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FIBOCOM AT Commands User Manual_Private_QCOM

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1 AT Commands

1.1 CDMA Commands

1.1.1+QCIMI, Request IMSI

1.1.1.1Description

This command controls different displays of PLMNs for CIMI command in 3GPP2.

1.1.1.2Syntax

Command	Possible response(s)
+QCIMI	<IMSI> or ERROR/+CMS ERROR:<err>
+QCIMI=?	OK or ERROR/+CMS ERROR:<err>

1.1.1.3Attributes

Pin Restricted	Persistent	Sync Mode	Effect Immediately	Time of duration
Yes	No	Yes	Yes	< 1s

1.1.1.4Defined Values

<IMSI>: string type; International Mobile Subscriber Identity (string without double quotes);e.g.

314566320021400

1.1.2+CCSQ, Request Signal Quality

1.1.2.1Description

This command queries received signal strength indication and bit error rate.

1.1.2.2Syntax

Command	Possible response(s)
+CCSQ	+CCSQ:<rssi>,<ber> or

Command	Possible response(s)
	ERROR/+CMS ERROR:<err>
+CCSQ=?	+CMMS: (list of supported <rssi>s),(list of supported <ber>s)

1.1.2.3 Attributes

Pin Restricted	Persistent	Sync Mode	Effect Immediately	Time of duration
Yes	No	Yes	Yes	< 1s

1.1.2.4 Defined Values

<rssi>: integer type; Received Signal Strength Indication

- 0 -125dBm
- 1-30 Integer(31×(125-|rssi|)/50)dBm.
- 31 above -75dBm
- 99 unknown or undetected

<ber>: integer type; bit error rate

- 99

1.1.3 +QCLCK(+CLCK), Facility Lock

1.1.3.1 Description

This command locks, unlocks or interrogates a modem or a network facility <fac> (any kind of call barring program).

A password is mandatory for performing locking and unlocking actions, but not for querying. The features of the modem that are affected by this are fixed dialing list.

When querying the status of a single call barring program <mode>=2, the <status> for each call type will be returned.

For <fac>="SC", SIM card PIN setting and for <fac>="FD", SIM fixed Dialing memory setting, the <class> is irrelevant (For more information about <class>, refer to the following table shows the +QCLCK parameters.). For "SC", the <passwd> is SIM PIN. For "FD", the <passwd> is SIM PIN2.

1.1.3.2 Syntax

Command	Possible response(s)
+QCLCK=<fac>,<mode>[, <passwd>[,<classx>]]	OK or

Command	Possible response(s)
	+QCLCK:<status> or ERROR/+CMS ERROR:<err>
+QCLCK=?	+QCLCK:(list of supported <fac>s) or ERROR/+CMS ERROR:<err>

1.1.3.3 Attributes

Pin Restricted	Persistent	Sync Mode	Effect Immediately	Time of duration
Yes	No	Yes	Yes	< 1s

1.1.3.4 Defined Values

<fac>: string type

"FD" SIM card or active application in the UICC (GSM or USIM) fixed dialing memory feature (if PIN2 authentication has not been done during the current session, PIN2 is required as <passwd>).

"SC" SIM (lock SIM/UICC card installed in the currently selected card slot) (SIM/UICC asks password in MT power up and when this lock command issued).

<mode>: integer type

- 0 unlock
- 1 lock
- 2 query status

<status>: integer type

- 0 not active
- 1 active

<passwd>: string type; shall be the same as password specified for the facility from the MT user interface or with command Change Password +CPWD

<classx> is a sum of integers each representing a class of information (default 7 - voice, data and fax):

- 1 voice (telephony)
- 2 data (refers to all bearer services; with <mode>=2 this may refer only to some bearer service if TA does not support values 16, 32, 64 and 128)
- 4 fax (facsimile services)
- 8 short message service

1.1.4+QCPWD(+CPWD), Change Password

1.1.4.1Description

This command sets a new password for the facility lock. The password can only be changed once the required facility is enabled by the +CLCK command.

A password can be changed only if the provided password <oldpwd> has been verified. The entered password <newpwd> must also comply to the password rules. The facility value <fac> is not case-sensitive. In the password value, letters are not allowed.

1.1.4.2Syntax

Command	Possible response(s)
+QCPWD=<fac>,<oldpwd>,<newpwd>	OK or ERROR/+CMS ERROR:<err>
+QCPWD=?	+QCPWD: list of supported (<fac>s,<pwdlength>) or ERROR/+CMS ERROR:<err>

1.1.4.3Attributes

Pin Restricted	Persistent	Sync Mode	Effect Immediately	Time of duration
Yes	No	Yes	Yes	< 1s

1.1.4.4Defined Values

<fac>: string type

"SC" UIM

"P2" SIM PIN2

<oldpwd>, <newpwd>: string type; old password, new password; maximum length of password can be determined with <pwdlength>,<newpwd> must be between '0'-'9', otherwise an error will be returned directly.

<pwdlength>: integer type maximum length of the password for the facility

1.1.5+QCPIN(+CPIN), Enter PIN

1.1.5.1Description

Set command sends to the DCE a password which is necessary before it can be operated. Read command returns an alphanumeric string indicating whether some password is required or not.

1.1.5.2 Syntax

Command	Possible response(s)
+QCPIN=<pin>[,<newpin>]	OK or ERROR/+CMS ERROR:<err>
+QCPIN?	+QCPIN:<code> or ERROR/+CMS ERROR:<err>
+QCPIN=?	OK

1.1.5.3 Attributes

Pin Restricted	Persistent	Sync Mode	Effect Immediately	Time of duration
Yes	No	Yes	Yes	< 1s

1.1.5.4 Defined Values

<pin>, <newpin>: string type values. Requires quotes.

<code> string type;

READY DEC is not pending for any password.

UIM PIN DEC is waiting UIM PIN to be given.

UIM PUK DEC is waiting UIM PUK to be given.

UIM PIN2 DEC is waiting UIM PIN2 to be given (this <code> is recommended to be returned only when the last executed command resulted in PIN2 authentication failure (i.e. +CME ERROR: 17); if PIN2 is not entered right after the failure, it is recommended that DEC does not block its operation).

UIM PUK2 DEC is waiting UIM PUK2 to be given (this <code> is recommended to be returned only when the last executed command resulted in PUK2 authentication failure (i.e. +CME ERROR: 18); if PUK2 and new PIN2 are not entered right after the failure, it is recommended that DEC does not block its operation).

1.1.6 ^CPIN, Extended PIN management

1.1.6.1 Description

Set command sends to the ME a password which is necessary before it can be operated. Read command returns an alphanumeric string indicating whether some password is required or not.

1.1.6.2 Syntax

Command	Possible response(s)
^CPIN=<pin>[,<newpin>]	OK or ERROR/+CMS ERROR:<err>
^CPIN?	^CPIN:<code>[,<times>],<PUK_times>,<PIN_times>,<PUK2_times>,<PIN2_times> or ERROR/+CMS ERROR:<err>
^CPIN=?	OK

1.1.6.3 Attributes

Pin Restricted	Persistent	Sync Mode	Effect Immediately	Time of duration
Yes	No	Yes	Yes	< 1s

1.1.6.4 Defined Values

<pin>, <newpin>: string type values. requires quotes.

<code> string type;

READY DEC is not pending for any password.

UIM PIN DEC is waiting UIM PIN to be given.

UIM PUK DEC is waiting UIM PUK to be given which is used to unlock blocked UIM PIN.

UIM PIN2 DEC is waiting UIM PUK to be given (temporarily not supported).

UIM PUK2 DEC is waiting UIM PUK2 to be given which is used to unlock blocked UIM PIN2(temporarily not supported).

<times> integer type; number of remaining attempts. The maximum number for PIN and PIN2 is 3, and the maximum number for PUK and PUK2 is 10. This field is blank if no password entry request exists.

<PUK_times> integer type values in the range of 0-10; number of remaining PUK attempts.

<PIN_times> integer type values in the range of 0-3; number of remaining PIN attempts.

<PUK2_times> integer type values in the range of 0-10; number of remaining PUK2 attempts.

<PIN2_times> integer type values in the range of 0-3; number of remaining PIN2 attempts.

1.1.7 ^PREFMODE, Network Mode Preference

1.1.7.1 Description

Set command forces the ME to enter the desired network mode.

Read command queries the current network mode of ME.

Test command displays the list of supported <pref_mode>s.

1.1.7.2 Syntax

Command	Possible response(s)
^PREFMODE=<pref_mode>	OK or ERROR/+CMS ERROR:<err>
^PREFMODE?	^PREFMODE: <pref_mode> or ERROR/+CMS ERROR:<err>
^PREFMODE=?	^PREFMODE:(list of supported <pref_mode>s or ERROR/+CMS ERROR:<err>

1.1.7.3 Attributes

Pin Restricted	Persistent	Sync Mode	Effect Immediately	Time of duration
Yes	No	Yes	Yes	< 1s

1.1.7.4 Defined Values

<pref_mode>: integer type:

- 2 CDMA mode.
- 4 HDR mode.
- 8 CDMA/HDR mixed mode.

1.2 CDMA Call Commands

1.2.1 D, Dial Command

1.2.1.1 Description

This command makes a DATA/VOICE call.

1.2.1.2 Syntax

Command	Possible response(s)
D<dial_string>	ERROR/+CMS ERROR:<err> or NO CARRIER or CONNECT<n>

1.2.1.3 Attributes

Pin Restricted	Persistent	Sync Mode	Effect Immediately	Time of duration
Yes	No	Yes	Yes	< 1s

1.2.1.4 Defined Values

<number>: string type; telephone number or Special number (e.g *99# or *99***1#).

1.2.2 H, Hang up call

1.2.2.1 Description

Execution command causes TA to hang up the current GSM/UMTS call of the MT.

1.2.2.2 Syntax

Command	Possible response(s)
H	ERROR/+CMS ERROR:<err> or OK

1.2.2.3 Attributes

Pin Restricted	Persistent	Sync Mode	Effect Immediately	Time of duration
Yes	No	Yes	Yes	< 1s

1.2.3+CRM, PPP Dial-up User Name Reading Configuration on Telecom 3G

1.2.3.1Description

This command selects data call mode on CDMA/EVDO

1.2.3.2Syntax

Command	Possible response(s)
+CRM=<parameter>	OK or ERROR/+CMS ERROR:<err>
+CRM?	+CRM:<Parameter> or ERROR/+CMS ERROR:<err>
+CRM	+CRM:(list of supported <parameter>s)

1.2.3.3Attributes

Pin Restricted	Persistent	Sync Mode	Effect Immediately	Time of duration
Yes	No	Yes	Yes	< 1s

1.2.3.4Defined Values

<parameter>: integer type:

- 0 default value. DUN call user name and password is passed from the client.
- 1 reserved.
- 2 DUN call user name and password is read from NV910 and NV906.

1.2.4+CDV(D), Voice Call Command

1.2.4.1Description

This command makes a VOICE call.

1.2.4.2Syntax

Command	Possible response(s)
+CDV<dial_string>	OK or

Command	Possible response(s)
	ERROR/+CMS ERROR:<err>

1.2.4.3 Attributes

Pin Restricted	Persistent	Sync Mode	Effect Immediately	Time of duration
Yes	No	Yes	Yes	< 1s

1.2.4.4 Defined Values

<dial_string>: string type; Called phone number, ASCII characters, legal characters include: 0-9, *, #, +
 "+" Must be in front of the number, the number can not exceed 24 digits (excluding "+").

1.2.5 +CHV(+CHUP), Hang-up Voice

1.2.5.1 Description

This command is used to hang up the voice call.

1.2.5.2 Syntax

Command	Possible response(s)
+CHV	OK or ERROR/+CMS ERROR:<err>

1.2.5.3 Attributes

Pin Restricted	Persistent	Sync Mode	Effect Immediately	Time of duration
Yes	No	Yes	Yes	< 1s

1.2.6 RING, Call Indication

1.2.6.1 Description

RING indicates incoming call. This command is unsolicited.

1.2.6.2 Syntax

Command	Possible response(s)
	RING

1.2.6.3 Attributes

Pin Restricted	Persistent	Sync Mode	Effect Immediately	Time of duration
Yes	No	Yes	Yes	< 1s

1.3 CDMA SMS Commands

1.3.1 \$QCPMS(+CPMS), Preferred Message Storage

1.3.1.1 Description

This command handles the selection of the preferred message storage area. The message storage area is divided into three parts, mem1, mem2 and mem3.

1.3.1.2 Syntax

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

1.3.1.3 Attributes

Pin Restricted	Persistent	Sync Mode	Effect Immediately	Time of duration
Yes	No	Yes	Yes	< 1s

1.3.1.4 Defined Values

<mem1>: string type; Memory from which messages are read and deleted.

<mem2>: string type; Memory to which writing operation is made.

<mem3>: string type; Memory to which received SMS are stored (unless forwarded directly to TE).

Note: Supported values for <mem1>,<mem2>,<mem3> may be:

"SM" (U)SIM message storage

"ME" ME message storage

Note:

- <mem1>,<mem2>,<mem3> may be restored to "SM" after power cycle device
- L8 family products only support "SM" storage for <mem1>,<mem2>,<mem3>
- L7 family products support as below combinations:

<mem1> : "SM", "ME"

<mem2> and <mem3>: "SM", "ME"

<used1,2,3> integer type; The number of currently stored messages in <mem1,2,3>.

< total1,2,3> integer type; The total amount of messages that can be stored in <Mem1,2,3>

1.3.2 \$QCMGF(+CMGF), Message Format

1.3.2.1 Description

Set command selects the format of inputting and sending messages, that is, the format of the message input and output by TA. The current version only supports TEXT format.

1.3.2.2 Syntax

Command	Possible response(s)
\$QCMGF=[<mode>]	OK
\$QCMGF?	\$QCMGF:<mode>
\$QCMGF=?	\$QCMGF:(list of supported <mode>s)

1.3.2.3 Attributes

Pin Restricted	Persistent	Sync Mode	Effect Immediately	Time of duration
Yes	No	Yes	Yes	< 1s

1.3.2.4 Defined Values

<mode>: integer type

0 PDU mode

1 Text mode(default)

1.3.3\$QCNMI(+CNMI), New Message Indications to Terminal

1.3.3.1Description

Set command sets program of new message reporting to TE:

<mode> and <bfr> select the way to report new SMS notifications to TE (including + CMT, + CMTI, + CDSI, and + CDS4).

<mt> sets whether to report to TE directly or store in MT and report the storage location when receiving a new SMS.

<bm>is not used temporarily.

<ds> sets whether to report SMS status indication (+ CDSI, + CDS).

1.3.3.2Syntax

Command	Possible response(s)
\$QCNMI=[<mode>,<mt>[,<bm>[,<ds>[,<bfr>]]]]]	OK or ERROR/+CMS ERROR:<err>
\$QCNMI?	\$QCNMI:<mode>,<mt>,<bm>,<ds>,<bfr>
\$QCNMI=?	\$QCNMI:(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)

1.3.3.3Attributes

Pin Restricted	Persistent	Sync Mode	Effect Immediately	Time of duration
Yes	No	Yes	Yes	< 1s

1.3.3.4Defined Values

<mode>: integer type; Default value is 1.

- 0 Buffer unsolicited result codes in the TA. If TA result code buffer is full, indications can be buffered in some other place or the oldest indications may be discarded and replaced with the new received indications.
- 1 Discard indication and reject new received message unsolicited result codes when TA-TE link is reserved (e.g. in on-line data mode). Otherwise forward them directly to the TE. China Telecom currently only supports this.
- 2 Buffer unsolicited result codes in the TA when TA-TE link is reserved (e.g. in on-line data mode) and flush them to the TE after reservation. Otherwise forward them directly to the TE.

(Temporarily not supported)

<mt> integer type; 0-3. Default value is 0.

The relationship between the <mt> values and the storage and notification methods of all types of messages is shown in the following table (for EW only).

<mt>	no class or class 1	class 0 or message waiting indication group (discard)	class 2 or message waiting indication group (store)	class 3
1	+CMTI	[+CMTI1]	+CMTI	+CMTI
2	+CMT & +CNMA3)	+CMT [&+CNMA2])	+CMTI	+CMT&+CNMA3)
3	+CMTI	[+CMTI1]	+CMTI	+CMT&+CNMA3)

1) result code is sent when ME does not have other display device than AT interface.
 2) acknowledgement command must be sent when +CSMS <service> value equals 1 and ME does not have other display device than AT interface.
 3) acknowledgement command must be sent when +CSMS <service> value equals 1.

<bm> integer type Default value is 0.

- 0 set the cell broadcast information.(temporarily not supported)
- 1 close the cell broadcast information.(temporarily not supported)

<ds>: integer type; Default value is 2.

- 0 No SMS-STATUS-REPORTs are routed to the TE.
- 1 SMS-STATUS-REPORTs are routed to the TE using unsolicited result code:
 ^HCDS:<CallerID>,<year>,<month>,<day>,<hour>,<minute>,<second>,<lang>,<format>,<length>,<pvt>
 ,<prv>,<type>,<tag><CR><LF><msg><CTRL+Z>
- 2 If SMS-STATUS-REPORT is stored into ME/TA, indication of the memory location is routed to the TE using unsolicited result code:
 +CDSI: <mem>,<index>

<bfr>: integer type; Default value is 0.

- 0 TA buffer of unsolicited result codes defined within this command is flushed to the TE when <mode> 1...2 is entered (OK response shall be given before flushing the codes).
- 1 TA buffer of unsolicited result codes defined within this command is cleared when <mode> 1...2 is entered.

1.3.4\$QCMGD(+CMGD), Delete Message

1.3.4.1Description

This command handles deletion of a single message from memory location <index>, or multiple messages according to <delflag>. If the optional parameter <delflag> is entered, and is greater than 0, the <index> parameter is practically ignored. If deletion fails, result code +CMS ERROR: <err> is returned.

1.3.4.2Syntax

Command	Possible response(s)
\$QCMGD=<index>,[<delflag>]	OK or ERROR/+CMS ERROR:<err>
AT\$QCMGD=?	\$QCMGD:(0-255),(0-4)

1.3.4.3Attributes

Pin Restricted	Persistent	Sync Mode	Effect Immediately	Time of duration
Yes	No	Yes	Yes	< 1s

1.3.4.4Defined Values

<index>: integer type; Index in the SMS memory of the message to be deleted.

<delflag>: integer type, indicating multiple message deletion request as follows:

- 0 Delete the message specified in <index>
- 1 Delete all read messages from preferred message storage, leaving unread messages and stored mobile originated messages (whether sent or not) untouched
- 2 Delete all read messages from preferred message storage and sent mobile originated messages, leaving unread messages and unsent mobile originated messages untouched
- 3 Delete all read messages from preferred message storage, sent and unsent mobile originated messages leaving unread messages untouched.
- 4 Delete all messages from preferred message storage including unread messages.

1.3.5\$QCMSS(+CMSS), Send Message from Storage

1.3.5.1Description

DTE sends a text message from the storage (PDU mode is not currently supported).

1.3.5.2 Syntax

Command	Possible response(s)
\$QCMSS=<index>	\$QCMSS:<mr> or ERROR/+CMS ERROR:<err>
\$QCMSS=?	OK

1.3.5.3 Attributes

Pin Restricted	Persistent	Sync Mode	Effect Immediately	Time of duration
Yes	No	Yes	Yes	< 1s

1.3.5.4 Defined Values

<index>: integer type; Index in storage of the message to be sent.

<mr>: integer type; 0-65535, TP-Message-Reference.

1.4 Phone Book Command

1.4.1 ^CPBR(+CPBR), Read Phone Book Entries

1.4.1.1 Description

This command recalls the phonebook entries between index1 and index2 which are currently selected in the phonebook memory. If there is no phonebook entry for all locations from index1 to index2, it returns: +CME ERROR: not found. If entered only index1, the phone book entry in location number<index1> is returned.

1.4.1.2 Syntax

Command	Possible response(s)
^CPBR=<index1>[,<index2>]	^CPBR:<index1>,<number>,<type>,<text>,<coding>[,<email>][...] or ERROR/+CMS ERROR:<err>
^CPBR=?	+CPBR:(list of supported <index>s),[<nlength>],[<tlength>]

1.4.1.3 Attributes

Pin Restricted	Persistent	Sync Mode	Effect Immediately	Time of duration
Yes	No	Yes	Yes	< 1s

1.4.1.4 Defined Values

<index1>, <index2>: integer type values in the range of location numbers of phonebook memory, 1-500.

<number>: string type phone number of format <type>

<type>: type of address octet in integer format.

<text>: string type field of maximum length <tlength>.

<coding>: integer type

0 RAW Mode

1 ASCII

<nlength>: integer type value indicating the maximum length of field <number>

<tlength>: integer type value indicating the maximum length of field <text>

1.4.2 ^CPBW(+CPBW), Write Phone Book Entry

1.4.2.1 Description

Set command writes phone book entry in location number<index> in the current phone book memory storage selected. If all fields except <index> are omitted, the corresponding entry is deleted. If the <index> is left out, but <number> is given, entry is written to the first free location in the phone book. If there is free location currently, report: + CME ERROR:

Test command returns location range supported by the current storage as a compound value, the maximum length of <number> field, supported number formats of the storage, the maximum length of <text> field. To store the phone book, ensure that all entered lengths are within the maximum length.

1.4.2.2 Syntax

Command	Possible response(s)
^CPBW=[<index>][,<number>[,<type>[,<text>,<coding>]]]	OK or ERROR/+CMS ERROR:<err>
^CPBW=?	+CPBW:(list of supported <index>s),[<nlength>],[<tlength>] ^CPBW:(list of supported <index>s),[<nlength>],(list of supported <type>s),[<tlength>] or

Command	Possible response(s)
	ERROR/+CMS ERROR:<err>

1.4.2.3 Attributes

Pin Restricted	Persistent	Sync Mode	Effect Immediately	Time of duration
Yes	No	Yes	Yes	< 1s

1.4.2.4 Defined Values

<index>: integer type values in the range of location numbers of phonebook memory, 1-500.

<number>: string type phone number of format <type>

<type>: integer type in range of 128-255. type of address octet in integer format.

<text>: string type field of maximum length <tlength>.

<coding> integer type

- 1 RAWMode
- 2 ASCII

<nlength>: integer type value indicating the maximum length of field <number>

<tlength>: integer type value indicating the maximum length of field <text>

1.4.3 ^CPBF(+CPBF), Find Phone Book Entries

1.4.3.1 Description

This execution command enables the user to search for a particular entry, by name, in the currently active phone book. If no matching entry is found, the command returns OK. If multiple matches are found, all are returned.

1.4.3.2 Syntax

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

1.4.3.3 Attributes

Pin Restricted	Persistent	Sync Mode	Effect Immediately	Time of duration
Yes	No	Yes	Yes	< 1s

1.4.3.4 Defined Values

<index1>, <index2>: integer type values in the range of location numbers of phonebook memory

<number>: string type phone number of format <type>

<type>: type of address octet in integer format <text>: string type field of maximum length <tlength>.

<findtext>, <text>: string type field of maximum length <tlength>;

<nlength>: integer type value indicating the maximum length of field <number>


<tlength>: integer type value indicating the maximum length of field <text>

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2 Error Code

2.1 CME Error

Parameter	Description
<Err>	0, "phone failure"
	1, "no connection to phone"
	2, "phone-adapter link reserved"
	3, "operation not allowed"
	4, "operation not supported"
	5, "PH-SIM PIN required"
	6, "PH-FSIM PIN required"
	7, "PH-FSIM PUK required"
	10, "SIM not inserted"
	11, "SIM PIN required"
	12, "SIM PUK required"
	13, "SIM failure"
	14, "SIM busy"
	15, "SIM wrong"
	16, "incorrect password"
	17, "SIM PIN2 required"
	18, "SIM PUK2 required"
	19, "incorrect PUK1"
	20, "memory full"
	21, "invalid index"
	22, "not found"
	23, "memory failure"
	24, "text string too long"
	25, "invalid characters in text string"
	26, "dial string too long"
	27, "invalid characters in dial string"
	30, "no network service"
	31, "network timeout"
	32, "network not allowed - emergency calls only"

Parameter	Description
	40, "network personalisation PIN required"
	41, "network personalisation PUK required"
	42, "network subset personalisation PIN required"
	43, "network subset personalisation PUK required"
	44, "service provider personalisation PIN required"
	45, "service provider personalisation PUK required"
	46, "corporate personalisation PIN required"
	47, "corporate personalisation PUK required"
	48, "hidden key required"
	 Note: This key is required when accessing hidden phonebook entries.)
	49, "EAP method not supported"
	50, "Incorrect parameters"
	100, "unknown"
	103, "Illegal MS"
	106, "Illegal ME"
	107, "GPRS services not allowed"
	111, "PLMN not allowed"
	112, "location area not allowed"
	113, "roaming not allowed in this location area"
	114, "GPRS services not allowed in this PLMN"
	116, "MSC temporarily not reachable"
	117, "Network failure"
	132, "Service not supported"
	133, "Service not subscribed"
	134, "service option temporarily out of order"
	135, "NS-api already used"
	148, "Unspecified GPRS error"
	149, "PDP authentication error"
	150, "invalid mobile class"
	244, "Attach failure"
	257, "Invalid error mapping"
	258, "APN not listed in APN Control List (ACL)"

Parameter	Description
	701, "incorrect security code"
	702, "max attempts reached"
	1001, "Unassigned (unallocated) number"
	1003, "No route to destination"
	1006, "Channel unacceptable"
	1008, "Operator determined barring"
	1016, "Normal call clearing"
	1017, "User busy"
	1018, "No user responding"
	1019, "User alerting, no answer"
	1021, "Call rejected"
	1022, "Number changed"
	1026, "Non selected user clearing"
	1027, "Destination out of order"
	1028, "Invalid number format (incomplete number)"
	1029, "Facility rejected"
	1030, "Response to STATUS ENQUIRY"
	1031, "Normal, unspecified"
	1034, "No circuit/channel available"
	1038, "Network out of order"
	1041, "Temporary failure"
	1042, "Switching equipment congestion"
	1043, "Access information discarded"
	1044, "requested circuit/channel not available"
	1047, "Resources unavailable, unspecified"
	1049, "Quality of service unavailable"
	1050, "Requested facility not subscribed"
	1055, "Incoming calls barred within the CUG"
	1057, "Bearer capability not authorized"
	1058, "Bearer capability not presently available"
	1063, "Service or option not available, unspecified"
	1065, "Bearer service not implemented"
	1068, "ACM equal to or greater than ACM max"

Parameter	Description
	1069, "Requested facility not implemented" 1070, "Only restr. digital information bearer capability" 1079, "Service or option not implemented, unspecified" 1081, "Invalid transaction identifier value" 1087, "User not member of CUG" 1088, "Incompatible destination" 1091, "Invalid transit network selection" 1095, "Semantically incorrect message" 1096, "Invalid mandatory information" 1097, "Message type non-existent or not implemented" 1098, "Message type not compatible with protocol state" 1099, "Information element non-existent or not implemented" 1100, "Conditional IE error" 1101, "Message not compatible with protocol state" 1102, "Recovery on timer expiry" 1111, "Protocol error, unspecified" 1127, "Interworking, unspecified" 1279, "Number not allowed" 1283, "CCBS possible" Note: L710、G500、G510 use respectively other error cause instead of above one with below value: 50, "Execute command failure" 100, NA

2.2 CMS Error

Parameter	Description
<Err>	1, "Unassigned (unallocated) number" 8, "Operator determined barring" 10, "Call barred" 17, "Network failure" 21, "Short message transfer rejected"

Parameter	Description
	22, "Memory capacity exceeded"
	27, "Destination out of service"
	28, "Unidentified subscriber"
	29, "Facility rejected"
	30, "Unknown Subscriber"
	38, "Network out of order"
	41, "Temporary failure"
	42, "Congestion"
	47, "Resources unavailable, unspecified"
	50, "Requested facility not subscribed"
	69, "Requested facility not implemented"
	81, "Invalid short message reference value"
	95, "Invalid message, unspecified"
	96, "Invalid mandatory information"
	97, "Message type non-existent or not implemented"
	98, "Message not compatible with short message protocol state"
	99, "Information element non-existent or not implemented"
	111, "Protocol error, unspecified"
	127, "Interworking unspecified"
	128, "Telematic interworking not supported"
	129, "Short message type 0 not supported"
	130, "Cannot replace short message"
	143, "Unspecified TP-PID error"
	144, "Data coding scheme (alphabet) not supported"
	145, "Message class not supported"
	159, "Unspecified TP-DCS error"
	160, "Command cannot be action"
	161, "Command unsupported"
	175, "Unspecified TP-Command error"
	176, "TPDU not supported"
	192, "SC busy"
	193, "No SC subscription"
	194, "SC system failure"

Parameter	Description
	195, "Invalid SME address"
	196, "Destination SME barred"
	197, "SM Rejected-Duplicate SM"
	198, "TP-VPF not supported"
	199, "TP-VP not supported"
	208, "SIM SMS storage full"
	209, "No SMS storage capability in SIM"
	210, "Error in MS"
	211, "Memory Capacity Exceeded"
	212, "SIM Application Toolkit Busy"
	213, "SIM data download error"
	224, "TP_FCS_APPL_ERR_START"
	254, "TP_FCS_APPL_ERR_STOP"
	255, "TP_FCS_UNSPECIFIED"
	300, "ME failure"
	301, "SMS service of ME reserved"
	302, "operation not allowed"
	303, "operation not supported"
	304, "Invalid PDU mode param"
	305, "invalid text mode parameter"
	310, "SIM not inserted"
	311, "SIM PIN required"
	312, "PH-SIM PIN necessary"
	313, "SIM failure"
	314, "SIM busy"
	315, "SIM wrong"
	317, "SIM PIN2 required"
	318, "SIM PUK2 required"
	319, "incorrect PUK1"
	320, "memory failure"
	321, "invalid memory index"
	322, "memory full"
	330, "SMSC address unknown"

Parameter	Description
	331, "no network service"
	332, "network timeout"
	340, "no +CNMA acknowledgement expected"
	512, "MN_SMS_RP_ACK"
	513, "MN_SMS_TIMER_EXPIRED"
	514, "MN_SMS_FORW_AVAIL_FAILED"
	515, "MN_SMS_FORW_AVAIL_ABORTED"
	516, "MS invalid TP-Message-Type-Indicator"
	517, "MS no TP-Status-Report in Phase 1"
	518, "MS no TP-Reject-Duplicate in Phase 1"
	519, "MS no TP-Reply-Path in Phase 1"
	520, "MS no TP-User-Data-Header in Phase 1"
	521, "MS missing TP-Validity-Period"
	522, "MS invalid TP-Service-Centre-Time-Stamp"
	523, "MS missing TP-Destination-Address"
	524, "MS invalid TP-Destination-Address"
	525, "MS missing Service-Centre-Address"
	526, "MS invalid Service-Centre-Address"
	527, "MS invalid alphabet"
	528, "MS invalid TP-User-Data-Length"
	529, "MS missing TP-User-Data"
	530, "MS TP-User-Data too long"
	531, "MS no Command-Request in Phase 1"
	532, "MS Cmd-Req invalid TP-Destination-Address"
	533, "MS Cmd-Req invalid TP-User-Data-Length"
	534, "MS Cmd-Req invalid TP-User-Data"
	535, "MS Cmd-Req invalid TP-Command-Type"
	536, "MN MNR creation failed"
	537, "MS CMM creation failed"
	538, "MS network connection lost"
	539, "MS pending MO SM transfer"
	540, "RP-Error OK"
	541, "RP-Error OK no icon display"

Parameter	Description
	<p>542, "SMS-PP Unspecified"</p> <p>543, "SMS rejected By SMS CONTROL"</p> <p>Note: L710、G500、G510 use respectively other error cause instead of above one with below value:</p> <p>513, "Unable to store"</p> <p>514, "Invalid status"</p> <p>515, "Invalid character in address string"</p> <p>516, "Invalid length"</p> <p>517, "Invalid character in pdu"</p> <p>518, "Invalid parameter"</p> <p>519, "Invalid length or character"</p> <p>520, "Invalid character in text"</p>