Software Requirement Specifications

AT commands

Revision History

version	date	description	author
1.0	21-11-01	Creation	R. Chevrier
1.1	19-04-02	Clarification on D* and Non volatile memory needs	R. Chevrier
1.1.1	08-07-02	Remove GSMS as it is not supported and add some clarifications	R. Chevrier
1.1.2	10-07-02	LMSdv73308: change behaviour for AT+CSCA &F does no more impact +CSCA LMSdv72845: extend S1 to incoming voice calls	R. Chevrier
1.2	27-06-02	Add AT commands of “AT commands” project	S. Mevel
1.3	22-08-02	Update about “AT commands” project	R. Aleksanderek
1.4	02/09/02	Update for the DV2.0 of the “AT Commands” project: • Clarification added for +CSCB • +CGSMS reincorporated • Update according to the implementation: . § Data impacted by &F and § Other stored data . "+" character supported in ATD command	P. Lefevre
1.5	18/10/02	• Update to take into account the switches of the AT command improvement project. • merge new information from version 1.1.1 and 1.1.2 done by R. Chevrier in SWM branch • clarification for commands AT+CSCB and D	P. Nay
1.6	28/11/02	• Clarify the “Compliant” description meaning. • Supported parameter values updated for the CBST command. • Missing parameters (of E, Q, V, X, +IFC and &K commands) incorporated in §6.4.	P. Lefevre
1.7	28/03/03	• Addition of the CGDATA Cmd according to the current implementation. • Update for R99 and PPP over GPRS	O.HOUOT
1.8	04/07/03	• Update +IPR and +CGSMS command for DF Telecom project • rename External Requirement Document in Software Requirement Specifications	P. Nay
1.9	18/08/03	• Update supported value for +COPS • Update default value for +CGQMIN and + CGQREQ • CHLD=4 now supported	Y.Fily
		• Addition of following new AT commands: +CRSL, +CVIB, +CLVL, +CAMM, +CACM, +CPUC, +CCWE, +CAOC, +CLAN, +CSGT, +CSVM, +CRMP	E. Gerondeau
1.10	17/09/03	• Add new commands +CFUN, *PSCPOF and *PSLOCUP	P. Nay

1.11	02/10/03 09/10/03	• Addition of the +CCWV and +CCCM URCs and also, modification of the +CSGT AT command • integration of remarks from SwRS_AT_CMD_Logging_sheet_p8053_V1.9_P2.doc	N. Lecomte J.-Y. Landrac
1.12	21/10/03	• +CBST support a new parameter value	Y.Fily
1.13	17/11/03	• +CMGD support new parameters • Added +CMUX command • Added *PSSTK and *PSSTKI proprietary commands	Y.Fily
1.14	28/01/04	• Add clarification for COMMAND +CGDCONT Update EEPROM data section.	P. Nay
1.15	08/04/04	• Add new display value for CME ERROR	H.Cormau
1.16	16/04/04	• Modify default value for +CVHU	P. Nay
1.17	26/04/04	• Add new proprietary command *PSSURC	H.Cormau
1.18	24/05/04	• Modify supported parameter values for command +CGEQREQ and +CGEQMIN	A.Morin
1.19	04/08/04	• Add mandatory or optional flags • Add restrictions for the command request GPRS service D* • Modify returned values of the command I4	P.Gonday A.Morin
1.20	18/08/04	• Update after review (Restrictions for CMUX & D*)	P.Gonday
1.21	16/09/04	• Add Restrictions for command +CHLD	A.Morin
1.22	26/10/04	• Clarification for +COPS command	V.Beunardeau
1.23	22/11/04	• Add new command +CPROT	V.Beunardeau

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1 PURPOSE AND SCOPE

1.1 PURPOSE

This document describes the AT command supported by the ME.

Those commands can be used by any TE connected to the ME by any medium (Serial link, IRDA, Blue-tooth,…)

2 REFERENCES

2.1 Applicable Documents

Documents whose application is mandatory for this ERD are:

Table 1: Applicable Documents

Ref.	Id.	Document name	Date issued	Status	Version	Comment
[07.05]	TS 100 585	Digital cellular telecommunications system (Phase 2+) - Use of Data Terminal Equipment - Data Circuit terminating Equipment (DTE - DCE) interface for Short Message Service (SMS) and Cell Broadcast Service (CBS)	1999-04	Release	6.0.0	
[27.007]	3GPP TS 27.007	AT command set for User Equipment	2002-12	Release	3.e.0	R99
[V25ter]	UIT-T V.25 ter	Data communication over the telephone network - Serial asynchronous automatic dialing and control	1997-07	Approved		
[TIA578A]	TIA/EIA-578-A	Facsimile Digital Interfaces - Asynchronous Facsimile DCE Control Standard, Service Class 1	1995-05	Approved		
[03.40]	ETS 300 901	Digital cellular telecommunications system (Phase 2+) - Technical realization of the Short Message Service (SMS) Point-to-Point (PP)	1998-07	Release	6.1.0	
[04.08]	ETS 300 940	Digital cellular telecommunications system (Phase 2+) - Mobile radio interface layer 3 specification	1999-12	Release	6.7.0	
[01.04] 3GPP TS 01.04 [07.10]	PRETS 300 748	Digital cellular telecommunications system (Phase 2+) - Abbreviations and acronyms	1999-08	Release	7.0.0	

3 TERMINOLOGY

3.1 Definitions

No object

3.2 Acronyms/Abbreviations

All abbreviations listed in [01.04] are applicable.

Abbreviations	Description
SAT	Sim Application Toolkit

Terminal Equipment to Mobile Station (TE-MS) Multiplexer protocol	2002-03	Release	6.5.0	R97		

4 AT command List

* : means that command is partially impacted by switch else command is activated by switch.
M : means mandatory
O : means optional

[07.05] commands		M/O	Compilation switch
Select Message Service +CSMS	+CSMS	M	
Preferred Message Storage +CPMS	+CPMS	M	
Message Format +CMGF	+CMGF	M	
Service Center Address +CSCA	+CSCA	M	
Select cell broadcast message types +CSCB	+CSCB	O	AT_CMD_IMPROVEMENT_FTR
Set Text Mode Parameters +CSMP	+CSMP	M[1]	
Show Text Mode Parameters +CSDH	+CSDH	M[1]	
Save Settings +CSAS	+CSAS	O	
Restore Settings +CRES	+CRES	O	
New Message Indications to TE +CNMI	+CNMI	M[2]	AT_CMD_IMPROVEMENT_FTR*
List Messages +CMGL	+CMGL	O	AT_CMD_IMPROVEMENT_FTR*
Read Message +CMGR	+CMGR	O	AT_CMD_IMPROVEMENT_FTR*
Send Message +CMGS	+CMGS	O	AT_CMD_IMPROVEMENT_FTR*
Send Message from Storage +CMSS	+CMSS	O	
Write Message to Memory +CMGW	+CMGW	O	AT_CMD_IMPROVEMENT_FTR*
Delete Message +CMGD	+CMGD	O	
[07.05] Result codes			
Received SMSPP indication +CMTI	+CMTI	O	
Received SMSPP content +CMT	+CMT	O	
Received CBM Content +CBM	+CBM	O	AT_CMD_IMPROVEMENT_FTR*
Received SMS status report Content +CDS	CDS	O	
Message Service Failure +CMS ERROR	+CMS ERROR	M	
[27.007] commands			
Manufacturer identification +CGMI	+CGMI	O	
Model identification +CGMM	+CGMM	O	
Revision identification +CGMR	+CGMR	O	
Product serial number identification +CGSN	+CGSN	O	
Select TE character set +CSCS	+CSCS	M[3]	AT_CMD_IMPROVEMENT_FTR*
Request international mobile subscriber identity +CIMI	+CIMI	O	AT_CMD_IMPROVEMENT_FTR
Select type of address +CSTA	+CSTA	M[4]	
Call mode +CMOD	+CMOD	M[5]	
Hang-up call +CHUP	+CHUP	M[5]	

[1] Mandatory when text mode is implemented
[2] Mandatory when any of the new message indications implemented
[3] Mandatory when a command using the setting of this command is implemented
[4] Mandatory when other than default value allowed
[5] Mandatory when alternating mode calls are implemented in the TA

Select bearer service type +CBST	+CBST	M[6]	
Radio link protocol +CRLP	+CRLP	M[7]	
Service reporting control +CR	+CR	M[6]	
Extended error report +CEER	+CEER	O	
Cellular result codes +CRC	+CRC	M[8]	
Voice hang up control +CVHU	+CVHU	O	AT_CMD_IMPROVEMENT_FTR
Subscriber number +CNUM	+CNUM	O	
Network registration +CREG	+CREG	O	
Operator selection +COPS	+COPS	O	
Facility lock +CLCK	+CLCK	M[9]	AT_CMD_IMPROVEMENT_FTR
Change password +CPWD	+CPWD	O	AT_CMD_IMPROVEMENT_FTR
Calling line identification presentation +CLIP	+CLIP	O	AT_CMD_IMPROVEMENT_FTR
Calling line identification restriction +CLIR	+CLIR	O	AT_CMD_IMPROVEMENT_FTR
Connected line identification presentation +COLP	+COLP	O	AT_CMD_IMPROVEMENT_FTR
Call forwarding number and conditions +CCFC	+CCFC	M[9]	AT_CMD_IMPROVEMENT_FTR
Call waiting +CCWA	+CCWA	O	AT_CMD_IMPROVEMENT_FTR
Call related supplementary services +CHLD	+CHLD	O	AT_CMD_IMPROVEMENT_FTR
Advice of Charge +CAOC	+CAOC	O	AT_CMD_FOR_AOC_FTR
Unstructured supplementary service data +CUSD	+CUSD	O	AT_CMD_IMPROVEMENT_FTR
Supplementary service notifications +CSSN	+CSSN	O	AT_CMD_IMPROVEMENT_FTR
List current calls +CLCC	+CLCC	O[10]	AT_CMD_IMPROVEMENT_FTR
Preferred operator list +CPOL	+CPOL	O	AT_CMD_IMPROVEMENT_FTR
Read operator names +COPN	+COPN	O	AT_CMD_IMPROVEMENT_FTR
Phone activity status +CPAS	+CPAS	M[11]	
Enter PIN +CPIN	+CPIN	M[12]	AT_CMD_IMPROVEMENT_FTR
Battery charge +CBC	+CBC	O	
Signal quality +CSQ	+CSQ	O	
Mobile Equipment control mode +CMEC	+CMEC	M[13]	
Indicator control +CIND	+CIND	O	AT_CMD_IMPROVEMENT_FTR*
Mobile Equipment event reporting +CMER	+CMER	M[13]	
Select phonebook memory storage +CPBS	+CPBS	M[14]	
Read phonebook entries +CPBR	+CPBR	O	AT_CMD_IMPROVEMENT_FTR*
Find phonebook entries +CPBF	+CPBF	O	AT_CMD_IMPROVEMENT_FTR*

[6] Mandatory when data calls implemented

[7] Mandatory when RLP implemented

[8] Mandatory when data or fax circuit mode calls implemented or for a MT/TA supporting AT commands only and eMLPP or VGCS or VBS is implemented

[9] Mandatory for MT/TA supporting AT commands only and not supporting the control through dial command D

[10] Recommended when +CHLD command is implemented

[11] Mandatory when MT can be operated from TE

[12] Mandatory for MT not supporting the +CKPD command and supporting AT commands only

[13] Mandatory when any of keypad, display or indicator commands is implemented

[14] Mandatory when phonebook read, find or write command, or direct dialing is implemented

Write phonebook entry +CPBW	+CPBW	O	AT_CMD_IMPROVEMENT_FTR*
Clock +CCLK	+CCLK	O	
Alert sound mode +CALM	+CALM	O	AT_CMD_IMPROVEMENT_FTR
Ringer sound level +CRSL	+CRSL	O	AT_CMD_FOR_SETTINGS_FTR
Vibrator mode +CVIB	+CVIB	O	AT_CMD_FOR_SETTINGS_FTR
Loudspeaker volume level +CLVL	+CLVL	O	AT_CMD_FOR_SETTINGS_FTR
Accumulated call meter +CACM	+CACM	O	AT_CMD_FOR_AOC_FTR
Accumulated call meter maximum +CAMM	+CAMM	O	AT_CMD_FOR_AOC_FTR
Price per unit and currency table +CPUC	+CPUC	O	AT_CMD_FOR_AOC_FTR
Call Meter maximum event +CCWE	+CCWE	O	AT_CMD_FOR_AOC_FTR
Set Language +CLAN	+CLAN	O	AT_CMD_FOR_SETTINGS_FTR
Set Greeting Text +CSGT	+CSGT	O	AT_CMD_FOR_SETTINGS_FTR
Set Voice Mail Number +CSVM	+CSVM	O	AT_CMD_FOR_SETTINGS_FTR __MBOXN__ __MBOXN_IN_EEPROM__*
Ring Melody Playback +CRMP	+CRMP	O	AT_CMD_FOR_SETTINGS_FTR
Mute control +CMUT	+CMUT	O	AT_CMD_IMPROVEMENT_FTR
List all available AT commands +CLAC	+CLAC	O	AT_CMD_IMPROVEMENT_FTR
Set phone functionality +CFUN	+CFUN	O	LOAD_TEST_AT_CMD_FTR
Report Mobile Equipment error +CMEE	+CMEE	M[15]	
Define PDP Context +CGDCONT	+CGDCONT	M[16]	ATP_PPP_OVER_GPRS_FTR*
Quality of Service Profile (Requested) +CGQREQ	+CGQREQ	O	ATP_PPP_OVER_GPRS_FTR*
Quality of Service Profile (Minimum acceptable) +CGQMIN	+CGQMIN	O	ATP_PPP_OVER_GPRS_FTR*
3G Quality of Service Profile (Requested) +CGEQREQ	+CGEQREQ	O	RELEASE99_CPR ATP_PPP_OVER_GPRS_FTR*
3G Quality of Service Profile (Minimum acceptable) +CGEQMIN	+CGEQMIN	O	RELEASE99_CPR ATP_PPP_OVER_GPRS_FTR*
GPRS attach or detach +CGATT	+CGATT	O	
PDP context activate or deactivate +CGACT	+CGACT	O	
Show PDP address +CGPADDR	+CGPADDR	O	
Enter data state +CGDATA	+CGDATA	O[17]	
GPRS mobile station class +CGCLASS	+CGCLASS	O	
GPRS network registration status +CGREG	+CGREG	O	
Select service for MO SMS messages +CGSMS	+CGSMS	O	ATP_SUPPRESS_GPRS_SMS SMS_OVER_GPRS_FTR
Request GPRS service D*	D*	O[18]	
DTMFand tone generation +VTS	+VTS	M	AT_CMD_IMPROVEMENT_FTR
Tone duration +VTD	+VTD	M	AT_CMD_IMPROVEMENT_FTR
CMUX protocol activation +CMUX	+CMUX	M	MUX_07_10_FTR
CPROT protocol mode selection +CPROT	+CPROT	O	AT_CPROT_CMD_FTR
[27.007] Result codes			

[15] Mandatory for <n> values 0 and 1

[16] Mandatory unless only a single subscribed context is supported

[17] Optional if the D (dial) command can be used to specify Packet Domain operation

[18] Optional if the +CGDATA command is supported

Service reporting +CR	+CR	M[19]	
Ringing indication +CRING	+CRING	O	AT_CMD_IMPROVEMENT_FTR*
Service reporting +CREG	+CREG	O	
Calling line identification presentation +CLIP	+CLIP	O	AT_CMD_IMPROVEMENT_FTR
Connected line identification presentation +COLP	+COLP	O	AT_CMD_IMPROVEMENT_FTR
Call waiting +CCWA	+CCWA	O	AT_CMD_IMPROVEMENT_FTR
Unstructured supplementary service data +CUSD	+CUSD	O	AT_CMD_IMPROVEMENT_FTR
Supplementary service notification +CSSI	+CSSI	O	AT_CMD_IMPROVEMENT_FTR
Supplementary service notification +CSSU	+CSSU	O	AT_CMD_IMPROVEMENT_FTR
Current Call Meter notification +CCCM	+CCCM	O	AT_CMD_FOR_AOC_FTR
Indicator event report	+CIEV	O	
Call Meter warning value +CCWV	+CCWV	O	AT_CMD_FOR_AOC_FTR
Error result code +CME ERROR	+CME ERROR	M[20]	
[V25ter] commands			
Answer A	A	O	AT_CMD_IMPROVEMENT_FTR*
Dial D	D	M	AT_CMD_IMPROVEMENT_FTR*
Hang up H	H	O	AT_CMD_IMPROVEMENT_FTR*
Monitor speaker loudness L	L	M	
Monitor speaker mode M	M	M	
Online O	O	M	
Pulse dialing P	P	M	
Automatic answer S0	S0	O	
Pause before blind dialing S6	S6	M	
Connection completion timeout S7	S7	M	
Comma dial modifier time S8	S8	M	
Automatic disconnect delay S10	S10	M	
Tone dialing T	T	M	
Repeat last command A/	A/	O	
Identification information I	I	O	
Reset default configuration Z	Z	M	
Factory defined configuration &F	&F	M	
Complete capabilities list +GCAP	+GCAP	M	
Manufacturer identification +GMI	+GMI	M	
Model identification +GMM	+GMM	M	
Revision identification +GMR	+GMR	M	
Serial number identification +GSN	+GSN	O	
Echo E	E	M	
Result code suppression Q	Q	M	
Line termination character S3	S3	M	
Response formatting character S4	S4	M	
Line editing character S5	S5	M	
TA response format V	V	M	

[19] Mandatory when data calls implemented

[20] Mandatory for numeric format codes applicable to implemented command set

Result code selection and call progress monitoring control X	X	M	
Data carrier detect (DCD) behavior &C	&C	M	AT_CMD_IMPROVEMENT_FTR*
Data Terminal Ready (DTR) behavior &D	&D	M	AT_CMD_IMPROVEMENT_FTR*
Fixed TE rate +IPR	+IPR	O	
TE-TA character framing +ICF	+ICF	O	
TE-TA local flow control +IFC	+IFC	O	HARDWARE_FLOW_CONTROL*
[V25ter] result codes			
Engaged signal BUSY	BUSY	M	
Connection established CONNECT	CONNECT	M	
Invalid command line ERROR	ERROR	M	
Connection completion timeout NO ANSWER	NO ANSWER	M	
Connection terminated or connection attempt fails NO CARRIER	NO CARRIER	M	
Command execution acknowledge OK	OK	M	
Incoming call signal RING	RING	M	
[TIA578A] commands			
Manufacturer identification +FMI	+FMI	O	
Model identification +FMM	+FMM	O	
Revision identification +FMR	+FMR	O	
Service Class +FCLASS	+FCLASS	M	
Transmit silence +FTS	+FTS	M	
Receive silence +FRS	+FRS	M	
HDLC transmit +FTH	+FTH	M	
HDLC receive +FRH	+FRH	M	
Facsimile transmit +FTM	+FTM	M	
Facsimile receive +FRM	+FRM	M	
Proprietary commands			
Communication option B	B	O	
Negotiate handshake option N	N	O	
Ring count S1	S1	O	
Escape character S2	S2	O	
DTMF Dialing speed S11	S11	O	
Extended result code W	W	O	
Flow control option &K	&K	O	HARDWARE_FLOW_CONTROL*
DSR option &S	&S	O	AT_CMD_IMPROVEMENT_FTR*
Configuration profile &V	&V	O	
Store active profile &W	&W	O	
Service Class #CLS	#CLS	O	
RTS/CTS option &R	&R	O	AT_CMD_IMPROVEMENT_FTR HARDWARE_FLOW_CONTROL
*PSCPOF	*PSCPOF	O	LOAD_TEST_AT_CMD_FTR
*PSLOCUP	*PSLOCUP	O	LOAD_TEST_AT_CMD_FTR
*PSSSURC	*PSSSURC	O	ATP_SS_URC_FTR
SIM ToolKit interface configuration *PSSTKI	*PSSTKI	O	STK_AT_CMD_FTR
SIM ToolKit command *PSSTK	*PSSTK	O	STK_AT_CMD_FTR

5 AT Commands description

Only supported AT commands are described in this document.
Except when restriction is given, commands description is the one specified in the recommendation it belongs to.
Description and possible values of the parameters are the one that can be found in the corresponding recommendation. This document only gives the supported and default values.
Default value appear in **underlined and bold style**.
Only non-ERROR or non-OK result code are described in Possible response(s).
At command line is limited to 200 bytes, response line is limited to 600.

5.1 [07.05] Command description

5.1.1 General AT commands

5.1.1.1 Select Message Service +CSMS

Command	Possible response(s)
+CSMS=<service>	+CSMS: <mt>,<mo>,<bm> *+CMS ERROR: <err>*
+CSMS?	+CSMS: <service>,<mt>,<mo>,<bm>
+CSMS=?	+CSMS: (list of supported <service>s)

Supported and default parameter values

<service>: 0. See Data impacted by &F for default value.

<mt>: 0,**1**

<mo>: 0,**1**

<bm>: 0,**1**

5.1.1.2 Preferred Message Storage +CPMS

Command	Possible response(s)
+CPMS=<mem1>[, <mem2>[,<mem3>]]	+CPMS: <used1>,<total1>,<used2>,<total2>,<used3>,<total3> *+CMS ERROR: <err>*
+CPMS?	+CPMS: <mem1>,<used1>,<total1>,<mem2>,<used2>,<total2>, <mem3>,<used3>,<total3> *+CMS ERROR: <err>*
+CPMS=?	+CPMS: (list of supported <mem1>s),(list of supported <mem2>s),(list of supported <mem3>s)

Supported and default parameter values

<mem1>,<mem2>,<mem3>: **"SM"**

<used1>,<total1>,<used2>,<total2>,<used3>,<total3>: Calculated values

5.1.1.3 Message Format +CMGF

Command	Possible response(s)
+CMGF=[<mode>]	
+CMGF?	+CMGF: <mode>
+CMGF=?	+CMGF: (list of supported <mode>s)

Supported and default parameter values

<mode>: 0,1. See Data impacted by &F for default value.

5.1.2 Message Configuration Commands

5.1.2.1 Service Center Address +CSCA

Command	Possible response(s)
+CSCA=<sca>[,<tosca>]	
+CSCA?	+CSCA: <sca>,<tosca>
+CSCA=?	

Restriction

Service Center Address is reset on switch on and is read on SIM on first PC connection after switch on

CSCA is not reset by &F

Default Values

<sca> and <tosca> : See Data stored by +CSAS for default values.

5.1.2.2 Select cell broadcast message types +CSCB

Command	Possible response(s)
+CSCB=[<mode>[,<mids>[,<dcss>]]]	
+CSCB?	+CSCB: <mode>,<mids>,<dcss>
+CSCB=?	+CSCB: (list of supported <mode>s)

Restriction

If option AT_CMD_IMPROVEMENT_FTR is disabled, command not available

All the <dcss> values can be accepted or up to 5 different <dcss> values can be accepted.

As ranges are not supported for <mids>, it's not possible to accept all the <mids> values. Up to SPB_MSG_ID_LIST_SIZE (See User Manual MMI/WAP - SPV Interface) different <mids> values can be accepted.

Supported parameter values

<mode>: see.[07.05]

<mids>: This list contains all accepted <mids>.Ranges are not supported (see.[07.05])

<dcss>: This list contains all accepted <dcss>. Default value : no <dcs> accepted. Ranges are not supported (see [07.05])

Clarification

AT+CSCB=1 means all dcss are accepted but this command has no effect on the list of the <mids>

accepted.

So, to modify those lists : use before the AT+CSCB=0 command to select no mid and no dcs, and after this operation, add some dcs or mid to the current lists“

AT+CSCB=0,<mids> : add the <mids> values in the <mids> current list handle by the mobile.

AT+CSCB=0,,<dcss> : add the <dcss> values in the < dcss > current list handle by the mobile

This command could return OK even is execution is partial. Ex :

at+cscb?
+CSCB: 0,"1,2,3,4,5,6,7,8,9,10,11,12,13,14,15","" => list of mids is full
OK
At+cscb=0,”16”
OK
at+cscb?
+CSCB: 0,"1,2,3,4,5,6,7,8,9,10,11,12,13,14,15","" => no mids add in list
OK

5.1.2.3 Set Text Mode Parameters +CSMP

Command	Possible response(s)
+CSMP=[<fo>[,<vp>[,<pid>[,<dcs>]]]]	
+CSMP?	+CSMP: <fo>,<vp>,<pid>,<dcs>
+CSMP=?	

Restriction

the enhanced validity period format ($(EVPF)$, see [03.40]) is not supported.

<fo> is only for SMS-DELIVER, SMS-SUBMIT or SMS-STATUS-REPORT. (If option AT_CMD_IMPROVEMENT_FTR is disabled, SMS-STATUS-REPORT not available)

Default Values

<fo> , <vp> , <pid> , <dcs> : See Data stored by +CSAS for default values.

5.1.2.4 Show Text Mode Parameters +CSDH

Command	Possible response(s)
+CSDH=[<show>]	
+CSDH?	+CSDH: <show>
+CSDH=?	+CSDH: (list of supported <show>s)

Supported and default parameter values

<show>: 0, 1. See Data impacted by &F for default value.

5.1.2.5 Save Settings +CSAS

Command	Possible response(s)
+CSAS[=<profile>]	*+CMS ERROR: <err>*
+CSAS=?	+CSAS: (list of supported <profile>s)

Restriction

If option AT_CMD_IMPROVEMENT_FTR is disabled, +CSCB command is not implemented and Cell Broadcast Message Types are not saved.

Supported and default parameter values

<profile>: **0**,1

see Data stored by +CSAS to know which setting is saved.

5.1.2.6 Restore Settings +CRES

Command	Possible response(s)
+CRES[=<profile>]	*+CMS ERROR: <err>*
+CRES=?	+CRES: (list of supported <profile>s)

Restriction

If option AT_CMD_IMPROVEMENT_FTR is disabled, command not available (+CSCB command is not implemented and Cell Broadcast Message Types are not saved).

Supported and default parameter values

<profile>: **0**,1

see Data stored by +CSAS to know which setting is saved.

5.1.3 Message Receiving and Reading Commands

5.1.3.1 New Message Indications to TE +CNMI

Command	Possible response(s)
+CNMI=[<mode>[,<mt>[,<bm>[,<ds>[,<bfr>]]]]]	*+CMS ERROR: <err>*
+CNMI?	+CNMI: <mode>,<mt>,<bm>,<ds>,<bfr>
+CNMI=?	+CNMI: (list of supported <mode>s),(list of supported <mt>s),(list of supported <bm>s),(list of supported <ds>s),(list of supported <bfr>s)

Restriction

<mode>: 1 is not supported for CBM Types.

If option AT_CMD_IMPROVEMENT_FTR is disabled, <ds>=1 is not available

Supported and default parameter values

<mode>: 0, 1, 2

<mt>: 0, 1, 2

<bm> : 0, 2

<ds>: 0, 1

<bfr>: 0, 1

See Other stored data for default value.

5.1.3.2 List Messages +CMGL

Command	Possible response(s)
+CMGL[=<stat>]	if text mode (+CMGF=1), command successful and SMS-SUBMITs and/or SMS-DELIVERs: +CMGL: <index>,<stat>,<oa/da>,[<alpha>],[<scts>]*[,<tooa/toda>,<length>]*<CR><LF><data>[<CR><LF> +CMGL: <index>,<stat>,<da/oa>,[<alpha>],[<scts>]*[,<tooa/toda>,<length>]*<CR><LF><data>[...]] if text mode (+CMGF=1), command successful and SMS-STATUS-REPORTs: +CMGL: <index>,<stat>,<fo>,<mr>,[<ra>],[<tora>],<scts>,<dt>,<st> [<CR><LF> +CMGL: <index>,<stat>,<fo>,<mr>,[<ra>],[<tora>],<scts>,<dt>,<st> [...]] if text mode (+CMGF=1), command successful and SMS-COMMANDs: +CMGL: <index>,<stat>,<fo>,<ct>[<CR><LF> +CMGL: <index>,<stat>,<fo>,<ct>[...]] if text mode (+CMGF=1), command successful and CBM storage: +CMGL: <index>,<stat>,<sn>,<mid>,<page>,<pages> <CR><LF><data>[<CR><LF> +CMGL: <index>,<stat>,<sn>,<mid>,<page>,<pages> <CR><LF><data>[...]] otherwise: *+CMS ERROR: <err>*
+CMGL=?	+CMGL: (list of supported <stat>s)

Restriction

Since SMS-STATUS-REPORTs, SMS-COMMANDs and CBM are not saved, only SMS-SUBMITs and/or SMS-DELIVERs are listed.

Supported parameter values

<stat>: 0, 1, 2, 3, 4 in PDU mode

"REC UNREAD", "REC READ", "STO UNSET", "STO SENT", "ALL" in text mode

Other parameters are extracted from memory storage.

5.1.3.3 Read Message +CMGR

Command	Possible response(s)
+CMGR=<index>	if text mode (+CMGF=1), command successful and SMS-DELIVER: +CMGR: <stat>,<oa>,[<alpha>],<scts>*[,<tooa>,<fo>,<pid>,<dcs>,<sca>,<tosca>,<length>]*<CR><LF><data> if text mode (+CMGF=1), command successful and SMS-SUBMIT: +CMGR: <stat>,<da>,[<alpha>]*[,<toda>,<fo>,<pid>,<dcs>,[<vp>],<sca>,<tosca>,<length>]*<CR><LF><data> if text mode (+CMGF=1), command successful and SMS-STATUS-REPORT: +CMGR: <stat>,<fo>,<mr>,[<ra>],[<tora>],<scts>,<dt>,<st> if text mode (+CMGF=1), command successful and SMS-COMMAND: +CMGR: <stat>,<fo>,<ct>*[,<pid>,[<mn>],[<da>],[<toda>],<length><CR><LF><cdata>]* if text mode (+CMGF=1), command successful and CBM storage: +CMGR: <stat>,<sn>,<mid>,<dcs>,<page>,<pages><CR><LF><data> otherwise: *+CMS ERROR: <err>*

+CMGR=?	

Restriction

Since SMS-STATUS-REPORTs, SMS-COMMANDs and CBM are not saved, only SMS-SUBMITs and/or SMS-DELIVERs are read.

Supported parameter values

<index>: 0..255

<stat>: 0, 1, 2, 3, 4 in PDU mode

"REC UNREAD", "REC READ", "STO UNSET", "STO SENT", "ALL" in text mode

Other parameters are extracted from memory storage.

5.1.4 Message sending and writing commands

5.1.4.1 Send Message +CMGS

Command	Possible response(s)
if text mode (+CMGF=1): +CMGS=<da>[,<toda>]<CR> *text is entered*<ctrl-Z/ESC>	if text mode (+CMGF=1) and sending successful: +CMGS: <mr>[,<scts>] if sending fails: *+CMS ERROR: <err>*
+CMGS=?	

Restriction

Since the Message service is restricted to 0 (+CSMS), the service Center Time Stamp is never filled in response to a SMSPP sent in text mode neither the RP-User-Data in PDU mode.

TP-User-Data-Header-Indication is never set as it is not managed.

Parameter values

Text length is limited to PDU max length (164).

5.1.4.2 Send Message from Storage +CMSS

Command	Possible response(s)
+CMSS=<index>[,<da>[,<toda>]]	**if text mode (+CMGF=1) and sending successful:** +CMSS: <mr>[,<scts>] **if sending fails:** *+CMS ERROR: <err>*
+CMSS=?	

Restriction

Since SMS-STATUS-REPORTs, SMS-COMMANDs and CBM are not saved, only SMS-SUBMITs and/or SMS-DELIVERs are read.

TP-User-Data-Header-Indication is never set as it is not managed.

Parameter values

<index>: 0..255

5.1.4.3 Write Message to Memory +CMGW

Command	Possible response(s)
if text mode (+CMGF=1): +CMGW[=<oa/da>[,<tooa/toda>[,<stat>]]]<CR> *text is entered*<ctrl-Z/ESC>	+CMGW: <index> *+CMS ERROR: <err>*
+CMGW=?	

Restriction

TP-User-Data-Header-Indication is never set as it is not managed.

Parameter values

Text length is limited to PDU max length (164).

<index>: 0..255

5.1.4.4 Delete Message +CMGD

Command	Possible response(s)
+CMGD=<index>[,<delflag>]	*+CMS ERROR: <err>*
+CMGD=?	+CMGD: (list of supported <index>s)[,(list of supported <delflag>s)]

Supported parameter values

<index>: 0..255

< delflag >: See [07.05]

5.1.5 Result code commands

5.1.5.1 Received SMSPP indication +CMTI

Result code
+CMTI: <mem>,<index>

Supported and default parameter values

<mem>: **"SM"**

<index>: given by the SIM card

5.1.5.2 Received SMSPP content +CMT

Result code	mode
+CMT: [<alpha>],<length><CR><LF><pdu>	PDU
+CMT:<oa>,[<alpha>],<scts>*[,<tooa>,<fo>,<pid>,<dcs>,<sca>,<tosca>,<length>]*<CR><LF><data>	Text .About parameters in italics, refer command Show Text Mode Parameters +CSDH

Parameter values

All parameters are extracted from received message

5.1.5.3 Received CBM Content +CBM

Result code	mode

+CBM: <length><CR><LF><pdu>	PDU
+CBM: <sn>,<mid>,<dcs>,<page>,<pages><CR><LF><data>	text

Parameter values

All parameters are extracted from received message

5.1.5.4 Received SMS status report Content +CDS

Result code	mode
+CDS: <length><CR><LF><pdu>	PDU
+CDS: <fo>,<mr>,<ra>,<tora>,<scts>,<dt>,<st>	text

Restriction

If option AT_CMD_IMPROVEMENT_FTR is disabled, result code command not available

Parameter values

All parameters are extracted from received message

5.1.5.5 Message Service Failure +CMS ERROR

Result code
+CMS ERROR: <err>

Supported parameter values

<err>: See [07.05]

5.2 Hayes proprietary commands

5.2.1 Standard Hayes commands

5.2.1.1 Communication option B

Command	Possible response(s)
B[<standard>]	

Restriction

The responses of this command are compliant with the recommendation but this command has no effect.

Supported parameter values

<standard>: 0..99

5.2.1.2 Negotiate handshake option N

Command	Possible response(s)
N[<option>]	

Restriction

The responses of this command are compliant with the recommendation but this command has no effect.

Supported parameter values

<option>: 0..9

5.2.1.3 Ring count S1

Command	Possible response(s)
S1?	<num>

Description

Read command returns the number <num> of ring occurrences of last incoming data, fax or voice call.

Supported and default parameter values

<num> : 0..255. See Data stored by &W for default value.

5.2.1.4 Escape character S2

Command	Possible response(s)
S2=<escp>	
S2?	<escp>

Description

Execution command saves the decimal value <escp> of the ASCII character used for the escape character.

Supported and default parameter values

<escp>: **43** (i.e. '+')

5.2.1.5 DTMF Dialing speed S11

Command	Possible response(s)
S11=<time>	

Restriction

The responses of this command are compliant with the recommendation but this command has no effect.

Supported and default parameter values

<time>: 0..999

5.2.1.6 Extended result code W

Command	Possible response(s)
W<mode>	

Description

Execution command determine which <mode> of result code is to be use as extended result code in addition to the CONNECT result code.

Supported and default parameter values

<mode>: **0** (only result code CONNECT supported)

5.2.2 Advanced Hayes commands

5.2.2.1 Flow control option &K

Command	Possible response(s)
&K<mode>	

Restriction

If option HARDWARE_FLOW_CONTROL is enabled only hardware or no flow control authorised else software flow control possible

Description

Execution command set the flow control <mode>.

Supported and default parameter values

<mode> : See Data impacted by &F for default value

0: Disable all flow control.

3: Enable bi-directional hardware flow control.(Only supported if using an USB data cable).

4: Enable XON/XOFF flow control.(Only supported if not using an USB data cable).

5.2.2.2 DSR option &S

Command	Possible response(s)
&S[<override>]	

Restriction

If option AT_CMD_IMPROVEMENT_FTR is disabled, the responses of this command are compliant with the recommendation but this command has no effect.

Description

Set DSR signal

Supported parameter values

<override>: 0,1 (See Data stored by &W for default value)

5.2.2.3 Configuration profile &V

Command	Possible response(s)
&V<profile>	

Description

Execution command displays the active and stored <profile>.

Refer to Data stored by &W to know which command are part of displayed profile.

Supported and default parameter values

<profile>: **0**

5.2.2.4 Store active profile &W

Command	Possible response(s)
&W<profile>	

Description

Execution command stores the active <profile>. Two profiles are supported but they are equivalent.

Refer to Data stored by &W to know which command is part of saved profile.

Supported and default parameter values

<profile>: **0**, 1

5.3 [V25ter] commands

5.3.1 Call control commands

5.3.1.1 Answer A

Command	Possible response(s)
A	

Supported and default parameter values

N/A

5.3.1.2 Dial D

Command	Possible response(s)
D<str>[<clir>][<cug>][<semicolon>]	

Clarification

If option AT_CMD_IMPROVEMENT_FTR is disabled result code "OK" is send to PC immediately after ATD else result code "OK" is send to PC when a voice call is established with the remote.
This behaviour described in the last case is no very compliant with the recommendation but follow the de facto standards available on the market (Wavecom and Siemens modules).

Restriction

<clir>, <cug> and characters *T, P, D, !*, @ and , in <str> are ignored.

If SAT call control modifies the call into an SS or USSD and error is return to the TE.

Supported parameter values

<clir>: *i I*

<cug>: *g G*

<str>: a string of the characters : *0 1 2 3 4 5 6 7 8 9 * # + a b c d A B C D , T P t p ! W w @*

or >[<mem>]<n> where:

<mem>: one of supported values of <storage> in +CPBS command

<n>: index in this <mem>

<semicolon>: *;*

5.3.1.3 Hang up H

Command	Possible response(s)
H[<type>]	

Restriction

Set command also ends active PDP if exists.

Supported and default parameter values

<type>: **0**

5.3.1.4 Monitor speaker loudness L

Command	Possible response(s)
L [<volume>]	

Restriction

The responses of this command are compliant with the recommendation but this command has no effect.

Supported parameter values

<volume>: 0..9

5.3.1.5 Monitor speaker mode M

Command	Possible response(s)
M[<mode>]	

Restriction

The responses of this command are compliant with the recommendation but this command has no effect.

Supported parameter values

<mode>: 0..9

5.3.1.6 Online O

Command	Possible response(s)
O[<type>]	

Supported and default parameter values

<type>: **0**

5.3.1.7 Pulse dialing P

Command	Possible response(s)
P	

Restriction

The response of this command is compliant with the recommendation but this command has no effect.

5.3.1.8 Automatic answer S0

Command	Possible response(s)
S0=<num>	
S0?	<num>

Supported and default parameter values

<num> : 0..255 . See Data stored by &W for default value.

5.3.1.9 Pause before blind dialing S6

Command	Possible response(s)
S6=<time>	

Restriction

The responses of this command are compliant with the recommendation but this command has no effect.

Supported parameter values

<time>: 0..999

5.3.1.10 Connection completion timeout S7

Command	Possible response(s)
S7=<time>	
S7?	<time>

Supported parameter values

<time> : 1..255 . See Data stored by &W for default value.

5.3.1.11 Comma dial modifier time S8

Command	Possible response(s)
S8=<time>	
S8?	<time>

Restriction

Since comma is ignored in D command, this command has no effect.

Supported parameter values

<time> : 0..255. See Data stored by &W for default value.

5.3.1.12 Automatic disconnect delay S10

Command	Possible response(s)
S10=<time>	
S10?	<time>

Restriction

The responses of this command are compliant with the recommendation but this command has no effect.

Supported parameter values

<time> : 1..254. See Data stored by &W for default value.

5.3.1.13 Tone dialing T

Command	Possible response(s)
T	

Restriction

The response of this command is compliant with the recommendation but this command has no effect.

5.3.2 Generic TA control command

5.3.2.1 Repeat last command A/

Command	Possible response(s)
A/	

5.3.2.2 Identification information I

Command	Possible response(s)
I[<info>]	

Supported and default parameter values

<info>: **0**: Model identifier

1,2,6,7: ignored

3: Software version

4: if the switch ATP_REMOVE_TCD_NB_TMP is active:
- manufacturer id and model id
else
- manufacturer id and TCD number

5: manufacturer id.

5.3.2.3 Reset default configuration Z

Command	Possible response(s)
Z[<profile>]	

Supported and default parameter values

<profile>: **0**, 1

See Data reset by Z to know which parameter is reset.

5.3.2.4 Factory defined configuration &F

Command	Possible response(s)
&F[<fact>]	

Supported and default parameter values

<fact>: **0**

See Data impacted by &F to know which parameter is reset.

5.3.2.5 Complete capabilities list +GCAP

Command	Possible response(s)
+GCAP	+GCAP:<list>

Supported and default parameter values

<list>: **+FCLASS,+CGSM**

5.3.2.6 Manufacturer identification +GMI

Command	Possible response(s)
+GMI	<manufacturer> *+CME ERROR: <err>*
GMI=?	

See Manufacturer identification +CGMI

5.3.2.7 Model identification +GMM

Command	Possible response(s)
+GMM	<model> *+CME ERROR: <err>*
+GMM=?	

See Model identification +CGMM

5.3.2.8 Revision identification +GMR

Command	Possible response(s)
+GMR	<revision> *+CME ERROR: <err>*
+GMR=?	

See Model identification +CGMM

5.3.2.9 Serial number identification +GSN

Command	Possible response(s)
+GSN	<sn> *+CME ERROR: <err>*
+GSN=?	

See Product serial number identification +CGSN

5.3.3 TA-TE interface command

5.3.3.1 Echo E

Command	Possible response(s)
E[<echo>]	

Supported and default parameter values

<echo> : 0, 1 . See Data stored by &W for default value.

5.3.3.2 Result code suppression Q

Command	Possible response(s)
Q[<result>]	

Supported and default parameter values

<result> : 0, 1. See Data stored by &W for default value.

5.3.3.3 Line termination character S3

Command	Possible response(s)
S3=<char>	
S3?	<char>

Supported and default parameter values

<char> : 13 : <CR> carriage return.

See Data stored by &W for default value.

5.3.3.4 Response formatting character S4

Command	Possible response(s)
S4=<char>	
S4?	<char>

Supported and default parameter values

<char> : 10 : <LF> line feed.

See Data stored by &W for default value.

5.3.3.5 Line editing character S5

Command	Possible response(s)
S5=<char>	
S5?	<char>

Supported and default parameter values

<char> : 8 : <BS> back space.

See Data stored by &W for default value.

5.3.3.6 TA response format V

Command	Possible response(s)
V[<format>]	

Supported and default parameter values

<format> : 0, 1. Data stored by &W for default value.

5.3.3.7 Result code selection and call progress monitoring control X

Command	Possible response(s)
X[<result>]	

Supported and default parameter values

<result> : 0..4. See Data stored by &W for default value.

5.3.3.8 Data carrier detect (DCD) behavior &C

Command	Possible response(s)
&C[<behavior>]	

Supported and default parameter values

<behavior> : 0, 1 . Data stored by &W for default value.

5.3.3.9 Data Terminal Ready (DTR) behavior &D

Command	Possible response(s)
&D[<behavior>]	

Clarification

In case of "Drop DTR", if the signal remains in the off state more than two seconds, it is considered as a PC disconnection and no "OK" is sent to the TE(cable considered unplugged). The behavior of the command complies to the recommendation description only with DTR pulses (pulse = DTR signal stay in the off state unless 2 seconds).

Supported and default parameter values

<behavior>: 0, 1, 2. See Data stored by &W for default value.

5.3.3.10 Fixed TE rate +IPR

Command	Possible response(s)
+IPR=<rate>	
+IPR?	+IPR: <rate>
+IPR=?	+IPR: (list of supported auto-detectable<rate>s)[,(list of supported fixed-only<rate>s)]

Restriction

The data rate value supported by the hardware can be modified according to the customer data channel implementation. In this case the customer has to modify this AT command in the ATPCTM module.

Supported parameter values

<rate>: 2400, 4800, 9600, 19200, 115200 for serial data cable with AUTOBAUDING_FTR

115200 if ATP_NO_AUTOBAUDING_FTR enable

5.3.3.11 TE-TA character framing +ICF

Command	Possible response(s)
+ICF=[<format>[,<parity>]]	
+ICF?	+ICF:<format>,<parity>
+ICF=?	+ICF:(list of supported <format>s), (list of supported<parity>s)

Supported and default parameter values

<format>: **3**

<parity>: **3**

5.3.3.12 TE-TA local flow control +IFC

Command	Possible response(s)
+IFC=[<TA_by_TE>[,<TE_by_TA>]]	
+IFC?	+IFC:< TA_by_TE >,< TE_by_TA >
+IFC=?	+IFC:(list of supported <TA_by_TE>s), (list of supported<TE_by_TA >s)

Restriction

If option HARDWARE_FLOW_CONTROL) is enabled or with the USB data cable, hardware flow control or no flow control are allowed, else software flow control or no flow control are allowed.

Supported and default parameter values

If option HARDWARE_FLOW_CONTROL is enabled or with the USB data cable

<TA_by_TE>: 0, 2

<TE_by_TA>: 0, 2

Else

<TA_by_TE>: 0, 1

<TE_by_TA>: 0, 1

Endif

See Data stored by &W for default value.

5.3.4 Result code commands

5.3.4.1 Engaged signal BUSY

Result code	V
BUSY	1
7	0

5.3.4.2 Connection established CONNECT

Result code	Q	V
CONNECT<text>	>0	1
CONNECT	0	
1		0

Supported parameter values

<text>: 2400, 4800, 9600

5.3.4.3 Invalid command line ERROR

Result code	V
ERROR	1
4	0

5.3.4.4 Connection completion timeout NO ANSWER

Result code	V
NO ANSWER	1
8	0

5.3.4.5 Connection terminated or connection attempt fails NO CARRIER

Result code	V
NO CARRIER	1
3	0

5.3.4.7 Command execution acknowledge OK

Result code	V
OK	1
0	0

5.3.4.8 Incoming call signal RING

Result code	+CRC	V
+CRING<type>	1	
RING	0	1
2		0

Supported and default parameter values

<type>: see Ringing indication +CRING

5.4 [27.007] commands

5.4.1 General commands

5.4.1.1 Manufacturer identification +CGMI

Command	Possible response(s)
+CGMI	<manufacturer> *+CME ERROR: <err>*
+CGMI=?	

Supported parameter values

<manufacturer>: read from configuration parameter

5.4.1.2 Model identification +CGMM

Command	Possible response(s)
+CGMM	<model> *+CME ERROR: <err>*
+CGMM=?	

Supported parameter values

<model>: read mobile name from configuration parameter

5.4.1.3 Revision identification +CGMR

Command	Possible response(s)
+CGMR	<revision> *+CME ERROR: <err>*
+CGMR=?	

Supported parameter values

<revision>: read revision date from configuration parameter

5.4.1.4 Product serial number identification +CGSN

Command	Possible response(s)

+CGSN	<sn> *+CME ERROR: <err>*
+CGSN=?	

Supported parameter values

<sn>: International mobile equipment identity (IMEI)

5.4.1.5 Select TE character set +CSCS

Command	Possible response(s)
+CSCS=[<chset>]	
+CSCS?	+CSCS: <chset>
+CSCS=?	+CSCS: (list of supported <chset>s)

Restriction

If option AT_CMD_IMPROVEMENT_FTR is disabled, <chset>="UCS2" and "IRA" are not supported

Supported and default parameter values

<chset>: "GSM", "UCS2", "IRA". See Data impacted by &F for default value.

5.4.1.6 Request international mobile subscriber identity +CIMI

Command	Possible response(s)
+CIMI	<IMSI> *+CME ERROR: <err>*
+CIMI=?	

Restriction

If option AT_CMD_IMPROVEMENT_FTR is disabled, command not available

Supported parameter values

<IMSI>: International Mobile Subscriber Identity (string without double quotes).

5.4.1.7 Multiplexing mode +CMUX

Command	Possible response(s)
+CMUX=<mode>[,<subset>[,<port_speed>[,<N1>[,<T1>[,<N2>[,<T2>[,<T3>[,<k>]]]]]]]]	*+CME ERROR: <err>*
+CMUX?	+CMUX: <mode>,[<subset>],<port_speed>,<N1>,<T1>, <N2>,<T2>,<T3>[,<k>] *+CME ERROR: <err>*
+CMUX=?	+CMUX: (list of supported <mode>s),(list of supported <subset>s),(list of supported <port_speed>s),(list of supported <N1>s),(list of supported <T1>s),(list of supported <N2>s),(list of supported <T2>s),(list of supported <T3>s),(list of supported <k>s)

Restriction

If option MUX_07_10_FTR is disabled, command not available.
Value 2 for subset parameter is not supported because CMUX is not running in error recovery mode.

Only two channels can be supported at the same time, one in data mode and the other in command mode. The activation of the MUX_07_10_FTR compilation requires the 7.10 protocol (see [07.10]).

Supported parameter values

See [27.007] for details about the parameters.

<mode> (Multiplexer Transparency Mechanism)

0, 1

<subset>:

0, 1

<port_speed> (transmission rate):

1, 2, 3, 4, 5, 6

<N1> (maximum frame size):

1- 32768
Default Value: **31** (64 if Advanced option is used)

<T1> (acknowledgement timer in units of ten milliseconds):

1-255, where **10** is default (100 ms)

<N2> (maximum number of re-transmissions):

0-100, where **3** is default

<T2> (response timer for the multiplexer control channel in units of ten milliseconds):

2-255, where **30** is default (300 ms)
NOTE: T2 must be longer than T1.

<T3> (wake up response timer in seconds):

1-255, where **10** is default

<k> (window size, for Advanced operation with Error Recovery options):

1-7, where **2** is default

Clarification

The parameters given in the "Set" command will be stored in non-volatile memory. See also paragraph 6.6.

5.4.2 Call control commands

5.4.2.1 Select type of address +CSTA

Command	Possible response(s)
+CSTA=[<type>]	
+CSTA?	+CSTA: <type>
+CSTA=?	+CSTA: (list of supported <type>s)

Supported and default parameter values

<type>: 129, 145. See Data impacted by &F for default value.

5.4.2.2 Call mode +CMOD

Command	Possible response(s)
+CMOD=[<mode>]	
+CMOD?	+CMOD: <mode>
+CMOD=?	+CMOD: (list of supported <mode>s)

Supported and default parameter values

<mode>: 0. See Data impacted by &F for default value.

5.4.2.3 Hang-up call +CHUP

Command	Possible response(s)
+CHUP	
+CHUP=?	

Restriction

Since only single mode is supported, the execution of the command always disconnects active call.

5.4.2.4 Select bearer service type +CBST

Command	Possible response(s)
+CBST=[<speed>[,<name>[,<ce>]]]	
+CBST?	+CBST: <speed>,<name>,<ce>
+CBST=?	+CBST: (list of supported <speed>s),(list of supported <name>s),(list of supported <ce>s)

Supported and default parameter values

<speed>: 0,7, 71

<name>: 0

<ce>: 1

See Other stored data for default value.

5.4.2.5 Radio link protocol +CRLP

Command	Possible response(s)
+CRLP=[<iws>[,<mws>[,<T1>[,<N2>[,<ver>[,<T4>]]]]]]	
+CRLP?	+CRLP: <iws>,<mws>,<T1>,<N2>[,<ver1>[,<T4>]] [<CR><LF>+CRLP: <iws>,<mws>,<T1>,<N2>[,<ver2>[,<T4>]] [...]]
+CRLP=?	+CRLP: (list of supported <iws>s),(list of supported <mws>s), (list of supported <T1>s),(list of supported <N2>s)[,<ver1> [,(list of supported <T4>s)]] [<CR><LF>+CRLP: (list of supported <iws>s),(list of supported <mws>s),(list of supported <T1>s),(list of supported <N2>s) [,<ver1>[,(list of supported <T4>s)]] [...]]

Restriction

<T4> is never set in response and ignored in set command.

Supported and default parameter values

<iws>: 0..61

<mws>: 0..61

<T1>:44..255

<N2>: 1..255

<ver>: 0

<T4>: 7

See Data impacted by &F for default value.

5.4.2.6 Service reporting control +CR

Command	Possible response(s)
+CR=[<mode>]	
+CR?	+CR: <mode>
+CR=?	+CR: (list of supported <mode>s)

Supported and default parameter values

<mode>: 0,1. See Data impacted by &F for default value.

5.4.2.7 Extended error report +CEER

Command	Possible response(s)
+CEER	+CEER: <report>
+CEER=?	

Restriction

No GPRS error cause are display.

Supported parameter values

<report>: Cause Select: <cause_select> cause: <cause>"

<cause select>	<cause>
0: No cause	0: No cause
16: Service provider	0: Unknown
	1: Not Allowed
	2: No cause
	6: Wrong parameter
	9: Network access not allowed
	20: all call instances are used
	21 ACM over ACM Max
	22 invalid AOC element
	23 SIM increase not allowed
	24 switch off
	25 Unknown call id
	28 barred
65: Local cause	1: state error
	2: no call entity
	3: wrong TI
	6: DTMF buffer overflow
	7: call disconnected
	17: No cell available
	32: Local rejection
	33: PLMN not allowed

	34: emergency call not possible
	35: authentication rejected
	36: network rejection
	37: LA not allowed
	38: Local timeout
	39: server congestion
	40: local data rejection
	48: failed replace PDP context
66: MM network cause	See [04.08]
67: CC network cause	See [04.08]
69: RP cause	See [04.08]
71: SIM cause	0: Unknown problem
	1: Memory problem
	2: File Id not found
	6: Increase problem
	7: Technical problem
	11: Command not allowed
	15: SIM card out
73: SM cause	See [04.08]

See Data impacted by &F for default value.

5.4.2.8 Cellular result codes +CRC

Command	Possible response(s)
+CRC=[<mode>]	
+CRC?	+CRC: <mode>
+CRC=?	+CRC: (list of supported <mode>s)

Supported and default parameter values

<mode>: 0,1. See Data impacted by &F for default value.

5.4.2.9 Voice hang up control +CVHU

Command	Possible response(s)
+CVHU==[<mode>]	
+CVHU?	+CVHU: <mode>
+CVHU=?	+CVHU: (list of supported <mode>s)

Restriction

If option AT_CMD_IMPROVEMENT_FTR is disabled, command not available

Clarification

If DTR signal is inactive (if DTR is not a pulse), then “Drop DTR” does not respond “OK”.

Supported and default parameter values

<mode>: see [27.007] (See Data impacted by &F for default value).

5.4.3 Call control result code commands

5.4.3.1 Service reporting +CR

Result code

+CR: <serv>

Supported parameter values

<serv>: "ASYNC","SYNC","REL ASYNC","REL SYNC","GPRS"

5.4.3.2 Ringing indication +CRING

Result code
+CRING: <type>

Supported parameter values

<type>: "ASYNC","SYNC","REL ASYNC","REL SYNC","FAX","VOICE"

5.4.4 Network service related commands

5.4.4.1 Subscriber number +CNUM

Command	Possible response(s)
+CNUM	+CNUM: [<alpha1>],<number1>,<type1>[,<speed>,<service>[,<itc>]] [<CR><LF>+CNUM: [<alpha2>],<number2>,<type2>[,<speed>,<service> [,<itc>]] [...]] *+CME ERROR: <err>*
+CNUM=?	

Parameter values

All parameters are extracted from MSISDN list

5.4.4.2 Network registration +CREG

Command	Possible response(s)
+CREG=[<n>]	
+CREG?	+CREG: <n>,<stat>[,<lac>,<ci>] *+CME ERROR: <err>*
+CREG=?	+CREG: (list of supported <n>s)

Supported and default parameter values

<n>: 0,2 . See Data impacted by &F for default value.

<stat>: 0, 1, 2, 3, 4, 5

<lac>,<ci> are extracted from network registration result

5.4.4.3 Operator selection +COPS

Command	Possible response(s)
+COPS=[<mode>[,<format>[,<oper>]]]	*+CME ERROR: <err>*
+COPS?	+COPS: <mode>[,<format>,<oper>] *+CME ERROR: <err>*
+COPS=?	+COPS: [list of supported (<stat>,long alphanumeric <oper> ,short alphanumeric <oper>,numeric <oper>)s] [,,(list of supported <mode>s),(list of supported <format>s)] *+CME ERROR: <err>*

Supported and default parameter values

<mode>: 0, 1, 3, 4. See Data impacted by &F for default value.

<format>: **0**, 2,

<oper>: see [27.007]

<stat>: 0, 1, 2, 3

5.4.4.4 Facility lock +CLCK

Command	Possible response(s)
+CLCK=<fac>,<mode>[,<passwd>[,<class>]]	*+CME ERROR: <err>* ***when <mode>=2 and command successful****:* +CLCK: <status>[,<class1>[<CR><LF>+CLCK: <status>,<class2>[…]]
+CLCK=?	+CLCK: (list of supported <fac>s) *+CME ERROR: <err>*

Clarification

the value "SC" of the <fac> parameter correspond to PIN1 code

the value "PN" of the <fac> parameter correspond to NCK code

the value "PU" of the <fac> parameter correspond to NSCK code

the value "PP" of the <fac> parameter correspond to SPCK code

Restriction

If option AT_CMD_IMPROVEMENT_FTR is disabled, command not available

If SAT call control modifies the SS an error is return to the TE.

Supported parameter values

<fac>: "SC","AO", "OI", "OX", "AI", "IR", "AB", "FD", "PN", "PU", "PP" (see [27.007])

<mode >: 0, 1, 2 (see [27.007])

<status>: 0, 1 (see [27.007])

<passwd>: see [27.007]

<classx>: 1, 2, 4, 7 (see [27.007])

5.4.4.5 Change password +CPWD

Command	Possible response(s)
+CPWD=<fac>,<oldpwd>,<newpwd>	*+CME ERROR: <err>*
+CPWD=?	+CPWD: list of supported (<fac>,<pwdlength>)s *+CME ERROR: <err>*

Restriction

If option AT_CMD_IMPROVEMENT_FTR is disabled, command not available

If SAT call control modifies the SS an error is return to the TE.

Clarification

the value “SC” of the <fac> parameter correspond to PIN1 code

Supported and default parameter values

<fac>: “AO”, “OI”, “OX”, “AI”, “IR”, “AB”, “P2”, “SC” (see [27.007])

<oldpwd>: see [27.007]

<newpwd>: see [27.007]

<pwdlength>: see [27.007]

5.4.4.6 Calling line identification presentation +CLIP

Command	Possible response(s)
+CLIP=[<n>]	
+CLIP?	+CLIP: <n>, <m>
+CLIP=?	+CLIP: (list of supported <n>s)

Restriction

If option AT_CMD_IMPROVEMENT_FTR is disabled, command not available**.**

If SAT call control modifies the SS or an error is return to the TE.

Supported parameter values

<n>: see [27.007] (See Data impacted by &F for default value)

<m>: see [27.007]

5.4.4.7 Calling line identification restriction +CLIR

Command	Possible response(s)
+CLIR=[<n>]	
+CLIR?	+CLIR: <n>, <m>
+CLIR=?	+CLIR: (list of supported <n>s)

Restriction

If option AT_CMD_IMPROVEMENT_FTR is disabled, command not available

If SAT call control modifies the SS an error is return to the TE.

Supported parameter values

<n>: see [27.007] (See Data impacted by &F for default value)

<m>: see [27.007]

5.4.4.8 Connected line identification presentation +COLP

Command	Possible response(s)
+COLP=[<n>]	
+COLP?	+COLP: <n>, <m>
+COLP=?	+COLP: (list of supported <n>s)

Restriction

If option AT_CMD_IMPROVEMENT_FTR is disabled, command not available

If SAT call control modifies the SS an error is return to the TE.

Supported and default parameter values

<n>: see [27.007] (See Data impacted by &F for default value)

<m>: see [27.007]

5.4.4.9 Call forwarding number and conditions +CCFC

Command	Possible response(s)
+CCFC=<reason>,<mode>[,<number>[,<type>[,<class>[,<subaddr>[,<satype>[,<time>]]]]]]	*+CME ERROR: <err>* **when <mode>=2 and command successful:** +CCFC: <status>,<class1>[,<number>,<type>[,<subaddr>,<satype>[,<time>]]][<CR><LF>+CCFC: <status>,<class2>[,<number>,<type>[,<subaddr>,<satype>[,<time>]]][…]
+CCFC=?	+CCFC: (list of supported <reason>s)

Restriction

If option AT_CMD_IMPROVEMENT_FTR is disabled, command not available

If SAT call control modifies the SS an error is return to the TE.

Supported parameter values

<reason>: see [27.007]

<mode>: see [27.007]

<number>: see [27.007]

<type>: see [27.007]

<classx>: 1,2,4,7 (see [27.007])

<time>: see [27.007]

<status>: see [27.007]

5.4.4.10 Call waiting +CCWA

Command	Possible response(s)
+CCWA=[<n>[,<mode>[,<class>]]]	*+CME ERROR: <err>* **when <mode>=2 and command successful** +CCWA: <status>,<class1>[<CR><LF>+CCWA: <status>,<class2> […]]
+CCWA?	+CCWA: <n>
+CCWA=?	+CCWA: (list of supported <n>s)

Restriction

If option AT_CMD_IMPROVEMENT_FTR is disabled, command not available.

If SAT call control modifies the SS an error is return to the TE.

Supported parameter values

<n>: see [27.007]

<mode>: see [27.007]

<classx>: 1, 2, 4, 7 (see [27.007])

5.4.4.11 Call related supplementary services +CHLD

Command	Possible response(s)
+CHLD=[<n>]	*+CME ERROR: <err>*
+CHLD=?	[+CHLD: (list of supported <n>s)

Restriction

This command is designed to manage only speech call and waiting MT data call.

Supported and default parameter values

<n>: 0, 1, 1x, 2, 2x, 3, 4 (see [27.007])

5.4.4.12 Advice of Charge +CAOC

Command	Possible response(s)
+CAOC[=<mode>]	[+CAOC: <ccm>] +CME ERROR: <err>
+CAOC?	+CAOC: <mode>
+CAOC=?	[+CAOC: (list of supported <mode>s]

Restriction

If option AT_CMD_FOR_AOC_FTR is disabled, command not available.

Supported parameter values

<mode>: 0, 1, 2. See "Other stored data in ATP section" for default value.

<ccm>: see [27.007]

5.4.4.13 Unstructured supplementary service data +CUSD

Command	Possible response(s)
+CUSD=[<n>[,<str>[,<dcs>]]]	*+CME ERROR: <err>*
+CUSD?	+CUSD: <n>
+CUSD=?	+CUSD: (list of supported <n>s)

Restriction

If option AT_CMD_IMPROVEMENT_FTR is disabled, command not available

If SAT call control modifies the USSD an error is return to the TE.

Supported and default parameter values

<n>: see [27.007]

<str>: see [27.007]

<dcs>: 0, 2 (see [27.007])

5.4.4.14 Supplementary service notifications +CSSN

Command	Possible response(s)
+CSSN=[<n>[,<m>]]	
+CSSN?	+CSSN: <n>,<m>
+CSSN=?	+CSSN: (list of supported <n>s),(list of supported <m>s)

Restriction

If option AT_CMD_IMPROVEMENT_FTR is disabled, command not available

Supported and default parameter values

<n>: **0**, 1 (see [27.007]; See Data impacted by &F for default value)

<m>: **0**, 1 (see [27.007]; See Data impacted by &F for default value)

5.4.4.15 List current calls +CLCC

Command	Possible response(s)
+CLCC	[+CLCC: <id1>,<dir>,<stat>,<mode>,<mpty>[<CR><LF>+CCLC: <id2>,<dir>,<stat>,<mode>,<mpty> […]]] +CME ERROR: <err>
+CLCC=?	

Restriction

If option AT_CMD_IMPROVEMENT_FTR is disabled, command not available

Supported parameter values

<idx>: see [27.007]

<dir>: see [27.007]

<stat>: see [27.007]

<mode>: see [27.007]

<mpty>: see [27.007]

5.4.4.16 Preferred operator list +CPOL

Command	Possible response(s)
+CPOL=[<index>][,<format>[,<oper>]]	*+CME ERROR: <err>*
+CPOL?	+CPOL: <index1>, <format>, <oper1> [<CR><LF>+CPOL: <index2>,<format>,<oper2>[…]] *+CME ERROR: <err>*
+CPOL=?	+CPOL: (list of supported <index>s), (list of supported <format>s) *+CME ERROR: <err>*

Restriction

If option AT_CMD_IMPROVEMENT_FTR is disabled, command not available

Supported parameter values

<index>: see [27.007]

<format>: 0, 1, 2 (see [27.007])

<opern> : see [27.007]

5.4.4.17 Read operator names +COPN

Command	Possible response(s)
+COPN	+COPN: <numeric1>, <alpha1> [<CR><LF>+COPN : <numeric2>,<alpha2>[…]] *+CME ERROR: <err>*
+COPN=?	

Restriction

If option AT_CMD_IMPROVEMENT_FTR is disabled, command not available

Supported parameter values

<numericn>: see [27.007]

<alphan>: see [27.007]

5.4.5 Network service related result code commands

5.4.5.1 Service reporting +CREG

Result code
+CREG: <stat>[,<lac>,<ci>]

Supported parameter values

<stat>: 0, 1, 2, 3, 4, 5

<lac>,<ci> are extracted from network registration result

5.4.5.2 Calling line identification presentation +CLIP

Result code
+CLIP: <number>, <type>[,<subaddr>,<satype>[,,<CLI validity>]]

Restriction

If option AT_CMD_IMPROVEMENT_FTR is disabled, URC not available

Supported parameter values

<number>: see [27.007]

<type>: see [27.007]

<subaddr>: see [27.007]

<satype>: see [27.007]

<CLI validity> : see [27.007]

5.4.5.3 Connected line identification presentation +COLP

Result code
+COLP: <number>, <type>[,<subaddr>,<satype>]

Restriction

If option AT_CMD_IMPROVEMENT_FTR is disabled, URC not available

Supported parameter values

<number>: see [27.007]

<type>: see [27.007]

<subaddr>: see [27.007]

<satype>: see [27.007]

5.4.5.4 Call waiting +CCWA

Result code
+CCWA: <number>,<type>,<class>,[,<CLI validity>]

Restriction

If option AT_CMD_IMPROVEMENT_FTR is disabled, URC not available

Supported parameter values

<number>: see [27.007]

<type>: see [27.007]

<class>: see [27.007]

<CLI validity>: see [27.007]

5.4.5.5 Unstructured supplementary service data +CUSD

Result code
+CUSD: <m>[,<str>,<dcs>]

Restriction

If option AT_CMD_IMPROVEMENT_FTR is disabled, URC not available

Supported parameter values

<m>: 0, 1, 2(see [27.007])

<str>: see [27.007]

<dcs>: see [27.007]

5.4.5.6 Supplementary service notification +CSSI

Result code
+CSSI: <code1>

Restriction

If option AT_CMD_IMPROVEMENT_FTR is disabled, URC not available

Supported parameter values

<code1>: 0, 1, 2, 3, 5, 6, 7 (see [27.007])

5.4.5.7 Supplementary service notification +CSSU

Result code
+CSSU: <code2>

Restriction

If option AT_CMD_IMPROVEMENT_FTR is disabled, URC not available

Supported parameter values

<code2>: 0, 2, 3, 4, 5 (see [27.007])

5.4.5.8 Current Call Meter notification +CCCM

Result code
+CCCM: <value>

Clarification

This unsolicited result code is sent whenever the CCM value changes, but not more than once every 10s. This URC is activated when CAOC is in mode 2.

Restriction

If option AT_CMD_FOR_AOC_FTR is disabled, URC not available

Supported parameter values

<value >: 0.. 0xFFFFFF

5.4.6 Control and status command

5.4.6.1 Phone activity status +CPAS

Command	Possible response(s)
+CPAS	+CPAS: <pas> *+CME ERROR: <err>*
+CPAS=?	+CPAS: (list of supported <pas>s) *+CME ERROR: <err>*

Supported parameter values

<pas>: 0, 2, 3, 4

5.4.6.2 Enter PIN +CPIN

Command	Possible response(s)
+CPIN=<pin>[,<newpin>]	*+CME ERROR: <err>*
+CPIN?	+CPIN: <code> *+CME ERROR: <err>*
+CPIN=?	

Restriction

If option AT_CMD_IMPROVEMENT_FTR is disabled, command not available

Clarification

PH-NET PIN correspond to NCK code

PH-NETSUB PIN correspond to NSCK code

PH-SP PIN correspond to SPCK code

PH-CORP PIN correspond to CCK code

Supported parameter values

<pin>, <newpin>: see [27.007]

<code>: “READY”, “SIM PIN1”, “SIM PUK1”, “SIM PIN2”, “SIM PUK2”, “PH-NET PIN”, “PH-NETSUB PIN”, “PH-SP PIN” and “PH-CORP PIN”(see [27.007])

Error result code

When the pin code is required, the error result code is a CMS ERROR for the AT commands belong to the [07.05] and a CME ERROR for all the other AT commands

5.4.6.3 Battery charge +CBC

Command	Possible response(s)
+CBC	+CBC: <bcs>,<bcl> *+CME ERROR: <err>*
+CBC=?	+CBC: (list of supported <bcs>s),(list of supported <bcl>s)

Supported parameter values

<bcs>: 0..3

<bcl>: 0..100

5.4.6.4 Signal quality +CSQ

Command	Possible response(s)
+CSQ	+CSQ: <rssi>,<ber> *+CME ERROR: <err>*
+CSQ=?	+CSQ: (list of supported <rssi>s),(list of supported <ber>s)

Supported parameter values

<rssi>: 0..31

<ber>: 99

5.4.6.5 Mobile Equipment control mode +CMEC

Command	Possible response(s)
+CMEC=[<keyp>[,<disp>[,<ind>]]]	*+CME ERROR: <err>*
+CMEC?	+CMEC: <keyp>,<disp>,<ind>
+CMEC=?	+CMEC: (list of supported <keyp>s),(list of supported <disp>s),(list of supported <ind>s)

Supported parameter values

<keyp>: 0

<disp>: 0

<ind>: 0

5.4.6.6 Indicator control +CIND

Command	Possible response(s)
+CIND=[<ind>[,<ind>[,…]]]	*+CME ERROR: <err>*
+CIND?	+CIND: <ind>[,<ind>[,...]] *+CME ERROR: <err>*
+CIND=?	+CIND: (<descr>,(list of supported <ind>s)) [,(<descr>,(list of supported <ind>s))[,...]] *+CME ERROR: <err>*

Restriction

If option AT_CMD_IMPROVEMENT_FTR is disabled, <descr> = `"service", "message", "call", "roam", "smsfull" are not available.`

It is impossible to set indicator controls.

Supported parameter values

```
<descr>: "battchg"

        <ind>: 0..5 (see [27.007])

<descr>: "signal"

        <ind>: 0..4 (see [27.007])

<descr>: "service"

        <ind>: 0,1 (see [27.007] _ Network available or not)

<descr>: "message"

        <ind>: 0,1 (see [27.007])

<descr>: "call"

        <ind>: 0,1 (see [27.007])

<descr>: "roam"

        <ind>: 0,1 (see [27.007])

<descr>: "smsfull"

        <ind>: 0,1 (see [27.007])
```

5.4.6.7 Mobile Equipment event reporting +CMER

Command	Possible response(s)
+CMER=[<mode>[,<keyp>[,<disp>[,<ind>[,<bfr>]]]]]	*+CME ERROR: <err>*
+CMER?	+CMER: <mode>,<keyp>,<disp>,<ind>,<bfr>
+CMER=?	+CMER: (list of supported <mode>s),(list of supported <keyp>s),(list of supported <disp>s),(list of supported <ind>s),(list of supported <bfr>s)

Supported and default parameter values

`<mode>: 0,1. See` Data impacted by &F `for default value.`

<keyp>: 0

<disp>: 0

<ind>: 0..2. See Data impacted by &F for default value.

<bfr>: 0

5.4.6.8 Select phonebook memory storage +CPBS

Command	Possible response(s)
+CPBS=<storage>	*+CME ERROR: <err>*
+CPBS?	+CPBS: <storage>[,<used>,<total>] *+CME ERROR: <err>*
+CPBS=?	+CPBS: (list of supported <storage>s)

Supported and default parameter values

<storage>: "DC", "EN", "FD", "MC", "ON", "RC", "SM" . See Data impacted by &F for default value.

<used> and <total> are read from <storage>.

5.4.6.9 Read phonebook entries +CPBR

Command	Possible response(s)
+CPBR=<index1>[,<index2>]	[+CPBR: <index1>,<number>,<type>,<text>[[...] <CR><LF>+CPBR: <index2>,<number>,<type>,<text>]] *+CME ERROR: <err>*
+CPBR=?	+CPBR: (list of supported <index>s),[<nlength>],[<tlength>] *+CME ERROR: <err>*

Supported parameter values

All values are given by the storage.

5.4.6.10 Find phonebook entries +CPBF

Command	Possible response(s)
+CPBF=<findtext>	[+CPBF: <index1>,<number>,<type>,<text>[[...] <CR><LF>+CBPF: <index2>,<number>,<type>,<text>]] *+CME ERROR: <err>*
+CPBF=?	+CPBF: [<nlength>],[<tlength>] *+CME ERROR: <err>*

Supported parameter values

All values are either given by the <storage> or the user.

5.4.6.11 Write phonebook entry +CPBW

Command	Possible response(s)
+CPBW=[<index>][,<number>[,<type>[,<text>]]]	*+CME ERROR: <err>*
+CPBW=?	+CPBW: (list of supported <index>s),[<nlength>], (list of supported <type>s),[<tlength>] *+CME ERROR: <err>*

Supported parameter values

<index>: 0..999 in the range of the <storage>.

All other values are either given by the storage or the user.

5.4.6.12 Clock +CCLK

Command	Possible response(s)
+CCLK=<time>	*+CME ERROR: <err>*
+CCLK?	+CCLK: <time> *+CME ERROR: <err>*
+CCLK=?	

Supported parameter values

<time>: see [27.007]

5.4.6.13 Alert sound mode +CALM

Command	Possible response(s)
+CALM=<mode>	*+CME ERROR: <err>*
+CALM?	+CALM: <mode> *+CME ERROR: <err>*
+CALM=?	+CALM: (list of supported <mode>s) +CME ERROR: <err>

Restriction

If option AT_CMD_IMPROVEMENT_FTR is disabled, command not available**.**

There is no synchronisation between the AT command and the MMI of the mobile (example : silent icon on the MMI of mobile is not updated when this command is used).

Clarification :

In the case of <mode> = 1, all sounds from ME are prevented except the sound of an incoming call (sound of incoming call treated by AT+CRSL command).

This command is developed in the ATPCTM module.

Supported parameter values

<mode>: see [27.007]

5.4.6.14 Ringer sound level +CRSL

Command	Possible response(s)
+CRSL=<level>	+CME ERROR: <err>
+CRSL?	+CRSL: <level> +CME ERROR: <err>
+CRSL=?	+CRSL: (list of supported <level>s) +CME ERROR: <err>

Restriction

If option AT_CMD_FOR_SETTINGS_FTR is disabled, command not available**.**

Clarification

This command is developed in the ATPCTM module.

Supported parameter values

<level>: 0, 1, 2, 3

See “Other stored data in other section” for default value.

5.4.6.15 Vibrator mode +CVIB

Command	Possible response(s)
+CVIB=<mode>	+CME ERROR: <err>
+CVIB?	+CVIB: <mode> +CME ERROR: <err>
+CVIB=?	+CVIB: (list of supported <mode>s) +CME ERROR: <err>

Restriction

If option AT_CMD_FOR_SETTINGS_FTR is disabled, command not available**.**

Clarification

This command is developed in the ATPCTM module.

Supported parameter values

<mode>: 0, 1.

See “Other stored data in other section” for default value.

5.4.6.16 Loudspeaker volume level +CLVL

Command	Possible response(s)
+CLVL=<level>	+CME ERROR: <err>
+CLVL?	+CLVL: <level> +CME ERROR: <err>
+CLVL=?	+CLVL: (list of supported <level>s) +CME ERROR: <err>

Restriction

If option AT_CMD_FOR_SETTINGS_FTR is disabled, command not available**.**

Clarification

This command is developed in the ATPCTM module.

Supported parameter values

<level>: 1, 2, 3…, 10

See “Other stored data in other section” for default value.

5.4.6.17 Accumulated call meter +CACM

Command	Possible response(s)
+CACM=[<passwd>]	+CME ERROR: <err>
+CACM?	+CACM: <acm> +CME ERROR: <err>
+CACM=?	

Restriction

If option AT_CMD_FOR_AOC_FTR is disabled, command not available**.**

Supported parameter values

<passwd>: see [27.007]

<Acm>: see [27.007]

5.4.6.18 Accumulated call meter maximum +CAMM

Command	Possible response(s)
+CAMM=[<acmmax>[,<passwd>]]	+CME ERROR: <err>
+CAMM?	+CAMM: <acmmax> +CME ERROR: <err>
+CAMM=?	

Restriction

If option AT_CMD_FOR_AOC_FTR is disabled, command not available.

Supported parameter values

<acmmax>: see [27.007]

<passwd>: see [27.007]

5.4.6.19 Price per unit and currency table +CPUC

Command	Possible response(s)
+CPUC=<currency>,<ppu>[,<passwd>]	+CME ERROR: <err>
+CPUC?	+CPUC: <currency>,<ppu> +CME ERROR: <err>
+CPUC=?	

Restriction

If option AT_CMD_FOR_AOC_FTR is disabled, command not available.

Supported parameter values

<currency>: string of 3 characters, see [27.007]

<ppu>: see [27.007]

<passwd>: see [27.007]

5.4.6.20 Call Meter maximum event +CCWE

Command	Possible response(s)
+CCWE=<mode>	+CME ERROR: <err>
+CCWE?	+CCWE: <mode> +CME ERROR: <err>
+CCWE=?	+CCWE: (list of supported <mode>s) +CME ERROR: <err>

Restriction

If option AT_CMD_FOR_AOC_FTR is disabled, command not available.

Supported parameter values

<mode>: 0,1. See “Other stored data in ATP section” for default value.

5.4.6.21 Set Language +CLAN

Command	Possible response(s)
+CLAN=<code>	+CME ERROR: <err>
+CLAN?	+CLAN: <code> +CME ERROR: <err>
+CLAN=?	+CLAN:(list of supported <code>s) +CME ERROR: <err>

Restriction

If option AT_CMD_FOR_SETTINGS_FTR is disabled, command not available**.**

Clarification

This command is developed in the ATPCTM module.

Supported parameter values

<code>: "AUTO" and non volatile memory supported 2 letters ISO 639 as defined in "Other stored data in other section", for example "en" for English.

See "Other stored data in other section" for default value.

5.4.6.22 Set Greeting Text +CSGT

Command	Possible response(s)
+CSGT=<mode>[,<text>]	+CME ERROR: <err>
+CSGT?	+CSGT: <text>, <mode> +CME ERROR: <err>
+CSGT=?	+CSGT:(list of supported <mode>s), <ltext> + CME ERROR: <err>

Restriction

If option AT_CMD_FOR_SETTINGS_FTR is disabled, command not available**.**

The mode is not saved, therefore:

- setting the mode to 0, even with a text as parameter is equivalent to setting the mode to 1 with an empty string (the greeting text is lost)
- the test command returns 1 if and only if the saved text is not empty (in other words +CSGT=1, then +CSGT? returns 0)

Clarification

This command handles the greeting text in the SIM cards if it exists else the greeting text is handled in EEPROM.

Supported parameter values

<text>: see [27.007]

See "Other stored data in other section" for default value.

<mode>: 0, 1

5.4.6.23 Set Voice Mail Number +CSVM

Command	Possible response(s)

+CSVM=<mode>[,<number>[,<type>]]	+CME ERROR: <err>
+CSVM?	+CSVM:<mode>,<number>,<type> +CME ERROR: <err>
+CSVM=?	+CSVM: (list of supported mode>s), (list of supported <type>s) +CME ERROR: <err>

Restriction

Command available only if If option AT_CMD_FOR_SETTINGS_FTR **and** __MBOXN__ are enabled.

Clarification

<mode>: 0 removes the information about the voice number instead of setting the number as disabled.

The command type SET allow to modify the existing Voice Mail Number or to create a Voice Mail number if no existing Voice Mail number.

Acces to a_hee_L1.a_hee_L1, .a_hee_L2, a_hee_fax or.a_hee_data in Non Volatile Memory if __MBOXN_IN_EEPROM__ is set.

Supported parameter values

<mode>: 0, 1

<number>: see [27.007]

<type>: 129, 145

5.4.6.24 Ring Melody Playback +CRMP

Command	Possible response(s)
+CRMP=<call type>[,<volume>[,<type>,<index>]]	+CME ERROR: <err>
+CRMP=?	+CRMP: (list of supported <call type>s),(list of supported <volume>s),(<type0>),(list of supported <index>s)[<CR><LF> +CRMP: (list of supported <call type>s),(list of supported <volume>s),(<type1>),(list of supported <index>s) +CME ERROR: <err>

Restriction

If option AT_CMD_FOR_SETTINGS_FTR is disabled, command not available**.**

Clarification

This command is developed in the ATPCTM module.

By playing the melody, if the melody is vibrator (default melody or given as parameter), the mobile does not vibrate.

If a melody is played, it's just played for 10 sec., then stopped.

Supported parameter values

<call type>: handle in order to be compliant but have no effect. Value: 0.

<volume>: 1, 2, 3

<type>: 0 Manufacturer defined

<index>: 1, 2, 3…, 10, 11 (11 corresponds to vibrator)

5.4.6.25 Mute control +CMUT

Command	Possible response(s)
+CMUT=<n>	*+CME ERROR: <err>*
+CMUT?	+CMUT: <n> *+CME ERROR: <err>*
+CMUT=?	+CMUT: (list of supported <n>s)

Restriction

If option AT_CMD_IMPROVEMENT_FTR is disabled, command not available**.**

There is no synchronisation between the AT command and the MMI of the mobile (example : mute icon on the MMI of mobile is not updated when this command is used).

Clarification

This command is developed in the ATPCTM module.

Supported parameter values

<n> : see [27.007]

5.4.6.26 List all available AT commands +CLAC

Command	Possible response(s)
+CLAC	*<AT Command1>[<CR><LF><AT Command2>[…]]* +CME ERROR: <err>
+CLAC=?	+CME ERROR: <err>

Restriction

If option AT_CMD_IMPROVEMENT_FTR is disabled, command not available**.**

Clarification

This command is developed in the ATPCTM module and in the ATP_PS module.

Supported parameter values

<AT command> : see [27.007]

5.4.6.27 Set phone functionality +CFUN

Command	Possible response(s)
+CFUN=[<fun>[,<rst>]]	*+CME ERROR: <err>*
+CFUN?	+CFUN: <fun> *+CME ERROR: <err>*
+CFUN=?	+CFUN: (list of supported <fun>s), (list of supported <rst>s) *+CME ERROR: <err>*

Restriction

If option LOAD_TEST_AT_CMD_FTR is disabled, command not available.

Clarification

Note that "OK" result code will appear after reset has been completed

Supported parameter values

<fun> : 1 see [27.007]

See : Other stored data for default value.

<rst> : 1

5.4.6.28 Protocol mode selection +CPROT

Command	Possible response(s)
+CPROT=<proto>[,<version>[,<lsap1>[,...[<lsapN>]]]]	CONNECT NO CARRIER OK ERROR *+CME ERROR: <err>*
+CPROT=?	+CPROT: <proto1>[,(list of supported <version>s)[,(list of supported <lsap1>s)[,...[,(list of supported <lsapN>s)]]]]

Restriction

If option AT_CPROT_CMD_FTR disabled, command not available.

This command needs some development by customer in OBEX and MIS modules

to be fully usable. (Implementation not yet available in PS stack)

Supported and default parameter values

<proto>

0 OBEX

<version>: "1.0"

<lsap1>:

8 IrMC level 1, 2 and 4 (Minimum, Access and Sync Levels)

5.4.7 Control and status Result code commands

5.4.7.1 Indicator event report +CIEV

Result code
+CIEV: <ind>,<value>

Supported parameter values

<ind>: 0,1

<value>: 0..5 for <ind>=0

0..4 for <ind>=1

5.4.7.2 Call Meter warning value +CCWV

Result code
+CCWV

Clarification

This warning will be triggered shortly before the ACM (Accumulated Call Meter) maximum value is reached, an unsolicited result code +CCWV will be sent, if enabled by +CCWE command. The warning is issued approximately when 30 seconds call time remains. It is also issued when starting a call if less than 30 seconds call time remains.

Restriction

If option AT_CMD_FOR_AOC_FTR is disabled, URC not available

5.4.8 Mobile Equipment errors commands

5.4.8.1 Report Mobile Equipment error +CMEE

Command	Possible response(s)
+CMEE=[<n>]	
+CMEE?	+CMEE: <n>
+CMEE=?	+CMEE: (list of supported <n>s)

Supported and default parameter values

<n>: 0..2 . See Data impacted by &F for default value.

5.4.9 Mobile Equipment error result code

5.4.9.1 Error result code +CME ERROR

Result code
+CME ERROR: <err>

Supported parameter values

<err>: 99 resource limitation (for +CCWA command only)

other values see [27.007] for numeric values, verbose values are the text associated with numeric values defined in [27.007] adding quotes. (ex "phone failure" for numeric 0).

5.4.10 GPRS commands

5.4.10.1 Define PDP Context +CGDCONT

Command	Possible response(s)
+CGDCONT=[<cid> [,<PDP_type> [,<APN> [,<PDP_addr> [,<d_comp> [,<h_comp> [,<pd1> [,…[,pdN]]]]]]]]	

+CGDCONT?	+CGDCONT: <cid>, <PDP_type>, <APN>,<PDP_addr>, <data_comp>, <head_comp>[,<pd1>[,…[,pdN]]] [<CR><LF>+CGDCONT: <cid>, <PDP_type>, <APN>,<PDP_addr>, <data_comp>, <head_comp>[,<pd1>[,…[,pdN]]] [...]]
+CGDCONT=?	+CGDCONT: (range of supported <cid>s), <PDP_type>,,,(list of supported <d_comp>s), (list of supported <h_comp>s)[,(list of supported <pd1>s)[,…[,(list of supported <pdN>s)]]] [<CR><LF>+CGDCONT: (range of supported <cid>s), <PDP_type>,,,(list of supported <d_comp>s), (list of supported <h_comp>s)[,(list of supported <pd1>s)[,…[,(list of supported <pdN>s)]]] [...]]

Restriction

<pdN> parameters are not supported

<cid>=3 locked in the Sysol default configuration in EEPROM

<PDP_type> = ”PPP” only possible if ATP_PPP_OVER_GPRS_FTR enabled.

The parameters <d_comp> and <h_comp> only support the value 0

Clarification

Pdp address provided in +CGDCONT is saved in EEPROM.

A PDP_adress with value "0.0.0.0" is considered as a request for a dynamic adress. Non-zero values are considered as static.

If present, the address parameter is only used for commands +CGACT/+CGDATA else we use address provided by configuration of PC modem.

Supported parameter values

<cid>: 1..3

<PDP_type>: "IP",”PPP”

<PDP_address>: "<n>.<n>.<n>.<n>" where <n>=0..255

<d_comp>: 0

<h_comp>: 0

<APN>: see [27.007]. See Other stored data for default value.

5.4.10.2 Quality of Service Profile (Requested) +CGQREQ

Command	Possible response(s)
+CGQREQ=[<cid> [,<precedence > [,<delay> [,<reliability.> [,<peak> [,<mean>]]]]]]	

+CGQREQ?	+CGQREQ: <cid>, <precedence >, <delay>, <reliability>, <peak>, <mean> [<CR><LF>+CGQREQ: <cid>, <precedence >, <delay>, <reliability.>, <peak>, <mean> […]]
+CGQREQ=?	+CGQREQ: <PDP_type>, (list of supported <precedence>s), (list of supported <delay>s), (list of supported <reliability>s) , (list of supported <peak>s), (list of supported <mean>s) [<CR><LF>+CGQREQ: <PDP_type>, (list of supported <precedence>s), (list of supported <delay>s), (list of supported <reliability>s) , (list of supported <peak>s), (list of supported <mean>s) […]]

Restriction

We cannot modify the PDP context when it is not in quiescent state.

If RELEASE99_CPR is enabled, an UMTS Qos profile may have been defined, either by default at start-up, or through the +CGEQREQ command. In that case, using the special form +CGQREQ=<cid> will not be enough to undefine the release 97 profile. It will be reset to default values, but will still be listed by +CGQREQ?, and used for PDP activation. To undefine the Qos profile completely, +CGEQREQ=<cid> must be used, too.

Supported and default parameter values

<cid>: 1..3

<precedence>: **0**..3

<delay>: **0**..4

<reliability>: 0..**3**..5

<peak>: **0**..9

<mean>: **0**..18, 31

See Other stored data for default values.

5.4.10.3 Quality of Service Profile (Minimum acceptable) +CGQMIN

Command	Possible response(s)
+CGQMIN=[<cid> [,<precedence > [,<delay> [,<reliability.> [,<peak> [,<mean>]]]]]]	
+CGQMIN?	+CGQMIN: <cid>, <precedence >, <delay>, <reliability>, <peak>, <mean> [<CR><LF>+CGQMIN: <cid>, <precedence >, <delay>, <reliability.>, <peak>, <mean> […]]
+CGQMIN=?	+CGQMIN: <PDP_type>, (list of supported <precedence>s), (list of supported <delay>s), (list of supported <reliability>s) , (list of supported <peak>s), (list of supported <mean>s) [<CR><LF>+CGQMIN: <PDP_type>, (list of supported <precedence>s), (list of supported <delay>s), (list of supported <reliability>s) , (list of supported <peak>s), (list of supported <mean>s) […]]

Restriction

We cannot modify the PDP context when it is not in quiescent state.

If RELEASE99_CPR is enabled, an UMTS Qos profile may have been defined, either by default at start up, or through the +CGEQMIN command. In that case, using the special form +CGQMIN=<cid> will not be enough to undefine the release 97 profile. It will be reset to default values, but will still be listed by +CGQMIN?, and used for PDP activation. To undefine the Qos profile completely, +CGEQMIN=<cid> must be used, too.

Supported parameter values

<cid>: 1..3

<precedence>: **0**..3

<delay>: **0**..4

<reliability>: 0..**3**..5

<peak>: **0**..9

<mean>: **0**..18, 31

5.4.10.4 3G Quality of Service Profile (Requested) +CGEQREQ

Command	Possible Response(s)
+CGEQREQ=[<cid> [,<Traffic class> [,<Maximum bitrate UL> [,<Maximum bitrate DL> [,<Guaranteed bitrate UL> [,<Guaranteed bitrate DL> [,<Delivery order> [,<Maximum SDU size> [,<SDU error ratio> [,<Residual bit error ratio> [,<Delivery of erroneous SDUs> [,<Transfer delay> [,<Traffic handling priority>]]]]]]]]]]]]	OK ERROR
+CGEQREQ?	+CGEQREQ: <cid>, <Traffic class> ,<Maximum bitrate UL> ,<Maximum bitrate DL> ,<Guaranteed bitrate UL> ,<Guaranteed bitrate DL> ,<Delivery order> ,<Maximum SDU size> ,<SDU error ratio> ,<Residual bit error ratio> ,<Delivery of erroneous SDUs> ,<Transfer delay> ,<Traffic handling priority> [<CR><LF>+CGEQREQ: <cid>, <Traffic class> ,<Maximum bitrate UL> ,<Maximum bitrate DL> ,<Guaranteed bitrate UL> ,<Guaranteed bitrate DL> ,<Delivery order> ,<Maximum SDU size> ,<SDU error ratio> ,<Residual bit error ratio> ,<Delivery of erroneous SDUs> ,<Transfer delay> ,<Traffic handling priority> […]]

+CGEQREQ=?	+CGEQREQ: <PDP_type>, (list of supported <Traffic class>s) ,(list of supported <Maximum bitrate UL>s), (list of supported <Maximum bitrate DL>s), (list of supported <Guaranteed bitrate UL>s), (list of supported <Guaranteed bitrate DL>s),(list of supported <Delivery order>s) ,(list of supported <Maximum SDU size>s) ,(list of supported <SDU error ratio>s) ,(list of supported <Residual bit error ratio>s) ,(list of supported <Delivery of erroneous SDUs>s) ,(list of supported <Transfer delay>s) ,(list of supported <Traffic handling priority>s) [<CR><LF>+CGEQREQ: <PDP_type>, (list of supported <Traffic class>s) ,(list of supported <Maximum bitrate UL>s), (list of supported <Maximum bitrate DL>s), (list of supported <Guaranteed bitrate UL>s), (list of supported <Guaranteed bitrate DL>s),(list of supported <Delivery order>s) ,(list of supported <Maximum SDU size>s) ,(list of supported <SDU error ratio>s) ,(list of supported <Residual bit error ratio>s) ,(list of supported <Delivery of erroneous SDUs>s) ,(list of supported <Transfer delay>s) ,(list of supported <Traffic handling priority>s) […]]

Restriction

This command is available only if RELEASE99_CPR is enabled.

We can not modify the PDP context when it is not in quiescent state.

A standard Qos profile may have been defined, either by default at start up, or through the +CGQREQ command. In that case, using the special form +CGEQREQ=<cid> will not be enough to undefine the release 99 profile. It will be reset to default values, but will still be listed by +CGEQREQ?, and used for PDP activation. To undefine the Qos profile completely, +CGQREQ=<cid> must be used, too.

For <SDU error ratio> and <Residual bit error ratio> parameters, if the user provides a value that is not in the list, it will be remapped locally in ATP to the closest member of the list.

Supported parameter values

<cid>: 1..3

<Traffic class>: 0..4

<Maximum bitrate UL>: 0..255

<Maximum bitrate DL>: 0..255

<Guaranteed bitrate UL>: 0..255

<Guaranteed bitrate DL>: 0..255

<Delivery order>: 0..2

<Maximum SDU size>: 0..255

<SDU error ratio>:

"0E0","1E2","7E3","1E3","1E4","1E5","1E6","1E1"

<Residual bit error ratio>:
"0E0","5E2","1E2","5E3","4E3","1E3","1E4","1E5","1E6","6E8"

<Delivery of erroneous SDUs>: 0..3

<Transfer delay>: 0..4000

<Traffic handling priority>: 0..3

5.4.10.5 3G Quality of Service Profile (Minimum acceptable) +CGEQMIN

Command	Possible Response(s)
+CGEQMIN=[<cid> [,<Traffic class> [,<Maximum bitrate UL> [,<Maximum bitrate DL> [,<Guaranteed bitrate UL> [,<Guaranteed bitrate DL> [,<Delivery order> [,<Maximum SDU size> [,<SDU error ratio> [,<Residual bit error ratio> [,<Delivery of erroneous SDUs> [,<Transfer delay> [,<Traffic handling priority>]]]]]]]]]]]]	OK ERROR
+CGEQMIN?	+CGEQMIN: <cid>, <Traffic class> ,<Maximum bitrate UL>, <Maximum bitrate DL> ,<Guaranteed bitrate UL> ,<Guaranteed bitrate DL>, <Delivery order> ,<Maximum SDU size> ,<SDU error ratio> ,<Residual bit error ratio> ,<Delivery of erroneous SDUs> ,<Transfer delay> ,<Traffic handling priority> [<CR><LF>+CGEQMIN: <cid>, <Traffic class> ,<Maximum bitrate UL> ,<Maximum bitrate DL> ,<Guaranteed bitrate UL> ,<Guaranteed bitrate DL>, <Delivery order> ,<Maximum SDU size> ,<SDU error ratio> ,<Residual bit error ratio> ,<Delivery of erroneous SDUs> ,<Transfer delay> ,<Traffic handling priority> […]]

+CGEQMIN=?	+CGEQMIN: <PDP_type>, (list of supported <Traffic class>s) ,(list of supported <Maximum bitrate UL>s) ,(list of supported <Maximum bitrate DL>s), (list of supported <Guaranteed bitrate UL>s), (list of supported <Guaranteed bitrate DL>s) ,(list of supported <Delivery order>s) ,(list of supported <Maximum SDU size>s) ,(list of supported <SDU error ratio>s) ,(list of supported <Residual bit error ratio>s) ,(list of supported <Delivery of erroneous SDUs>s) ,(list of supported <Transfer delay>s) ,(list of supported <Traffic handling priority>s) [<CR><LF>+CGEQMIN: <PDP_type>, (list of supported <Traffic class>s) ,(list of supported <Maximum bitrate UL>s), (list of supported <Maximum bitrate DL>s) ,(list of supported <Guaranteed bitrate UL >s), (list of supported <Guaranteed bitrate DL >s) ,(list of supported <Delivery order>s) ,(list of supported <Maximum SDU size>s) ,(list of supported <SDU error ratio>s) ,(list of supported <Residual bit error ratio>s) ,(list of supported <Delivery of erroneous SDUs>s) ,(list of supported <Transfer delay>s) ,(list of supported <Traffic handling priority>s) […]]

Restriction

This command is available only if RELEASE99_CPR is enabled.

We cannot modify the PDP context when it is not in quiescent state.

A standard Qos profile may have been defined, either by default at start up, or through the +CGQMIN command. In that case, using the special form +CGEQMIN=<cid> will not be enough to undefine the release 99 profile. It will be reset to default values, but will still be listed by +CGEQMIN?, and used for PDP activation. To undefine the Qos profile completely, +CGQMIN=<cid> must be used, too.

For <SDU error ratio> and <Residual bit error ratio> parameters, if the user provides a value that is not in the list, it will be remapped locally in ATP to the closest member of the list.

Supported parameter values

<cid>: 1..3

<Traffic class>: 0..4

<Maximum bitrate UL>: 0..255

<Maximum bitrate DL>: 0..255

<Guaranteed bitrate UL>: 0..255

<Guaranteed bitrate DL>: 0..255

<Delivery order>: 0..2

<Maximum SDU size>: 0..255

<SDU error ratio>:

"0E0","1E2","7E3","1E3","1E4","1E5","1E6","1E1"

<Residual bit error ratio>:
"0E0","5E2","1E2","5E3","4E3","1E3","1E4","1E5","1E6","6E8"

<Delivery of erroneous SDUs>: 0..3

<Transfer delay>: 0..4000

<Traffic handling priority>: 0..3

5.4.10.6 GPRS attach or detach +CGATT

Command	Possible response(s)
+CGATT= [<state>]	
+CGATT?	+CGATT: <state>
+CGATT=?	+CGATT: (list of supported <state>s)

Supported parameter values

<state>: 0, 1

Clarification:

This command may take a long time to operate and is not abortable.

5.4.10.7 PDP context activate or deactivate +CGACT

Command	Possible response(s)
+CGACT=[<state> [,<cid>[,<cid>[,…]]]]	
+CGACT?	+CGACT: <cid>, <state> [<CR><LF>+CGACT: <cid>, <state> [...]]
+CGACT=?	+CGACT: (list of supported <state>s)

Restriction

No more than one PDP context can be activated at the same time.

Supported parameter values

<state>: 0, 1

<cid>: 1..3

5.4.10.8 Show PDP address +CGPADDR

Command	Possible response(s)

+CGPADDR=[<cid> [,<cid> [,…]]]	+CGPADDR: <cid>,<PDP_addr> [<CR><LF>+CGPADDR: <cid>,<PDP_addr> [...]]
+CGPADDR=?	+CGPADDR: (list of defined <cid>s)

Restriction

Set command return address given by the network if a connection have been established.

Supported parameter values

<PDP_address>: "<n>.<n>.<n>.<n>" where <n>=0..255

<cid>: 1..3

5.4.10.9 Enter data state +CGDATA

Command	Possible Response(s)
+CGDATA=[<L2P> ,[<cid> [,<cid> [,…]]]]	CONNECT ERROR
+CGDATA=?	+CGDATA: (list of supported <L2P>s)

Restriction

Only at+cgdata=<cr> is allowed. No parameter can be specified. The <cid> used is the last one specified in the last +CGACT command, or the identifier of the context specified as the default one in EEPROM otherwise. This PDP context must have been previously activated with +CGACT.

This command is used for PS internal tests with network emulators, and no guarantee is offered to the customer as to its behaviour on a real network, or its compliance with the recommendation.

Supported parameter values

<L2P>: none

<cid>: none

5.4.10.10 GPRS mobile station class +CGCLASS

Command	Possible response(s)
+CGCLASS= [<class>]	
+CGCLASS?	+CGCLASS: <class>
+CGCLASS=?	+CGCLASS: (list of supported <class>s)

Restriction

The class cannot be change for a mobile

Supported parameter values

<class >: "B" or "CC"

5.4.10.11 GPRS network registration status +CGREG

Command	Possible response(s)
+CGREG=[<n>]	
+CGREG?	+CGREG: <n>,<stat>[,<lac>,<ci>] *+CME ERROR: <err>*
+CGREG=?	+CGREG: (list of supported <n>s)

Supported and default parameter values

<n>: 0..2 . See Data impacted by &F for default value.

<stat>: 0..5

<lac>,<ci> : see [27.007]

5.4.10.12 Select service for MO SMS messages +CGSMS

Command	Possible response(s)
+CGSMS= [<service>]	
+CGSMS?	+CGSMS: <service>
+CGSMS=?	+CGSMS: (list of currently available <service>s)

Restriction

If option ATP_SUPPRESS_GPRS_SMS enable, command not available

If option SMS_OVER_GPRS_FTR enable all services are available

Else only service 1 and 2 available. When <service> value is 2, the SMS is sent on GPRS network if already attached. Otherwise it is sent on circuit switched network. If an error occurs on the GPRS network, no further attempt is made.

Supported and default parameter values

<service >: 0, 1, 2, 3.

5.4.10.13 Request GPRS service D*

Command	Possible response(s)
D*99[*[<called_address>] [*[<L2P>][*[<cid>]]]]# or D*98[*<cid>]#	

Restriction

If the supplied or default context is not correct, no further attempt (look for another suitable context, create one if necessary, …) will be made.

This command cannot be used after PDP context activation throught AT+CGACT command (use +CGDATA instead).

If SAT call control modifies SS or USSD string, an error is returned to TE.

Supported and default parameter values

<called_address>: empty

<L2P>: **1**

<cid>: 1..3 . see Other stored data for default value.

5.4.11 Commands from TIA IS-101

5.4.11.1 DTMFand tone generation +VTS

Command	Possible response(s)
+VTS= (see [27.007])	**Case 1 argument :** <DTMF> **case 3 arguments :** [<tone1>,<tone2>,<duration>] **case 2 arguments :** {<DTMF>,<duration>}
+VTS=?	+VTS: (list of supported <tone1>s), (list of supported <tone2>s), (list of supported <duration>s)

Restriction

If option AT_CMD_IMPROVEMENT_FTR is disabled, command not available**.**

Clarification

In spite of the FCLASS equal to 8 is not supported, this command works in speech call connected case.

Supported parameter values

<DTMF>: see [27.007]

<tone1>: 0 (see [27.007])

<tone2>: 0 (see [27.007])

<duration>: 0 (see [27.007])

5.4.11.2 Tone duration +VTD

Command	Possible response(s)
+VTD=<n>	
+VTD?	+VTD: <n>
+VTD=?	+VTD: (list of supported <n>s)

Restriction

If option AT_CMD_IMPROVEMENT_FTR is disabled, command not available**.**

Supported parameter values

<n>: 0 (see [27.007])

5.5 [TIA578A] commands

5.5.1 General commands

5.5.1.1 Manufacturer identification +FMI

Command	Possible response(s)
+FMI	<manufacturer> *+CME ERROR: <err>*
+FMI=?	

See Manufacturer identification +CGMI

5.5.1.2 Model identification +FMM

Command	Possible response(s)

+FMM	<model> *+CME ERROR: <err>*
+FMM=?	

See Model identification +CGMM

5.5.1.3 Revision identification +FMR

Command	Possible response(s)
+FMR	<revision> *+CME ERROR: <err>*
+FMR=?	

See Revision identification +CGMR

5.5.2 Capabilities identification and control

5.5.2.1 Service Class +FCLASS

Command	Possible response(s)
+FCLASS=<class>	
+FCLASS?	+FCLASS: <class>
+FCLASS=?	+FCLASS: (list of supported <class>s)

Restriction

If option AT_CMD_IMPROVEMENT_FTR is enabled, command VTD and VTS are now available**.**
In spite of VTD and VTS command are now available, FCLASS command does not accept <class> = 8 (voice call).

Supported and default parameter values

<class> : 0, 1. See Data stored by &W for default value.

5.5.2.2 Transmit silence +FTS

Command	Possible response(s)
+FTS=<time>	

Restriction

Only supported during FAX communication established.

Supported parameter values

<time>: see [TIA578A]

5.5.2.3 Receive silence +FRS

Command	Possible response(s)
+FRS=<time>	

Restriction

Only supported during FAX communication established.

Supported parameter values

<time>: see [TIA578A]

5.5.2.4 HDLC transmit +FTH

Command	Possible response(s)
+FTH=<mode>	
+FTH?	+FTH:<mode>
+FTH=?	+FTH: (list of supported <mode>s)

Restriction

Set command only supported during FAX communication established.

Supported and default parameter values

<mode>: **3**

5.5.2.5 HDLC receive +FRH

Command	Possible response(s)
+FRH=<mode>	
+FRH?	+FRH:<mode>
+FRH=?	+FRH: (list of supported <mode>s)

Restriction

Set command only supported during FAX communication established.

Supported and default parameter values

<mode>: **3**

5.5.2.6 Facsimile transmit +FTM

Command	Possible response(s)
+FTM=<mode>	
+FTM?	+FTM:<mode>
+FTM=?	+FTM: (list of supported <mode>s)

Restriction

Set command only supported during FAX communication established. Read and test command only supported in command mode.

Read command always return 9600 bits/s because the communication must begin at this speed

Supported and default parameter values

<mode>: 2400, 4800, 7200, 9600

5.5.2.7 Facsimile receive +FRM

Command	Possible response(s)
+FRM=<mode>	
+FRM?	+FRM:<mode>
+FRM=?	+FRM: (list of supported <mode>s)

Restriction

Set command only supported during FAX communication established. Read and test command only supported in command mode

Read command always return 9600 bits/s because the communication must begin at this speed

Supported and default parameter values

<mode>: 2400, 4800, 7200, 9600

5.6 Proprietary commands

5.6.1 Capabilities identification and control

5.6.1.1 Service Class #CLS

Command	Possible response(s)
#CLS =<class>	
#CLS?	#CLS <class>
#CLS=?	#CLS: (list of currently available <class>s)

Description

Same behaviour than +FCLASS command. Needed for Microsoft® agreement.

Supported and default parameter values

<class>: **0**, 1

5.6.2 Flow control command

5.6.2.1 RTS/CTS option &R

Command	Possible response(s)
&R<option>	*+CME ERROR: <err>*

Description

This selects how the modem control CTS. CTS operation is modified if hardware flow control is selected (see &K command). The parameter value, if valid, is written to S21 bit2

Supported and default parameter values

<option> : **1** => In sync mode, CTS is always ON (RTS transitions are ignored). In async mode, CTS will only drop if required by the flow control (See Data stored by &W for default value).

5.6.3 Manufacturer test commands

5.6.3.1 *PSCPOF

Command	Possible response(s)
*PSCPOF	

Description

This command allows to switch off the mobile. Note that "OK" result code will appear immediately if the command is accepted and power off will occur after that. Unexpected random characters may also be issued during switch off of MS.

Supported and default parameter values

None

5.6.3.2 *PSLOCUP

Command	Possible response(s)
*PSLOCUP	

Description

This command generates a location update of MS

Supported and default parameter values

None

5.6.3.3 *PSSSURC

Command	Possible response(s)
*PSSSURC=<mode>	
*PSSSURC?	*PSSSURC: <mode>
*PSSSURC =?	*PSSSURC: (list of supported <mode>s)

Description

If option ATP_SS_URC_FTR is disabled, command not available. Implemented in ATP module.

The aim of this AT command is to configure the AT interface to give additional information through result code to TE when D command is entered with an SS string as parameter. When <mode> parameter is enabled, *PSSSURC (resp. *PSSERR) result code is sent to TE before OK (resp. ERROR) result code.

Supported and default parameter values

<mode>: 0,1

0 : disable sending of additional result code

1 : enable sending of additional result code

5.6.4 SIM Toolkit commands

5.6.4.1 SIM ToolKit interface configuration *PSSTKI

Command	Possible response(s)
*PSSTKI=<mode>	*+CME ERROR: <err>*
*PSSTKI?	*PSSTKI: <mode> *+CME ERROR: <err>*
*PSSTKI =?	*PSSTKI: (list of supported <mode>s)

Description

If option STK_AT_CMD_FTR is disabled, command not available. Implemented in ATPCTM module.

The aim of this AT command is to configure the AT interface for SIM ToolKit support.

Supported and default parameter values

<mode>: 0,**1**

0 : means that no *PSSTK unsolicited result code will be sent to TE. TE won't be able to sent *PSSTK command to the ME

1 : means that any *PSSTK unsolicited result code will be sent to TE

5.6.4.2 SIM ToolKit command *PSSTK

The *PSSTK can be used in two differents ways:

- ***PSSTK** is an unsolicited result code received from SIM ToolKit application
- ***PSSTK** is sent by the TE to the ME (used as a normal AT command)

a) SIM ToolKit *PSSTK unsolicited result code

Result Code	Possible response(s)

*PSSTK: <msg>,<parameter1>,...,<parameterN>	*PSSTK= <msg>, <parameter1>,...,<parameterN>

Description

If option STK_AT_CMD_FTR is disabled, unsolicited result code not available. Implemented in ATPCTM module.

SIM ToolKit notifies or requests an action of the TE.

Supported and default parameter values

<msg> : This parameter defines the type of event SIM ToolKit is notifying or requesting to the TE. Some notifications or requests needs an answer to be sent by the TE. The answers will be sent to the ME using *PSSTK command (see b). chapter).

1. Unsolicited result code not requiring an answer from TE :

   "LANGUAGE NOTIFICATION"
   "SETUP IDLE MODE TEXT"
   "CONTROL BY SIM"
   "REFRESH"
   "END CALL"
   "DISCONNECT"
   "PROCESSING"
   "END SESSION"
   "ABORT SESSION"

2. Unsolicited result code requiring answer from TE (see b). chapter)

   "NOTIFICATION"
   "SETUP CALL"
   "DISPLAY TEXT"
   "GET INKEY"
   "GET INPUT"
   "PLAY TONE"
   "SELECT ITEM"
   "SETUP MENU"
   "REMOVE MENU"

<parameter i > : Depends of <**msg**> value.
For a full list of parameters refer to [STK ISD] and [UPV ID]. For each value of <msg>, a parameter list based on STK ISD is defined. Basically, this command is an adaptation of STK message (RTK format) to an AT command format. (See Use Case below).

b) SIM ToolKit *PSSTK as command

Command	Possible response(s)
*PSSTK=<msg>,<parameter1>,...,<parameterN>	*+CME ERROR: <err>*
*PSSTK =?	*PSSTK: (list of supported <msg>s)

Description

If option STK_AT_CMD_FTR is disabled, command not available. Implemented in ATPCTM module.

Set command : TE request an action of SIM ToolKit or send an URC's answer to SIM ToolKit.

Test command : TE wants the list of supported <mgs>s.

Supported and default parameter values

<msg> : This parameter defines the type of action TE is sending to SIM ToolKit.

1. Command requires a SIM ToolKit answer :

   "MENU SELECTION"
   "GET ITEM LIST"

2. Command does not require a SIM ToolKit answer :

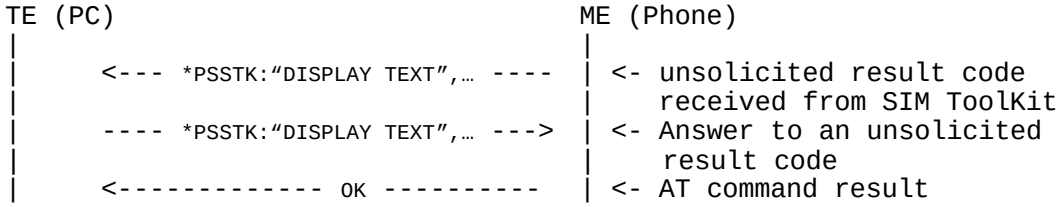
   "ALL CALLS DISCONNECTED"
   "USER ACTIVITY"
   "IDLE SCREEN AVAILABLE"
   "SETUP CALL TERMINATED"

3. Command used to answer an unsolicited result code :

   "COMMAND REJECTED"
   "NOTIFICATION"
   "SETUP CALL"
   "DISPLAY TEXT"
   "GET INKEY"
   "GET INPUT"
   "PLAY TONE"
   "SELECT ITEM"
   "SETUP MENU"
   "REMOVE MENU"

<parameter i > : Depends of <**msg**> value.
For a full list of parameters refer to [STK ISD] and [UPV ID]. For each value of <msg>, a parameter list based on STK ISD is defined. Basically, this command is an adaptation of STK message (RTK format) to an AT command format. (See Use Case below).

Use case :



Unsolicited result code (ME à TE) :

AT*PSSTK: "DISPLAY TEXT", <CommandNumber>, <Priority>, <Clear>, <ImmediateResponse>, <Alphabet>, <Text>, <IconId>, <IconQualifier>

```
RTK message structure :  APPI_STK_DISPLAY_TEXT_IND

typedef struct {  t_upv_AppiMsgHeader s_MsgHeader;
    u8  v_CommandNumber ;
    u8  v_Priority ;
    u8  v_Clear ;
    u8  v_ImmediateResponse ;
    t_upv_LongTextString  s_Text ;
    t_upv_IconId  s_IconId ;
}  t_stk_AppiDisplayTextInd ;

typedef struct {
   u8  v_Alphabet ;
   ascii  a_Text[ UPV_MAX_LENGTH_LONG_TEXT_STRING ];
}  t_upv_LongTextString ;

typedef struct {
   u8  v_IconId ;
   u8  v_IconQualifier ;
}  t_upv_IconId ;
```

*** Note** : In t_upv_LongTextString , a_Text is an array, it will be sent between double quote in the unsolicicted result code.

Exemple : AT*PSSTK: "DISPLAY TEXT",1,1,1,0,4,”abcd”,0,0

Response to an unsolicited result code (TE à ME) :

AT*PSSTK="DISPLAY TEXT", <CommandNumber>,<v_IconDisplay>

```
RTK message structure :   APPI_STK_DISPLAY_TEXT_RSP

typedef struct {  t_upv_AppiMsgHeader s_MsgHeader;
    u8  v_CommandNumber ;
    u8  v_IconDisplay ;
   *** 2 padding bytes ***
}  t_stk_AppiDisplayTextRsp ;
```

5.6.5 Result Code Commands

5.6.5.1 *PSSSURC

Result code
*PSSSURC:<service_code>[,<basic_service_code>,<status>,<no_reply_cond_timer>,<ccbs_index>,<phone_number_ton_npi>,<phone_number_config>,<phone_number>,<sub_address_type>,<sub_address_authority_and_format_identifie>,<sub_address_data>[,<clir_option>]]

If option ATP_SS_URC_FTR is disabled, command not available. Implemented in ATP module.

Supported and default parameter values

All parameters take the decimal value describe in ISD [UPVI] and [APPI]

5.6.5.2 *PSSERR

Result code
*PSSSERR:<cause_select>,<cause>

If option ATP_SS_URC_FTR is disabled, command not available. Implemented in ATP module.

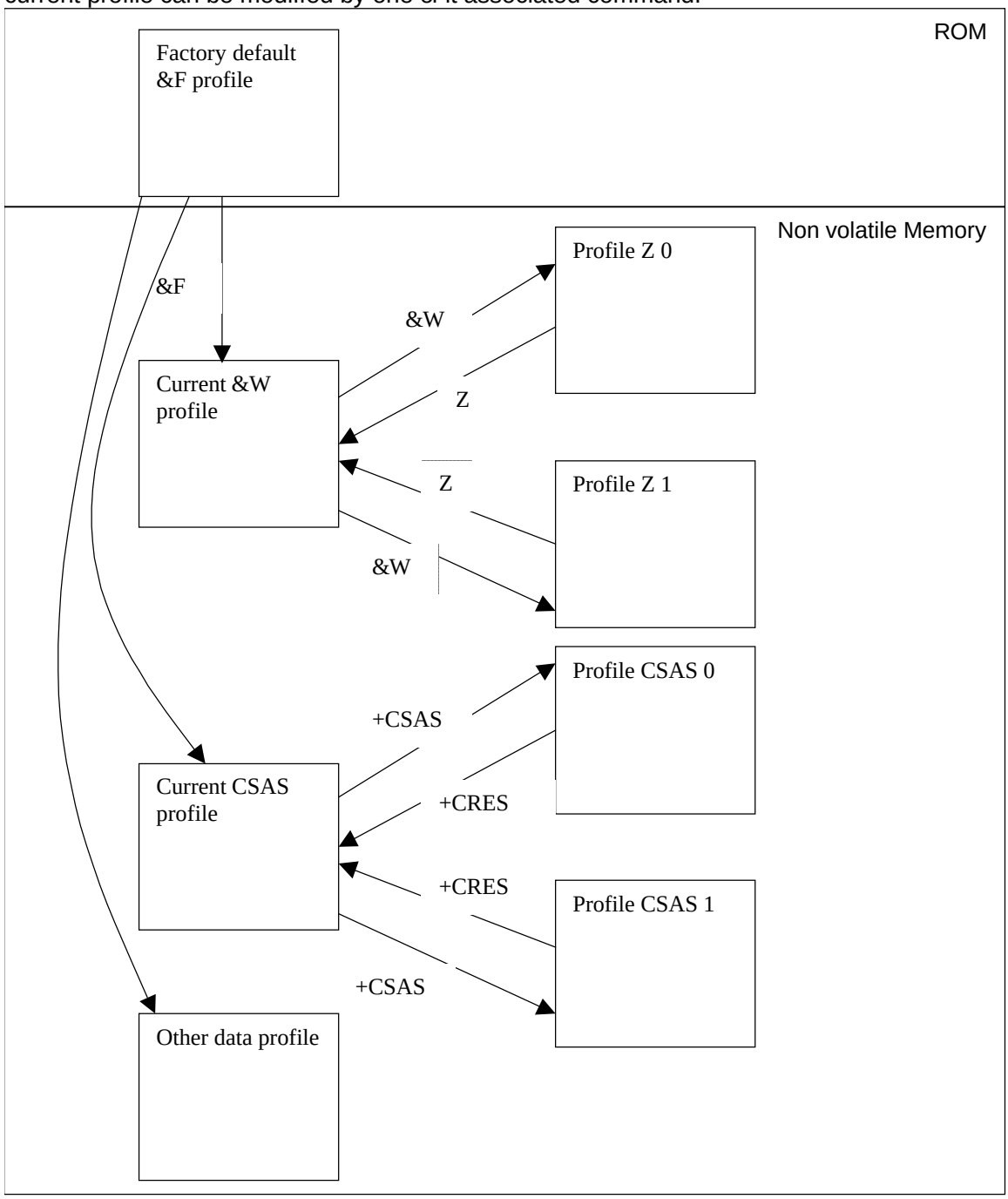
Supported and default parameter values

<cause_select> and <cause>: Only decimal value described in ISD [UPVI] and [APPI]

6 Non volatile memory needs

6.1 Behavior description

There are 7 non-volatile memory sections (profile), the behavior of the modem on those sections is described in the next figure. Note that each component of one of the different current profile can be modified by one of it associated command.



6.2 Data stored by &W

Parameter name	Parameter of command:	Non volatile memory field name	Default value hexa	Displayed by &V
<echo>	E	v_Echo	1	Y
<result>	Q	v_SuppressResult	0	Y
<format>	V	v_Verbose	1	Y
<result>	X	v_ExtendedResultCode	4	Y
<behavior>	&C	v_DcdControl	1	Y
<behavior>	&D	v_DTRBehaviour	2	Y
<override>	&S	V_DSRcontrol	1	Y
<option>	&R	V_RTScontrol	1	Y
<TA_by_TE>	+IFC	v_FlowControlDCEbyDTE	0	Y
<TE_by_TA>		v_FlowControlDTEbyDCE	1	Y
<mode>	&K	v_FlowControl	0	Y
<class>	+FCLASS	v_Fclass	0	Y
<num>	S0	v_S0	0	Y
<num>	S1	v_S1	0	N
<char>	S3	v_S3	D	Y
<char>	S4	v_S4	A	Y
<char>	S5	v_S5	8	Y
<time>	S7	v_S7	32	Y
<time>	S8	v_S8	2	Y
<time>	S10	v_S10	E	Y

6.3 Data reset by Z

Parameter name	Parameter of command:	Non volatile memory field name	Default value hexa
<echo>	E	v_Echo	1
<result>	Q	v_SuppressResult	0
<format>	V	v_Verbose	1
<result>	X	v_ExtendedResultCode	4
<behavior>	&D	v_DTRBehaviour	2
<behavior>	&C	v_DcdControl	1
<option>	&R	V_RTScontrol	1
<override>	&S	V_DSRcontrol	1
<TA_by_TE>	+IFC	v_FlowControlDCEbyDTE	0
<TE_by_TA>		v_FlowControlDTEbyDCE	1
<mode>	&K	v_FlowControl	0
<class>	+FCLASS	v_Fclass	0
<num>	S0	v_S0	0
<num>	S1	v_S1	0
<char>	S3	v_S3	D
<char>	S4	v_S4	A
<char>	S5	v_S5	8
<time>	S7	v_S7	32

<time>	S8	v_S8	2
<time>	S10	v_S10	E

6.4 Data impacted by &F

Parameter name	Parameter of command:	Non volatile memory field name	Length	Default value hexa
<echo>	E	v_Echo	1 bit	1
<result>	Q	v_SuppressResult	1 bit	0
<format>	V	v_Verbose	1 bit	1
<result>	X	v_ExtendedResultCode	3 bits	4
<TA_by_TE>	+IFC	v_FlowControlDCEbyDTE	2 bits	0
<TE_by_TA>		v_FlowControlDTEbyDCE	2 bits	1
<mode>	&K	v_FlowControl	3 bits	0
<num>	S0	v_S0	1 byte	0
<num>	S1	v_S1	1 byte	0
<char>	S3	v_S3	1 byte	13
<char>	S4	v_S4	1 byte	10
<char>	S5	v_S5	1 byte	8
<time>	S7	v_S7	1 byte	50
<time>	S8	v_S8	1 byte	2
<time>	S10	v_S10	1 byte	14
<ver>	+CRLP	v_CrlpVer	1 byte	0
<T4>		v_CrlpT4	1 byte	7
<iws>		v_CrlpIws	1 byte	61
<mws>		v_CrlpMws	1 byte	61
<T1>		v_CrlpT1	1 byte	48
<N2>		v_CrlpN2	1 byte	6
<cause_select>	+CEER	v_CauseSelect	1 byte	0
<cause>		v_Cause	1 byte	0
<storage>	+CPBS	a_atp_Storage	3 bytes	53h,4dh,0
<fo>	+CSMP	v_hee_Smsfo	1 byte	17
<vp>		v_hee_SmsVp.s_RelTime	24 bytes	(167)
		- v_NbMinutes	1 byte	0
		- v_NbHours	1 byte	24
		- v_NbDays	1 byte	0
		- v_NbWeeks	1 byte	0
		- v_Gap_RelativeTime	20 bytes	0,...,0
<pid>		v_hee_SmsPid	1 byte	0
<dcs>		v_hee_SmsDcs	1 byte	0
<mode>	+CR	v_CrState	1 bit	0
<type>	+CSTA	v_TypeOfAddress	1 byte	81
<speed>	+CBST	v_UserBearerRate	4 bits	5
		v_InfoTrans	3 bits	2
<name>		v_SyncAsync	1 bit	1
		v_TransferMode	1 bit	0
<ce>		v_ConnElm	2 bits	1
<mode>	+CRC	v_Crc	1 bit	0

<mode>	+CMOD	v_CallMode	2 bits	0
<n>	+CMEE	v_CMEE	2 bits	0
<n>	+CREG	v_CREGn	2 bits	0
<n>	GPRS network registration status +CGREG	v_CGREGn	2 bits	0
<service>	+CSMS	v_CSMSService	1 bit	0
<ind>	+CMER	v_CMER_IndicatorReport	2 bits	0
<mode>		v_CMER_Mode	3 bits	0
<mode>	+COPS	v_RegisterInAutomaticMode	1 bit	0
<mode>	+CMGF	v_CMGFMode	1 bit	0
<show>	+CSDH	v_CSDH	1 bit	0
<chset>	+CSCS	v_CharSet	2 bits	0
<mode>	+CVHU	v_CVHUMode	2 bits	0
<n>	+CLIR	v_CLIR_n	1	0
<n>	+CLIP	v_CLIP_n	1	0
<n>	+COLP	v_COLP_n	1	0
<n>	+CSSN	v_CSSN_n	1	0
<m>		v_CSSN_m	1	0

6.5 Data stored by +CSAS

Parameter name	Parameter of command:	Non volatile memory field name	Length	Default value hexa
<sca> and <tosca>	+CSCA	a_atp_ScAddress	12 bytes	FF..FF
<fo>	+CSMP	v_hee_Smsfo	1 byte	11
<vp>		v_hee_SmsVp.s_RelTime	structure	
		- v_NbMinutes	1 byte	0
		- v_NbHours	1 byte	18
		- v_NbDays	1 byte	0
		- v_NbWeeks	1 byte	0
		- v_Gap_RelativeTime	20 bytes	0..0
<pid>		v_hee_SmsPid	1 byte	0
<dcs>		v_hee_SmsDcs	1 byte	0

6.6 Other stored data in ATP section

Parameter name	Parameter of command:	Non volatile memory field name	Length	Default value hexa
<mode>	+CNMI	v_CNMI_Mode	2 bits	0
<mt>		v_CNMI_Mt	2 bits	0
<bm>		v_CNMI_Bm	2 bits	0
<ds>		v_CNMI_ds	1 bit	0

<bfr>		v_CNMI_bfr	1 bit	0
<sca> and <tosca>	+CSCA	a_atp_ScAddress	12 bytes	FFh,..,FFh
<cid>	D*	v_hee_DefaultPDPCtxt	1 byte	3
<precedence>	+CGQREQ	v_hee_PDPCtxtQosPrecedence	2 bits	0
<delay>		v_hee_PDPCtxtQosDelay	3 bits	0
<reliability>		v_hee_PDPCtxtQosReliability	3 bits	3
<peak>		v_hee_PDPCtxtQosPeak	4 bits	0
<mean>		v_hee_PDPCtxtQosMean	1 byte	0
<APN>	+CGDCONT	a_hee_PDPCtxtApn	64 bytes	FF..FF
<PDP_addr>		a_hee_PDPCtxtAddress	4 bytes	0,0,0,0
<mode>	+CCWE	v_CCWE_Mode	1 bit	0
<mode>	+CAOC	v_CAOC_Mode	2 bits	0
<fun>	+CFUN	v_CFUNState	1 bit	0
<mode>	+CMUX	v_Mode	1 bit	0
<subset>		v_Subset	1 bit	0
<portspeed>		v_Portspeed	3 bits	5
<N1>		v_N1	2 bytes	1F
<T1>		v_T1	1 byte	A
<N2>		v_N2	1 byte	3
<T2>		v_T2	1 byte	1E
<T3>		v_T3	1 byte	A
<K>		v_K	3 bits	2

6.7 Other stored data in other section

Parameter name	Parameter of command:	Non volatile memory field name	Length	Default value hexa	Section used to store the data
<level>	+CRSL	v_hee_RingVolume	4 bits	2	SETTING
<mode>	+CVIB	v_hee_RingerType v_hee_Vibrator	7 bits 1	0 0	SETTING SETTING
<level>	+CLVL	v_hee_UserVolume	4 bits	5	SETTING
<code>	+CLAN	v_hee_AutomaticLanguage s_hee_SetupLanguages	1 bit 28 bits	0 800	SETTING SETUP
<text>	+CSGT	a_hee_WelcomeMessage	23 bytes	“Philips DUAL BAND “	SETUP