

# Application Note

## GenPro 20e – SQB Enfora module GSM0308

### Remote dialing and hang-up via SMS

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Reference : EG\_GenPro\_SQB\_AN054\_000\_UK.doc

Revision : 000

Date : 30/07/09

### Document history

Révision	Modifications	Author	Date
000	CREATION	OCH	30/07/09

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

## 1 - Introduction:

This application note describes the process to remote control the modem or the module through SMS. The operations described are dialing and hang-up of the modem. The settings are using AT commands set from the Enfora module : E IIIIG.

**Hardware used :** GenPro 20e SQB (labeled GenPro20e R3A)  
**OS version:** V1.1.1 (see AT command AT+CGMR) and **PKG41** (see AT command AT\$PKG)

## 2 - Important notes:

- The AT commands sequence is enabled only if a SIM card is present into the mode, the PIN code enabled, an antenna plugged to the modem and the modem registered on a GSM network (AT+CREG ?)
- The AT commands over SMS needs to be activated (AT\$SMSDAEN).
- AT commands sent via SMS must originate from a phone number listed in the modem. At least one phone number has been set. (AT\$SMSDA).
- The phone number able to send AT commands over SMS can be set locally (through serial port) or via SMS.
- The modem identifier is known as it is part of the SMS sent to the modem. (AT\$MDID?).
- The SMS are started and ended with > and < as shown below.
- The SMS syntax to be sent is the following :

AT+CMGS="06xxxxxxxx" (phone number of the SIM card used in the GenPro20 SQB or in the Enfora module)

>RSP=[T/F];ID=[modem id];[AT command]<

T= response to an AT command will be sent back to the originator

F= no response required. The response to an AT command will be discarded.

ID = same value as AT\$MDMID

AT command = AT command to be executed

- The AT&F command erases the modem settings. Therefore after an AT&F, all settings need to be set.
- The complete sequence are extracted from documentation provided by module's manufacturer. The complete AT commands guide is available upon request to our sales department.

### 3 - Settings:

<b>AT\$SMSDAEN?</b> \$SMSDAEN: 1 OK	The AT commands over SMS is activated. If \$SMSDAEN: 0 then set AT\$SMSDAEN=1
<b>AT\$MDID?</b> \$MDID: "011106000275067"	To know modem ID.
<b>AT\$SMSDA?</b> OK	No phone number enabling remote control via SMS set.
<b>AT\$SMSDA=1,"+336xxxxxxxx"</b>  <b>Ou</b>  <b>AT+CMGS="06xxxxxxxx"</b> >RSP=T;ID=011106000275067;AT\$SMSDA=1,"+336xxxx< +CMGS: 18 OK	Set of a phone number using serial port ( Caution : national number 06 doesn't work, international number e.g. +336 has to be set)  Or  Sending by SMS the phone number enabling the remote control via SMS. In that example, no response required as phone number hasn't been set.
<b>AT&amp;W</b> OK	Save the settings.

### 4 - Dialing and hang-up sequences:

The modem doesn't accept all AT commands via SMS. Therefore, the event engine and script are used. The complete AT commands guide is available upon request.

The scripts below are able to activate some AT commands :

**AT\$STOATEV=1,ATH** (hang-up)  
**AT\$STOATEV=2,ATD06xxxxxxxx** (DATA or CSD call)  
**AT\$EVENT=20,1,50,0,0**  
**AT\$EVENT=20,3,44,1,1** to execute ATH command  
  
**AT\$EVENT=30,1,49,0,0**  
**AT\$EVENT=30,3,44,2,1** to dial (ATD06xxxxxxxx)

It is possible to check the modem's settings using AT&V command :

The settings below shows the modem is enable to receive SMS requesting it to call a CSD phone number and to hang up the call.

AT&V

```
E1 Q0 V1 X1 &C1 &D0 S0:000 S3:013 S4:010 S5:008 +CBST: 7,0,1 +FCLASS:0
+CRLP: 61,61,48,6 +CR:0 +CRC:0 +CMGF:1 +CSCS:"PCCP437" +CNMI:1,1,0,0,0
+ILRR:0 +IPR:115200 +CMEE:0 +CSMS:0,1,1,1 +CFUN:1 +CREG:0 +CGREG:0
+CLIP:0,2 +CAOC:1 +COPS:0,0 Orange F +CSNS:0 +CSSN:0,0 +CSDH:0 +CMUT:0
+COLP:0 +CPBS:"AD" +CGAUTO:3 +CGSMS:3 +CGEREP:0,0 +CGCLASS:"B"
+CSVM:0,"",129 +CGQREQ:1,0,0,0,0,0 +CGQMIN:1,0,0,0,0,0
+CGDCONT: 1,"IP","internet-entreprise","",0,0
+IFC:2,2 +ICF:3 %CGAATT:0,1 %CGPPP:3 $AREG:1 $HOSTIF:2
$VGR: 20 $VGT: 8 $VLVL: 4 $VST: 0 $VSELECT: 0
$PADBLK: 512 $PADBS: 08 $PADCMD: 000b $PADDST: "193.252.108.045", 10040
$PADFWD: 0d $PADESC: 00 $PADSRC: 0 $PADTO: 50 $UDPAPI: "199.245.180.013",
1720
$ACTIVE: 1 $CONNTO: 60 $IDLETO: 30 $GATEWAY:000.000.000.000
$MSCLS: 8 %SLEEP: 2 %CPI: 0 %CGREG: 0 $ACKTM: 0, 0, 0
$MDMID: "354115020018972" $MSGLOGEN: 0 $RTCUPD: 0, 0 $PKG: 41
$STOATEV: AT Event# AT Cnds
      1 ATH
      2 ATD06xxxxxxxxx
$SMSDAEN: 1 $USRVAL: 0 $RICSD: 0 $IFC: 0
$FRIEND: 01, 0, "090.095.036.205", 0, 0
$APIOPT: 0,0,0
$EVTIM1: 0, $EVTIM2: 0, $EVTIM3: 0, $EVTIM4: 0
$EVTIM5: 0, $EVTIM6: 0, $EVTIM7: 0, $EVTIM8: 0
$WAKEUP: 0, 0 $NETMON: 0, 0, 0, 0
$IOCFG: 11111111111111111111
$ILOGPA: 100011111111100011111
$EVENT:  evgp evtyp evcat  p1  p2
10A  0  9      2      4
10B  3 19      1      1
11A  0  9      1      1
11B  3 35     524292    0
12A  0  9      5      5
12B  3 35     524292    0
20A  1 50      0      0
20B  3 44      1      1
30A  1 49      0      0
30B  3 44      2      1
```

OK

## 5 - Sending SMS to remote control modem:

### To enable dialing via SMS

```
AT+CMGS="06xxxxxxxx"  
>RSP=T;ID=011106000275067;AT$evtest=49,0< then CTRL Z  
+CMGS: 26  
OK
```

### Response SMS :

```
+CMTI: "SM",2  
at+cmgr=2  
+CMGR: "REC UNREAD", "+33662931300", "09/04/28,16:40:14+08"  
OK
```

OK (the command has been taken into account by the remote modem)

### To hang-up via SMS

```
AT+CMGS="06xxxxxxxx"  
>RSP=T;ID=011106000275067;AT$evtest=50,0< then CTRL Z  
+CMGS: 27  
OK
```

### Response SMS :

```
+CMTI: "SM",5  
at+cmgr=5  
+CMGR: "REC UNREAD", "+33662931300", "09/04/28,14:27:11+08"  
OK
```

OK (the command has been taken into account by the remote modem)