disable ME error reports, use only ERROR	OK
AT+CMEE=1 Note: Enable +CME ERROR: <xxx> or +CMS ERROR: <xxx>	OK

Keypad Control +CKPD

Description: Emulates the ME keypad by sending each keystroke as a character in a <keys> string. The supported GSM sequences are listed in the Appendix A.

If emulation fails, a +CME ERROR: <err> is returned. If emulation succeeds, the result depends on the GSM sequence activated: <keys>: string of the following characters (0-9,*,#).

Note: In the case where the FDN phonebook is activated, the sequences concerning "call forwarding" are allowed only if the entire sequence is written in the FDN.

Values: <keys>

Keyboard sequence; sting of the following characters (0-9, *, #)

Syntax: AT+CKPD=<keys>

Command	Possible responses
AT+CKPD="*#21#" Note: Check every call forwarding status	+CCFC: 0,7
AT+CKPD="1234" Note: Sequence not allowed	+CME ERROR 3

Clock Management +CCLK

Description: Sets or gets the current date and time of the ME real-time clock.

Values: <date and time string>

String format for date/time is "yy/MM/dd,hh:mm:ss"

Note: Valid years are 98 (for 1998) to 97 (for 2097). The seconds field is not mandatory.

Default date/time is "98/01/01,00:00:00" (January 1st, 1998 / midnight).

Syntax: AT+CCLK=<date and time string>

Command	Possible responses
AT+CCLK="00/06/09,17:33:00" Note: set date to June 9 th , 2000, and time to 5:33pm	OK Note: Date/Time stored
AT+CCLK="00/13/13,12:00:00" Note: Incorrect month entered	+CME ERROR 3
AT+CCLK? Note: Get current date and time	+CCLK: "00/06/09,17:34:23" OK Note: current date is June 9 th , 2000 current time is 5:34:23 pm

Alarm Management +CALA

Description: Sets the alarm date/time in the ME. The maximum number of alarms is 16.

Values: <date and time string> String format for alarms: "yy/MM/dd,hh:mm:ss" (see +CCLK)
Note: Seconds are taken into account.

<index> Offset in the alarm list, range 1 to 16

Syntax: AT+CALA=<date and time string> (set alarm)

AT+CALA="",<index> (delete alarm)

Command	Possible responses
AT+CALA="00/06/09,07:30" Note: set an alarm for June 9 th , 2000 at 7:30 am	OK Note: Alarm stored
AT+CALA="99/03/05,13:00:00" Note: set an alarm for March 5 th , 1999 at 1:00 pm	+CME ERROR 3 Note: Invalid alarm (date/time expired)
AT+CALA? Note: list all alarms	+CALA: "00/06/08,15:25:00",0 +CALA: "00/06/09,07:30:00",1 +CALA: "00/06/10,23:59:00",2 Note: three alarms are set (index 0, 1, 2)
	+CALA: "00/06/08,15:25:00",0 Note: an alarm occurs (index 0)
AT+CALA="",2 Note: delete alarm index 2	OK Note: Alarm index 2 deleted
AT+CALA? Note: list all alarms	+CALA: "00/06/09,07:30:00",1 Note: Only one alarm (index 1)

SHORT MESSAGES COMMANDS

Parameters Definition

<da>	Destination Address, coded according to the GSM Technical Specification 03.40 TP-DA
<dcs>	Data Coding Scheme, coded according to document [5]
<dt>	Discharge Time in string format: "yy/MM/dd,hh:mm:ss±zz"(Year [00-99], Month [01-12], Day [01-31], Hour, Minute, Second and Time Zone [quarters of an hour])
<fo>	First Byte, coded according to SMS-SUBMIT first byte in document [4], default value is 17 for SMS-SUBMIT
<index>	Place of storage in memory
<length>	Text mode (+CMGF=1): number of characters PDU mode (+CMGF=0): length of the TP data unit in bytes
<mem1>	Memory used to list, read and delete messages (+CMGL, +CMGR and +CMGD)
<mem2>	Memory used to write and send messages (+CMGW, +CMSS)
<mid>	CBM Message Identifier
<mr>	Message Reference
<oa>	Originator Address
<pid>	Protocol Identifier
<pdu>	For SMS : GSM 04.11 SC address followed by GSM Technical Specification 03.40 TPDU in hexadecimal format, coded as specified in doc [4] For CBS : GSM Technical Specification 03.41 TPDU in hexadecimal format
<ra>	Recipient Address
<sca>	Service Center Address
<scts>	Service Center Time Stamp in string format: "yy/MM/dd,hh:mm:ss±zz" (Year/Month/Day,Hour:Min:Seconds±TimeZone)
<sn>	CBM Serial Number
<st>	Status of a SMS-STATUS-REPORT
<stat>	Status of message in memory
<toa>	Type-of-Address of <oa>
<tora>	Type-of-Address of <ra>
<tosca>	Type-of-Address of <sca>
<total1>	Number of message locations in <mem1>
<total2>	Number of messages locations in <mem2>
<used1>	Total number of messages locations in <mem1>
<used2>	Total number of messages locations in <mem2>
<vp>	Validity Period of the short message, default value is 167

Select Message Service +CSMS

Description:

The supported services include originated (SMS-MO) and terminated short messages (SMS-MT) as well as Cell Broadcast Message (SMS-CB) services.

Values:

<service>

0: SMS AT commands are compatible with GSM 07.05 Phase 2 version 4.7.0.

1: SMS AT commands are compatible with GSM 07.05 Phase 2 + version .

Syntax: AT+CSMS=<service>

Command	Possible responses
AT+CSMS=0 <i>Note: SMS AT command Phase 2 version 4.7.0</i>	+CSMS: 1,1,1 OK <i>Note: SMS-MO, SMS-MT and SMS-CB supported</i>
AT+CSMS=1 <i>Note: SMS AT command Phase 2 +</i>	+CSMS: 1,1,1 <i>Note: SMS-MO, SMS-MT and SMS-CB supported</i>
AT+CSMS? <i>Note: Current values ?</i>	+CSMS: 0,1,1,1 OK <i>Note: GSM 03.40 and 03.41 (SMS AT command Phase 2 version 4.7.0)</i>
AT+CSMS=? <i>Note: Possible services</i>	+CSMS: (0,1) OK

New Message Acknowledgement +CNMA

Description:

This command allows reception of a new message routed directly to the TE to be acknowledged.,

In TEXT mode, only positive acknowledgement to the network (RP-ACK) is possible.

In PDU mode, either positive (RP-ACK) or negative (RP-ERROR) acknowledgement to the network is possible.

Acknowledgement with +CNMA is possible only if the +CSMS parameter is set to 1 (+CSMS=1) when a +CMT or +CDS indication is shown (see +CNMI command).

If no acknowledgement occurs within the network timeout, an RP-ERROR is sent to the network. The <mt> and <ds> parameters of the +CNMI command are then reset to zero (do not show new message indication).

Values:

<n>: Type of acknowledgement in PDU mode

0: send RP-ACK without PDU (same as TEXT mode)

1: send RP-ACK with optional PDU message

2: send RP-ERROR with optional PDU message

<length>: Length of the PDU message

Syntax:

Command syntax in text mode: AT+CNMA

Command syntax in PDU mode: AT+CNMA [= <n> [, <length> [<CR>

Note: PDU is entered using <ackpdu> format instead of <pdu> format (e.g., SMSC address field is not present).

PDU is entered <ctrl-Z / ESC>]]]

Example of new message acknowledgement in TEXT mode

Command	Possible responses
AT+CMGF=1 <i>Note: Set TEXT mode</i>	OK <i>Note: TEXT mode valid</i>
AT+CNMI=2,2,0,0,0 <i>Note: <mt>=2</i>	OK
	+CMT: "123456","98/10/01,12:30 00+00",129,4 ,32,240, "15379",129,5<CR><LF> Received message <i>Note: message received</i>
AT+CNMA <i>Note: acknowledge the message received</i>	OK <i>Note: send positive acknowledgement to the network</i>
AT+CNMA <i>Note: try to acknowledge again</i>	+CMS ERROR: 340 <i>Note: no +CNMA acknowledgment expected</i>

Example of new message acknowledgement in PDU mode:

Command	Possible responses
AT+CMGF=0 <i>Note: Set PDU mode</i>	OK <i>Note: PDU mode valid</i>
	+CMT: ,29 07913366003000F1240B913366920547F300000030034 19404800B506215D42ECFE7E17319 <i>Note: message received</i>
AT+CNMA=2,<length> <CR> ... Pdu message ... <Ctrl-Z/ESC> <i>Note: negative acknowledgement for the message.</i>	OK <i>Note: send a negative acknowledgement to the network (RP-ERROR) with PDU message (<ackpdu> format).</i>

Preferred Message Storage +CPMS

Description:

This command allows the message storage area to be selected (for reading, writing, etc).

Values:

<mem1>: Memory used to list, read and delete messages. It can be:

“SM”: SMS message storage in SIM (default)

“BM”: CBM message storage (in volatile memory).

“SR”: Status Report message storage (in SIM if the EF-SMR file exists, otherwise in the ME non volatile memory)

Note: “SR” ME non-volatile memory is cleared when another SIM card is inserted. It is kept, even after a reset, while the same SIM card is used.

<mem2>: Memory used to write and send messages

“SM”: SMS message storage in SIM (default).

If the command is correct, the following message indication is sent:

+CPMS: <used1>,<total1>,<used2>,<total2>

When <mem1> is selected, all following +CMGL, +CMGR and +CMGD commands are related to the type of SMS stored in this memory.

Syntax: AT+CPMS=<mem1>,[<mem2>]

Command	Possible responses
AT+CPMS=? <i>Note: Possible message storages</i>	+CPMS: (("SM", "BM", "SR"), ("SM")) OK <i>Note: Read, list, delete: SMS, CBM or SMS Status Report Write, send: SMS</i>
AT+CPMS? <i>Note: Read</i>	+CPMS: "SM",3, 10,"SM",3,10 OK <i>Note: Read, write...SMS from/to SIM 3 SMS are stored in SIM. 10 is the total memory available in SIM</i>
AT+CPMS="AM" <i>Note: Select false message storage</i>	+CMS ERROR: 302
AT+CPMS="BM" <i>Note: Select CBM message storage</i>	+CPMS: 2,20,3,10 OK <i>Note: Read, list, delete CBM from RAM 2 CBM are stored in RAM</i>
AT+CPMS? <i>Note: Read</i>	+CPMS: "BM",2,20,"SM",3,10 OK <i>Note: Read list, delete CBM from RAM Write SMS to SIM</i>

Preferred Message Format +CMGF

Description:

The message formats supported are *text mode* and *PDU mode*. In PDU mode, a complete SMS Message including all header information is given as a binary string (in hexadecimal format). Therefore, only the following set of characters is allowed: {'0','1','2','3','4','5','6','7','8','9','A','B','C','D','E','F'}. Each pair of characters are converted to a byte (e.g.: '41' is converted to the ASCII character 'A', whose ASCII code is 0x41 or 65). In Text mode, all commands and responses are in ASCII characters. The format selected is stored in EEPROM by the +CSAS command.

Values:

The <pdu> message is composed of the SC address (« 00 means no SC address given, use default SC address read with +CSCA command) and the TPDU message. In this example, the length of **bytes** of the TPDU buffer is 14, coded according to GSM Technical Specification 03.40 . In this case the TPDU is: 0x01 0x03 0x06 0x91 0x21 0x43 0x65 0x00 0x00 0x04 0xC9 0xE9 0x34 0x0B, which is GSM 03.40:

<fo> 0x01 (SMS-SUBMIT, no validity period)
<mr> (TP-MR) 0x03 (Message Reference)
<da> (TP-DA) 0x06 0x91 0x21 0x43 0x65 (destination address +123456)
<pid> (TP-PID) 0x00 (Protocol Identifier)
<dcs> (TP-DCS) 0x00 (Data Coding Scheme: 7 bits alphabet)
<length> (TP-UDL) 0x04 (User Data Length, 4 characters of text)
TP-UD 0xC9 0xE9 0x34 0x0B (User Data: ISSY)

TPDU in hexadecimal format must be converted into two ASCII characters; e.g., an byte with hexadecimal value 0x2A is presented to the ME as two characters '2' (ASCII 50) and 'A' (ASCII 65).

Syntax: AT+CMGF

Command	Possible responses
AT+CMGF ? <i>Note: Current message format</i>	+CMGF: 1 OK <i>Note: Text mode</i>
AT+CMGF=? <i>Note: Possible message format</i>	+CMGF: (0-1) OK <i>Note: Text or PDU modes are available</i>

Example: Sending an SMS Message in PDU mode:

Command	Possible responses
AT+CMGF=0 <i>Note: Set PDU mode</i>	OK <i>Note: PDU mode valid</i>
AT+CMGS=14<CR> 0001030691214365000004C9E9340B <i>Note: Send complete MSG in PDU mode, no SC address</i>	+CMGS: 4 OK <i>Note: MSG correctly sent, <mr> is returned</i>

Save Settings +CSAS

Description:

All settings specified by the +CSCA and +CSMP commands are stored in EEPROM if the SIM card is a Phase 1 card or in the SIM card if it is a Phase 2 SIM card.

Values: No parameters

Syntax: AT+CSAS

Command	Possible responses
AT+CSAS <i>Note: Store +CSCA and +CSMP parameters</i>	OK <i>Note: Parameters saved</i>

Restore Settings +CRES

Description:

All settings specified in the +CSCA and +CSMP commands are restored from EEPROM if the SIM card is Phase 1 or from the SIM card if it is a Phase 2 SIM card.

Values: No parameters

Syntax: AT+CRES

Command	Possible responses
AT+CRES <i>Note: Restore +CSCA and +CSMP parameters</i>	OK <i>Note: Parameters restored</i>

Show Text Mode Parameters +CSDH

Description:

This command gives additional information on text mode result codes. This information is given in brackets in the +CMTI, +CMT, +CDS, +CMGR, +CMGL commands.

Values: <n>: show indicator

0: do not show header values

1: show the values in result codes

Syntax: AT+CSDH

Command	Possible responses
AT+CSDH=0 <i>Note: Set value to "do not how"</i>	OK
AT+CSDH? <i>Note: Current value</i>	+CSDH: 0 OK <i>Note: Do not show header values</i>

New Message Indication +CNMI

Description:

This command selects the procedure for message reception from the network.

Values:

<mode>: controls the processing of unsolicited result codes

Note: Only <mode>=2 is supported.

Any other value for <mode> (0,1 or 3) is accepted (return code will be *OK*), but the processing of unsolicited result codes will be the same as with <mode>=2.

- 0: Buffer unsolicited result codes in the TA. If TA result code buffer is full, indications can be buffered in some other place, or the oldest indications may be discarded and replaced with the new received indications
- 1: Discard indication and reject new received message unsolicited result codes when TA-TE link is reserved. Otherwise forward them directly to the TE
- 2: Buffer unsolicited result codes in the TA when TA-TE link is reserved and flush them to the TE after reservation. Otherwise forward them directly to the TE
- 3: Forward unsolicited result codes directly to the TE. TA-TE link specific inband used to embed result codes and data when TA is in on-line data mode

<mt>: sets the result code indication routing for SMS-DELIVERs. Default is 0.

- 0: No SMS-DELIVER indications are routed.
- 1: SMS-DELIVERs are routed using unsolicited code: +CMTI: "SM",<index>
- 2: SMS-DELIVERs (except class 2 messages) are routed using unsolicited code: +CMT: [<alpha>,
<length> <CR> <LF> <pdu> (PDU mode) or +CMT: <oa>,<alpha>,
<scts> [<tooa>,<fo>,<pid>,<dcsc>,
<sca>,<tosca>,<length>] <CR><LF><data> (text mode)
- 3: Class 3 SMS-DELIVERs are routed directly using code in <mt>=2 ; Message of other classes result in indication <mt>=1

<bm>: set the rules for storing received CBMs (Cell Broadcast Message) types depend on its coding scheme, the setting of Select CBM Types (+CSCB command) and <bm>. Default is 0.

- 0: No CBM indications are routed to the TE. The CBMs are stored.
- 1: The CBM is stored and an indication of the memory location is routed to the customer application using unsolicited result code: +CBMI: "BM", <index>
- 2: New CBMs are routed directly to the TE using unsolicited result code. +CBM: <length><CR><LF><pdu> (PDU mode) or +CBM:<sn>,<mid>,<dcsc>,<page>,<pages>(Text mode) <CR><LF> <data>
- 3: Class 3 CBMs: as <bm>=2. Other classes CBMs: as <bm>=1.

<ds> for SMS-STATUS-REPORTs. Default is 0.

- 0: No SMS-STATUS-REPORTs are routed.
- 1: SMS-STATUS-REPORTs are routed using unsolicited code: +CDS: <length> <CR> <LF> <pdu> (PDU mode) or +CDS: <fo>,<mr>,
[<ra>] , [<tora>], <scts>,<dt>,<st> (Text mode)
- 2: SMS-STATUS-REPORTs are stored and routed using the unsolicited result code: +CDSI: "SR",<index>

<bfr> Default is 0.

- 0: TA buffer of unsolicited result codes defined within this command is flushed to the TE when <mode> 1...3 is entered (OK response shall be given before flushing the codes)
- 1: TA buffer of unsolicited result codes defined within this command is cleared when <mode> 1...3 is entered.

Syntax: AT+CNMI=<mode>,<mt>,<bm>,<ds>,<bfr>

Command	Possible responses
AT+CNMI=2,1,0,0,0 <i>Note: <mt>=1</i>	OK
	AT+CMTI: "SM",1 <i>Note: message received</i>
AT+CNMI=2,2,0,0,0 <i>Note: <mt>=2</i>	OK
	+CMT: "123456","98/10/01,12:30 00+00",129,4,32,240, "15379",129,5<CR><LF> <i>Note: message received</i>
AT+CNMI=2,0,0,1,0 <i>Note: <ds>=1</i>	OK
AT+CMGS="+33146290800"<CR> Message to send <ctrl-Z> <i>Note: Send a message in text mode</i>	+CMGS: 7 OK <i>Note: Successful transmission</i>
	+CDS: 2, 116, "+33146290800", 145, "98/10/01,12:30:07+04", "98/10/01 12:30:08+04", 0 <i>Note: message was correctly delivered</i>

Read Message +CMGR

Description:

This command allows the application to read stored messages. The messages are read from the memory selected by the **+CPMS** command.

Command syntax: AT+CMGR=<index>

Response syntax for text mode:

+CMGR: <stat>, <oa>, [<alpha>], <scts> [, <tooa>, <fo>, <pid>, <dcs>, <sca>, <tosca>, <length>] <CR><LF> <data> (for **SMS-DELIVER** only)

+CMGR: <stat>, <da>, [<alpha>], [, <toda>, <fo>, <pid>, <dcs>, [, <vp>], <sca>, <tosca>, <length>] <CR><LF> <data> (for **SMS-SUBMIT** only)

+CMGR: <stat>, <fo>, <mr>, [<ra>], [<tora>], <scts>, <dt>, <st> (for **SMS-STATUS-REPORT** only)

Response syntax for PDU mode:

+CMGR: <stat>, [<alpha>], <length> <CR><LF> <pdu>

A message read with status "REC UNREAD" will be updated in memory with the status "REC READ".

Note: The <stat> parameter for SMS Status Reports is always "READ".

Command	Possible responses
	AT+CMTI: "SM",1 <i>Note: New message received</i>
AT+CMGR=1 <i>Note: Read the message</i>	+CMGR: "REC UNREAD","0146290800", "98/10/01,18:22:11+00",<CR><LF> ABCdefGHI OK
AT+CMGR=1 <i>Note: Read the message again</i>	+CMGR: "REC UNREAD","0146290800", "98/10/01,18:22:11+00",<CR><LF> ABCdefGHI OK <i>Note: Message is read now</i>
AT+CMGR=2 <i>Note: Read at a wrong index</i>	+CMS ERROR: 321 <i>Note: Error: invalid index</i>
AT+CMGF=0 ;+CMGR=1 <i>Note: In PDU mode</i>	+CMGR: 2,,<length> <CR><LF><pdu> OK <i>Note: Message is stored but unsent, no <alpha>field</i>
AT+CMGF=1;+CPMS="SR";+CNMI=,,2 Reset to text mode, set read memory to "SR", and allow storage of further SMS Status Report into "SR" memory	OK
AT+CMSS=3 Send an SMS previously stored	+CMSS: 160 OK
	+CDSI: "SR",1 New SMS Status Report stored in "SR" memory at index 1
AT+CMGR=1 Read the SMS Status Report	+CMGR: "READ",6,160, "+33612345678",129,"01/05/31,15:15:09+00", "01/05/31,15:15:09+00",0 OK

List Message +CMGL

Description:

This command allows the application to read stored messages, by indicating the type of the message to read. The messages are read from the memory selected by the +CPMS command.

Values:

<stat> possible values (status of messages in memory):

Text mode possible values	PDU mode possible values	Status of messages in memory
"REC UNREAD"	0	received unread messages
"REC READ"	1	received read messages
"STO UNSENT"	2	stored unsent messages
"STO SENT"	3	stored sent messages
"ALL"	4	all messages

Note: For SMS Status Reports, only "ALL" / 4 and "READ" / 1 values of the <stat> parameter will list messages ; other values will only return OK.

Command syntax: AT+CMGL=<stat>

Response syntax for text mode:

+CMGL: <index>,<stat>,<da/oa>[,<alpha>], [<scts>, <tooa/toda>, <length>] <CR><LF><data> (for **SMS-DELIVER** and **SMS-SUBMIT**, may be followed by other <CR><LF>+CMGL:<index>...)

+CMGL: <index>,<stat>,<fo>,<mr>[,<ra>],[<tora>],<scts>,<dt>,<st> (for **SMS-STATUS-REPORT** only, may be followed by other <CR><LF>+CMGL:<index>...)

Response syntax for PDU mode:

+CMGL: <index>,<stat>, [<alpha>], <length> <CR><LF> <pdu> (for **SMS-DELIVER**, **SMS-SUBMIT** and **SMS-STATUS-REPORT**, may be followed by other <CR><LF>+CMGL:<index>...)

Command	Possible responses
AT+CMGL="REC UNREAD" <i>Note: List unread messages in text mode</i>	+CMGL: 1,"REC UNREAD","0146290800", <CR><LF> Unread message ! +CMGL: 3,"REC UNREAD", "46290800", <CR><LF> Another message unread! OK <i>Note: 2 messages are unread, these messages will then have their status changed to "REC READ" (+CSDH:0)</i>
AT+CMGL="REC READ" <i>Note: List read messages in text mode</i>	+CMGL: 2,"REC READ","0146290800", <CR><LF> Keep cool OK
AT+CMGL="STO SENT" <i>Note: List stored and sent messages in text mode</i>	OK <i>Note: No message found</i>
AT+CMGL=1 <i>Note: List read messages in PDU mode</i>	+CMGL: 1,1,,26 <CR><LF> 07913366003000F3040B913366920547F4001300119041253 0400741AA8E5A9C5201 OK

Send Message +CMGS

Description:

The <address> field is the address of the terminal to which the message is sent. To send the message, simply type, <ctrl-Z> character (ASCII 26). The text can contain all existing characters except <ctrl-Z> and <ESC> (ASCII 27). This command can be aborted using the <ESC> character when entering text. In PDU mode, only hexadecimal characters are used ('0'...'9','A'...'F').

Values: <ctrl-Z / ESC > type this to send the message

Command syntax in text mode:

AT+CMGS= <da> [,<toda>] <CR>

text is entered <ctrl-Z / ESC >

Command syntax in PDU mode:

AT+CMGS= <length> <CR>

PDU is entered <ctrl-Z / ESC >

Command	Possible responses
AT+CMGS="+33146290800"<CR> Please call me soon, Fred. <ctrl-Z> <i>Note: Send a message in text mode</i>	+CMGS: <mr> OK <i>Note: Successful transmission</i>
AT+CMGS=<length><CR><pdu><ctrl-Z> <i>Note: Send a message in PDU mode</i>	+CMGS: <mr> OK <i>Note: Successful transmission</i>

The message reference <mr> is returned to the application and allocated by the product. This number begins with 0, is incremented by one for each outgoing message (successes and failures), and is cyclic on one byte (0 follows 255). **Note:** This number is not a storage number. Outgoing messages are not stored.

Write Message to Memory +CMGW

Description:

This command stores a message in memory (either SMS-SUBMIT or SMS-DELIVERs). The memory location <index> is returned (no choice possible as with phonebooks +CPBW). Text or PDU is entered as described for the Send Message +CMGS command.

Values:

<oa/da>: Originating or Destination Address Value in string format

<tooa/toda>: Type of Originating / Destination Address

<stat>: Integer type in PDU mode (*default 2 for +CMGW*) or string type in text mode (*default "STO UNSENT" for +CMGW*). Indicates the status of message in memory. If <stat> is omitted, the stored message is considered as a message to send

<stat>

0: "REC UNREAD"

1: "REC READ"

2: "STO UNSENT"

3: "STO SENT"

<length>: Length of the actual data unit in bytes

Command syntax in text mode: (<index> is returned in both cases)

AT+CMGW= <oa/da> [,<tooa/toda> [,<stat>]] <CR>

enter text <ctrl-Z / ESC>

Command syntax in PDU mode:

AT+CMGW= <length> [,<stat>] <CR>

give PDU <ctrl-Z / ESC>

Response syntax:

+CMGW: <index> or **+CMS ERROR:** <err> if writing fails

Command	Possible responses
AT+CMGW="+33146290800"<CR> Hello how are you ?<ctrl-Z> <i>Note: Write a message in text mode</i>	+CMGW: 4 OK <i>Note: Message stored in index 4</i>
AT+CMGW=<length><CR><pdu><ctrl-Z> <i>Note: Write a message in PDU mode</i>	+CMGW: <index> OK <i>Note: Message stored in <index></i>

Send Message from Storage +CMSS

Description:

This command sends a message stored at location value <index>.

Values:

<index> location of stored message
 <da> desination address
 <tda> type of destination address
 <mr> message reference

Command syntax: AT+CMSS=<index>[,<da> [,<tda>]]

Response syntax: +CMSS: <mr> or +CMS ERROR: <err> if sending fails

If a new recipient address <da> is given, it will be used instead of the one stored with the message

Command	Possible responses
AT+CMGW=0660123456<CR> Today is my birthday <i>Note:</i>	+CMGW: 5 OK <i>Note:Message stored with index 5</i>
AT+CMSS=5, 0680654321 <i>Note: Send the message 5 to a different destination number</i>	AT+CMSS:<mr> OK <i>Note: Successful transmission</i>
AT+CMSS=5, 0680654321 <i>Note: Send the message 5 to a different destination number</i>	+CMSS:<mr> OK <i>Note: Successful transmission</i>

Set Text Mode Parameters +CSMP

Description:

This command selects a value for <vp>, <pid>, and <dcs>.

Values:

The <fo> byte comprises 6 different fields:

B7	B6	B5	b4	b3	b2	b1	b0
RP	UDHI	SRR	VPF		RD	MTI	

RP: Reply Path, not used in text mode.

UDHI: User Data Header Information, b6=1 if the beginning of the User Data field contains a Header in addition to the short message. This option is not supported in +CSMP command, but can be used in PDU mode (+CMGS).

SRR: Status Report Request, b5=1 if a status report is requested. This mode is supported.

VPF: Validity Period Format

b4=0 & b3=0 -> <vp> field is not present

b4=1 & b3=0 -> <vp> field is present in relative format

Others formats (absolute & enhanced) are not supported.

RD: Reject Duplicates, b2=1 to instruct the SC to reject an SMS-SUBMIT for an SM still held in the SC which has the same <mr> and the same <da> as the previously submitted SM from the same <oa>.

MTI: Message Type Indicator

b1=0 & b0=0 -> SMS-DELIVER (in the direction SC to MS)

b1=0 & b0=1 -> SMS-SUBMIT (in the direction MS to SC)

In text mode <vp> is only coded in "relative" format. The default value is 167 (24 hours). This means that one byte can describe different values:

VP value	Validity period value
0 to 143	(VP + 1) x 5 minutes (up to 12 hours)
144 to 167	12 hours + (VP - 143) x 30 minutes)
168 to 196	(VP - 166) x 1 day
197 to 255	(VP - 192) x 1 week

<pid> is used to indicate the higher layer protocol being used or indicates interworking with a certain type of telematic device. For example, 0x22 is for group 3 telefax, 0x24 is for voice telephone, 0x25 is for ERMES.

<dcs> is used to determine the way the information is encoded. Compressed text is not supported. Only GSM default alphabet, 8 bit data and UCS2 alphabet are supported.

Syntax: AT+CSMP=<fo>, <vp>, <pid>,<dc>

Command	Possible responses
AT+CSMP? <i>Note: current values</i>	+CSMP: 0,0,0,0 OK <i>Note: No validity period</i> <dc>= PCCP437 alphabet (8 bits → 7 bits)
AT+CMPS=17,23,64,244 <i>Note:<vp> = 23 (2 hours, relative format)</i> <i><dc> = GSM 8 bits alphabet</i>	OK <i>Note: Command correct</i>

Delete Message +CMGD

Description:

This command deletes one or several messages from preferred message storage ("BM" SMS CB 'RAM storage', "SM" SMSPP storage 'SIM storage' or "SR" SMS Status-Report storage).

Values:

<index>

(1-20)

When the preferred message storage is "BM"
Integer type values in the range of location numbers of SIM Message memory when the preferred message storage is "SM" or "SR".

<DelFlag>

0

Delete message at location <index>.

1

Delete All READ messages

2

Delete All READ and SENT messages

3

Delete All READ, SENT and UNSENT messages

4

Delete All messages.

Note: When the preferred message storage is "SR", as SMS status reports are assumed to have a "READ" status, if <DelFlag> is greater than 0, all SMS status reports will be deleted.

Syntax: AT+CMGD=<Index> [,<DelFalg>]

Command	Possible responses
	+CMTI:"SM",3 <i>Note: New message received</i>
AT+CMGR=3 <i>Note: Read it</i>	+CMGR: "REC UNREAD","0146290800", "98/10/01,18:19:20+00" <CR><LF> Message received! <i>Note: Unread message received from 0146290800 on the 01/10/1998 at 18H19m 20s</i>
AT+CMGD=3 <i>Note: Delete it</i>	OK <i>Note: Message deleted</i>
AT+CMGD=1,0	OK <i>Note: The message from the preferred message storage at the location 1 is deleted</i>
AT+CMGD=1,1	OK <i>Note: All READ messages from the preferred message storage are deleted</i>
AT+CMGD=1,2	OK <i>Note: All READ messages and SENT mobile originated messages are deleted</i>
AT+CMGD=1,3	OK <i>Note: All READ, SENT and UNSENT messages are deleted</i>
AT+CMGD=1,4	OK <i>Note: All messages are deleted</i>

Service Center Address +CSCA

Description

This command indicates the service center to which the message must be sent. The product has no default value for this address. If the application tries to send a message without having indicated the service center address, an error will be generated. Therefore, the application must indicate the SC address when initializing the SMS. This address is then permanently valid. The application may change it if necessary.

Values:

<sca> service center address

Syntax: AT+CSCA

Command	Possible responses
AT+CMGS= "+33146290800"<CR> Hello, how are you?<ctrl-Z> <i>Note: Send a message</i>	+CMS ERROR: 330 <i>Note: service center unknown</i>
AT+CSCA="0696741234" <i>Note: Service center initialization</i>	OK
AT+CMGS="+33146290800"<CR> Happy Birthday ! <ctrl-Z> <i>Note:</i>	+CMGS: 1 OK <i>Note: Successful transmission</i>

Select Cell Broadcast Message Types +CSCB

Description:

This command selects which types of CBMs are to be received by the ME. This command is allowed in both PDU and text modes.

Values:

The <bm> parameter of +CNMI command controls the message indication.

The activation of **CBM reception (<mode>=0)** can select only specific **Message Identifiers (list in <mids>)** for specific **Languages (list in <dcss>)**, but the deactivation stops any reception of CBMs (only AT+CSCB=1 is allowed).

Message Identifiers (<mids> parameter) indicates the type of message identifiers for which the ME should listen.

<dcss> Supported languages

0 for German	8 for Portuguese
1 for English	9 for Finnish
2 for Italian	10 for Norwegian
3 for French	11 for Greek
4 for Spanish	12 for Turkish
5 for Dutch	13 for Hungarian
6 for Swedish	14 for Polish
7 for Danish	32 for Czech

Syntax: AT+CSCB= <mode>, [<mids>, [<dcss>]]

Important Note : Test read command (AT+CSCB ? is not supported).

Command	Possible responses
AT+CSCB=0,"15-17,50,86","" <i>Note: Accept SMS-CB types, 15,16,17,50 and 86 in any language</i>	OK <i>Note: CBMs can be received</i>
	+CBM: 10<CR><LF> 00112233445566778899 <i>Note: CBM length of a received Cell Broadcast message (SMS-CB), CBM bytes in PDU mode</i>
AT+CSCB=1 <i>Note: Deactivate the reception of CBMs</i>	OK <i>Note: CBM reception is completely stopped</i>

Cell Broadcast Message Identifiers +WCBM

Description:

This specific command is used to read the EF-CBMI SIM file. The EF-CBMI file is not used with the +CSCB command. The application should read this file (using AT+WCBM ?) and combine the Message Identifiers with those required by the application.

Values:

<mids> message identifiers

Syntax: AT+WCBM= <mids>

Command	Possible responses
AT+WCBM="10,100,1000,10000" <i>Note : Write 4 messages identifiers in EFCBMI</i>	OK <i>Note : CBMIs</i>
AT+WCBM? <i>Note : Read the CBMIs in EF-CBMI</i>	+WCBM="10,100,1000,10000" OK <i>Note : 4 CBMIs are stored in EF-CBMI</i>

Message Status Modification +WMSC

Description:

This command allows the manipulation of a message status. The accepted status changes are from READ to NOT READ and vice versa, and also from SENT to NOT SENT and vice versa.

Values:

<loc> location number of the stored message <integer>

<status> new status to be stored, as in the +CMGL command

PDU Mode	Text Mode
0	"REC UNREAD"
1	"REC READ"
2	"STO UNSENT"
3	"STO SENT"

Syntax: AT+WMSC= <loc>, <status>

Command	Possible responses
AT+CMGR=2	+CMGR: "REC READ", "+336290918", "99/05/01 14:19:44+04" <CR><LF> Hello All of you! OK
AT+WMSC=2, "REC UNREAD"	
AT+CMGR=2	+CMGR: "REC UNREAD", "+336290918", "99/05/01 14:19:44+04" <CR><LF> Hello All of you! OK

Note: If all parameters are correct, the product overwrites the whole SMS in SIM. Only the first byte (Status byte) is changed.

Possible responses:

OK if the location is valid

+CMS ERROR: 321 if <loc> is invalid or free

+CMS ERROR: 302 if the new <status> and the previous one are incompatible (1)

Message Overwriting +WMGO

Description:

The +CMGW command writes an SMS to the first location available. To write an SMS to a specified location, the +WMGO command forces the product to write an SMS (with the +CMGW command) to the location specified with +WMGO, but for just one +CMGW command.

Important Notes:

- If the external application specifies a free location and an incoming message is received before the AT+CMGW command occurs, the product may store the incoming message at the specified available location. If the user then issues an AT+CMGW command without changing the location with another AT+WMGO, the received message will be overwritten.
- The location number is not kept over a software reset.

Values:

<loc> location number of the SIM record to write or overwrite. The number depends on the SIM capacity.

Syntax: AT+WMGO= <loc>

Command	Possible responses
AT+CMGW="+33146290800"<CR> Hello how are you?<ctrl-Z> <i>Note: Write a message in text mode</i>	+CMGW: 4 OK <i>Note: Message stored in index 4</i>
AT+WMGO=4	
AT+CMGW="+33146299704"<CR> You are overwritten<ctrl-Z>	+CMGW: 4 OK <i>Note: New Message stored in index 4</i>
AT+WMGO?	+WMGO: 4 OK
AT+WMGO=999	+CMS ERROR:321
AT+WMGO=?	+WMGO: [<range of location>] OK

Unchange SMS Status +WUSS

Description:

The +WUSS command allows the SMS Status to be kept at UNREAD after +CMGR or +CMGL.

Values:

<mode>

- 0 The SMS Status will change
- 1 The SMS Status will not change

Syntax: AT+WUSS = <mode>

Command	Possible responses
AT+WUSS=1	OK
	+CMTI: "SM",10 Note: SMS has been received in index 10
AT+CMGR=10	+CMGR: "REC UNREAD","+33660669023",,"03/02/ 13, 18:36:35+00"<CR><LF> Do you want to change state?
	OK
AT+CMGR=10	+CMGR: "REC UNREAD","+33660669023",,"03/02/ 13, 18:36:35+00"<CR><LF> Do you want to change state?
	OK Note: The state hasn't been updated
AT+WUSS=0	OK
AT+CMGR=10	+CMGR: "REC UNREAD","+33660669023",,"03/02/ 13, 18:56:55+00"<CR><LF> It is me again.
	OK
AT+CMGR=10	+CMGR: "REC READ","+33660669023",,"03/02/ 13, 18:56:55+00"<CR><LF> It is me again.
	OK