GT64 GSM/GPRS modem

Application manual



► Features:

- RS232 interface
- GSM data transfer
- GPRS data transfer
- BELL 103/v.21 communication

► Applications:

- Remote programming of T.E.L.L. products
- Remote programming of (Paradox, DSC, Crow etc.) alarm control panels adapted to GSM network with GSM Adapter *Mini* or GSM Line Pro5 communicator

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1 Basic functions of the GT64 modem

- Remote management of GSM Pager 2, GSM Pager 3, GSM Gate Control devices as well as GSM Ultimate alarm control panel manufactured by T.E.L.L. Ltd., using GSM data call.
- Remote management of Paradox, DSC, Crow etc. alarm control panels connected to GSM Adapter *Mini* or GSM Line Pro5 communicator using BELL 103/v.21 communication on data call.

2 Software applied during the use of the modem

- Remoter programs applicable for devices manufactured by T.E.L.L.
- Virtualmodem.exe (on CD enclosed)
- Programming software recommended for Paradox, DSC, etc. Alarm control panels (Espload, WinLoad, DLS, etc.)

3 Putting the modem into operation

- For the establishment of the GSM data communication it is necessary both in the modem and in the device wished to program the use of SIM cards on which the GSM data call service is enabled.
- Disable PIN code request on the SIM card, then place it into the modem The SIM card case becomes visible after replacing the cover of the slot found on the modem. The card case upper part can be bent up after pulling it towards the LED display ,then the card can be slid into this part.
- Power up the modem using the supplied 12V DC adapter.
- Connect the modem to PC using a normal RS232 serial port cable. (Communication failures may occur when using USB – RS232 adapters).
- The antenna supplied with the modem provides good transmission under normal reception circumstances. In case of weak reception circumstances the use of a different GSM antenna with a higher gain level may be necessary. The modem is provided with standard FME-M antenna connector.
- The LED display on the modem turns to continuous green after powering up. As soon as the modem connects successfully to the GSM network, the green light starts blinking.

4 BELL 103 remote programming using GSM data transfer

4.1 Necessary devices, programs

- GSM Line Pro 5 , (with v1.10 or higher firmware version), or GSM Adapter *Mini*
- GSM modem (T.E.L.L. GT64 recommended)
- Pro5 programming software (v1.03 BELL), or GSM Adapter *Mini* programming software
- VirtualModem.exe program (version v1.10 or higher)
- The programming software of the alarm control panel, e.g. Espload, WinLoad (using most recent versions is recommended)
- The SIM cards used for the modem and the device should both support GSM data call either ways (initiate and receive).

4.2 Settings necessary for the Pro5 module

- In the v1.03 BELL version of the Pro5 programming software, in the "Set module parameters / Edit parameters" window a "Bell 103" tab can be found. On this site can be enabled to accept all incoming data calls for programming or only the ones coming from the specified phone numbers.
- If call back option is set in the alarm control panel, then here should be specified the phone number to be called back and "Enable BELL103 callback" option should be also selected.
- Upload these new settings to the module

4.3 Settings necessary for the GSM Adapter *Mini* module

- In the Adapter *Mini's* programming software, in the "Set module parameters / Edit parameters" window a "Bell 103" tab can be found. On this site can be enabled to accept all incoming data calls for programming or only the ones coming from the specified phone numbers.
- If call back option is set in the alarm control panel, then here should be specified the phone number to be called back and "Enable BELL103 callback" option should be also selected.
- Upload these new settings to the module

4.4 Putting into operation

- Insert the SIM card into the GT64 modem.
- Connect the modem to the serial port of the PC.
- Power up the modem (5-24V DC).
- Copy the VirtualModem.exe program to the PC, then open it.

Physical GT64 Modem Port COM2 Test / Init GT64 modem
COM2 Test / Init GT64 modem
Virtual Serial Port
COM4 Create port
Details >> Exit

- The program installs the necessary virtual serial port at the first start.
- Select the serial port to which the GT64 modem is connected (physical serial port).
- Check the connection between the PC and the modem by pressing the "Test / Init GT64 modem".
- Select a previously unused COM port ordinal number for the virtual port to be created.
- When using DOS based remote programming software (e.g. Espload), select COM4 or below.
- Press the "Create port" button
- Start the programming software of the alarm control panel (e.g. Espload)
- Select the virtual serial port's number for modem serial port in the alarm control panel's programming software.
- For modem type any of the modems can be selected as experienced so far. (In case of still detecting fault, select another modem type. E.g. set the Espload or WinLoad programs as shown on the figures below.)
- Thereafter you can proceed with the programming using the remote programming software the same way as using a hardwired BELL 103 modem.
- The VirtualModem program is essential to run all along the remote programming procedure, close it only after closing the programming software of the alarm control panel.

4.5 Troubleshooting

- In case the remote programming does not start for some reason, then in the VirtualModem program the GT64 modem can be reinitialized by pressing the "Test / Init GT64 modem" button.
- Using the "Details >>" window the physical and the virtual port's operation may be checked.
- Make sure the SIM card placed in the GSM Line Pro5 or GSM Adapter Mini module supports GSM data call reception (ask the GSM service provider).
- If you wish to use a virtual port application from a different manufacturer on the PC and fault is detected during its operation, then the virtual port installed by "VirtualModem.exe" may be removed using "VSRemove.exe" program.
- If errors occur frequently during data communication, then set the modem answer timeout to a higher value in the alarm control panel's programming software.

4.5.1 Setting the Espload program

Example of setting the Espload program:

🛤 Espload 3.43	
Modem +	Printer Configuration
MODEM SET-UP Communication port I/O Address IRQ Interrupt vector Dialing method Ans. machine hang-up delay Delay before 2nd dial Dialing condition Modem speaker control Modem speaker volume Number of rings Modem speed External or internal modem Modem type/initialization Modem suffix Parallel printer port Printer initialization	[Com4] [Default] [Default] [Default] [DTMF] [11] Seconds [7] Seconds [Blind dial] Delay [3] Seconds [On until connection] [Medium] [1] [Customize] [1] [Lustomize] [1] [Internal] [Boca 14.4 Kb] [E0Q0V0] [] [] [Lpt1] []
ESC-Exit F4-Modem test	

4.5.2 Setting the WinLoad program

Example of setting the WinLoad program:

Connections settings	Advanced modem setup, COM 0 :	
Modem connection Direct connection Memory key	General AT commands Result codes	
Com Port ELTIMA Virtual Serial Port (COM4)	Reverse Command Call Progress G: ATA G: Show C: R C Don't show	
Supported moderns HAYES ACCURA 144 + FAX 144 External	Dialing condition Viat for dial tone Viat for dial tone Dialing (with ADP1) Dialing (with	
Modem Test	Call Waiting Disabled 170;	
Windows Phone & Moderns options Close Cancel	Rings before answer incoming call Terminate call if no connection after (Sec.) C 1 C 3 C 5 C 2 C 4 C 6	
	Speaker Volume C Always off C Low 1 C On until carrier C Low 2 C Always on C Medium C Off when clains, on until carrier C High	
	Windows Phone & Moderns options	Cancel

Advanced modem setup, COM 0 :	
General AT commands Result codes	
Set modern as	
HAYES ACCURA 144 + FAX 144 External	Init String 1:
	Z &K0 &Q0
	Init String 2:
	E0 Q0 X4
	Init String 3:
	87=120 89=1 812=50
	Init String 4:
	S37=3 N0 &C0
6000 AT Command Maximum Delay (ms):	
20 Delay between AT Command characters (ma	\$)
Windows Phone & Moderns options	Close Cancel

Advanced modem set	ир, СОМ О :	
General AT commands	Result codes	
	Verbose answer	Numeric answer
ок	ок	0
CONNECT	CONNECT	1
RING	RING	2
NO CARRIER	NO CARRIER	3
ERROR	ERROR	4
NO DIAL TONE	NO DIAL TONE	6
BUSY	BUSY	7
NO ANSWER	NO ANSWER	8
Response Type Verbose Numeric		
Windows Phone & Mode	ems options	Close Cancel

5 Remote programming of T.E.L.L. devices

- 1. Open the remoter program recommended for the specific device
- 2. Select the serial port where the GT64 modem is connected



Example: GSM Pager3

In case of GS	SM Ultimate
and GSM	Pager2:

뫙	GSM-Ultimate v1.34 (dv.2) 🔳 🗖 🔀
	Select serial port:
	COM2
	Open serial port
	Close serial port
	Type in the Mastercode:
	Type in remote IP address
	TCP/IP password:
	Connect Disconnect

In case of GSM Gate Control:

🖗 Gate Control Remoter 2.4	
SOFTWARE HUNGÁR	L. KFT.
© Connection via modem	
Serial port: COM2 Phone number:	Select port
🥖 Dial modem	🛒 Hang up

3. In the corresponding fields of the software enter the phone number and if necessary, the access code of the device you wish to program

Example: GSM Pager3:		In o	case of C and GSN	SM Ultimate / Pager2:	
🛃 GSM Pager3 v1.06 🔲 🗖 🔀		Close serial port			
USB Modem		Type in	the Masterco	ide: 🖊	
Select the modem's serial port		Type in r	emote IP addr	ess	
COM2					
Phone number:		TCP/IP p	bassword:		
06301234567		Co	nnect	Disconnect	
Establish modem connection		Phone nu	umber for remo	ote connection: 801234567	
)ial	Hangup	
Password	Code	nust be e	entered b	efore connect	ing 🔶
Type in the password of the module	→ Th ha	e window establis enter	v appear shed and red at that	s after connec the code mus it moment	tion t be

In case of GSM Gate Control:

Please enter your connection password!
Code must be entered while connecting
Connection state

4. Click on dialer button or modem connection establisher button. Modem connection process may be displayed in the details window which may be opened by pressing the ">>" button in the main window.

Modem messages Techn DTR> 0 Techn DTR> 1 Techn AT Techn Waitstr: Str:"OK'' Timeout:3000 Techn ''OK'' Received in 200ms Pott opened Techn Waitstr: Str:"OK'' Timeout:500 Techn ''OK'' Received in 200ms Techn ''OK'' Received CONNECTED	CK	Serial connection details → ATH ATH ATH OK → AT + CFUN=1 AT + CFUN=1 AT + CFUN=1 OK → ATZ ATZ ATZ OK → AT DK WDOK WDOK PWDOK PWDOK	
		Clear Window Send AT	Close Window

Example: GSM Pager3:

In case of GSM Ultimate:

In case of GSM Gate Control connection process is shown by the program step by step automatically.

- 5. After the connection has established, all the functions of the remoter program can be accessed/used the same way as the distant device would be connected to the PC through physical serial port.
- 6. When you finished programming, the communication may be terminated by closing the connection.

6 Technical details

Power supply:5-24V DCMaximum current consumption:500mAOperating temperature:-10°C — +60°CTransmission frequency:GSM 900MHz / 1800MHz and
GSM 850MHz / 1900MHzDimensions:84x72x32 mmNet weight:200gGross weight (packed):300g

7 Package contents

- GT64 modem
- GSM 900MHz /1800MHz antenna
- 230VAC / 12VDC/800mA adapter
- RS232 serial cable
- CD, application manual, warranty card