

i-com SERIES EXTERNAL GSM / GPRS MODEM & BATTERY MODULE

(Model : GM-2)

(Model : GM-3)

(Model : GMB1)



USER MANUAL

We thank you for choosing our product for protection of your electrical device.

GSM modem accessories are designed with care. In order to use the device properly you should read all the pages of this user's manual.

Environment

Our products are designed and manufactured according to environmental regulations.

- Does not contain CFC or HCFC

Recycling

All packaging material is chosen from recyclable material. Please, be sure to recycle all the packaging material.

- If you need to store the device, store it in a dry place.
- Storage temperature is -10°C to $+70^{\circ}\text{C}$

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1. INTRODUCTION

1.1 Unpackaging

External GSM/GPRS Modem (GM-2 or GM-3)
9 Volt DC Power Adapter
RS232 cable for Modem - PC connection (CC01- gray cable) – for configuration
RS232 cable for UPS-Modem connection (CC05-green cable) – for regular operation
CD containing user’s manual

1.2 General Overview

GM-2



GM-2 Front panel



GM-2 Back panel



GM-3



GM-3 Front panel



GM-3 Back panel



- 1 RS232 connection (for UPS connection)
- 2 SIM card socket (push-push type)
- 3 DC power adapter connection (9Vdc - 24Vdc 1A)
- 4 GM-2 GSM modem external battery unit connection
- 5 GSM antenna connection
- 6 GM-3 internal battery unit on/off switch
- 7 Display LEDs
- 8 Battery charge status LED

1.3 Functions

GSM/GPRS modem, gets information on alarms and warnings of the UPS via RS232 communication and informs user about these alarms and warnings with SMS. Device, adds ability to connect and communicate with UPS over a GSM network.

Note:

- GSM / GPRS modem can only be used with UPS models supporting TX301, TX300 and TX100 protocols.
- Local GSM network is used for operation. There is no GSM operator limitation.

1.4 Technical Specification

RS232	Baud Rate	2400
	Parity	None
	Stop bit	1
	UPS connection	RX, TX, Gnd
	Protocol	Automatic(depends on UPS model)
MODEM	Specification	Dualband EGSM900 / GSM1800 Controlled with AT commands SMS support Output performance: – Class 4 (2 W) for EGSM900 – Class 1 (1 W) for GSM1800
	GPRS data	GPRS Class 10
	SMS	Point-to-point MT and MO SMS cell broadcast Text and PDU mode
	Data mode	Non-transparent mode
	Certification	R&TTE approved GCF approved
GENERAL	Operation voltage	9Vdc ~ 24Vdc 1A
	Operation temperature	-10 °C-+70 °C
	Supported UPS protocols	TX100, TX300, TX301

2. INSTALLATION

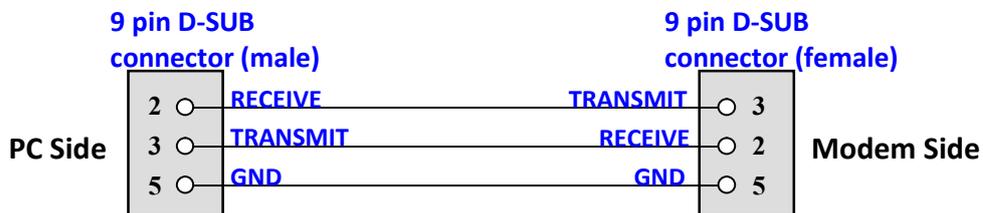
In order to use GSM modem functionality, user phone numbers should be saved modem. **“GSM Configurator”** software is used for this operation. For configuration with software, user should use CC01 RS232 cable(gray cable) for modem – PC communication. During configuration, SIM card should not be inserted into modem.

GSM modem which is connected to UPS with CC04 RS232 cable(green cable), communicates with UPS and starts regular operation after configuration process.

MODEM – PC Connection (Configuration Mode)



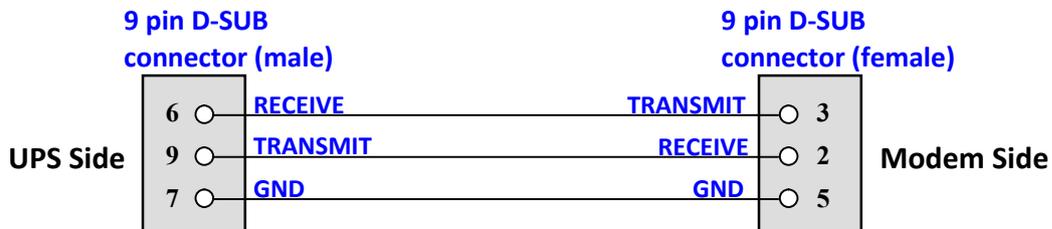
- **CC01 cable pin structure**



2.1 MODEM – UPS connection (Operation mode)



- CC05 cable pin structure



3. Modem setup with GSM Configurator software

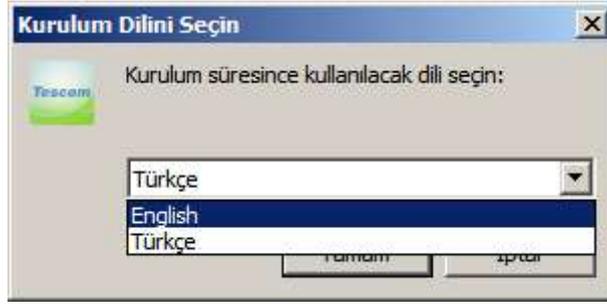
This program used for configuring and testing GM2 and GM3 GSM modems from the RS232 port or USB port of PC. (with RS232 – USB converter).

What you can configure :

1. You can set 8 telephone numbers to send sms when any alarm is occurred on UPS.
2. You can set sms language when any alarm is occurred on UPS.(Turkish and English)
3. You can set alarm report type. (Only SMS, Only GPRS, SMS & GPRS)
4. You can set Server IP and PORT numbers for GPRS reporting when any alarm is occurred on UPS.
5. You can choose any alarm which starts the alarm process by setting alarm maskes.

SETUP

You should click the Tescom's setup icon double time for installing program.

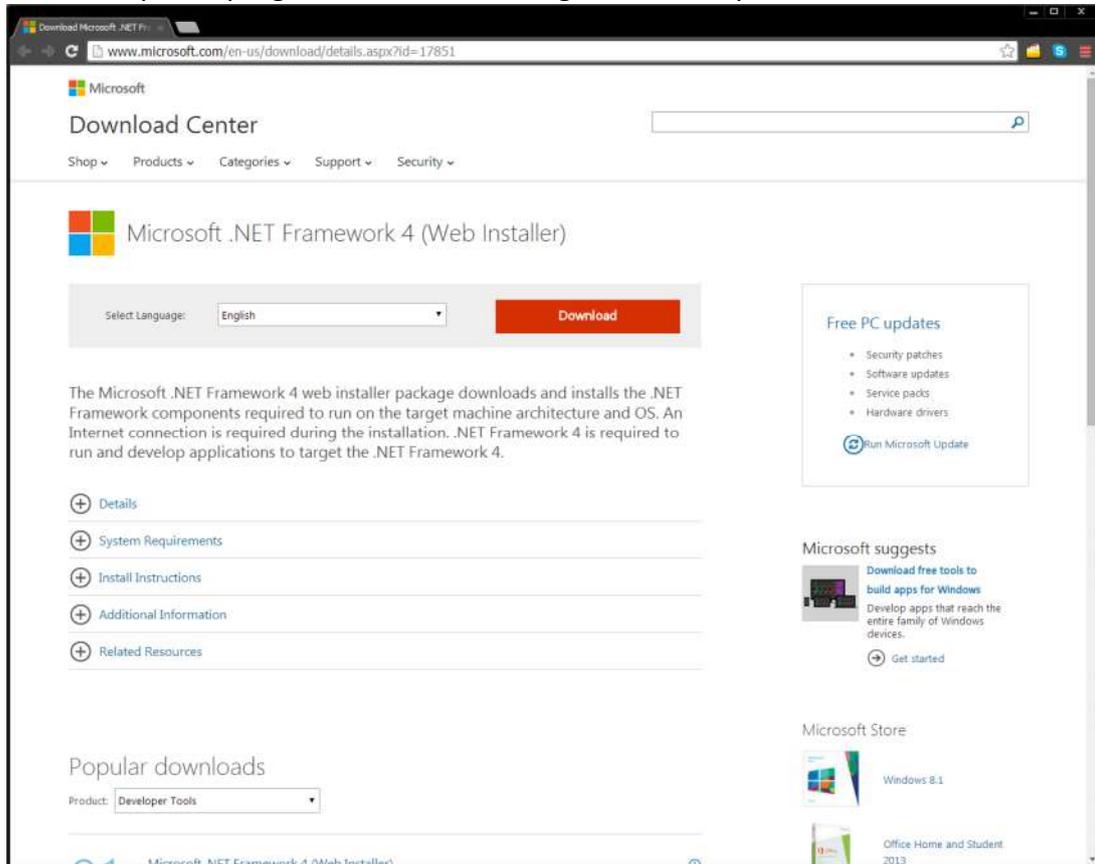


Microsoft Framework 4.0 installation is required to run the program.

English language is selected in the window above and the "OK" button is clicked. If the Microsoft Framework 4.0 is not installed on your PC, the following window appears on your screen.



When the button of "Yes" is clicked in the above window, it connects to Microsoft's link by using your active explorer program and the following window is opens.



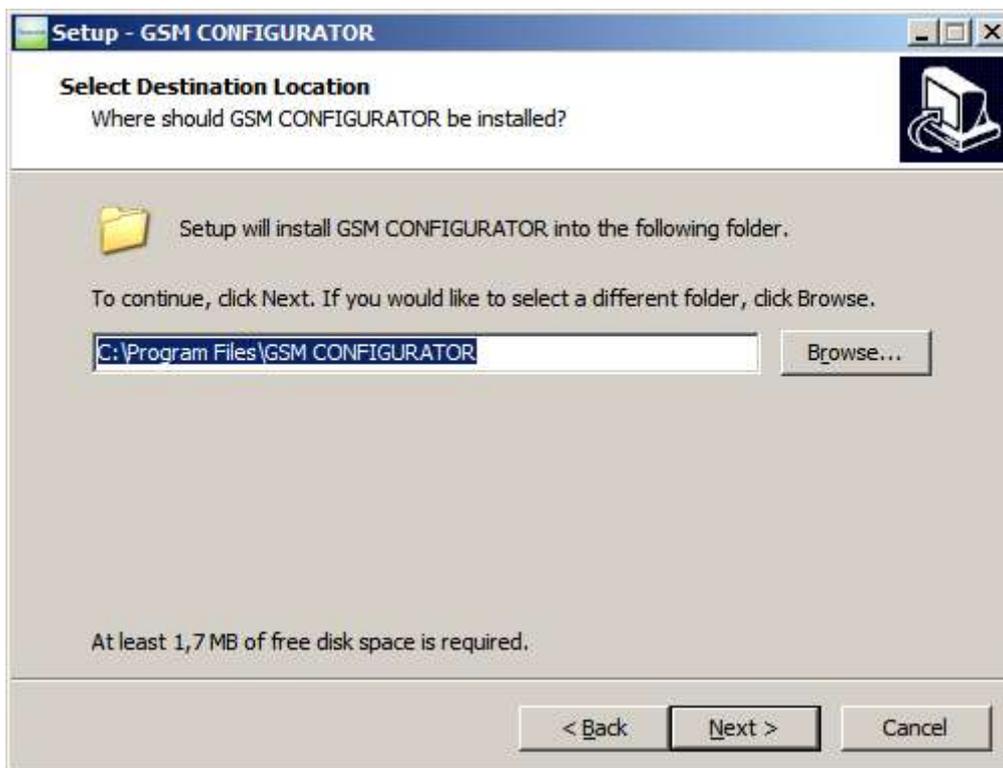
You should click the Download button and after making necessary steps would be installed

Microsoft .NET Framework 4 on your PC. You can reach the next step if you repeat the above steps for installing.

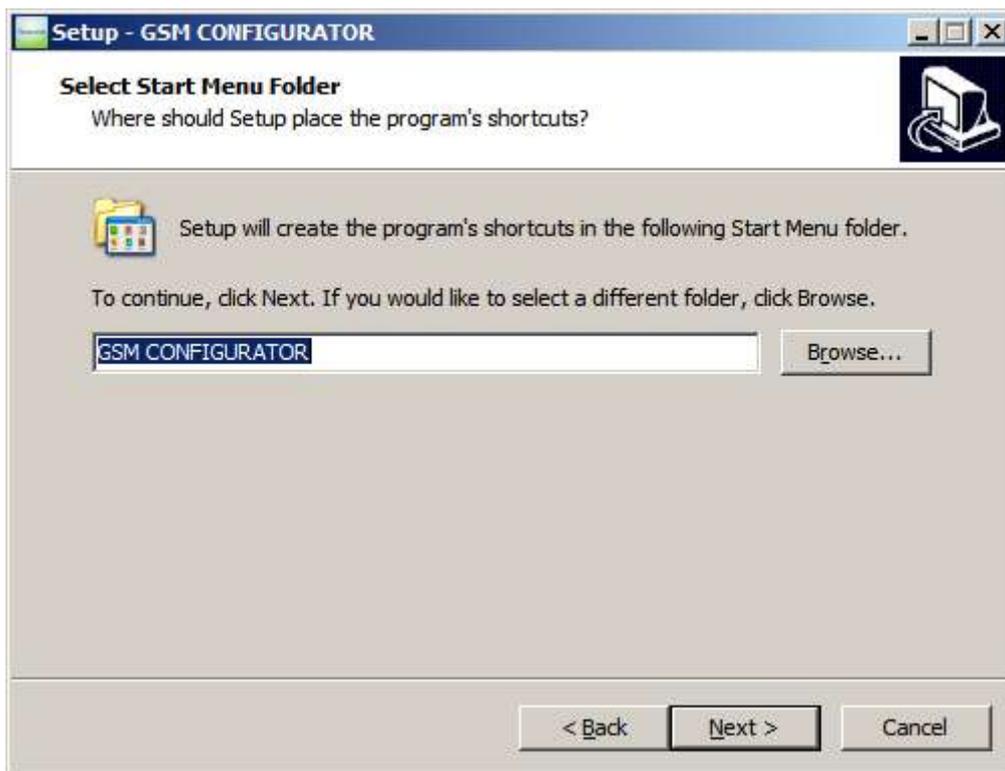
If Microsoft Framework 4.0 installed on your PC, the following window appears in front of you.



Following window appears when clicking the next button.



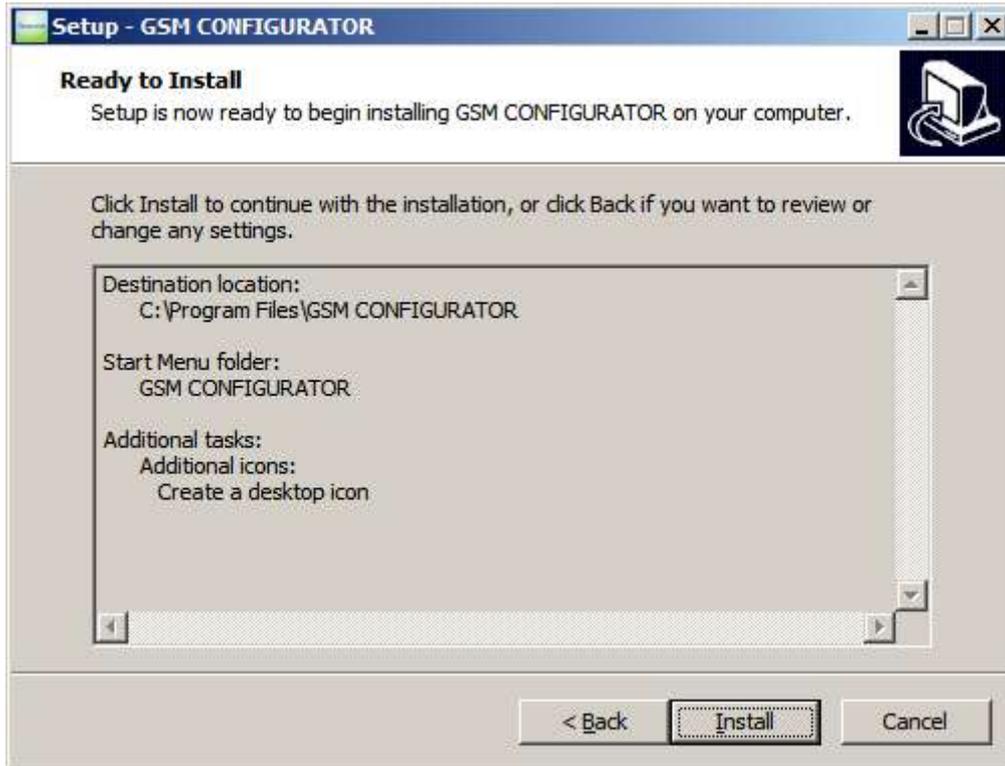
Following window appears when clicking the next button.



Following window appears when clicking the next button.



Following window appears when clicking the next button.

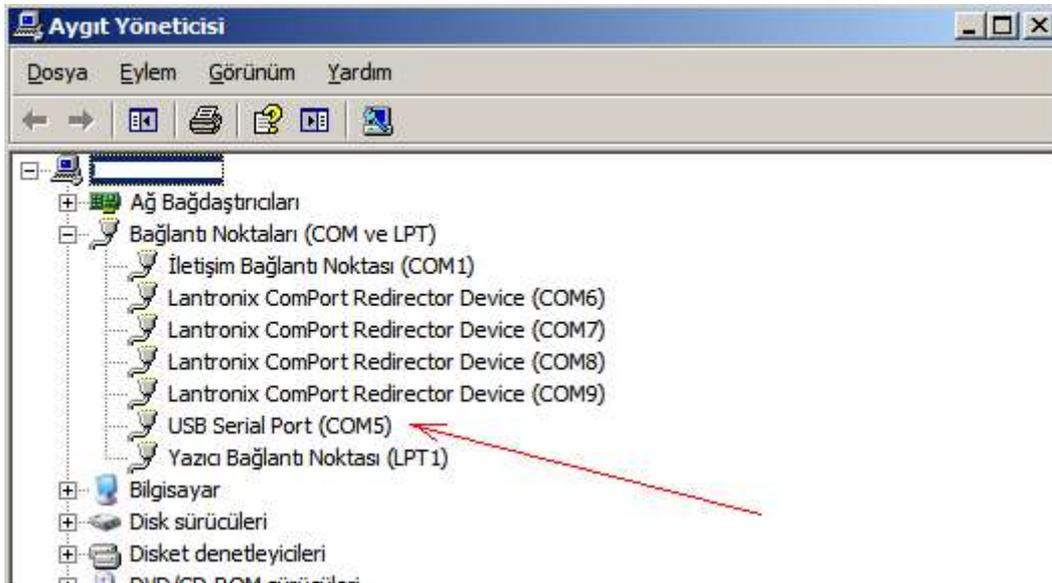


If "Install" button is clicked, the program would be installed on your PC.



"Done" button is clicked, the program will be established if the PC.

Between the device and your computer, connect your RS232 cable in the box. If you do not have any COMM-PORT input on your computer, you should provide USB - RS232 converter to connect your device to your computer.

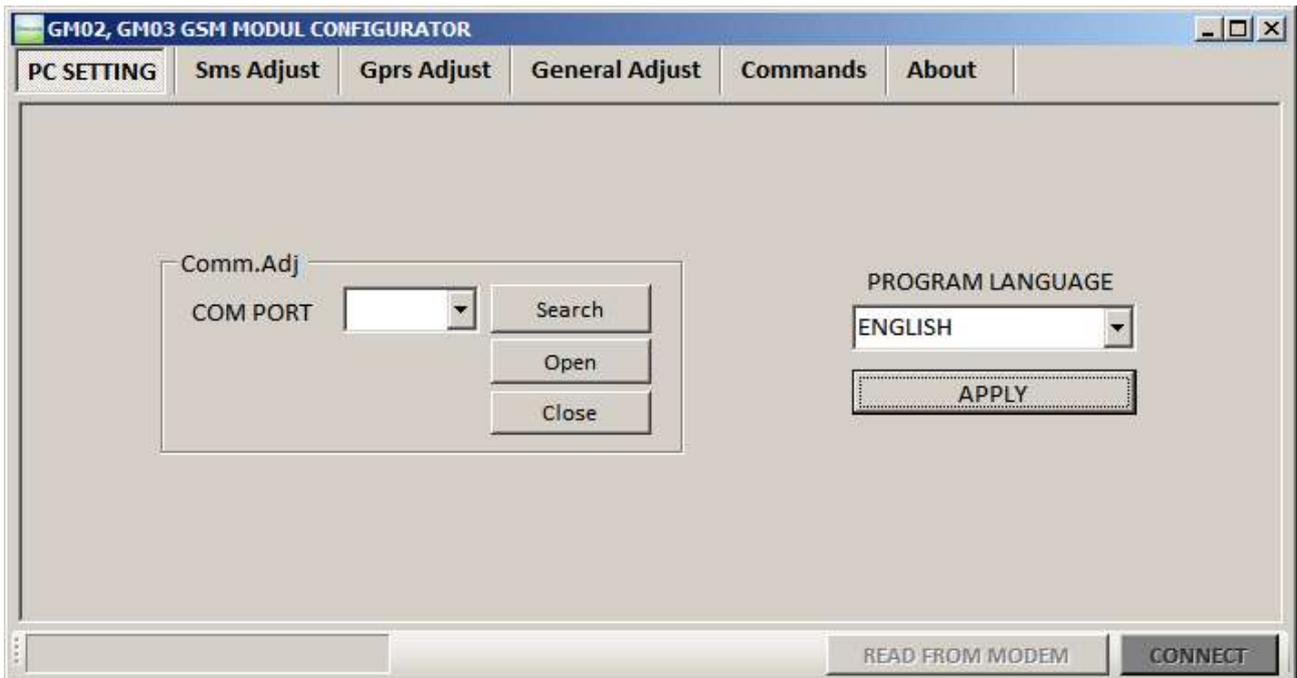


When you plug the USB – RS232 converter, it may take a different COMM-PORT name on your PC. You should save this COMM port settings in the Comm Settings of the GSM CONFIGURATOR program.

USAGE

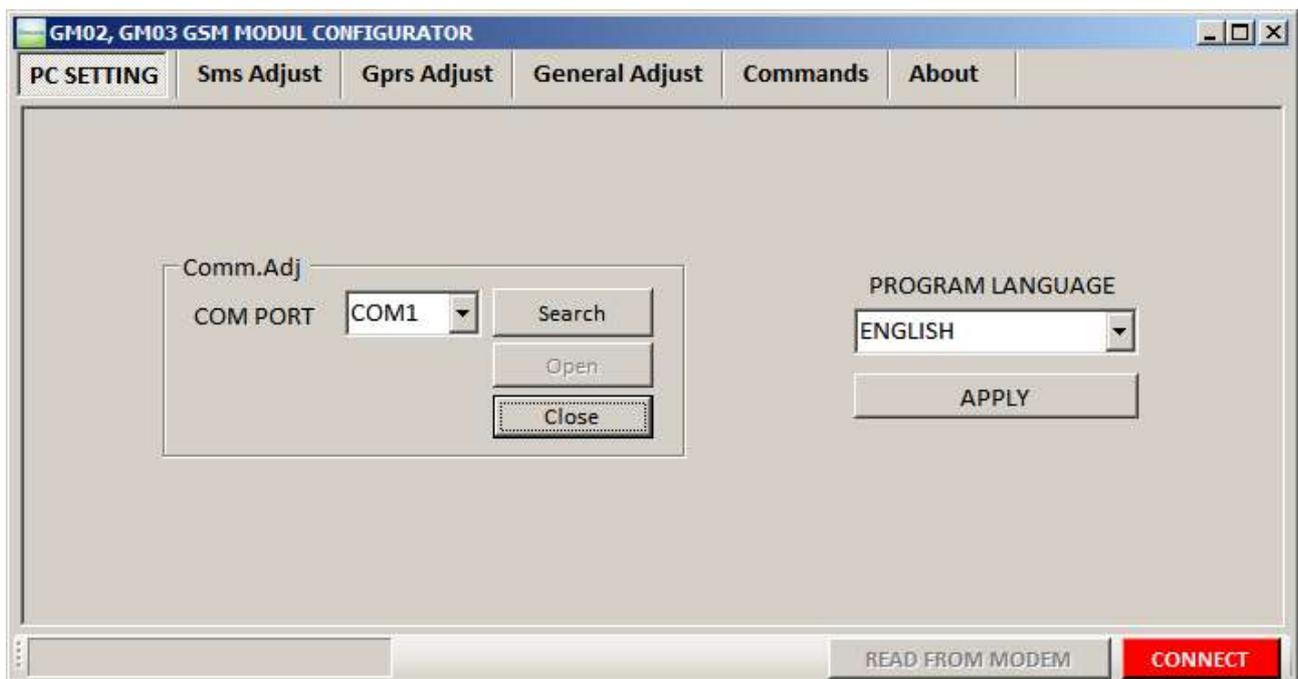
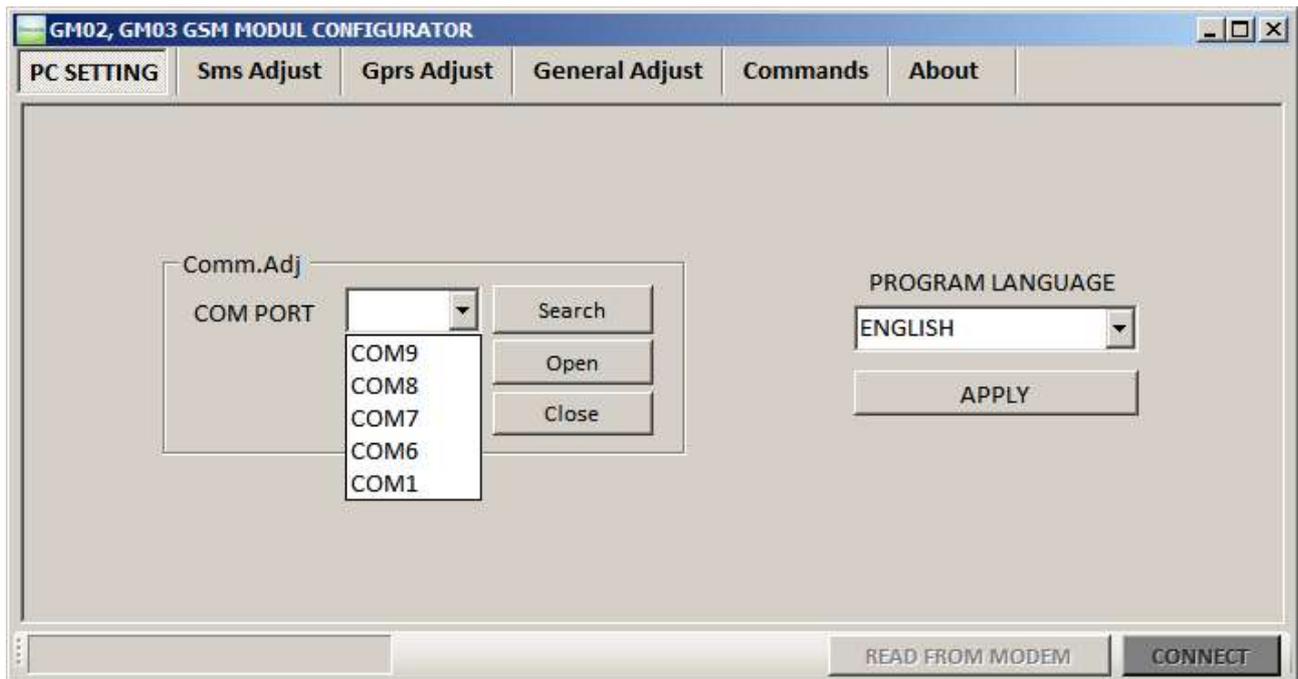
PC Adjust Tab

Run the GSM CONFIGURATOR program. The following window will appear when the program is executed.



From Com-setup section, click “Search” button, and then following window will appear when you click

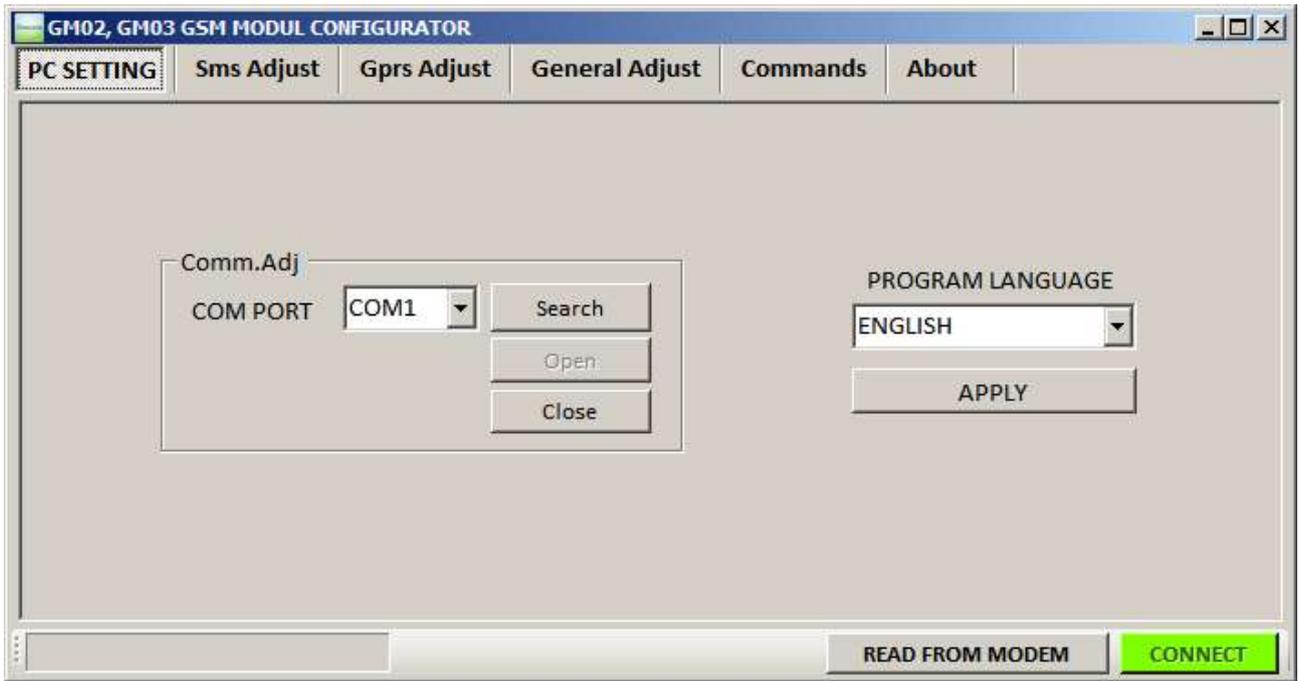
on the COM PORT list.



After selecting the required COM port, you should click "Open" button.

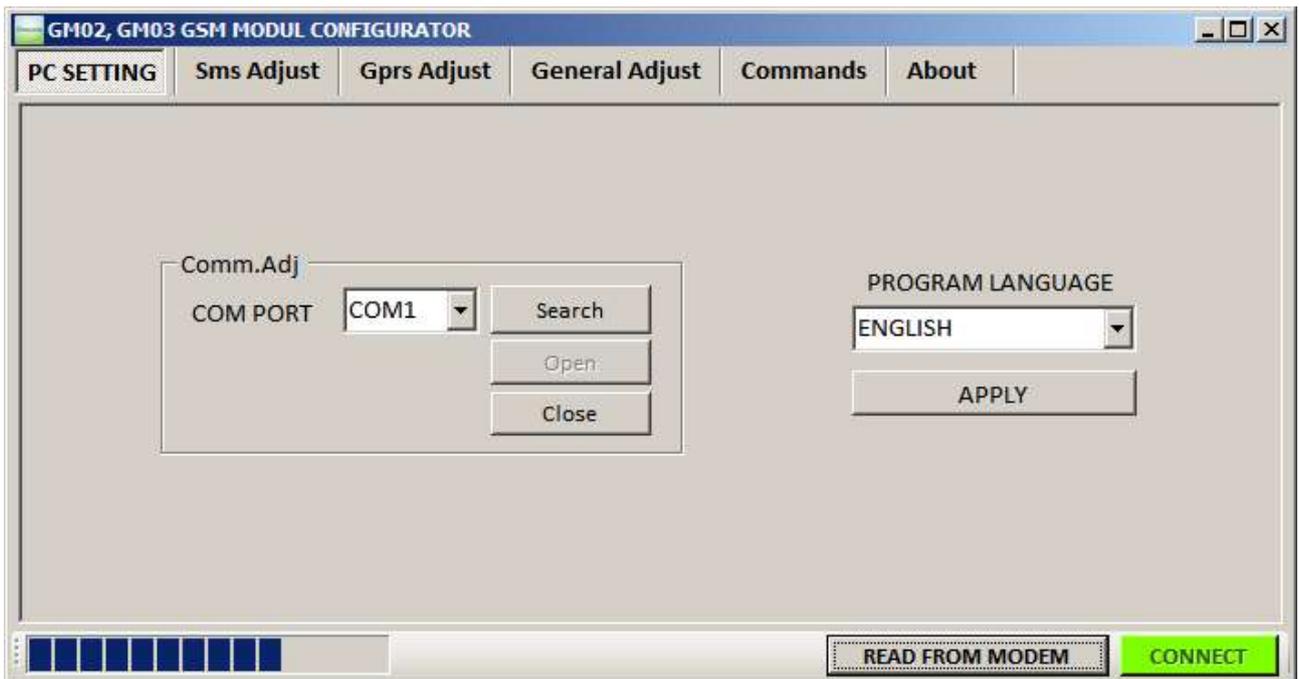
Thus, you have made the connection between your computer and the modem hardware. You

should click red "CONNECT" button in the above window. If there would be no problem the connection between your PC and your device is provided, the following window appear.



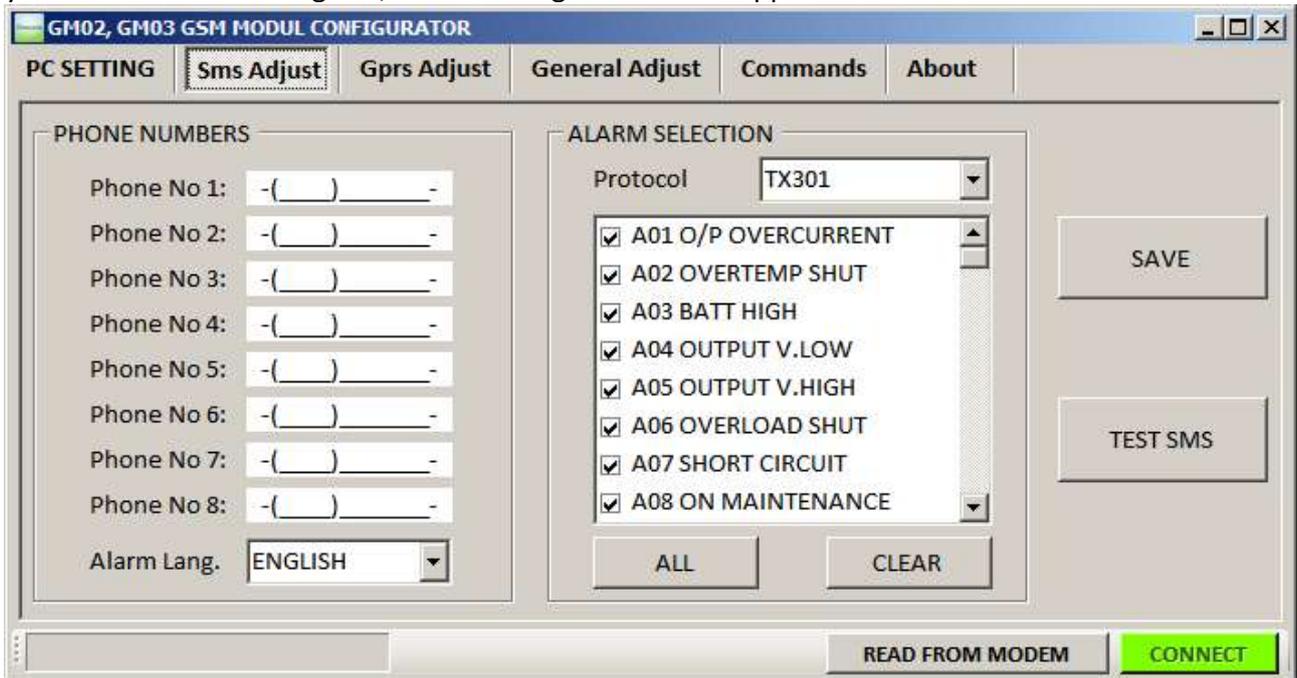
This connection remains active as long as data communication.. If there is no communication between PC program and GSM modem during 20 seconds, the connection will be lost. You should click "CONNECT" button to link back.

After this process, if you click "READ FROM MODEM" button, a window will appear as follows and the modem information (phone numbers, server ip and port 's, etc.) will transfer to the computer.



Sms Adjust Tab

If you click the Sms Setting Tab, the following window will appear.



In this tab;

1. In "Telephone Numbers" section, you can set 8 phone numbers and you can choose SMS language. The places of phone numbers left blank will not be saved.
2. In the "Alarm Select" section, you can choose alarms which trigger the sending sms process.
3. "SAVE" button, you can record the settings to the modem.
4. "TEST SMS" button sends test sms to the mobile numbers that is saved.

GPRS Adjust Tab

If you click "Gprs Adjust" tab, the following window appear.



You can set the IP and PORT numbers of the server for GPRS reporting. When entering the IP and PORT numbers, the gap should be written to 0.

For example : 89-250-192-38 should be written 089-250-192-038.

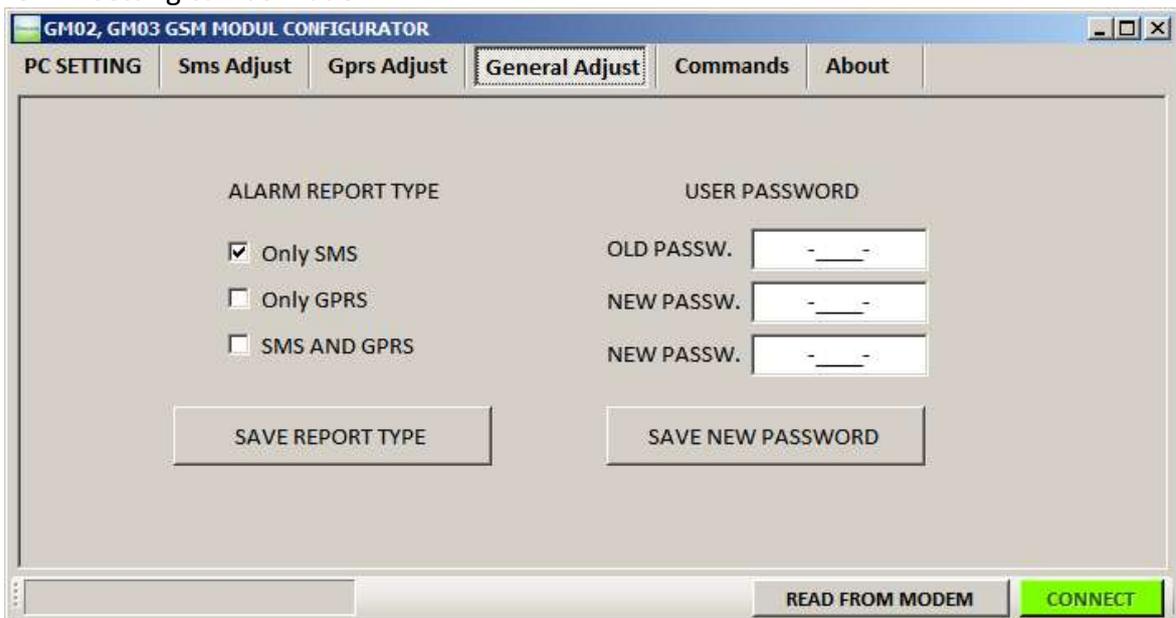
After sending report , for taking report confirmation from the server, there are two options that are "Request" and "Not Request". If the response is not necessary, "Not Request" is recommended.

When the "READ FROM MODEM" button is clicked, it will read server IP and PORT which is registered from modem. When the "TEST GPRS" button is clicked, it will send test gprs report to the server.



General Adjust Tab

General Settings tab, as shown in the following window "ALARM REPORT TYPE" and "USER PASSWORD" setting can be made.



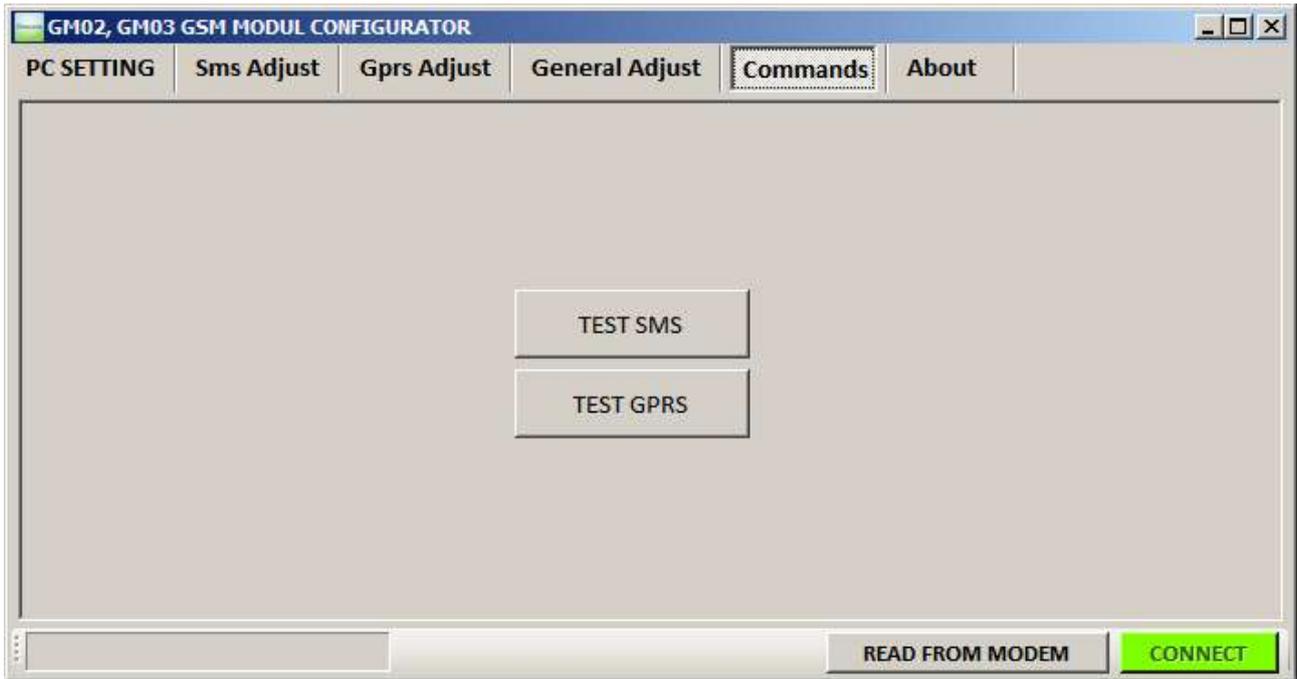
In the ALARM REPORT TYPE section the alarm reporting type is selected to determine how modem conveys the alarms to the users.

“Only SMS” option sends an SMS to the phone number that was set when the alarm occurred.

“Only GPRS” option sends an alarm report to the servers, which they have IP and PORT values when the alarm occurs.

"Both SMS and GPRS" also performs with the option of either reporting process when alarms occur.

Command Tab



Sms and gprs settings on the other tabs can be tested in this tab

4.GSM Modem Operation

GSM Modem starts regular operation by connecting modem to UPS with CC05 RS232 cable(green cable) after configuration process. **SIM card should be inserted before powering GSM modem.**

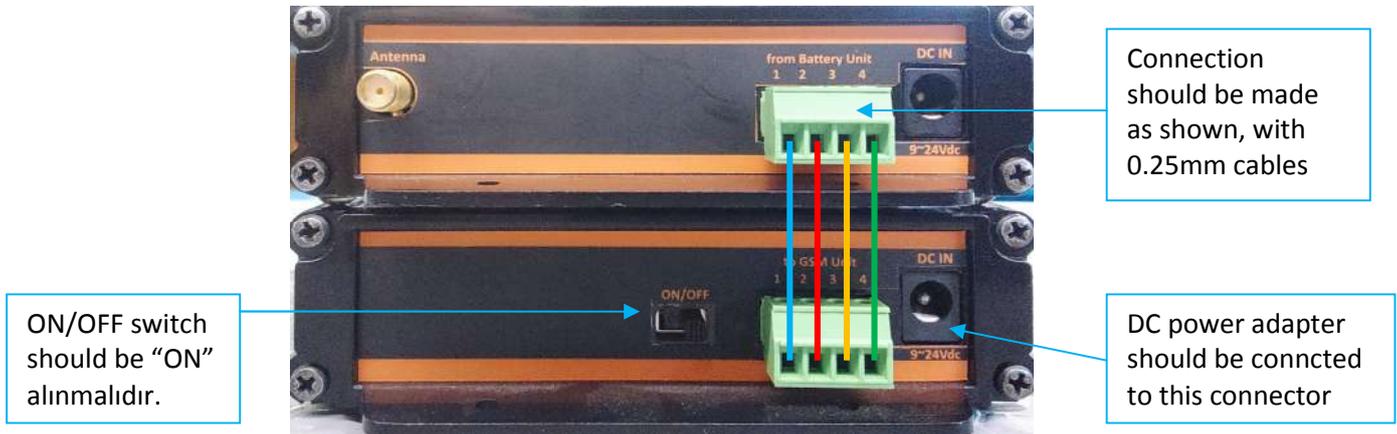
GSM modem automatically chooses proper communication protocol for respective UPS model. GSM modem supports TX100, TX300 and TX301 UPS communication protocols.

GM-3 models have internal battery unit. If GSM modem has external power, batteries will charge(if needed). If external power is cut off, device will operate on battery energy. This feature allows modem to send SMS to user even if batteries are empty. **After powering GM-3 modem, switch the ON/OFF switch to “ON” position.**

Connect power adapter to GM-2 modem during stand alone operation.

5.GMB1 external battery unit connection (for GM-2 modem)

There is no internal battery unit in GM-2 modems. Therefore, GM-2 modem is powered from UPS and if UPS output is closed GM-2 modem will not operate. For operation under such a situation, an external GMB1 battery unit is designed to work with GM-2 modems. Connection of GMB1 battery unit to GM-2 modem is shown below. When GMB1 battery unit is connected to GM-2 modem, DC power adapter should be connected to GMB1 battery unit instead of GM-2 modem. Also, ON/OFF switch of the GMB1 battery unit should be switch ON.



6.Display LEDs



LEDs placed on the front panel of the Modem displays communication status.

Led durumu	Açıklama
Comm (Red)	Long blinking interval: UPS RS232 connection error Short blinking interval: UPS RS232 connection established
GSM (Green)	Blinking : Searches for GSM signal Continuous light : GSM signal OK
SIM fault (Red)	No light: SIM card inserted Continuous light: SIM card not inserted
SMS (Green)	Blinks on every SMS send operation
GPRS (Green)	No light: GPRS not connected Continuous light: GPRS connected
Ready (Yellow)	Continuous light: battery charge is sufficient(for units with battery, GM-2 with GMB1 battery unit and GM-3)

