

# "SMS Module"

## Part 1: Packing list

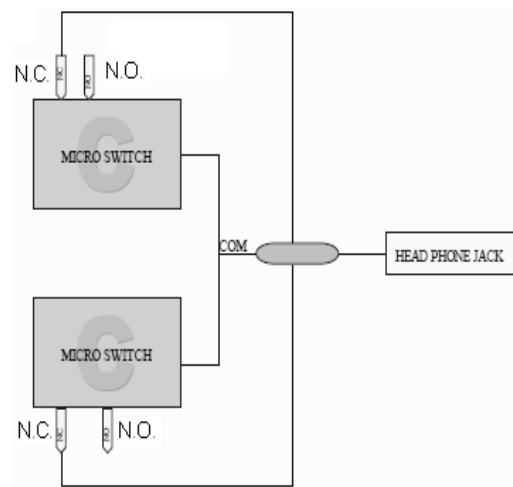
Sequence number	component	Quantity
1	GSM module	1
2	SIM card holder	1
3	Micro Switch	1
4	Internal battery	1
5	Battery Charger	1
6	Installation manual	1

## Part 2: features

- Change mobile phone number by SMS
- Ability to work without an adapter (by battery) for (12-18) hours
- Send message Battery low, when the battery is low and Disconnect Adapter.
- delete all kind of advertising and unacceptable messages from device inbox automatically (to prevent it filling)
- Ability to use two micro switches & use multi parallel switches in multi Doors safe box.
- For greater security and independence for constant power devices, A rechargeable internal battery inside the device is intended , It automatically connects to the charging device to the adapter and power cut-off automatically , now, electrical device provides, And after full charge the battery does not require the user to disconnect the adapter device, The entire process is done automatically
- Ability to change text entries Device
- This machine has the ability to work with all kinds of network operators.
- The last number adjusted on device, in the memory of that is saved and when Disconnect electricity or finish internal battery, this number will not clean.

## Part 3: Micro switch Connectors

If you need know, how to connects micro switch, you can follow this pattern such as following schematic:



## Part 4: GSM key features



Size: 54 mm\*64 mm\*26 mm

Feature	Implementation
Power supply	Single supply 5 V- 2.2 A
Power saving	Typical power consumption in SLEEP mode is 5 mA(BS-PA-MFRMS=5)
Frequency Bands	<ul style="list-style-type: none"> <li>• SIM 900quad-band: GSM 850, EGSM 900, DCS 1800,PCS1900. The SIM900 can search the frequency bands automatically. The frequency bands also can be set by AT command.</li> </ul>
GSM class	Small MS
Transmitting power	<ul style="list-style-type: none"> <li>• Class 4 (2W) at GSM 850 and EGSM900</li> <li>• Class 1 (1W) at DCS 1800 and PCS 1900</li> </ul>

GPRS connectivity	GPRS multi-slot class 10 (default) GPRS multi-slot class 8(option) GPRS mobile station class B
Temperature range	Normal operation: -30°C to +80°C.

## Part 5: GSM Antenna

GSM Antenna is in 2 types:

- Indoor
- Out door

We use indoor model antenna in device. But, If you need to use module in places that network signal is weak, out door model can be used.

The out door GSM antenna has cable with 3m length. Frequency range both of antenna is about (900-1800)



Figure 1:Indoor GSM antenna

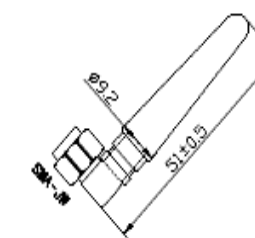


Figure 2: Indoor GSM antenna dimension

### Part 6: Work environment

The product must be placed in the pack box before installation, if not used for a while, in order to make the product accord with the warranty of our company and future maintenance, be sure to notice the following items when stored.

- Must be placed place of no dust and dryness
- Relative humidity of deposited place should in the range of 10%-50% and be non-condensing.
- Never locate device near magnetic fields, such as electronic motors.
- The environment temperature of deposited place should in the range of -30°C to +80°C.

### Part 7: Introduce operation of device

In this model, the user can change the text message So you can send message (English or Persian) from your phone number defined to device.

To change the message recipient's mobile phone number, in the same manner as the following format should be send message to the device

The device has two LED: “Red & Green”

**Green:** To display the device mood.

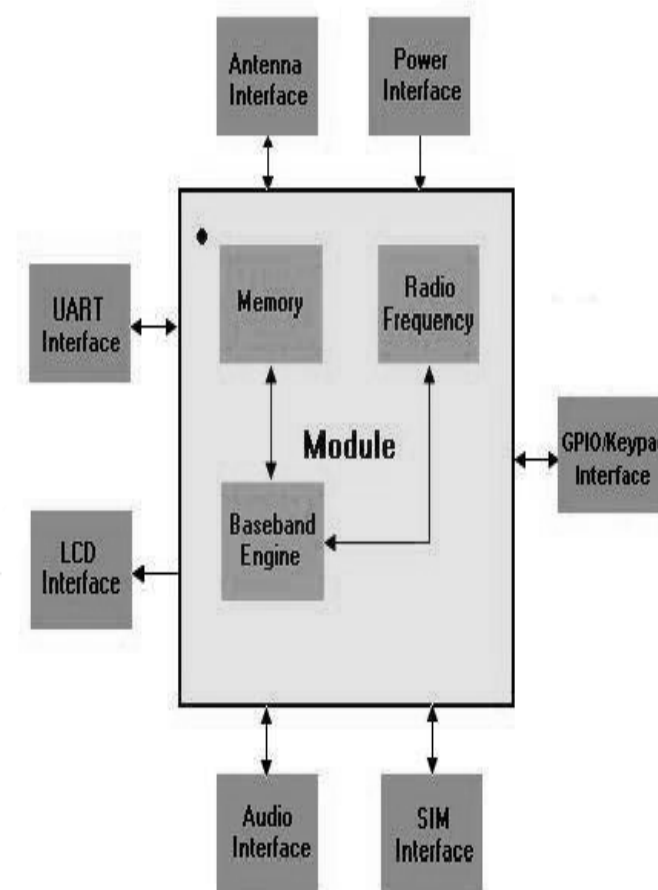
**Red:** To display antenna mood.

Blink number	Indicate the status
Blink 10 times	If the device number is set to the number of devices receive messages, LED blinks ten times, then the message is deleted
Blink 1 time	If the micro switch changes mood, LED flashes twice
Blink 4 times	To change the text of the SMS, the text must be sent to the device, With this act, LED flashes 4 times.
LED will turn on for 4 seconds.	To change the number, the number must be sent to the device, If the number changes, LED stays on for 4 seconds.
Blinking red LED	If LED blinks one time it means is searching network & if blink 3 times, it means find network.

### Part 8: GSM Functional diagram

The following figure shows a functional diagram of the GSM Module and illustrates the mainly functional part:

- The GSM base band engine
- ARM microcontroller
- The GSM radio frequency part
- The antenna interface
- The other interfaces



### Part 9: reset factory bottom

A bottom is located on the electronic board that by Keeping up this bottom, green LED device will start blinking.

If this button is held down for a minute, all device settings including receiver number and etc. Back to factory default settings, So please use this button carefully.

To use this feature, it is required to open the bolt and slide it to remove the electronic board.

### Part 10: On & OFF device

In this module, when the device is on, one message send to module and also when the device turn off, one message send to it.

In addition to, this device has this ability to turn off, as soon as you send exactly this word: “Off”.

### Part 11: Warning! ⚠

- If the sent SMS text is changed, and change the SIM card on module, Must re-send the text to a new SIM card.
- Never connect device to the power more than 5 volts.

### Notice

Please forgive that the contents of the manual may be changed without notice.

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