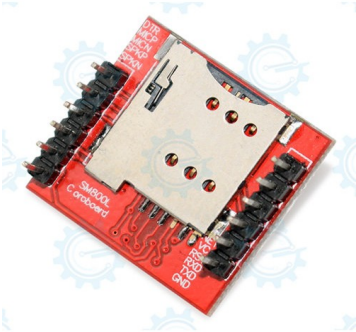
SIM800L GSM Module

Technical Manual Rev 1r0



The SIM800L is a quad-band GSM/GPRS module, that works on frequencies GSM850MHz, EGSM900MHz,DCS1800MHz and PCS1900MHz where it can meet all the space requirements in user applications, such as smart phone, PDA and other mobile devices. It has a microSIM slot. antenna for the network signal, microphone, speaker pin outs and ring. The power supply requirements for this module is restrictly 3.4 to 4.4V DC with the minimum 2A. (Note: Do not use this directly to the Arduino board or any 5V source without regulator, it also needs a voltage translator for better serial communications).

Features:

- With power saving technique for low current consumption.
- Audio channel which includes two microphone input, a receiver output and a speaker output.
- External antenna pad

General Specifications:

Power Supply: 3.4 to 4.4VDC (4.0V Typical)
Current Required: 1A-2.6A(MAX)
Band Frequency: Quad-band
Default baud rate : 9600bps
Working Temperature range: -40 °C ~ +85 °C
SIM Interface: 1.3V, 3V
Timing Functions : Use AT Commands Set
PCB Dimensions: 23 mm x 25 mm

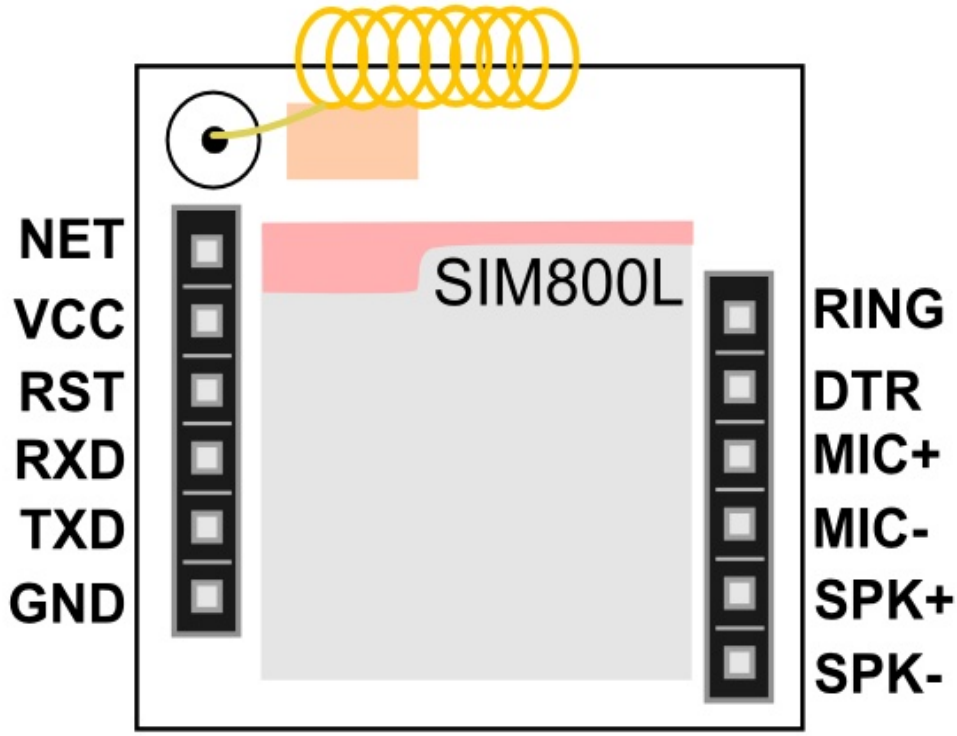
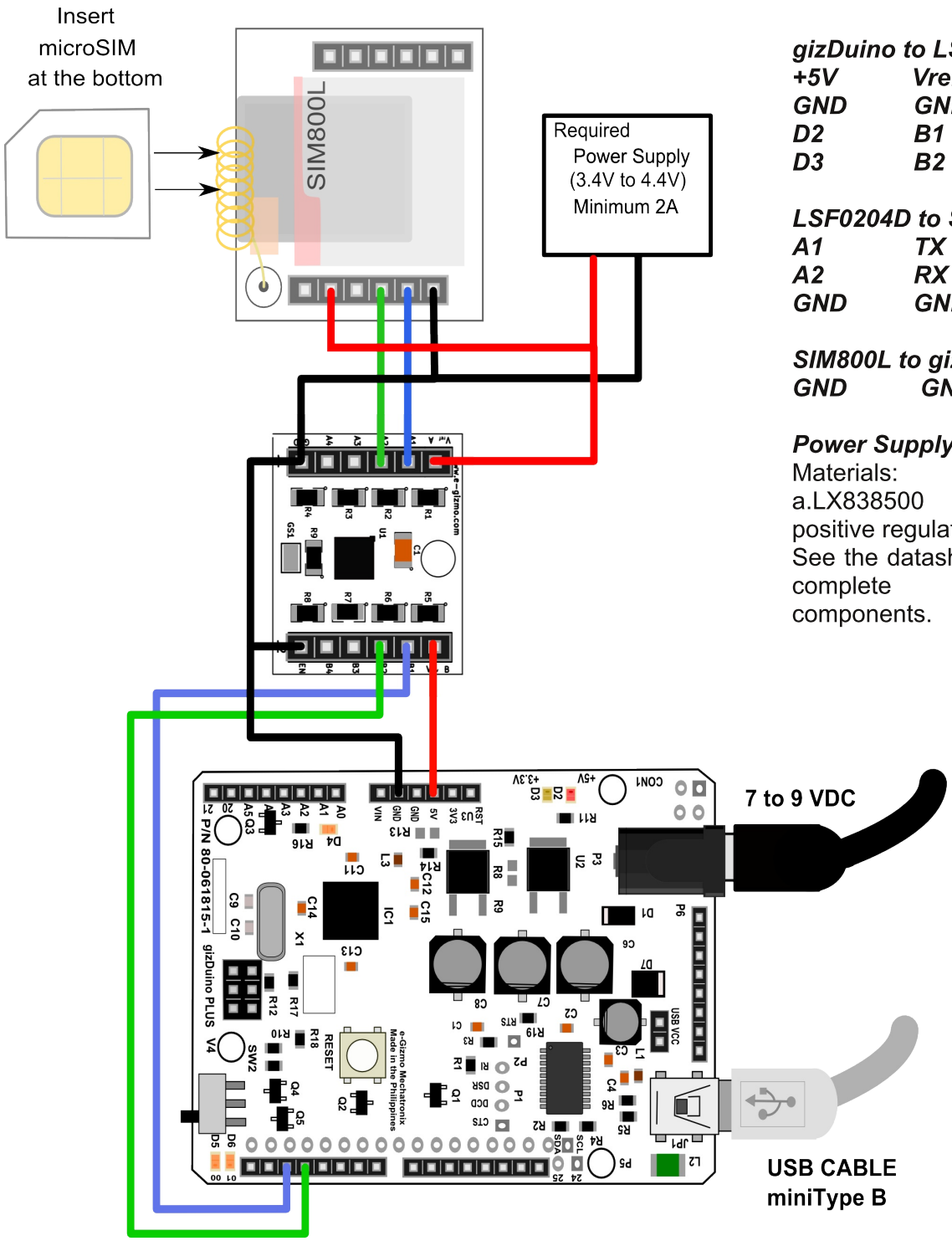


Figure 1. Major Part of SIM800L GSM Module with adaptor.

TABLE 1.

Name	Descriptions
GND	*Ground*
TXD	*Transmit Data*
RXD	*Receive Data*
RST	*SIM Reset*
VCC	*4.0V Input Supply (Typical)*
NET	*Network Status*
SPK-	*Differential audio output (SpeakerN)*
SPK+	*Differential audio output (SpeakerP)*
MIC-	*Differential audio input (MicrophoneN)*
MIC+	*Differential audio input (MicrophoneP)*
DTR	*Data terminal ready*
RING	*Ring Indicator*



gizDuino to LS0204D

+5V	***Vref_B***
GND	***GND***
D2	***B1***
D3	***B2***

LSF0204D to SIM800L

A1	***TX***
A2	***RX***
GND	***GND***

SIM800L to gizDuino

GND	***GND***

Power Supply for SIM800L

Materials:
a.LX838500 (3A Lowdrop positive regulator)
See the datasheet to get the complete supporting components.

Download the GPRS_Shield_Arduino library

1.Visit the Product page: goo.gl/7N7qFg
OR direct link: goo.gl/MgdMGC

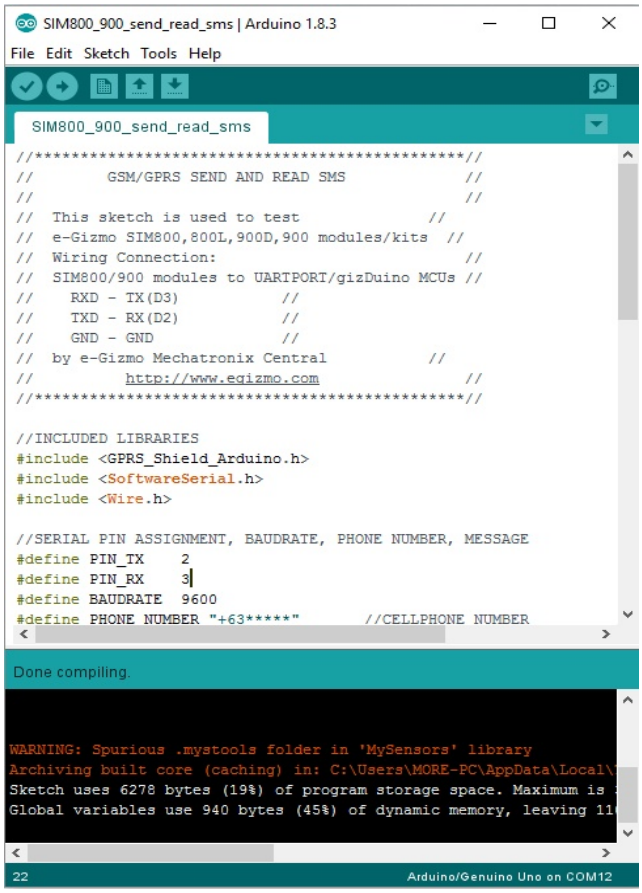
2. Unzip the file. Copy the
GPRS_Shield_Arduino folder.

3. Go to My Documents>Arduino>libraries>
(paste it)

4. Restart Arduino IDE.

Opening the Sampe codes.

1. In Arduino IDE, File>Open..
Find the SIM800_900_send_read_sms.ino.



Codes Explaination

Make sure you included these libraries

```
//INCLUDED LIBRARIES
#include <GPRS_Shield_Arduino.h>
#include <SoftwareSerial.h>
#include <Wire.h>
```

Setting the Serial pin connections

```
#define PIN_TX    2
#define PIN_RX    3
#define BAUDRATE  9600
```

Note: If you are using...
a. gizDuino ATMEGA328P or Arduino UNO
b. gizDuino PLUS ATMEGA644P
you may use these boards in pin_tx 2 and pin _rx 3.

Furthermore,In...
a. gizDuino X ATMEGA1281
b. Arduino MEGA 2560
change the pins assignment to pin_tx 18 and pin_rx 19.

Set the Phone number and Compose your message.

```
#define PHONE_NUMBER "+63*****"
#define MESSAGE  "YOUR_MESSAGE_HERE"
```

Upload this code. Wait for the SIM800L module to get a Signal then press RESET button.

If INIT ERROR occur, Check your connections and make sure you put a correct cellphone number and the module has a better signal.