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COLLABORATIVE THINGS

Command List

for

EaseIP V1.21

for the GenPro modem family

<u>Reference</u> :   EG_EaseIP_V121_CL_006_UK

<u>Revision</u> :   006

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Document History

Rev.	Modifications	Author	Date	Validation	Date
000	Creation	MRE	06/01/2015	BBO	06/01/2015
001	Modified AT+EGCGSM default values and added description to force GSM in 2G or 3G mode. Added description for AT+EGRST mode 2.	MRE	06/03/2015		
002	Modified AT+EGCGSM default values and added description to force GSM in 2G or 3G mode. Added description for AT+EGRST mode 2. Updated list of commands not allowed via SMS.	MRE	07/04/2015		
003	Add description for ATQ command. Added note concerning the RTS signal in the +IFC chapter.	MRE	20/08/2015		
004	Added description for AT+EGSMSCFG command. Added description for AT+EGNTPPORT, AT+EGNTPWAIT and AT+EGNTPUTC commands. Added description for AT+EGETX command. Added description for AT+EGMRST command. Updated AT+EGREC and AT+EGCCREC commands with friendly name explanation. Added note to AT+EGFPT and AT+EGFMO commands concerning the server port and Active/Passive modes. Added restriction concerning the AT+EGSMTPSN parameter.	MRE	18/11/2015	BBO	23/11/2015
005	Added description for AT+EGXRT command for the RS485 configuration. Removed restriction concerning the AT+EGSMTPSN parameter. Added option to AT+EGTRC command to show/not show "+EGEVT: n" messages. Updated description of AT+EGDDNSTIME=<timeout> parameter. Added option to AT+EGCNXPERM command to wait until connection to socket has been established before showing "Ok_Info_WaitingForData". Added description for S47, the RS485 character reception timeout. Added escape sequence restriction note to the AT+EGCNXPERM chapter. Added S47 to register list displayed with the command AT&V3. Added note to AT+EGCMEE chapter concerning error code reporting by the GSM. Added restriction concerning AT&D1. Added description of +EGEVT messages to AT+EGTRC chapter.	MRE	29/02/2016		
006	Adjusted document page headers and footers. Added a warning concerning the uses of carriage-return and line-feed characters in the Configuration and remote control by SMS chapter. Corrected description for AT+EGCNXPERM command. Added option to AT+EGNETWUP command to disable the network wakeup function. Added S21 register description for AT&D configuration. Added note concerning the escape sequence in TCP client and server modes. Added description of the command AT+EGCMGS. Corrected notes in AT+EGCGSM command. Updated the description for S27 automatic low-power timeout. Updated description for S32 Transfer inactivity timeout.	MRE	28/02/2017	BBO	02/03/2017

The main modifications in this document compared to its previous version are easily identifiable on a screen by the blue colour of the text.

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Dct_433_01

CONTENTS

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1   Introduction

The AT commands described in this document provide IP connectivity for TCP/UDP, FTP, SMTP, PING, SNTP and Dynamic DNS for the GenPro family of modems from ERCOGENER such as the Genpro 25e.

1.1   AT commands

All commands begin with "**AT+**".
The command syntax for each command may be obtained with **AT+command=?**
Parameters are entered with **AT+command=parameter1,parameter2**,…
ASCII parameters must be entered with surrounding quotes (e.g.: **"parameter3"**)
Command configuration may be checked with **AT+command? (**or in some cases **AT+command**)

All parameters are automatically save to non-volatile flash memory.

1.2   Activation

The software application must be activated with the command AT+EGLIBKEY (see chapter **16.1 +EGLIBKEY – Special library key**) in order to use the IP connectivity functions. Without this key only the configuration of the modem will be operational.

1.3   Reset

The complete configuration of the modem may done with the command AT+EGMFLH=3 (see chapter **12.3 +EGMFLH=3 – Erase all parameters**). This command will reset all the configuration commands to their default values.

1.4   Upgrade

The software application may be updated with the command AT+EGDWL (see chapter **17 +EGDWL – Remote download of a new application**).

1.5   Restrictions

The current version of this application has the following known limitations:

- Any incoming vocal call whilst a GPRS connection is in progress will result in the data transfer being temporarily halted for the whole time that the call is present. Data transfer will resume when the call has terminated.

- By default the modem will not automatically reply to an incoming call.

- The AT&D1 functionality is only available during a CSD connection. It has no effect during a TCP/UDP session.

- The RS485 maximum baudrate is 19200 baud with a maximum packet size of 2kbytes.

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1.6   Glossary and abbreviations

<DLE>	Data Link Escape character
<ETX>	End of TeXt escape character
AOB	Application On-Board
APN	Access Point Name
DNS	Domain Name System
EGM	ERCOGENER Middleware
FTP	File Transfer Protocol
GPRS	General Packet Radio Service
GSM	Global System for Mobile communication
IP	Internet Protocol
ISP	Internet Service Provider
PING	Server echo requests service
SMTP	Simple Mail Transfer Protocol
SNTP	Simple Network Time Protocol
TCP	Transmission Control Protocol
UDP	User Datagram Protocol

2   Network services

2.1   Access Point configuration

2.1.1   +EGAPW – Access Point Password

- **Definition**
  Access Point Name password to be used for GPRS access via the GSM operators.

- **Configuration**
  Set value : AT+EGAPW=<SIM1>[,<SIM2>]
  Get value : AT+EGAPW? or AT+EGAPN, AT+EGVALL

- **Legal values**
  Alphanumeric ASCII text string up to 120 characters.

- **Default value**
  Empty.

2.1.2   +EGASV – Access Point Servername

- **Definition**
  Access Point Name to be used for GPRS access via the GSM operator.

- **Configuration**
  Set value : AT+EGASV=<SIM1>[,<SIM2>]
  Get value : AT+EGASV? or AT+EGAPN, AT+EGVALL

- **Legal values**
  Alphanumeric ASCII text string up to 120 characters.

- **Default value**
  Empty.

Notes:
A private APN with PAP or CHAP authorisation may be configured as:
AT+EGASV="PAP:*apn_server*"   (private APN with PAP authorisation)
AT+EGASV="CHAP:*apn_server*"   (private APN with CHAP authorisation)

2.1.3   +EGAUN – Access Point Username

- **Definition**
  Access Point Name Username to be used for GPRS access via the GSM operator.

- **Configuration**
  Set value : AT+EGAUN=<SIM1>[,<SIM2>]
  Get value : AT+EGAUN? or AT+EGAPN, AT+EGVALL

- **Legal values**
  Alphanumeric ASCII text string up to 120 characters.

- **Default value**
  Empty.

2.1.4   +EGGID – PDP context

- **Definition**
  PDP context identifier which specifies a particular PDP context definition

- **Configuration**
  Set value : AT+EGGID =<SIM1>[,<SIM2>]
  Get value : AT+EGGID? or AT+EGAPN, AT+EGVALL

- **Legal values**
  1

- **Default value**
  1

- **Note**: Always set to 1.

2.1.5   +EGGMO – GPRS/GSM operating mode

- **Definition**
  Select GPRS or GSM operation.

- **Configuration**
  Set value : AT+EGGMO =<SIM1>[,<SIM2>]
  Get value : AT+EGGMO? or AT+EGAPN, AT+EGVALL

- **Legal values**
  0 : GSM operation
  1 : GPRS operation

- **Default value**
  1

- **Note**: Only GPRS mode is managed.

2.2   +EGVAPN – Display GPRS parameters

Description:
> This command displays all the parameters related to the GPRS configuration.

Syntax:
> **AT+EGVAPN**

Examples:

Command	Possible Responses	Notes
AT+EGVAPN	+EGAPW: "acces","" +EGASV: "a2myoperator.com","" +EGAUN: "a2b","" +EGGID: 1,1 +EGGMO: 1,1 OK	*Display current parameters*

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2.3   Network connection

2.3.1   +EGCNXSTART – Start GPRS session

Description:

This command will establish a GPRS session with the APN using +EGASV, +EGAPW and +EGAUN parameters. The GPRS session must be established before continuing with a socket connection. The AT+EGCNXSTOP command will end the GPRS session.

Syntax:

AT+EGCNXSTART

Examples:

Command	Possible Responses	Notes
AT+EGCNXSTART *Note: Request connection to GPRS network*	213.192.200.4 Ok_Info_GprsActivation	*IP address attributed to the TCP/IP Stack* *GPRS session established*
AT+EGCNXSTART	+CME ERROR: 35866	*All connection attempts will return this message if the GPRS session cannot be established*
AT+EGCNXSTART	+CME ERROR: 35865	*The product is not connected on the network*
AT+EGCNXSTART	+CME ERROR: 35868	*Aborted GPRS connection, check APN parameters.*

Note: If GPRS attachment is not automatic then it may be required before a +EGCNXSTART command.

2.3.2   +EGCNXSTOP – Stop GPRS connection

Description:

This command ends a GPRS connection previously established with the +EGCNXSTART command.

Syntax:

AT+EGCNXSTOP

Examples:

Command	Possible Responses	Notes
AT+EGCNXSTOP	OK	*Disconnect from network*

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2.3.3 +EGCNXPERM – Permanent TCP/UDP connection

Description:

     If the APN and TCP or UDP parameters have been set then this command will allow a permanent connection with a remote TCP/UDP client or server. If the SIM card is present then the connection will be automatically established at start-up or after a reset of the modem.

     The connection may be stopped at any time by removing the SIM card.

Syntax:

     AT+EGCNXPERM=<mode>,<protocol>,<num>,<socType>,<msgType>,<options>

Examples:

Command	Possible Responses
AT+EGCNXPERM=?	+EGCNXPERM: (0-1),("TCP,UDP"),(1-2),(0-1),(0-2),(0-1) OK *Note: Display syntax*
AT+EGCNXPERM?	+EGCNXPERM: 0,"TCP",1,0,0,0 OK *Note: Display current configuration*
AT+EGCNXPERM=1 *Note: Start permanent connection*	OK *Note: permanent connection will be started*

Defined values:

     <mode>
          0:      Disabled (default).
          1:      Enabled.

     <protocol>
          "TCP": TCP protocol (default).
          "UDP": UDP protocol.

     <num>
          Select configuration to use (1 default):
          TCP: 1-2
          UDP: 1

     <socType>
          0:      Client (default).
          1:      Server.

     <msgType>
          0:      Normal messages (default).
          1:      When entering DATA mode, "CONNECT" will sent over the serial link.
                  When returning to COMMAND mode, "NO CARRIER" will be sent over the serial link.
          2:      No message are sent over the serial link when entering DATA mode or returning to COMMAND mode.

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<options>   Options bit mask, default = 0.

The following options are available :
-   1 : wait until connection to socket has been established before showing "Ok_Info_WaitingForData".
-   2 : not used
-   4 : not used
-   8 : not used
- 16 : not used
- 32 : not used
- 64 : not used
- 128 : not used

Notes:

In order for this function to operate, the APN and TCP or UDP configurations must be set.

The connection may be stopped or started by removing or inserting the SIM card.

If SIM is present and mode is enabled then the module will enter the DATA mode and activate the DSR signal. The module will buffer any data from the serial line until it can be sent over the socket.

If the SIM is removed then the module will enter the COMMAND mode and deactivate the DSR signal.

The escape sequence "+++" (to return to command mode) is not operational when a permanent connection is enabled.

2.4   Dynamic DNS

Description:

Dynamic DNS is a method of automatically updating a name server in the Domain Name System (DNS).

In the case where the module is configured as a server with a permanent connection, a mechanism is implemented to allow automatic update of the DNS each time that the module obtains a new IP address after a GPRS connection. Thus, as soon as the IP is obtained after a GPRS connection, the DNS will be updated so that a client will be able to connect to the server via a constant domain name.

If required, a manual update may be achieved via the command AT+EGDDNSSTART.

2.4.1   +EGDDNSSERV – DynDNS server

Description:

This command will configure the Dynamic DNS server access parameters to allow update of the DNS with a new IP address.

Syntax:

AT+EGDDNSSERV=<server>,<port>,<user>,<pass>

Examples:

Command	Possible Responses

AT+EGDDNSSERV=?	`+EGDDNSSERV: ("120"),(1-65535),("120"),("120")`
	
	`OK`
	Note: Display syntax

AT+EGDDNSSERV="dns.server.org", 80, "user","pass"	`OK` *Note: Configure server access*

AT+EGDDNSSERV?	`+EGDDNSSERV: "dns.server.org",80,"user","pass"`
	
	`OK`
	Note: Display current configuration

Defined values:

<server>

Dynamic DNS server name. 120 characters maximum. Default: "members.dyndns.org".

<port>

From 1 to 65535. Default: 80.

<user>

Dynamic DNS server username. 120 characters maximum. Default: "".

<server>

Dynamic DNS server password. 120 characters maximum. Default: "".

2.4.2 +EGDDNSHOST – DynDNS hostname

Description:

This command will configure the DNS hostname. This hostname will be associated with the module.

Syntax:

AT+EGDDNSHOST=<hostname>

Examples:

Command	Possible Responses
AT+EGDDNSHOST=?	+EGDDNSHOST: ("120") OK *Note: Display syntax*
AT+EGDDNSSERV="device1.dyndns.org"	OK *Note: Configure hostname*
AT+EGDDNSHOST?	+EGDDNSHOST: "device1.dyndns.org" OK *Note: Display current configuration*

Defined values:

<hostname>

Hostname. 120 characters maximum. Default: "".

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2.4.3 +EGDDNSTIME – DynDNS timeouts

Description:

This command will configure the DynDNS timeouts and retry values.

Syntax:

AT+EGDDNSTIME=<timeout>,<retries>,<period>,<cycle>

Examples:

Command	Possible Responses
AT+EGDDNSTIME=?	+EGDDNSTIME: (1-300),(0-5),(60-86400),(0,1800-2592000) OK *Note: Display syntax*
AT+EGDDNSTIME?	+EGDDNSTIME: 60,0,300,0 OK *Note: Display current configuration*
AT+EGDDNSTIME=90,1	OK *Note: Configure timeout and number of retries*
AT+EGDDNSTIME?	+EGDDNSTIME: 90,1,300,0 OK *Note: Display current configuration*

Defined values:

<timeout>

The amount of time to wait for an update request response. Default: 60 seconds.
If the server responds but the response is not "**good**" then the cycle phase will be entered (if not 0). If the cycle time is set to zero then the repeated update attempts will be disabled.

<retries>

The number of retries if there is a network problem or no response from the server.
Default: 0.
Setting this value to 0 will disable the automatic update of the DNS if the module is configured as a server with permanent connection.
A manual update with the command AT+EGDDNSSTART will continue to function.

<period>

The time between update retry attempts. Default: 300 seconds.

<cycle>

Interval between updates. Default: 0 seconds.
Setting this value to 0 will disable repeated update attempts after the maximum number of retries has been reached.

The diagram below shows the timing sequence:

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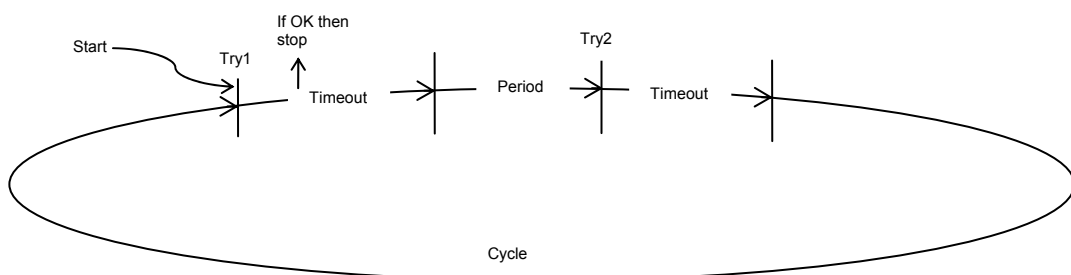
2.4.4 +EGVDDNS – Display DynDNS parameters

Description:

This command will display the complete current configuration for the DynDNS.

Syntax:

AT+EGVDDNS

Examples:

Command	Possible Responses
AT+EGVDDNS	+EGDDNSSERV: "dns.server.org",80,"user","pass" +EGDDNSHOST: "device1.dyndns.org" +EGDDNSTIME: 90,1,300,0 OK *Note: Display current configuration*

2.4.5 +EGDDNSSTOP – DynDNS stop

Description:

This command will stop an active DynDNS update.

Syntax:

AT+EGDDNSSTOP

Examples:

Command	Possible Responses
AT+EGDDNSSTOP	OK *Note: Stop any active DnyDNS update*

2.4.6   +EGDDNSSTART – DynDNS manual start

Description:

      This command will start a manual DynDNS update. A GPRS connection must already have been established before starting a manual update.

Syntax:

      AT+EGDDNSSTART   **(start a DynDNS update)**

      AT+EGDDNSSTART?   **(display current update status)**

Response syntax:

      Update attempted: 0 (no) or 1 (yes)
      Updated DnynDNS IP address
      Current IP address
      OK

Examples:

Command	Possible Responses
AT+EGDDNSSTART?	`+EGDDNSSTART: 0,"",""` OK *Note: Display current status* *Update not attempted, no updated IP address, no current IP address*
AT+EGDDNSSTART?	`+EGDDNSSTART: 0,"","90.122.20.57"` OK *Note: Display current status (GPRS connection only)* *Update not attempted, no update IP address, current IP address*
AT+EGDDNSSTART?	`+EGDDNSSTART: 1,"90.122.20.57","90.122.20.57"` OK *Note: Display current status (after DnyDNS update)* *Update attempted, updated IP address, current IP address*
AT+EGDDNSSTART	OK *Note: Update started and terminated OK. If the module is still connected GPRS then repeated use of this command will return OK without attempting a new update.*
AT+EGDDNSSTART?	`+EGDDNSSTART: 1,"90.122.20.57",""` OK *Note: Display current status (after GPRS disconnection)* *Update attempted, updated IP address, no current IP address*
AT+EGDDNSSTART?	`+EGDDNSSTART: 1,"90.122.20.57","90.117.173.254"` OK *Note: Display current status (after GPRS reconnection)* *Update attempted, updated IP address, new current IP address*
AT+EGDDNSSTART	OK *Note: Update started and terminated OK. If the module is still connected GPRS then repeated use of this command will return OK without attempting a new update.*
AT+EGDDNSSTART?	`+EGDDNSSTART: 1,"90.117.173.254","90.117.173.254"` OK *Note: Display current status (after DnyDNS update)* *Update attempted, updated IP address, current IP address*

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2.4.7 Error messages

Description:

The following DynDNS error messages are managed

Error codes	Dct_433_01
Numeric	**Description**
60000	good – The update was successful, hostname is now updated
60001	request ignored – agent does not respect specifications
60002	go change – The update changed no settings and is considered abusive
60003	Abuse – Host has been blocked
60004	badagent – User agent has been blocked
60005	badauth – Bad username/password pair
60006	badsys – Bad system parameter
60007	dnserr – DNS inconsistency
60008	donator – Option available only to credited users was specified
60009	notfqdn – Invalid hostname format
60010	numhost – Serious error
60011	!yours – Host not in this account
60012	911 – There is a problem or scheduled maintenance on server side
60099	Unknown error

2.5 Network wakeup

Description:

When the module is configured as a server, the module will listen for incoming connections. However, the network must know about the existence of the listening module. After having performed a GPRS connection, before starting the server, the application will contact the specified IP address and port so as to "wakeup the network". The listening server will then be started. Clients attempting to connect to the IP address obtained during the GPRS connection will then be connected to the listening server. See chapter **2.4 Dynamic DNS** for information about Dynamic DNS configuration.

2.5.1 +EGNETWUP – Network wakeup

Description:

This command will configure the address, port and timeout for the network wakeup parameters.

Syntax:

AT+EGNETWUP=<addr>,<port>,<timeout>,<enable>

Examples:

Command	Possible Responses
AT+EGNETWUP=?	+EGNETWUP: ("120"),(0,1-65535),(0,1-65535),(0-1) OK *Note: Display syntax*
AT+EGNETWUP="DNS1",53,90	OK *Note: Configure address, port and timeout. Enable network wakeup.*
AT+EGNETWUP?	+EGNETWUP: "DNS1",53,90,1 OK *Note: Display current configuration*

Defined values:

> **<addr>** If set to "" then the default value will be set.
> Network wakeup address. "DNS1" will use the primary DNS obtained after the GPRS connection. "DNS2" will use the secondary DNS obtained after the GPRS connection. 120 characters maximum. Default: "8.8.8.8".

> **<port>** If set to 0 then the default value will be set.
> Network wakeup port. From 1 to 65535. Default: 53.

> **<timeout>** If set to 0 then the default value will be set.
> Timeout for wakeup. From 1 to 65535 seconds. Default: 60 seconds.

> **<enable>** If not specified then the function will be enabled.
> 0: disable network wakeup.
> 1: enable network wakeup (default).

Notes:

> If the parameter **<addr>** is set to "" (empty) then the default values will be restored.
> For example:
> > **AT+EGNETWUP="",0,0,0**
> will set the default address, port and timeout and disable the function.

> > **AT+EGNETWUP=""**
> will set the default address, port and timeout and enable the function.

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2.6 +EGVIP – Display IP addresses

Description:

> This command allows the attached host to view the IP addresses that have been attributed during the IPCP phase of the PPP negotiation. Both local and remote PPP peer IP addresses are displayed. This command should be used once the PPP OK message has been received from the TCP/IP stack.

Command syntax:

> **AT+EGVIP**

Response syntax:

> MY IP: xxx.xxx.xxx.xxx
> Gateway: xxx.xxx.xxx.xxx
> OK

Examples:

Command (GPRS mode)	Possible Responses	Notes
AT+EGVIP *Note: Request for local and remote IP addresses*	MY IP: 1.2.3.4 Gateway IP: 1.0.3.5 OK	*(IP address attributed to the TCP/IP Stack*
AT+EGVIP *Note: Request for local and remote IP addresses*	+CME ERROR: 35867	*No IP addresses have been attributed:* *no active connection or PPP/IPCP negotiation not yet completed*

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3 FTP services

3.1 Parameters definition

3.1.1 +EGFSV – Server address

- **Definition**
  FTP server address

- **Configuration**
  Set value : AT+EGFSV=<Value>
  Get value : AT+EGFSV? or AT+EGVFTP, AT+EGVALL

- **Legal values**
  32-bit number in dotted-decimal notation (i.e. xxx.xxx.xxx.xxx) or alphanumeric ASCII text string up to 120 characters.

- **Default value**
  None.

3.1.2 +EGFUN – Server username

- **Definition**
  FTP server username.

- **Configuration**
  Set value : AT+EGFUN=<Value>
  Get value : AT+EGFUN? or AT+EGVFTP, AT+EGVALL

- **Legal values**
  Alphanumeric ASCII text string up to 64 characters.

- **Default value**
  None.

3.1.3 +EGFPW – Server password

- **Definition**
  FTP server password.

- **Configuration**
  Set value : AT+EGFPW=<Value>
  Get value : AT+EGFPW? or AT+EGVFTP, AT+EGVALL

- **Legal values**
  Alphanumeric ASCII text string up to 64 characters.

- **Default value**
  None.

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3.1.4 +EGFPT – Server port

- **Definition**
  FTP port to be used for file transfer.

- **Configuration**
  Set value : AT+EGFPT=<Value>
  Get value : AT+EGFPT? or AT+EGVFTP, AT+EGVALL

- **Legal values**
  From 1 to 5 digits (each digit between 0 and 9 inclusive). Numbers above 65,535 are illegal as the port identification fields are 16 bits long in the TCP header.

- **Default value**
  21

- **Note**
  This parameter should be changed only upon request of your network administrator. It applies for network infrastructure including Firewalls, Proxy or specific TCP port translation.
  If a server port different to 21 is used then it is possible that only the Active mode will ensure connection and data transfer.

3.1.5 +EGFGF – GET filename

- **Definition**
  Name of file to be downloaded from FTP server.

- **Configuration**
  Set value : AT+EGFGF=<Value>
  Get value : AT+EGFGF? or AT+EGVFTP, AT+EGVALL

- **Legal values**
  Alphanumeric ASCII text string up to 120 characters.

- **Default value**
  None.

3.1.6 +EGFGP – GET pathname

- **Definition**
  Pathname on server when downloading from the FTP server.

- **Configuration**
  Set value : AT+EGFGP=<Value>
  Get value : AT+EGFGP? or AT+EGVFTP, AT+EGVALL

- **Legal values**
  Alphanumeric ASCII text string up to 120 characters.

- **Default value**
  None.

- **Note**
  Depending on the FTP server, the value can be used for getting a file from the root directory of the FTP server.

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3.1.7 +EGFPF – PUT filename

- **Definition**
  Name of file to be uploaded to FTP server.

- **Configuration**
  Set value : AT+EGFPF=<Value>
  Get value : AT+EGFPF? or AT+EGVFTP, AT+EGVALL

- **Legal values**
  Alphanumeric ASCII text string up to 120 characters.

- **Default value**
  None.

3.1.8 +EGFPP – PUT pathname

- **Definition**
  Pathname on server when uploading to the FTP server.
  For example : "./list"

- **Configuration**
  Set value : AT+EGFPP=<Value>
  Get value : AT+EGFPP? or AT+EGVFTP, AT+EGVALL

- **Legal values**
  Alphanumeric ASCII text string up to 120 characters.

- **Default value**
  None.

- **Note**
  Depending on the FTP server, the value can be used for putting a file on the root directory of the FTP server.

3.1.9 +EGFMO – Mode

- **Definition**
  Define the FTP behaviour for file transfer.
  Active or Passive mode.

- **Configuration**
  Set value : AT+EGFMO=<Value>
  Get value : AT+EGFMO? or AT+EGVFTP, AT+EGVALL

- **Legal values**
  0 : Active mode
  1 : Passive mode

- **Default value**
  0

- **Note**
  If a server port different to 21 is used then it is possible that only the Active mode will ensure connection and data transfer.

3.1.10 +EGFTY – Type

- **Definition**
  Type of data to be transferred during the FTP session.

- **Configuration**
  Set value : AT+EGFTY=<Value>
  Get value : AT+EGFTY? or AT+EGVFTP, AT+EGVALL

- **Legal values**
  A : ASCII sessions
  I : Binary sessions (upper case 'i' char)

- **Default value**
  I (Binary mode)

- **Note**
  When this value is set to A, all the bytes sent to the FTP server will be 7 bits wide (NVT-ASCII: the MSB is set to 0). As a result, binary data containing 8-bit characters will be corrupted during the transfer if +EGFTY is set to A.

3.2 +EGVFTP – Display FTP parameters

Description:
This command displays all the parameters related to the FTP client configuration.

Syntax:
AT+EGVFTP

Examples:

Command	Possible Responses
AT+EGVFTP *Note : View FTP parameters*	+EGFGF: "" +EGFGP: "." +EGFMO: 0 +EGFPT: 21 +EGFPF: "Testseb3.txt" +EGFPP: "." +EGFPW: "mypass" +EGFSV: "mytestwebsite.com" +EGFTY = I +EGFUN: "myname" OK

Descriptions and non-contractual illustrations in this document are given as an indication only.
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3.3   +EGFGET – Get data from server

Description:

This command sent by the attached host directs the TCP/IP stack to connect to the specified FTP server and to retrieve the specified file from this server. Once the operation completed, the TCP/IP stack closes the FTP connection.

Once an IP link established, the attached host can retrieve a file from a FTP server at any time (except when the TCP/IP stack software is already in a process using TCP resources).

This command is similar to a GET operation (with an automatic connect/disconnect) issued by a standard FTP client on a PC. The TCP/IP stack handles the global FTP get process by itself.

Note

- Each <ETX> character present in the payload data of the FTP flow will be coded by the TCP/IP stack on the serial port as <DLE><ETX>. Each <DLE> character will be coded as <DLE><DLE>. The attached host must then decode the FTP flow to remove these escape characters.

Syntax:

AT+EGFGET

Examples:

Command	Possible Responses
AT+EGFGET *Note: Start data reception*	Ok_Info_DataBegin *Note : The server is ready to send data to the TCP/IP stack. For the attached host, it notifies the switch from command to data mode.* DATA *Note: The data transmitted from the FTP server to the TCP/IP stack is sent over the serial port.* <ETX> *Note: Once the file transfer finished, the TCP/IP stack sends an ETX character over the serial port to notify the attached host the end of transfer : switch from data to command mode.* OK *Note: The FTP process was successfully completed.*
AT+EGFGET *Note: Start data reception*	+CME ERROR: 38027 *Note: The address of the FTP server has not been resolved by the secondary DNS server. The TCP/IP stack is not able to reach the primary and secondary DNS servers or a wrong FTP server address has been filled in.*
AT+EGFGET *Note: Start data reception*	+CME ERROR: <value> *Note: The connection to the FTP server. If this error occurs once the data transfer started, it is preceded by an ETX character.*

3.4 +EGFPUT – Put data on server

Description

>This command sent by the attached host directs the TCP/IP stack to connect to the specified FTP server and to upload the data received on the serial port to the specified file to this server. Once the operation is completed, the TCP/IP stack closes the FTP connection.

>Once an IP link is established, the attached host can send a file to a FTP server at any time (except when the TCP/IP stack software is already in a process using TCP resources).

>This command is similar to a PUT operation (with an automatic connect/disconnect) issued by a standard FTP client on a PC. The TCP/IP stack handles the global FTP put process by itself.

Note

- The TCP/IP stack will only interpret an <ETX> character as the end of the file to be transferred if it's not preceded by a <DLE> character. As a consequence the attached host must send <ETX> characters preceded by <DLE> characters and it must also code <DLE> characters in <DLE><DLE>.

Syntax:
>**AT+EGFPUT**

Examples:

Command	Possible Responses
AT+EGFPUT *Note: Start data sending*	Ok_Info_DataBegin *Note : TCP/IP stack is ready to send data from the serial port to the remote FTP server. TCP/IP stack then immediately transfers all the data sent by the attached host to the remote FTP server. **To notify the TCP/IP stack that all data has been sent, the attached host must send the <ETX> character**.* <ETX> *Note: Notification from the host for end of data : switch from data mode to command mode.* OK *Note: The FTP process was successfully completed.*
AT+EGFPUT *Note: Start data sending*	+CME ERROR: 38027 *Note: The address of the FTP server has not been resolved by the secondary DNS server. The TCP/IP stack is not able to reach the primary and secondary DNS servers or a wrong FTP server address has been filled in.*
AT+EGFPUT *Note: Start data sending*	+CME ERROR: <value> *Note: The connection to the FTP server failed. If this error occurs once the data transfer started, it is preceded by an ETX character.*

Descriptions and non-contractual illustrations in this document are given as an indication only.
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4   TCP socket services

4.1   Parameters definition

4.1.1   +EGTDMO – TCP DLE mode

- **Definition**
  When performing a socket TCP, the attached host has the choice to code or not the ETX character.

- **Configuration**
  Set value : AT+EGTDMO= id,<Value>
  Get value : AT+EGTDMO=id or AT+EGVTCP=id, AT+EGVALL

- **Legal id**
  {1, 2}

- **Legal values**
  0 : When +EGTDMO is set to 0, no specific process is needed on [ETX] characters. It means that it is not possible for a host to request an end of connection or to receive a clear indication of end of connection from the TCP/IP stack.

  1 : When +EGTDMO is set to 1, the [ETX] character means a request or an indication of end of connection. As a consequence, [ETX] characters that are part of the payload data must be sent by the host on the serial port preceded by a DLE character. Similarly ETX characters received by the TCP/IP stack from the network are sent to the host through the serial port preceded by a DLE character.

- **Default value**
  1

4.1.2   +EGTPT – TCP port

- **Definition**
  To exchange data over TCP, the TCP/IP stack must know the port of the remote peer used for the TCP session.

- **Configuration**
  Set value : AT+EGTPT=id,<Value>
  Get value : AT+EGTPT=id or AT+EGVTCP=id, AT+EGVALL

- **Legal id**
  {1, 2}

- **Legal values**
  From 1 to 5 digits (each digit between 0 and 9 inclusive). Numbers above 65,535 are illegal as the port identification fields are 16 bits long in the TCP header.

- **Default value**
  0 (not yet configured)

Descriptions and non-contractual illustrations in this document are given as an indication only.
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4.1.3 +EGTSV – TCP server address

- **Definition**
  To exchange data over TCP, the TCP/IP stack must know the address of the remote TCP server (or host) that is to be used.

  IP address filter if the TCP session is initiated in listen mode. This means that the remote must have a defined EGTSV IP address. No IP filter is applied if parameter is "255.255.255.255". Address ranges may be specified, e.g. 198.162.1.255 will allow connections from 198.162.1.xxx. Remote IP address if the TCP session is initiated in active mode.

- **Configuration**
  Set value : AT+EGTSV=id,<Value>
  Get value : AT+EGTSV=id or AT+EGVTCP=id, AT+EGVALL

- **Legal id**
  {1, 2}

- **Legal values**
  32-bit number in dotted-decimal notation (i.e. xxx.xxx.xxx.xxx) or alphanumeric ASCII text string up to 120 characters.

- **Default value**
  "255.255.255.255"

4.1.4 +EGTTXDLY – TCP TX delay

- **Definition**
  This parameter determines the time delay introduced before sending a TCP frame that has not been entirely filled with user data. The time is entered in milliseconds. A value of '0' initiates the sending of a TCP frame as soon as possible after the reception of a single character value from the host.

- **Configuration**
  Set value : AT+EGTTXDLY=id,<Value>
  Get value : AT+EGTTXDLY=id or AT+EGVTCP=id, AT+EGVALL

- **Legal id**
  {1, 2}

- **Legal values**
  Integer multiple of 20 and between 0 and 32760 inclusive.

- **Default value**
  100

4.2   +EGVTCP – Display TCP parameters

Description:
This command displays all the parameters related to the TCP socket configuration.

Syntax:
AT+EGVTCP=id (to display a single TCP socket)
AT+EGVTCP (to display all TCP sockets)

Examples:

Command	Possible Responses
AT+EGVTCP=2 *Note : display parameters for TCP socket 2*	+EGTDMO: 2,1 +EGTSV: 2,"" +EGTPT: 2,0 +EGTTXDLY: 2,100 OK

4.3 +EGTSSTART – Start TCP server

Description

This command sent by the attached host directs the TCP/IP stack to open a listening TCP connection on the specified TCP port.

Once an IP link is established, the attached host can open a listening TCP socket at any time (except when the TCP/IP stack software is already in a process using TCP resources).

The TCP connection will be active upon reception of a TCP connection request sent by a remote allowed TCP peer (+EGTSV) on the appropriate TCP port (+EGTPT).

Once opened, this TCP connection may be closed by the remote TCP peer or by the attached host via sending an ETX character on the serial port (depending on the +EGTDMO parameter).

Notes

▪ The LTCP command can be aborted before an incoming TCP request has been received by issuing an <ETX> character on the serial port.

▪ If the +EGTDMO parameter is set to 1, the TCP/IP stack will only interpret an <ETX> character as a close request if a <DLE> character does not precede it. As a consequence, the attached host must send <ETX> characters preceded by <DLE> characters and it must also code <DLE> characters as <DLE><DLE>.

Similarly, each <ETX> character present in the payload data of the TCP frame will be coded by the TCP/IP stack on the serial port as <DLE><ETX>. Each <DLE> character will be coded as <DLE><DLE>. The attached host must then decode the TCP socket flow to remove these escape characters.

▪ If the +EGTDMO parameter is set to 0, the TCP/IP stack will never close the TCP connection (unless an error occurs).

▪ The escape sequence "+++" (to return to command mode) will be sent to the remote connection.

Syntax:
AT+EGTSSTART=id   (id = 1 - 2)

Examples:

Command	Possible Responses
AT+EGTSSTART=1 *Note : Activate TCP socket 1 in listen mode*	Ok_Info_WaitingForData *Note : This message signals that a remote allowed TCP peer has opened the TCP socket. The TCP connection is now opened. All the data from the attached host / remote TCP server is then immediately transferred by the TCP/IP stack to the remote TCP server / attached host. Depending on the +EGTDMO value, the attached host may close this TCP connection by sending an ETX character. If the remote TCP server closes the connection, the TCP/IP stack issues an ETX character on the serial port.*
AT+EGTSSTART=1	+CME ERROR: <value> *Note: An error has occurred during the TCP connection. This connection is being closed. If this error occurs once the TCP connection opened, it is preceded by an ETX character.*

Descriptions and non-contractual illustrations in this document are given as an indication only.
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4.4 +EGTSSTOP – Stop TCP server

Description:

> This command directs the TCP/IP stack to close a TCP listening mode (previously launched by the AT+EGTSSTART command).

Syntax:

> **AT+EGTSSTOP=id, with id one of {1,2}**

Examples:

Command	Possible Responses
AT+EGTSSTOP=1 *Note : Stop the TCP socket 1 from listening*	OK *Note : The local listening port is closed in the TCP/IP stack*

4.5 +EGTCSTART – Start TCP client

Description:

> This command sent by the attached host directs the TCP/IP stack to open a TCP connection to the specified TCP server.

> Once an IP link is established, the attached host can open a TCP connection at any time (except when the TCP/IP stack software is already in a process using TCP resources).

> This TCP connection may be closed by the remote TCP server or by the attached host via sending an ETX character on the serial port (**depending on the +EGTDMO parameter**).

Notes on +EGTDMO value

Depending in the +EGTDMO value, the attached host may close this TCP connection by sending an ETX character.

- If the +EGTDMO parameter is set to 1, the TCP/IP stack will only interpret an <ETX> character as a close request if it's not preceded by a <DLE> character. As a consequence the attached host must send <ETX> characters preceded by <DLE> characters and it must also code <DLE> characters in <DLE><DLE>. Similarly, each <ETX> character present in the payload data of the TCP frame will be coded by the TCP/IP stack on the serial port as <DLE><ETX>. Each <DLE> character will be coded as <DLE><DLE>. The attached host must then decode the TCP socket flow to remove these escape characters.

- If the +EGTDMO parameter is set to 0, the TCP/IP stack will never close the TCP connection (unless an error occurs).

- The escape sequence "+++" (to return to command mode) will be sent to the remote connection.

If the remote TCP server closes the connection, the TCP/IP stack sends an ETX character on the serial port.

Syntax:
> **AT+EGTCSTART=id**   **(id = 1 – 2)**

Examples:

Command	Possible Responses
AT+EGTCSTART=1 *Note : Request opening of the TCP socket 1*	Ok_Info_WaitingForData *Note : This message signals that the TCP socket has been opened. All the data from the attached host / remote TCP server is then immediately transferred by the TCP/IP stack to the remote TCP server / attached host. Depending on the +EGTDMO value, the attached host may close this TCP connection by sending an ETX character. If the remote TCP server closes the connection, the TCP/IP stack issues an ETX character on the serial port.*
	Ok_Info_SocketClosed OK *Note: The TCP socket is closed*
AT+EGTCSTART=2	+CME ERROR: 38027 *Note: The address of the server has not been resolved by the secondary DNS server. TCP/IP stack is not able to reach the primary and secondary DNS servers or a wrong server address has been filled in.*
AT+EGTCSTART=2	+CME ERROR: <value> *Note: An error has occurred during the TCP connection. This connection is being closed .If this error occurs once the TCP connection opened, it is preceded by an ETX character.*

5 UDP socket services

5.1 Parameters definition

5.1.1 +EGUDMO – UDP DLE mode

- **Definition**
  When performing a socket UDP, the attached host has the choice to code or not the ETX character.

- **Configuration**
  Set value : AT+EGUDMO=<Value>
  Get value : AT+EGUDMO= or AT+EGVALL

- **Legal values**
  0 : When +EGUDMO is set to 0, no specific process is needed on [ETX] characters. It means that it is not possible for a host to request an end of connection or to receive a clear indication of end of connection from the TCP/IP stack.

  1 : When +EGUDMO is set to 1, the [ETX] character means a request or an indication of end of connection. As a consequence, [ETX] characters that are part of the payload data must be sent by the host on the serial port preceded by a DLE character. Similarly ETX characters received by the TCP/IP stack from the network are sent to the host through the serial port preceded by a DLE character.

- **Default value**
  1

5.1.2 +EGUPT – UDP port

- **Definition**
  Local UDP port number if UDP session is initiated in listen mode (server).
  Remote UDP number if UDP session is initiated in active mode (client)

- **Configuration**
  Set value : AT+EGUPT=<Value>
  Get value : AT+EGUPT? or AT+EGVUDP=id, AT+EGVALL

- **Legal values**
  From 1 to 5 digits (each digit between 0 and 9 inclusive).
  Port number 0 and numbers above 65,535 are illegal as the port identification fields are 16 bits long in the UDP header.

- **Default value**
  0 (not yet configured)

Descriptions and non-contractual illustrations in this document are given as an indication only.
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5.1.3 +EGUSV – UDP server address

- **Definition**
  IP address filter if the UDP session is initiated in listen mode. This means that the remote must have a defined EGUSV IP address. No IP filter is applied if parameter is "255.255.255.255". Address ranges may be specified, e.g. 198.162.1.255 will allow connections from 198.162.1.xxx. Remote IP address if the UDP session is initiated in active mode.

- **Configuration**
  Set value : AT+EGUSV<Value>
  Get value : AT+EGUSV? or AT+EGVUDP, AT+EGVALL

- **Legal values**
  32-bit number in dotted-decimal notation (i.e. xxx.xxx.xxx.xxx) or alphanumeric ASCII text string up to 120 characters.

- **Default value**
  "255.255.255.255"

5.1.4 +EGUTXDLY – UDP TX delay

- **Definition**
  This parameter determines the time delay introduced before sending a UDP frame that has not been entirely filled with user data. The time is entered in milliseconds. A value of '0' initiates the sending of a UDP frame as soon as possible after the reception of a single character value from the host.

- **Configuration**
  Set value : AT+EGUTXDLY=<Value>
  Get value : AT+EGUTXDLY or AT+EGVUDP, AT+EGVALL

- **Legal values**
  Integer multiple of 20 and between 0 and 32760 inclusive.

- **Default value**
  100

5.2 +EGVUDP – Display UDP parameters

Description
This command displays all the parameters related to the UDP socket configuration.

Syntax
AT+EGVUDP

Examples:

Command	Possible Responses
AT+EGVUDP *Note : display parameters for UDP socket*	+EGUDMO: 1 +EGUSV: "" +EGUPT: 0 +EGUTXDLY: 100 OK

5.3 +EGUSSTART – Start UDP server

Description:

This command sent by the attached host directs the TCP/IP stack to open a listening UDP connection on the specified UDP port.

Once an IP link is established, the attached host can open a listening UDP socket at any time (except when the TCP/IP stack software is already in a process using UDP resources).

The UDP connection will be active upon reception of a UDP connection request sent by a remote allowed UDP peer (+EGUSV) on the appropriate UDP port (+EGUPT).

Once opened, this UDP connection may be closed by the remote UDP peer or by the attached host via sending an ETX character on the serial port.

Notes

- The +EGUSSTART command can be aborted before an incoming UDP request has been received by issuing an <ETX> character on the serial port.

- The TCP/IP stack will only interpret an <ETX> character as a close request if a <DLE> character does not precede it. As a consequence, the attached host must send <ETX> characters preceded by <DLE> characters and it must also code <DLE> characters as <DLE><DLE>.

  Similarly, each <ETX> character present in the payload data of the UDP frame will be coded by the TCP/IP stack on the serial port as <DLE><ETX>. Each <DLE> character will be coded as <DLE><DLE>. The attached host must then decode the UDP socket flow to remove these escape characters.

Syntax:

AT+EGUSSTART

Examples:

Command	Possible Responses
AT+EGUSSTART *Note : Activate UDP socket in listen mode*	Ok_Info_WaitingForData *Note : This message signals that a remote allowed UDP peer has opened the UDP socket. The UDP connection is now opened. All the data from the attached host / remote UDP server is then immediately transferred by the TCP/IP stack to the remote UDP server / attached host. The attached host may close this UDP connection by sending an ETX character. If the remote UDP server closes the connection, the TCP/IP stack issues an ETX character on the serial port.*
AT+EGUSSTART	+CME ERROR: <value> *Note: An error has occurred during the UDP connection. This connection is being closed. If this error occurs once the UDP connection opened, it is preceded by an ETX character.*

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5.4 +EGUSSTOP – Stop UDP server

Description

> This command directs the TCP/IP stack to close a UDP listening mode (previously launched by the AT+EGTSSTART command).

Syntax:

> **AT+EGUSSTOP**

Examples:

Command	Possible Responses
AT+EGUSSTOP *Note : Stop the UDP socket from listening*	OK *Note : The local listening port is closed in the TCP/IP stack*

5.5   +EGUCSTART – Start UDP client

Description:

This command sent by the attached host directs the TCP/IP stack to open a UDP connection to the specified UDP server.

Once an IP link is established, the attached host can open a UDP connection at any time (except when the TCP/IP stack software is already being used).

The UDP connection may be closed by the attached host via sending an ETX character on the serial port.

The TCP/IP stack will only interpret an <ETX> character as a close request if it's not preceded by a <DLE> character. As a consequence the attached host must send <ETX> characters preceded by <DLE> characters and it must also code <DLE> characters in <DLE><DLE>. Similarly, each <ETX> character present in the payload data of the UDP frame will be coded by the TCP/IP stack on the serial port as <DLE><ETX>. Each <DLE> character will be coded as <DLE><DLE>. The attached host must then decode the UDP socket flow to remove these escape characters.

If the remote UDP server closes the connection, the TCP/IP stack sends an ETX character on the serial port.

Syntax:

AT+EGUCSTART

Examples:

Command	Possible Responses
AT+EGUCSTART *Note : Request opening of the UDP*	Ok_Info_WaitingForData *Note : This message signals that the UDP socket has been opened. All the data from the attached host / remote UDP server is then immediately transferred by the TCP/IP stack to the remote UDP server / attached host. If the remote UDP server closes the connection, the TCP/IP stack issues an ETX character on the serial port.*
	Ok_Info_SocketClosed OK *Note: The UDP socket is closed*
AT+EGUCSTART	+CME ERROR: 38027 *Note: The address of the server has not been resolved by the secondary DNS server. TCP/IP stack is not able to reach the primary and secondary DNS servers or a wrong server address has been filled in.*
AT+EGUCSTART	+CME ERROR: <value> *Note: An error has occurred during the UDP connection. This connection is being closed .If this error occurs once the UDP connection opened, it is preceded by an ETX character.*

6 SMTP services

6.1 Parameters definition

6.1.1 +EGSMTPSN – Sender name

▪ **Definition**

The sender's literal name. This parameter will appear in the 'From: ' field in the header of the email sent by the TCP/IP stack.

▪ **Configuration**

Set value : AT+EGSMTPSN=<String>
Get value : AT+EGSMTPSN? or AT+EGVSMTP, AT+EGVALL

▪ **Legal values**

Alphanumeric ASCII text string up to 120 characters.

▪ **Default value**

None.

6.1.2 +EGSMTPSE – Sender email address

▪ **Definition**

The sender's e-mail address. This parameter will appear in the 'From:' field in the header of the email sent by the TCP/IP stack.

▪ **Configuration**

Set value : AT+EGSMTPSE=<String>
Get value : AT+EGSMTPSE? or AT+EGVSMTP, AT+EGVALL

▪ **Legal values**

Alphanumeric ASCII text string up to 120 characters.

▪ **Default value**

None.

6.1.3 +EGREC1 / 2 / 3 – Recipients addresses

▪ **Definition**

Recipient email addresses. These email addresses will appear in the 'To:' field in the header of the email sent by the TCP/IP stack.

▪ **Configuration**

Set value : AT+EGRECi=<String> (i may be either 1, 2 or 3)
Get value : AT+EGRECi? or AT+EGVMAILi or AT+EGVMAIL, AT+EGVALL

▪ **Legal values**

Alphanumeric ASCII text string up to 120 characters. Multiple recipients addresses must be separated with a semi-colon ' **;** '.

Friendly names may be specified: "**Bob <robert.noname.hisaddress.com>**". Ensure a space between the friendly name and the '**<**' character.

▪ **Default value**

None.

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6.1.4   +EGCCREC1 / 2 / 3 – Carbon copy recipients adresses

▪ **Definition**

Carbon copy recipient email addresses. These email addresses will appear in the 'Cc:' field in the header of the email sent by the TCP/IP stack.

▪ **Configuration**
Set value : AT+EGCCRECi=<String> (i may be either 1, 2 or 3)
Get value : AT+EGCCRECi? or AT+EGVMAILi or AT+EGVMAIL, AT+EGVALL

▪ **Legal values**

Alphanumeric ASCII text string up to 120 characters. Multiple recipients addresses must be separated with a semi-colon ' **;** '.

Friendly names may be specified: "**Bob <robert.noname.hisaddress.com>**". Ensure a space between the friendly name and the '**<**' character.

▪ **Default value**
None.

6.1.5   +EGSUBJ1 / 2 / 3 – Subject

▪ **Definition**

Pre-defined subjects that will appear in the 'Subject:' field in the header of the email sent by the TCP/IP stack.

▪ **Configuration**
Set value : AT+EGSUBJi=<String> (i may be either 1, 2 or 3)
Get value : AT+EGSUBJi? or AT+EGVMAILi or AT+EGVMAIL, AT+EGVALL

▪ **Legal values**

Alphanumeric ASCII text string up to 120 characters.

▪ **Default value**
None.

6.1.6   +EGBODY1 / 2 / 3 – Body

▪ **Definition**

Pre-defined message bodies that will appear in the body of the email sent by the TCP/IP stack.

▪ **Configuration**
Set value : AT+EGBODYi (i may be either 1, 2 or 3)
Get value : AT+EGBODYi? or AT+EGVMAILi or AT+EGVMAIL, AT+EGVALL

▪ **Legal values**

Alphanumeric ASCII text string up to 120 characters to be entered after the AT+EGBODYi<CR> command followed by the <CTRL-Z> character (ASCII 0x1A).
Example:

> AT+EGBODY1<CR>
> *Text body*
> <CTRL-Z>

▪ **Default value**
None.

6.1.7   +EGSMTPDO – Domain name

▪ **Definition**

The sender's domain name. This may be different to the domain name in the sender's email address.

▪ **Configuration**
Set value : AT+EGSMTPDO=<String>
Get value : AT+EGSMTPDO? AT+EGVSMTP, AT+EGVALL

▪ **Legal values**

Alphanumeric ASCII text string up to 120 characters.

▪ **Default value**
None.

6.1.8   +EGSMTPSV – Server name

▪ **Definition**

The address of the SMTP server.

▪ **Configuration**
Set value : AT+EGSMTPSV=<String>
Get value : AT+EGSMTPSV? AT+EGVSMTP, AT+EGVALL

▪ **Legal values**

32-bit number in dotted-decimal notation (i.e. xxx.xxx.xxx.xxx) or alphanumeric ASCII text string up to 120 characters.

▪ **Default value**
None.

6.1.9   +EGSMTPPT – Port

▪ **Definition**

The port of the SMTP server.

▪ **Configuration**
Set value : AT+EGSMTPPT=<Value>
Get value : AT+EGSMTPPT? AT+EGVSMTP, AT+EGVALL

▪ **Legal values**

From 1 to 5 digits (each digit between 0 and 9 inclusive). Numbers above 65,535 are illegal as the port identification fields are 16 bits long in the TCP header.

▪ **Default value**
25.

6.1.10 +EGSMTPPW – Password

- **Definition**

  SMTP password required for authentication process. If either the password or username is empty then the authentication mode is inactive.

- **Configuration**
  Set value : AT+EGSMTPPW=<String>
  Get value : AT+EGSMTPPW? AT+EGVSMTP, AT+EGVALL

- **Legal values**

  Alphanumeric ASCII text string up to 64 characters.

- **Default value**
  None.

6.1.11 +EGSMTPUN – Username

- **Definition**

  SMTP username required for authentication process. If either the password or username is empty then the authentication mode is inactive.

- **Configuration**
  Set value : AT+EGSMTPUN=<String>
  Get value : AT+EGSMTPUN? AT+EGVSMTP, AT+EGVALL

- **Legal values**

  Alphanumeric ASCII text string up to 64 characters.

- **Default value**
  None.

Descriptions and non-contractual illustrations in this document are given as an indication only.
ERCOGENER reserves the right to make any modifications.

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6.2   +EGVSMTP – Display SMTP parameters

Description
    This command will display the email sender parameters.

Syntax
    AT+EGVSMTP

Examples:

Command	Possible Responses
AT+EGVSMTP *Note: Display SMTP parameters*	+EGSMTPDO: "" +EGSMTPSE: "" +EGSMTPSN: "" +EGSMTPPT: 25 +EGSMTPPW: "" +EGSMTPSV: "" +EGSMTPUN: "" OK

6.3   +EGVMAIL – Display email parameters

Description
    This command will display the email parameters.

Syntax
    AT+EGVMAIL=id (to display a single email configuration)
    AT+EGVMAIL (to display all email configurations)

Examples:

Command	Possible Responses
AT+EGVMAIL1 *Note: Display email parameters*	+EGBODY1: "" +EGCCREC1: "" +EGREC1: "" +EGSUBJ1: "" OK

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6.4 +EGSENDMAIL – Send email

Description

This command sends one of the predefined email combinations.
Once an IP link is established, the attached host can request the transmission of an email message.
The header of this email is built with the commands +EGRECi, +EGCCRECi and +EGSUBJi and the body is created with the +EGBODYi command.

Syntax:

AT+EGSENDMAILi   **(i = 1 - 3)**

Examples:

Command	Possible Responses
AT+EGSENDMAIL=1 *Note : Send predefined email 1*	OK *Note : The mail has been successfully sent*

AT+EGSENDMAIL=2
 	
Note : Send predefined email 1
	+CME ERROR: <value>
	Note: An error has occurred during the communication with the remote SMTP server.
	This error can be due to one of the following reasons:
	  ▪ *the DNS servers are not able to resolve the SMTP server address*
	  ▪ *the SMTP server is temporarily out of service*
	  ▪ *the authentication (+EGSMTPUN, +EGSMTPPW) is not valid*
	  ▪ *an email address specified in REC1 or CCREC1 is not valid*
	
	See chapter 19.2 Error messages

Descriptions and non-contractual illustrations in this document are given as an indication only.
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6.5 +EGPUTMAIL – Put email

Description

> This command allows the attached host to send an email message containing body text sent to the modem over the serial port.
> Once an IP link is established, the attached host can request the transmission of an email message.
> The header of this email is built with the commands +EGREC1, +EGCCREC1 and +EGSUBJ1.

Syntax:

> **AT+EGPUTMAIL**

Examples:

Command	Possible Responses
AT+EGPUTMAIL *Note : Recipient address1, copy address1, and subject1 must be configured before starting the session. The body of the email is entered when the SMTP session is started. The data is not echoed.*	Ok_Info_WaitingForData *Note: An SMTP session has been successfully started and is now waiting for the message body to be sent over the serial port.* *The <CR><LF>.<CR><LF> sequence sent by the attached host will indicate the end of the e-mail body. The email will then be sent.* *The <ESC> character will abort the SMTP session.*
Note: Message body is entered. The data is not echoed.	
<CR><LF>.<CR><LF> *Note: The termination sequence sent by the attached host indicates the end of the email body. The email will then be sent.*	OK *Note: the email has been successfully sent*

	+CME ERROR: <value>
	Note: An error has occurred during the communication with the remote SMTP server.
	This error can be due to one of the following reasons:
	  ▪ *the DNS servers are not able to resolve the SMTP server address*
	  ▪ *the SMTP server is temporarily out of service*
	  ▪ *the authentication (+EGSMTPUN, +EGSMTPPW) is not valid*
	  ▪ *an email address specified in +EGREC1 or +EGCCREC1 is not valid*
	  ▪ *there has been at least 50 seconds of inactivity on the serial port*
	
	See chapter 19.2 Error messages

Notes:

> The size of the body is limited to 200kbytes. If this limit is reached then the mail will be automatically sent.

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7 PING services

7.1 Parameters definition

7.1.1 +EGPINGDLY – Ping delay

- **Definition**
  Wait delay in seconds before an echo request times out. This is also the delay between each ping request.

- **Configuration**
  Set value : AT+EGPINGDLY=<Value>
  Get value : AT+EGPINGDLY? or AT+EGVPING, AT+EGVALL

- **Legal values**
  1 to 255.

- **Default value**
  1

7.1.2 +EGPINGNUM – Ping number

- **Definition**
  Number of PING echo requests to the +EGPINGRSV.

- **Configuration**
  Set value : AT+EGPINGNUM=<Value>
  Get value : AT+EGPINGNUM? or AT+EGVPING, AT+EGVALL

- **Legal values**
  1 to 255.

- **Default value**
  4

7.1.3 +EGPINGRSV – Ping Remote Server

- **Definition**
  IP address or alphanumeric ASCII text string, up to 120 characters long if DNS is available.

- **Configuration**
  Set value : AT+EGPINGRSV=<String>
  Get value : AT+EGPINGRSV? or AT+EGVPING, AT+EGVALL

- **Legal values**
  32-bit number in dotted-decimal notation (i.e. xxx.xxx.xxx.xxx) or alphanumeric ASCII text string up to 120 characters.

- **Default value**
  None.

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7.2 +EGVPING – Display PING parameters

Description

This command will display all the PING configuration parameters.

Syntax

AT+EGVPING

Examples:

Command	Possible Responses
AT+EGVPING *Note: Display PING parameters*	+EGPINGDLY: 5 +EGPINGNUM: 4 +EGPINGRSV: "www.ercogener.com" OK

7.3 +EGPING – Start PING request

Description:

Once an IP link is established, this command sent by the attached host directs the TCP/IP stack to start PING requests.

Syntax:

AT+EGPING

Examples:

Command	Possible Responses
AT+EGPING	"www.ercogener.com" is alive : time = 1860 ms "www.ercogener.com" is alive : time = 690 ms "www.ercogener.com" is alive : time = 690 ms "www.ercogener.com" is alive : time = 660 ms OK *Note : +EGPINGNUM: 4*
AT+EGPING	+CME ERROR: 37122 *Note: The PING service is already running.*
AT+EGPING	+CME ERROR: 38027 *Note: The address of the remote has not been resolved by the DNS servers. TCP/IP stack is not able to reach the primary and secondary DNS servers or an incorrect remote address has been entered.*

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8 SNTP Date/Time service

8.1 +EGNTP – Get NTP date/time

Description:

The GSM and system real-time-clocks maybe set to the network date/time via the SNTP service. This may be done manually or automatically at a regular time interval.

Once an IP link is established, this command sent by the attached host directs the TCP/IP stack to request the NTP date/time and set the system time and GSM real-time clock.

Syntax:

AT+EGNTP=<option>,<t>,<s>
AT+EGNTP=<option>,<server>,<port>
AT+EGNTP=<option>,<timeout>

Examples:

Command	Possible Responses
AT+EGNTP=?	+EGNTP: (0-4),(0-200)/(64),(0-1)/(1-65535) OK *Note: Display syntax*
AT+EGNTP?	+EGNTP: 0,0,0 +EGNTP: 1,"europe.pool.ntp.org",123 +EGNTP: 2,15 OK *Note: Display current configuration*
AT+EGNTP=0,24	OK *Note: Set auto-update configuration*
AT+EGNTP=0	+EGNTP: 0,24,0 OK *Note: Display auto-update configuration*
AT+EGNTP=4 *Note: Start manual SNTP update*	OK *Note: Set date/time successful*
AT+EGNTP=4 *Note: Start manual SNTP update*	+CME ERROR: 38027 *Note: The host server could not be found*
AT+EGNTP=4 *Note: Start manual SNTP update*	+CME ERROR: 37964 *Note: Data request from server timed-out*
AT+EGNTP=4 *Note: Start manual SNTP update*	+CME ERROR: 361 *Note: The port on the host server could not be opened*
AT+EGNTP=3	+EGNTP: 3,11/01/07,13:46:43 OK *Note: Display current system time*

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Defined values:

    <option>

        0: Display, modify auto-update configuration.
            =0   - display current configuration.
            =0,<t>   - set auto-update rate, 0 to 720 hours, (default = 0, inactive).
            =0,<t>,<s>   - set auto-update rate, 0 to 720 hours, (default = 0, inactive).
                                      - set auto-update at start-up, 0 = inactive (default), 1 = active.

        1: Display, modify SNTP server configuration.
            =1   - display current configuration.
            =1,<"server"> - set server address (default = "europe.pool.ntp.org").
            =1,<"server">,<port>
                                        - set server address (default = "europe.pool.ntp.org").
                                        - set server port (default = 123).

        2: Display, modify SNTP response timeout configuration.
            =2   - display current configuration.
            =2,<timeout > - set SNTP response timeout, 1 to 60 seconds (default = 15).

        3: Display system time.
            =3   - display current system time.

        4: Get SNTP date/time manually.
            =4   - Get SNTP date/time and set GSM and system real-time-clocks.

        80: Set SNTP server configuration to default values.
            =80   - Set SNTP server configuration to default values.
                                      - set server address (default = "europe.pool.ntp.org").
                                      - set server port (default = 123).

        81: Set auto-update configuration to default values.
            =81   - Set auto-update rate to default value.
                                    - Set auto-update at start-up to default value.

Notes:
    The SNTP server uses IP/UDP via port 123. This should NOT be changed.

    Default configuration:
        +EGNTP: 0,0,0
        +EGNTP: 1,"europe.pool.ntp.org",123
        +EGNTP: 2,15

8.2 +EGNTPPORT – NTP port

Description:
  This command will configure the NTP server port (default = 123).

Syntax:
  AT+EGNTPPORT=<port>

Examples:

Command	Possible Responses
AT+EGNTPPORT=?	+EGNTPPORT: (1-65535) OK *Note: Display syntax*
AT+EGNTPPORT?	+EGNTPPORT: 123 OK *Note: Display current configuration*
AT+EGNTPPORT=3210	OK *Note: Set new configuration*

Defined values:

  <**port**>   Set NTP server port (default = 123).

8.3 +EGNTPWAIT – NTP wait timeout

Description:
  This command will configure the NTP response timeout.

Syntax:
  AT+EGNTPWAIT=<timeout>

Examples:

Command	Possible Responses
AT+EGNTPWAIT=?	+EGNTPWAIT: (1-60) OK *Note: Display syntax*
AT+EGNTPWAIT?	+EGNTPWAIT: 15 OK *Note: Display current configuration*
AT+EGNTWAIT=30	OK *Note: Set new configuration*
AT+EGNTPWAIT?	+EGNTPWAIT: 30 OK *Note: Display current configuration*

Defined values:

  <**timeout**>   Set NTP response timeout, 1 to 60 seconds (default = 15).

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8.4 +EGNTPUTC – NTP local time offset

Description:

This command will configure the local time offset. The GSM and system real-time-clocks will be adjusted.

Syntax:

AT+EGNTPUTC=<hours>,<minutes>

Examples:

Command	Possible Responses
AT+EGNTPUTC=?	+EGNTPUTC: (-11/12),(0/59) OK *Note: Display syntax*
AT+EGNTPUTC?	+EGNTPUTC: 0,0 OK *Note: Display current configuration*
AT+EGNTPUTC="-1",30	OK *Note: Set new configuration*
AT+EGNTPUTC?	+EGNTPUTC: -1,30 OK *Note: Display current configuration*

Defined values:

     <hours>   Set local time hours offset. Negative values must be enclosed in "". (default = 0).
     <minutes>   Set local time minutes offset (default = 0).

9 Miscellaneous

9.1 +EGVER – Display application version

Description:

This command displays the version of this application.

Syntax:

AT+EGVER

Examples:

Command	Possible Responses

AT+EGVER
 	
Note : display application version
	`+EGVER: "EaseIP-V1.20_EGM430 506768 Nov 18 2015 10:21:54"`
	
	`OK`

9.2 +EGVSTA – Display network connection status

Description:

This command display the current network connection status.

Syntax:

AT+EGVSTA

Examples:

Command	Possible Responses
AT+EGVSTA	+EGVSTA: "IDLE" OK *Note : Registered on network, waiting for AT+EGCNXSTART*
AT+EGVSTA	+EGVSTA: "CONNECTED" OK *Note : Connected to network. An IP address has been attributed to the TCP/IP stack*
AT+EGVSTA	+EGVSTA: "DIALING" OK *Note : Connection to network in progress after a AT+EGCNXSTART*
AT+EGVSTA	+EGVSTA: "DISCONNECTING" *Note: Disconnection from network in progress after a AT+EGCNXSTOP*
AT+EGVSTA	+EGVSTA: "NO SERVICE" *Note: Not registered on the network*

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9.3 +EGVALL – Display all parameters

Description:

This command displays all the parameters for the modem. The parameters are displayed by blocks of categories separated by a <CR><LF> sequence.

Syntax:

AT+EGVALL

Examples:

Command	Possible Responses
AT+EGVALL	EaseIP-V1.10_EGM420 490700 Feb 25 2015 15:33:03 +EGAPW: "","" +EGASV: "","" +EGAUN: "","" +EGGID: 1,1 +EGGMO: 1,1 +EGSMTPDO: "" +EGSMTPSE: "" +EGSMTPSN: "" +EGSMTPPT: 25 +EGSMTPPW: "" +EGSMTPSV: "" +EGSMTPUN: "" +EGBODY1: "" +EGCCREC1: "" +EGREC1: "" +EGSUBJ1: "" +EGBODY2: "" +EGCCREC2: "" +EGREC2: "" +EGSUBJ2: "" +EGBODY3: "" +EGCCREC3: "" +EGREC3: "" +EGSUBJ3: "" +EGFGF: "" +EGFGP: "" +EGFMO: 0 +EGFPT: 21 +EGFPF: "" +EGFPP: "" +EGFPW: "" +EGFSV: "" +EGFTY: "I" +EGFUN: "" +EGTDMO: 1,1 +EGTPT: 1,0 +EGTSV: 1,"" +EGTTXDLY: 1,100 +EGTDMO: 2,1 +EGTPT: 2,0 +EGTSV: 2,"" +EGTTXDLY: 2,100

```
+EGUPT: 0
+EGUSV: ""
+EGUTXDLY: 100

+EGPINGDLY: 1
+EGPINGNUM: 4
+EGPINGRSV: ""
OK
```

9.4 +EGSPWD – Password for configuration by SMS

Description:

This command will manage the password which will authorize configuration via a received SMS.

Syntax:

AT+EGSPSW=<PaSsWord>

Examples:

Command	Possible responses	Notes
AT+EGSPWD=?	+EGSPWD: 8 OK	*Display syntax. Maximum length of password.*
AT+EGSPWD="12345"	OK	*Change password.*
AT+EGSPWD?	+EGSPWD: "12345" OK	*Current configuration*

Defined values:

      <**PaSsWord**>   Current password entered as an ASCII string, for example : "0000".

Notes:

- Maximum length of the password: 8 characters.
- Password is case-sensitive.
- **Password by default: "0000".**

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9.5   +EGRST – Programmed Reset

Description:

This command will configure the automatic reset of the module. This reset can be used to avoid possible lock-up of the application due to a random rejection by the GSM network.

This function uses the internal clock of the GSM module which is set by the command : **AT+CCLK="yy/MM/dd,hh:mm:ss±TZ"** or by the **NTP function** (see chapter **8.1 +EGNTP – Get NTP date/time**)

Notes:

In case of power OFF or Reset, the Date and Time are saved only if the modem has an internal backup battery.

Syntax:

AT+EGRST=<mode>[,<type>][,<p>][,<time>]   (ReSeT)

Examples :

Command	Possible Responses	Notes
AT+EGRST=?	+EGRST: (0-3),(0-1),(0-1),"HH:MM" OK	*Display syntax*
AT+EGRST=1,0,0,"03:00"	 OK	*Set a daily general reset at 03h00*
AT+EGRST?	+EGRST: 1,0,0,"03:00" OK	*Display current configuration*
AT+EGRST=1,0,1,"72:30"	 OK	*Set a general reset every 72 hours 30 minutes*
AT+EGRST?	+EGRST: 1,0,1,"72:30" OK	*Display current configuration*
AT+EGRST=0	 OK	*Deactivate the reset feature*

Defined values:

<mode>

0 : Reset inactive
1 : Reset active
2 : Detachment from network then re-attachment to network. The parameter **<type>** must be set to GSM only.
3 : Reserved for future development

<type>

0 : General
1 : GSM only

<p>

0 : Fix time, each day (maximum 23:59)
1 : Interval, each HHH:MM hours (maximum 100:00)

<time>   "HHH:MM"
HH = hours, MM = minutes

Default configuration:
+EGRST:0,0,0,"03:00"

Notes:

- The mode 2 will send result in AT+COPS=2 being sent to the GSM at the specified time/interval in order to detach from the network. If this is successful then AT+COPS=0 will be sent to the GSM to reattach to the network. If the detachment from the network fails then the GSM is reset.

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9.6 +EGTRC – Activate traces

Description:

It is possible to activate the trace mode to show diagnostic information during the operation of the module. The trace information is send to the serial port. This trace information may be useful for ERCOGENER technical support. By default, all traces are deactivated.

Syntax:

AT+EGTRC=<level>,<options>

Examples :

Command	Possible Responses	Notes
AT+EGTRC=?	+EGTRC: (0-255),(0-255) OK	*Display syntax*
AT+EGTRC=17	 OK	*Validate the traces DISPLAY_GPRS (level 16) and DISPLAY_GENERAL (level 1)*
AT+EGTRC?	TRACE : GENERAL ON, EGEVT OFF, GSM OFF, GPRS ON, DATA OFF, DOWNLOAD OFF,0 OK	*Display current configuration*
AT+EGTRC	 OK	*Inverse all trace levels*
AT+EGTRC?	TRACE : GENERAL OFF, EGEVT ON, GSM ON, GPRS OFF, DATA ON, DOWNLOAD ON,0 OK	*Display current configuration*

Defined values:

    <**level**>   Trace level.

The following trace levels are available :
- 1 : DISPLAY_GENERAL, general operating information.
- 2 : DISPLAY_EGEVT, information about the SIM card and the attachment to network.
- 4 : not used.
- 8 : DISPLAY_GSM, information about attachment to GSM network.
- 16 : DISPLAY_GPRS, information about attachment to GPRS network and transfer in TCP and FTP.
- 32 : DISPLAY_DATA, information about attachment to network and transfer in connection DATA GSM.
- 64 : DISPLAY_DOWNLOAD, information about application updating in DOTA mode (Download Over The Air).

    <**options**>   Options bit mask, default = 0.

The following options are available :
- 1 : show "**+EGEVT: n**" messages.
- 2 : not used
- 4 : not used
- 8 : not used
- 16 : not used
- 32 : not used
- 64 : not used
- 128 : not used

The command **AT+EGTRC** with no parameters will inverse all <**level**> traces only.

Default configuration :

    +EGTRC: 0,0

Notes:

The following **+EGEVT** messages are available :

+EGEVT: n	**Description**
+EGEVT: 0	SIM Removed
+EGEVT: 1	SIM Inserted
+EGEVT: 2	SIM Ready
+EGEVT: 3	Network Ready
+EGEVT: 4	Network not registered but IS searching for new operator
+EGEVT: 5	SMS Received
+EGEVT: 6	SMS Send
+EGEVT: 7	GSM Ready
+EGEVT: 8	CALL setup message
+EGEVT: 9	CALL disconnect message
+EGEVT: 10	CALL alert message
+EGEVT: 11	CALL precede message
+EGEVT: 12	CALL synchronization message
+EGEVT: 13	CALL progress description message
+EGEVT: 14	CALL connect message
+EGEVT: 15	CALL reset request for call reestablishment
+EGEVT: 16	CALL reset confirm for call reestablishment
+EGEVT: 17	CALL release
+EGEVT: 18	CALL reject
+EGEVT: 19	CALL mobile originated call setup
+EGEVT: 20	Network Roaming
+EGEVT: 21	Not registered but IS NOT searching for new operator
+EGEVT: 22	Attachment denied
-	-
+EGEVT: 24	SMS ready
+EGEVT: 25	PHB ready
+EGEVT: 26	PIN code not required
+EGEVT: 27	PIN code required
+EGEVT: 28	SMS not ready
+EGEVT: 29	Phonebook not ready
+EGEVT: 30	GSM power off

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9.7 +EGINFO – Display library status

Description:

This command displays the library activation status. The library is activated by the library key (see chapter **16.1 +EGLIBKEY – Special library key**).

Syntax:

AT+EGINFO

Examples:

Command	Possible Responses	Notes

AT+EGINFO
 	
Note : display library status and information
	`+LibraryIP: 1`
	
	`OK`
		Library is activated

9.8 +EGCMEE – Error reporting

Description:

This command will configure the error reporting mode. These errors will be reported in case of connection errors (see chapter **19.2 Error messages**).

Syntax:

AT+EGCMEE=<mode>

Examples:

Command	Possible Responses	Notes

AT+EGCMEE=?	`+EGCMEE: (0-3)`
	
	`OK`
		Display syntax

AT+EGCMEE?	`+EGCMEE: 1`
	
	`OK`
		Display current configuration

AT+EGCMEE=2	`OK`	*Set verbose error reporting*

Defined values:

<mode>

0 : error reporting inactive.
1 : numeric error code reporting only (default), codes > 10000 only.
2 : all numeric error codes reporting.
3 : verbose (all numeric codes and text) error reporting.

Notes:

The GSM error reporting codes must be activated with the command AT+CMEE=n
where:

n = 0: result code disabled and ERROR used.
n = 1: result code enabled and numeric values used.
n = 2: result code enabled and verbose values used.

The command AT+CMEE is not saved by the GSM module.

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9.9 +EGCGSM – GSM start-up configuration commands

Description:
> This command configures the AT commands that will be sent to the GSM when the GSM starts up and the SIM is ready ("+EGEVT: 2").

Syntax:
> **AT+EGCGSM=<n>,<cmd>**   (Config GSM)

Examples:

Command	Possible Responses	Notes
AT+EGCGSM=?	+EGCGSM: (1-5),"AT+COMMAND" OK	*Display syntax.*
AT+EGCGSM=2,"AT+CRLP=61,61,48,7"	OK	*Set the command 2*
AT+EGCGSM?	+EGCGSM: 1,"AT+URAT=1,2" +EGCGSM: 2,"AT+CRLP=61,61,48,7" +EGCGSM: 3,"" +EGCGSM: 4,"" +EGCGSM: 5,"" OK	*Display the current configuration*
AT+EGCGSM=2	+EGCGSM: 2,"AT+CRLP=61,61,48,7" OK	*Display the current configuration for command 2*
AT+EGCGSM=2,""	OK	*Erase the command 2*

Defined values:

> **<n>**   Command number (1 – 5).

> **<cmd>**   "AT+command" (max size 30 characters).

Notes:
- It is not possible to enter ' **"** ' in the **<cmd>** parameter. The ' **"** ' must be entered as ' ***** '. Example: **AT+EGCGSM=3,"AT+CSCS=*UCS2*"**. The ' ***** ' will be replaced by ' **"** '.

- Commands must begin with "**AT**" and can be in upper or lower case.

- By default the GSM is forced to start up in 3G mode. The 2G or 3G modes may be forced by ensuring that the command AT+URAT is set in the first GSM startup configuration position as follows:

  > 3G mode: **AT+EGCGSM=1,"AT+URAT=1,2"**
  > 2G mode: **AT+EGCGSM=1,"AT+URAT=0,0"**

- Default values:

  > **+EGCGSM: 1,"AT+URAT=1,2"**
  > **+EGCGSM: 2,"AT+CRLP=61,61,48,7"**
  > **+EGCGSM: 3,""**
  > **+EGCGSM: 4,""**
  > **+EGCGSM: 5,""**

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9.10 +EGETX – ETX character

Description:

This command will configure the ETX character used in TCP/UDP/FTP data transfers.

Syntax:

AT+EGETX=<etxchar>

Examples:

Command	Possible Responses
AT+EGETX=?	+EGETX: (0-255) OK *Note: Display syntax*
AT+EGETX?	+EGETX: 3 OK *Note: Display current configuration*
AT+EGETX=5	OK *Note: Set new configuration*
AT+EGETX?	+EGETX: 5 OK *Note: Display current configuration*

Defined values:

<etxchar>   Set the ETX character. Accepts a decimal value (default = 3).

9.11 +EGMRST – Reset CPU, GSM

Description:

This command is used to reset the CPU or the GSM module. Note that resetting the CPU will completely restart the application.

Syntax:

AT+EGMRST=<resetType>

Examples:

Command	Possible Responses
AT+EGMRST=?	+EGMRST: (0-3) OK *Note: Display syntax*
AT+EGMRST=0	*Reset CPU and restart application*
AT+EGMRST=1	*Reset GSM module*

Defined values:

<mode>
  0: Reset ARM CPU. The application is restarted.
  1: Reset GSM module only.
  2: Reset GPS module only (not available).
  3: Reset ARM CPU (will either enter bootloader or enter low-power mode. Bootloader must be present).

Descriptions and non-contractual illustrations in this document are given as an indication only.
ERCOGENER reserves the right to make any modifications.

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9.12 +EGCMGS – Send SMS

Description:

This command is used to send an SMS.

Syntax:

AT+EGCMGS="<da>","<text>"

Examples:

Command	Possible Responses
AT+EGCMGS=?	+EGCMGS: "<da>",<"text"> OK *Note: Display syntax*
AT+EGCMGS="0612345678","Hello World"	CMGS: 193 OK *Send an SMS*

Defined values:

<da>

Destination address – a telephone number.

<text>

Text message, 160 alpha-numeric characters.

Notes:

This command can easily send an SMS in one single command line (no need to enter CTRL-Z).

Carriage returns and line-feeds may be entered with "**\r**" and "**\n**".

The ASCII characters equivalent to 0x0D 0x0A are not allowed.

Example:

AT+EGCMGS="0612345678","Hello\r\nWorld"
+CMGS: 193
OK

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10 DUAL SIM

On units where two SIM holders are present, the user may configure the changeover between the two SIMs. When activated, the function monitors:

- GSM/GPRS network registration,
- CSQ level,
- detected networks.

10.1 +EGDSIM - DUAL SIM configuration

Description:
> This command will configure the Dual SIM service

Syntax:
> **AT+EGDSIM=<mode>,<defsim>,<op1>,<tim1>,<csq>,<op2>,<tim2>**

Examples:

Command	Possible Responses	Notes
AT+EGDSIM=?	`+EGDSIM: (0-3),(1-2),(5),(0-600),(0-31),(5),(10-600)` `OK`	*Display syntax*
AT+EGDSIM?	`+EGDSIM: 0,0,0,60,10,0,600` `OK`	*Display current configuration*
AT+EGDSIM=3	`+EGDSIM: 3,1,1` `OK`	*Show available SIMs. Here both SIMs are present.*
AT+EGDSIM=1,1, 20820,45,10,20801,45	`OK`	*Enable Dual SIM mode. Set SIM 1 as preferred SIM. Set CSQ threshold, operator preferences and timeouts.*
AT+EGDSIM=2	`+EGDSIM: 2,1,12,Registered` `OK`	*Display current SIM used, CSQ and registration status.*

Defined values:

> <**mode**>
>> 0: Disabled (default).
>> 1: Enabled (all other parameters must be correct).
>> 2: Show current SIM being used, CSQ level and Dual-SIM registration status (<**mode**> must already be enabled):
>>
>>> Response: **+EGDSIM: 2,<SIM>,<CSQ>,<Registration state>**
>>> **SIM**
>>>> Current SIM, 1 or 2
>>>
>>> **CSQ**
>>>> Level, 0 to 31, 99
>>>
>>> **Registration state**
>>>> "Registered" or "Unregistered"
>>
>> 3: Show available SIMs.
>> Response: **+EGDSIM: 3,<Sim1>,<Sim2>**
>>> **Sim1** and **Sim2**
>>>> 0: absent
>>>> 1: present
>
> <**defsim**>
>> Select preferred SIM.
>> **1**: SIM 1 (default)
>> **2**: SIM 2.

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<op1>

Expected operator for SIM 1 (numerical international operator code), default = 0 (Roaming).

<tim1>

Timeout before returning to SIM 2 (0 to 600 secs) (default 60 secs).

<csq>

Minimum CSQ threshold level (0 to 31) (default 10).

<op2>

Expected operator for SIM 2 (numerical international operator codes), default = 0 (Roaming).

<tim2>

Timeout before returning to SIM 1 (0 to 600 secs) (default 600 secs).

Notes:

This command will return "ERROR" if not running on a Genxxx5xe.

The numerical international operator codes may be found here:
http://en.wikipedia.org/wiki/Mobile_country_code

When operating on the preferred SIM, if the network has been lost or the CSQ is below the threshold level for the time **timN** then the operation will be changed to use the secondary SIM.

An attempt will be made to return to the preferred SIM after time **timN** regardless of network status and CSQ level.

Before changing SIM, if a specific operator has been specified for the next SIM then a check will be made to determine if this operator is present before changing. If not present then the SIM will not be changed.

However, if no specific operator has been specified for the next SIM ("0", Roaming), then operation will always be changed to the next SIM.

Refer to the Dual SIM flow chart in annex Erreur ! Source du renvoi introuvable. Erreur ! Source du renvoi introuvable. for operation details.

Examples:

AT+EGDSIM=1,1,20820,90,10,0,300

SIM 1 is the preferred SIM with operator "20820". Loss of network timeout is 90 seconds.
SIM 2 is the secondary SIM operating in Roaming mode. Timeout to return to preferred SIM 1 is 300 seconds. CSQ threshold level is 10.

Operation will start with SIM 1. If the network has been lost or CSQ has been low for at least 90 seconds, the unit will change over to the secondary SIM 2 and operate in the Roaming mode for a maximum of 300 seconds.

After 300 seconds the unit will check the presence of operator "20820" and if present will change back to the preferred SIM 1.

If whilst operating on the secondary SIM 2, the network has been lost or CSQ has been low for at least 90 seconds, the unit will change back to the preferred SIM 1.

11 Remote management and configuration

It is possible to send configuration information to the module via SMS.
Note that a received SMS will only be interpreted as a configuration SMS if the SMS remote configuration bit is set with the command **AT+EGSMSCFG** (see chapter **11.2 +EGSMSCFG – SMS remote configuration**).

It is possible to identify operating problems remotely from the device. For example, a request by SMS for the reception level of the GSM signal (the SMS are sent with very low levels whereas a GPRS connection will not work) will determine if the device is in a "white" zone and explains the non-reception of the expected information, on the server side.

11.1 Configuration and remote control by SMS

Description:

- All commands are accepted by remote configuration via SMS except:

    AT+EGFPUT
    AT+EGPUTMAIL

- Phone number must be authorized (see chapter **11.3 +EGPHN – Authorized telephone numbers**) or password (see chapter **9.4 +EGSPWD – Password for configuration by SMS**) must always be included.

- Password and commands must be separated by a 'space' character.

- The first command must begin with "AT".

- Subsequent commands may omit the leading "AT".

- The command name of each AT command may be in upper or lower-case.

- **Do not add carriage-return or line-feed characters after the commands in the SMS. The command will not be managed and an error will be returned.**

- If the SMS is accepted, the modem returns a SMS containing "OK" unless the SMS contains +EGNRP.

- Long responses may result in multiple reply SMS(s).

    The presence of the command "+EGNRP" in the configuration SMS will deactivate the reply SMS only for AT commands.

Syntax with AT commands and SMS response allowed:
　　　[<password><*space*>]<**AT**command1><*space*><command2><*space*><command3>……

Syntax with AT commands and without SMS response:
　　　[<password><*space*>]<**AT+EGNRP**><*space*><command1><*space*><command2>……

It is possible to initiate the update of the application via the DOTA function. See chapter **17 +EGDWL – Remote download of a new application**.

11.2 +EGSMSCFG – SMS remote configuration

Description:

This command will configure the SMS remote configuration options.

Syntax:

AT+EGSMSCFG=<x>

Examples:

Command	Possible Responses	Notes
AT+EGSMSCFG=?	+EGSMSCFG: (0-255) OK	*Display syntax*
AT+EGSMSCFG?	+EGSMSCFG: 1 OK	*SMS remote configuration is currently enabled*
AT+EGSMSCFG=0	OK	*Disable SMS remote configuration*

Defined values:

     <x>   Bit map allowing:
- **1 (bit 0)   SMS remote configuration, 0: disabled, 1: enabled (default).**
- 2 (bit 1)   Reserved
- 4 (bit 2)   Reserved
- 8 (bit 3)   Reserved
- 16 (bit 4)   Reserved
- 32 (bit 5)   Reserved
- 64 (bit 6)   Reserved
- 128 (bit 7)   Reserved

     Default configuration:

         AT+EGSMSCFG=1

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11.3 +EGPHN – Authorized telephone numbers

Description:

This command will configure the telephone numbers that will be used in case of received configuration by SMS.

Syntax:

AT+EGPHN=<x>[,<nnn>,<y>]

Examples:

Command	Possible Responses	Notes
AT+EGPHN=?	+EGPHN: (1-300),20,(0-255) OK	*Display syntax*
ATEGPHN=x,,y	 OK	*Modify only the function parameters for an existing telephone number*
AT+EGPHN=1, "+33612345678",128	 OK	*Program a destination number for remote configuration*
AT+EGPHN?	+EGPHN: 1,"+33612345678",128 OK	*Display all saved telephone numbers.*
AT+EGPHN=1	+EGPHN: 1,"+33612345678",128 OK	*Display saved telephone number at index 1.*
AT+EGPHN=1, ""	 OK	*Erase telephone number of index 1.*

Defined values:

<x>   Index (1-300)

<nnn>   Telephone number (20 digits max.). It is advisable to enter the telephone number in the international format : "**+**yyxxxxxxx"

<y>   Bit map allowing to select the function using this telephone number:
- 1 (bit 0)   Reserved.
- 2 (bit 1)   Reserved
- 4 (bit 2)   Reserved
- 8 (bit 3)   Reserved
- 16 (bit 4)   Reserved
- 32 (bit 5)   Reserved
- 64 (bit 6)   Reserved
- **128** (bit 7)   **Phone number allowed for remote access**

Default configuration:

All fields are empty.

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11.4 "Special" command messages

These commands may be entered in lower or upper-case.

11.4.1 +EGNRP – Request for non-response by SMS

Description:

This command requests that the system not to send response after receipt of a command SMS.
This command is active when it is in the text of the. Its entry via the serial port has no effect. It is not saved.

Syntax:

AT+EGNRP

Default configuration :
None

12 General features

12.1 GSM Led Status

The GSM LED will indicate the status of the connection to the network:

Examples:

State	ON time	OFF time	Description
Fixed ON	Always ON	-	No network / no SIM
Flash	500ms	1s	Attached to GSM only
Flash	500ms	500ms	Connecting to GPRS network (waiting for IP address)
Flash	200ms	800ms	Connected to GPRS network (got IP address)
Flash	100ms	100ms	TCP/UDP/FTP/SMTP/PING session open

12.2 Internal clock

Description:

An internal clock running on 24H, starts with the power-up of the product.
This function uses the internal clock of the GSM modem which is set by the command :

AT+CCLK

Syntax:

AT+CCLK="yy/MM/dd,hh:mm:ss±TZ"

Examples:

Command	Possible Responses	Notes
AT+CCLK="13/11/25"14:10:00+00"	OK	*Set Date & Time& Time zone*
AT+CCLK?	+CCLK: "13/11/25,14:10:00+00" OK	*Display current values*

Notes:
- In case of power OFF or Reset, the Date and Time are saved only if the modem has an internal backup battery.
- Date & Time may be updated via NTP in GPRS (see chapter **8.1 +EGNTP – Get NTP date/time**).

12.3 +EGMFLH=3 – Erase all parameters

Description:

This command allows will erase all the parameters from the flash memory (Flash objects).
After the erase, the modem performs a reset and the application is restarted. The modem is now in factory default setting.

Syntax:

AT+EGMFLH=3

Examples:

Command	Possible Responses	Notes
AT+EGMFLH=3	*** ERASING SERIAL FLASH *** *** RESTARTING CPU ***	*Erase Flash objects and Restart the application*

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12.4 ATI8 – Display application version and build information

Description:

    This command will display the version and build information of the application.

Syntax:

    ATI8

Examples:

Command	Possible Responses

ATI8	`EaseIP V1.20_EGM430 - GenLoc354e D - Wed Nov 18 10:21:54      2015`
	
	`OK`
	
	Note: Display application version and build information

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13 V24 commands

13.1 +IPR – Fixed DTE rate

Description:

This command specifies the data rate at which the DCE will accept commands.

Any AT command issued by the DTE must start with 'A' and 'T'. The case is not important.

The parameter may be saved in the module with the command AT&W.

Syntax:

AT+IPR=<rate>

Examples:

Command	Possible Responses
AT+IPR=?	+IPR: (300,600,1200,2400,4800,9600,10400,14400,19200,38400,57600, 115200,230400,460800) OK *Note: Possible values.*
AT+IPR?	+IPR: 115200 OK *Note: Current rate is 115200 bps.*
AT+IPR=9600	OK *Note: Set rate to 9600 bps.*

Defined values:

<rate>
300
600
1200
2400
4800
9600
10400
14400
19200
38400
57600
115200
230400
460800

Default value: AT+IPR=115200

13.2 +ICF – DTE-DCE character framing

Description:

This command is used to determine the local serial port start-stop (asynchronous) character framing used by the DCE.

The parameter may be saved in the module with the command AT&W.

Syntax:

AT+ICF=<format>[,<parity>]

Examples:

Command	Possible Responses
AT+ICF=?	+ICF: (1-6),(0-4) OK *Note: Possible values.*
AT+ICF?	+ICF: 3,4 OK *Note: Current values*
AT+ICF=2,0	OK *Note: New values.*

Defined values:

<format>
   0   Auto detect (not supported)
   1   8 Data 2 Stop (supported)
          <parity> parameter is ignored.
   2   8 Data 1 Parity 1 Stop (supported)
          if no <parity> provided, 3 is used by default as <parity> value.
   3   8 Data 1 Stop (supported)
          <parity> parameter is ignored.
   4   7 Data 2 Stop (supported)
          <parity> parameter is ignored.
   5   7 Data 1 Parity 1 Stop (supported)
          if no <parity> provided, 3 is used by default as <parity> value.
   6   7 Data 1 Stop (supported)
          <parity> parameter is ignored.

<parity>
   0   Odd (supported)
   1   Even (supported)
   2   Mark (supported)
   3   Space (supported)
   4   None (supported)

Default value: AT+ICF=3,4

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13.3 +IFC – DTE-DCE local flow control

Description:

> This command is used to control the of local flow control between the DTE and DCE.
>
> The parameter may be saved in the module with the command AT&W.

Syntax:

> **AT+IFC=<DCE_by_DTE>,<DTE_by_DCE>**

Examples:

Command	Possible Responses
AT+IFC=?	+IFC: (0,0 - 2,2) OK *Note: Possible values.*
AT+IFC?	+ICF: 0,0 OK *Note: Current values*
AT+IFC=2,2	OK *Note: New values.*

Defined values:

> **<DCE_by_DTE>**
> 0   None (supported) (default value)
> 2   RTS (supported)
>
> When his parameter is set to 2 (DTE invokes flow control via RTS) DCE behaviour is as follows:
> If the DCE has never detected TRS high (or ON) condition since startup, then it ignores RTS (assuming that this signal is not connected).
> As soon as the DCE detects RTS high the signal acts on it. Therefore subsequent RTS transition to OFF will prevent the DCE from sending further data.
>
> **<DCE_by_DTE>**
> 0   None (supported)
> 2   CTS (supported)
>
> When this parameter is set to 0 (none) then CTS is kept high all the time.
>
> **Default value: AT+ICF=0,0**

Notes:
- The application has an internal input buffer of 128kbytes.
- When an RTS off signal is received from the external terminal and the flow control is active, then at 9600 baud up to about 50 characters may still be sent.

13.4 Q – Quiet mode

Description:

This command is used to control the command responses.

The parameter may be saved in the module with the command AT&W.

Syntax:

ATQ, ATQn, ATQ

Examples:

Command	Possible Responses
ATQ	OK *Note: Off, display result codes, user sees command responses.*
ATQ0	OK *Note: Off, display result codes, user sees command responses.*
ATQ1	*Note:Off, result codes are suppressed, user does not see command responses.*

Defined values:

<n>
0   (default value) , same as ATQ, Quiet Mode OFF
1   Quiet Mode ON

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14 RS485 commands

14.1 RS485 interface

The RS485 interface is available on the GenPro 325e only. It may be activated with the following command.

14.1.1 +EGXRT – RS485 interface configuration

Description:
  This command will configure the RS485 interface.

Syntax:
  AT+EGXRT=2,<mode>,<baud>,<parity>,<data bits>,<stop bits>

Examples:

Command	Possible Responses	Notes
AT+EGXRT=?	`+EGXRT: (2),(0-1),(baud),(parity),(Data bits),(stop bits)` `OK`	*Display syntax*
AT+EGXRT?	`+EGXRT: 2,0,9600,"N",8,1` `OK`	*Display current configuration*
AT+EGXRT=2	`+EGXRT: 2,0,9600,"N",8,1` `OK`	*Show current configuration*
AT+EGXRT=2,1,19200	`OK`	*Set configuration*

Defined values:

  <n>
    2: RS485 UART

  <mode>
    0: Disabled (default)
    1: Enabled

  <baud>
    Baud rate:
    Available values: 300, 600, 1200, 2400, 4800, 9600, 10400, 14400, 19200.

  <parity>
    Parity. Available values: "N", "E", "O", "1", "0".

  <data bits>
    Data bits. Available values: 5, 6, 7, 8.

  <stop bits>
    Stop bits. Available values: "1", "1,5", "1".

Notes:

Default values:

+EGXRT:2,0,9600,"N",8,1

The RS485 interface is disabled by default at 9600 baud.

The RS485 maximum baudrate is 19200 baud with a maximum packet size of 2kbytes.

If the RS485 interface is active then the V24 input is disabled and only the traces are displayed on the V24 serial link.

When the RS485 interface is activated then the return to normal V24 mode is achieved by entering the command **AT+EGXRT=2,0** via the RS485 interface (or by erasing all the flash objects. In this case the complete configuration of the unit will be reset to default).

The Hayes register S47 specifies the character reception timeout. If no characters have been received for at least this time then data may be transmitted. See chapter **15.4**

S47 – RS485 character reception timeout.

15 Hayes registers

Description:

Various functions of the module may be configured via the use of internal Hayes registers. These registers may be set and read:

Write: ATSn=decimal value
Read: ATSn?
Response: decimal value

The registers may be saved to non-volatile memory with the command **AT&W**. This will ensure that the new values are used each time that the application starts up.
The command **AT&V3** will display all the registers values (see examples below).
The command **AT&F** will restore the registers to their default values.

Examples:

Command	Possible Responses
ATS0?	000 OK *Note: Read register 0 (number of RINGS before automatic call pick-up)*
ATS0=2	OK *Note: Set register 0 to 2 (2 RINGS before automatic call pick-up)*
AT&V3	S0:002 S7:060 S27:000 S37:000 S47:002 OK *Note: display all registers.* **Note: S7 is not used**.
AT&W	OK *Note: Save registers to non-volatile memory*

15.1 S0 – Automatic call pick-up

Default value = 0, limits: 0-255. Specifies the number of RINGs before automatic pick-up of an incoming GSM data call. If 0 then no automatic pick-up. Note that there is no automatic pick-up on incoming voice calls.

15.2 S27 – Automatic low-power timeout

Default value = 0, units seconds, limits: 0-255. If this value is different to 0, then when the unit is not connected GPRS or connected GPRS but not connected FTP/TCP/UDP/SMTP..., the unit will enter the low-power mode thus reducing power consumption to less than 6mA on a GenPro 25e.
It will wake up upon reception of a character on the serial port or upon reception of an incoming GSM data call or upon reception of an SMS.

15.3 S37 – Transfer inactivity timeout

Default value = 0, units minutes, limits: 0-255. If this value is different to 0 then during a GSM data call, the call may be automatically terminated if there is no further exchange of data between the two sites.
If a TCP/UDP connection has been configured then, the socket will be closed and then then GPRS connection will be stopped. If a permanent TCP/UDP connection has been configured then the GPRS connection will be re-established and TCP/UDP socket opened.
The inactivity timeout will manage wait for connection timeout to remote FTP server during an FTPGET/FTPPUT session.
The inactivity timeout will manage inactivity timeouts during FTPGET and FTPPUT when connected to an FTP server.
The inactivity timeout will manage wait for disconnection timeout by remote server after having detected the local ETX and then sent 0 bytes to remote server during an FTPPUT session.

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15.4 S47 – RS485 character reception timeout

Default value = 2 (20ms), limits: 0-255. Specifies the character reception timeout before transmitting data via the RS485 link. If no data has been received for at least this time then data may be sent.

15.5 S21 – AT&D configuration

By default the mode AT&D2 is configured.
The register S21 will indicate the current configuration of AT&D.

ATS21? decimal	&D	B7	B6	B5	B4	B3	B2	B1	B0
112	2	0	1	1	1	0	0	0	0
104	1	0	1	1	0	1	0	0	0
096	0	0	1	1	0	0	0	0	0

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16 SPECIAL LIBRARY FUNCTIONS

16.1 +EGLIBKEY – Special library key

Description:

This command allows a library key to be entered to allow access to special functions. The key may be obtained from ERCOGENER upon request.

Syntax:

AT+EGLIBKEY=<"key">

Examples:

Command	Possible Responses
AT+EGLIBKEY=?	+EGLIBKEY: (160) OK *Note: Possible values.*
AT+EGLIBKEY?	+EGLIBKEY: "" OK *Note: Key is empty.*
AT+EGLIBKEY="019207af. . . .9832eb"	*Note: If the key is accepted, the key is installed and the product resets. If the key is not accepted, ERROR is returned.*
AT+EGLIBKEY?	+EGLIBKEY: "019207af. . . .9832eb" OK *Note: Display current key.*

Defined values:

<key>

The library key is a hexadecimal number of 160 characters. It is supplied by ERCOGENER to unlock various library functions. For example: "019207af. . . .9832eb".

Notes:

- The key is checked and if valid, it will be installed. The application will then be restarted and the various library functions will be unlocked as determined by the library key.
- If the key is not accepted, ERROR is returned.
- Whilst erasing the flash objects, the key will be temporarily saved to RAM. This will avoid having to re-enter the key to unlock the library functions. The key will be lost if the power supply is removed during the erasure of the flash objects.

17 +EGDWL – Remote download of a new application

Description:

This command is used to initiate the update of application. This is often to add new functions. This action is also called "DOTA" (Download Over The Air).

The transfer is possible only in GPRS via an FTP connection. As a consequence, the FTP parameters must be set in the device with the commands **AT+EGFSV**, **AT+EGFUN** and **AT+EGFPW**.

Syntax:

AT+EGDWL=<slot>,<"filename">,<"path"><filetype>

Defined values:

<slot>	(1-2) flash slot number where the file is written before installed.
<filename>	file name to download.
<path>	directory path for the file.
<filetype>	0: application file (default if omitted).
	1: bootloader file (uses modified bootloader file for DOTA. Consult ERCOGENER).

ORIGIN OF THE COMMAND :

The command can be sent via the serial link or a SMS.

When the command is received, the unit connects to the download server using the FTP parameters. The transfer is made, and then the application is installed. The unit is restarted with the new application if successful or with the old application in case of a problem.

Examples:

Via serial link

(filename, directory: "./DWL")

AT+EGDWL=1," EaseIP_V1.00_EGM405_boot_sdram_lzo.bin","./DWL"

By a SMS

(file in the root directory of the server: ".")

0000 AT+EGDWL=1," EaseIP_V1.00_EGM405_boot_sdram_lzo.bin","."

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18 Examples

18.1 Configuration

AT+EGVALL   (display complete current configuration)

18.1.1 GPRS

AT+EGGMO=1   (the IP stack is used in GPRS mode)
AT+EGASV="*apn_server*"   (example for Orange: AT+EGASV="internet-entreprise")
AT+EGAUN="user_name_APN"   (example for Orange: AT+EGAUN="orange")
AT+EGAPW="password_APN"   (example for Orange: AT+EGAPW="orange")

A private APN with PAP or CHAP authorisation may be configured as:
AT+EGASV="PAP:*apn_server*"   (private APN with PAP authorisation)
AT+EGASV="CHAP:*apn_server*"   (private APN with CHAP authorisation)

AT+EGVAPN   (display current GPRS configuration)

18.1.2 TCP

AT+EGTSV=1,"255.255.255.255"   (enter the IP address)
AT+EGTSV=1,"distantserver.com"   (or the URL of the remote TCP server)
AT+EGTPT=1,"1025"   (enter the number of the remote TCP server)

AT+EGVTCP   (display current TCP configuration)

18.1.3 FTP

AT+EGFMO=1   (Passive mode)
AT+EGFSV="server.ftp.fr"   (address of FTP server)
AT+EGFUN="username"   (user Name for FTP server)
AT+EGFPW="password"   (password for FTP server)
AT+EGFPT="21"   (port number for FTP server)
AT+EGFGP="."   (GET directory on FTP server. Here, the root directory)
AT+EGFPP="."   (PUT directory on FTP server. Here, the root directory))
AT+EGFPF="filename.txt"   (name of file to put on the FTP server)
AT+EGFGF="filename.txt"   (name of file to get from the FTP server)
AT+EGFTY="I"   (Binary mode. ASCII mode will truncate bytes to 7 bits)

AT+EGVFTP   (display current FTP configuration)

18.2 TCP client socket

18.2.1 Attachment to a GPRS network

It is assumed that the modem is already connected in GSM (valid PIN code entered) and the APN parameters are configured.

18.2.2 Start GPRS connection

AT+EGCNXSTART   (start the GPRS connection)

80.10.32.45   *(IP address attributed by the network)*
Ok_Info_GprsActivation   *(GPRS connection established)*

18.2.3 Open TCP client

AT+EGTCSTART=1   (open socket 1 in client mode)

Ok_Info_WaitingForData

The socket is now open. Data may be sent and received.

18.2.4 Close socket

The socket is closed by locally sending the character <ETX> = Ctrl-C = 03 (Hex).

Ok_Info_SocketClosed

Note: To send the <ETX> character as part of data, it must be preceded by the character <DLE> = Ctrl-P = 10 (hex). In this case the <ETX> character will not be interpreted as an order to close the socket.

18.2.5 Stop GPRS connection

AT+EGCNXSTOP   (stop the GPRS connection)
OK

18.3 TCP server socket

18.3.1 Attachment to a GPRS network

It is assumed that the modem is already connected in GSM (valid PIN code entered) and the APN parameters are configured.

18.3.2 Start GPRS connection

AT+EGCNXSTART   (start the GPRS connection)

80.10.32.45   *(IP address attributed by the network)*
Ok_Info_GprsActivation   *(GPRS connection established)*

18.3.3 Open TCP server

AT+EGTSSTART=1   (open server socket 1)
OK

The socket is now ready to receive a connection request from TCP client. When the client socket connects, the server will output the message:

Ok_Info_WaitingForData

The socket is now open. Data may be sent and received.

18.3.4 Close socket

The socket may be closed by sending the character <ETX> = Ctrl-C = 03 (Hex) locally.
When closed, the server will output the message:

Ok_Info_SocketClosed

Note: a new socket connection must started with the command AT+EGTSSTART=1

18.3.5 Stop GPRS connection

AT+EGCNXSTOP   (stop the GPRS connection)
OK

18.4 Send email

18.4.1 Attachment to a GPRS network

It is assumed that the modem is already connected in GSM (valid PIN code entered) and the APN parameters are configured.

18.4.2 Start GPRS connection

AT+EGCNXSTART   (start the GPRS connection)

80.10.32.45   *(IP address attributed by the network)*
Ok_Info_GprsActivation   *(GPRS connection established)*

18.4.3 Send email

AT+EGSENDMAIL1   (send predefined email 1)
OK

18.4.4 Stop GPRS connection

AT+EGCNXSTOP   (stop the GPRS connection)
OK

18.5 Put email

18.5.1 Attachment to a GPRS network

It is assumed that the modem is already connected in GSM (valid PIN code entered) and the APN parameters are configured.

18.5.2 Start GPRS connection

AT+EGCNXSTART   (start the GPRS connection)

80.10.32.45   *(IP address attributed by the network)*
Ok_Info_GprsActivation   *(GPRS connection established)*

18.5.3 Put email

AT+EGPUTMAIL   (start put email session)

Ok_Info_WaitingForData
datadatdatadatadatadatadatadatadata (send email body)
<CR><LF>.<CR><LF>   (end body sequence, this will initiate transmission of email)
OK   *(email successfully sent)*
                                        or:
<ESC>   (abort body sequence, this will abort transmission of email)
OK

18.5.4 Stop GPRS connection

AT+EGCNXSTOP   (stop the GPRS connection)
OK

18.6 FTP file transfer

18.6.1 Attachment to a GPRS network

It is assumed that the modem is already connected in GSM (valid PIN code entered) and the APN parameters are configured.

18.6.2 Start GPRS connection

AT+EGCNXSTART   (start the GPRS connection)

80.10.32.45   *(IP address attributed by the network)*
Ok_Info_GprsActivation   *(GPRS connection established)*

18.6.3 GET file "filname.txt" from FTP server

AT+EGFGET   (start procedure)
Ok_Info_DataBegin
datadatdatadatadatadatadatadata (reception of data contained in remote file "filename.txt")
           (reception of end-of-file character <ETX>)

OK

18.6.4 PUT file "filname.txt" on FTP server

AT+EGFPUT   (start procedure)
Ok_Info_WaitingForData

           (transmission of data is not echoed)
           (transmission of end-of-file character <ETX>)
           (the IP stack returns the of end-of-file character <ETX>)

OK

18.6.5 Stop GPRS connection

AT+EGCNXSTOP   (stop the GPRS connection)
OK

18.6.6 FTP server restrictions

The FTP server may be equipped with a proxi server limiting external access. The server may also forbid WAN accesses (external RTC, GSM…).

18.6.7 <ETX> and <DLE> characters

Note :
   <ETX> = Ctrl-C = 03 (Hex)
   <DLE> = Ctrl-P = 10 (Hex)

File transmission (AT+EGFPUT):

When sending a file from the modem to the server, the IP stack detects the end of the file by means of the <ETX> character. This is normally placed at the end of the file.

If the <ETX> character is placed in the middle of the file then the file will be cut at this point and transmission will end.

If, however, it is required that the <ETX> character be sent as a data byte, then:
- the file transmission format must be in binary (AT+EGFTY="I"),
- and each <ETX> character in the data to be sent as data must be preceded by the <DLE> character.

Descriptions and non-contractual illustrations in this document are given as an indication only.
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The sequence <DLE><ETX> ensures that the <ETX> character is sent and transmission continues. Only the <ETX> character will be present in the remote file.

A similar requirement must be made for <DLE> characters in the data.

Transmission example:

    Local file to send with AT+EGFPUT: 0123456<DLE><DLE>654321<DLE><ETX>123456<ETX>

    Remote file stored on server: 0123456<DLE>654321<ETX>123456

File reception (AT+EGFGET) :

If the <ETX> character is not present at the end of the file, the IP stack will detect the end of transmission and generate the <ETX> character automatically. The serial port will thus output the file terminated by a single <ETX> character:

    Ok_Info_DataBegin
    datadatdatadatadatadatadatadatadatadata <ETX>

If the <ETX> character is already present at the end of the file, the IP stack will transform the <ETX> character to <DLE><ETX>. The serial port will output the file terminated with <DLE><ETX> then <ETX>:

    Ok_Info_DataBegin
    datadatdatadatadatadatadatadatadatadata<DLE><ETX> <ETX>

In a similar manner, received <DLE> characters will be transformed to <DLE><DLE> on the serial port.
For example, if the file contains the sequence <DLE><ETX>, then it will be transformed to <DLE><DLE><DLE><ETX> on the serial port.

Reception example:

    Remote file on server: 0123456<DLE>654321<ETX>123456

    File received with AT+EGFGET :   0123456<DLE><DLE>654321<DLE><ETX>123456<ETX>

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19 Response messages and error codes

19.1 Response messages

Standard AT messages		
Numeric	**Verbose**	**Description**
	OK	Operation or command success
	ERROR	Operation or command unsuccessful

Information messages		
Numeric	**Verbose**	**Description**
	Ok_Info_DataBegin	Start of data
	Ok_Info_WaitingForData	Send data
	Ok_Info_SocketClosed	Socket connection closed successfully
	Ok_Info_GprsActivation	GPRS connection successful

19.2 Error messages

Error codes	
Numeric	**Description**
35840	Physical layer : Modem is already running
35862	Physical layer : Timeout, no activity on network connection
35865	Physical layer : Module is not attached to the network
35866	Physical layer : Invalid event during activation process
35867	Physical layer : Physical layer connection is currently not active
35868	Physical layer : GPRS connection aborted
35871	IP Connectivity library: SIM removed
36872	IP Connectivity library internal error : internal resource unavailable
37122	IP Connectivity library : Another internal application is already running
37964	Distant : No response from server
37966	Distant : TCP session closed by peer (FIN received from peer)
38016	Distant : Open session attempt failed
38017	Distant : Data send attempt failed
38024	Distant : Data retrieve attempt failed
38027	Distant : No answer from DNS servers or the domain name resolution could not be completed by the server
38029	Distant : Recipient email address rejected by server
38080	Distant : Username rejected by server
49154	Internal error : Close data flow request failed

354	Connection reset by peer
357	Socket is not connected
360	Operation timed out
361	Connection refused
364	Host is down
365	No route to host

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