Raspberry PI GSM Add-on

Overview

Raspberry PI GSM Add-on is customized for Raspberry Pi interface based on SIM900 quad-band GSM/GPRS module. AT commands can be sent via the serial port on Raspberry Pi, thus functions such as dialing and answering calls, sending and receiving messages and surfing on line can be realized. Moreover, the module supports powering-on and resetting via software.

Features

- Quad-Band 850/ 900/ 1800/ 1900 MHz
- GPRS multi-slot class 10/8GPRS mobile station class B
- Compliant to GSM phase 2/2+Class 4 (2 W @850/ 900 MHz)
- Class 1 (1 W @ 1800/1900MHz)
- Control via AT commands (GSM 07.07 ,07.05 and SIMCOM enhanced AT Commands)
- Low power consumption: 1.5mA(sleep mode)
- Operation temperature: -40℃ to +85 ℃

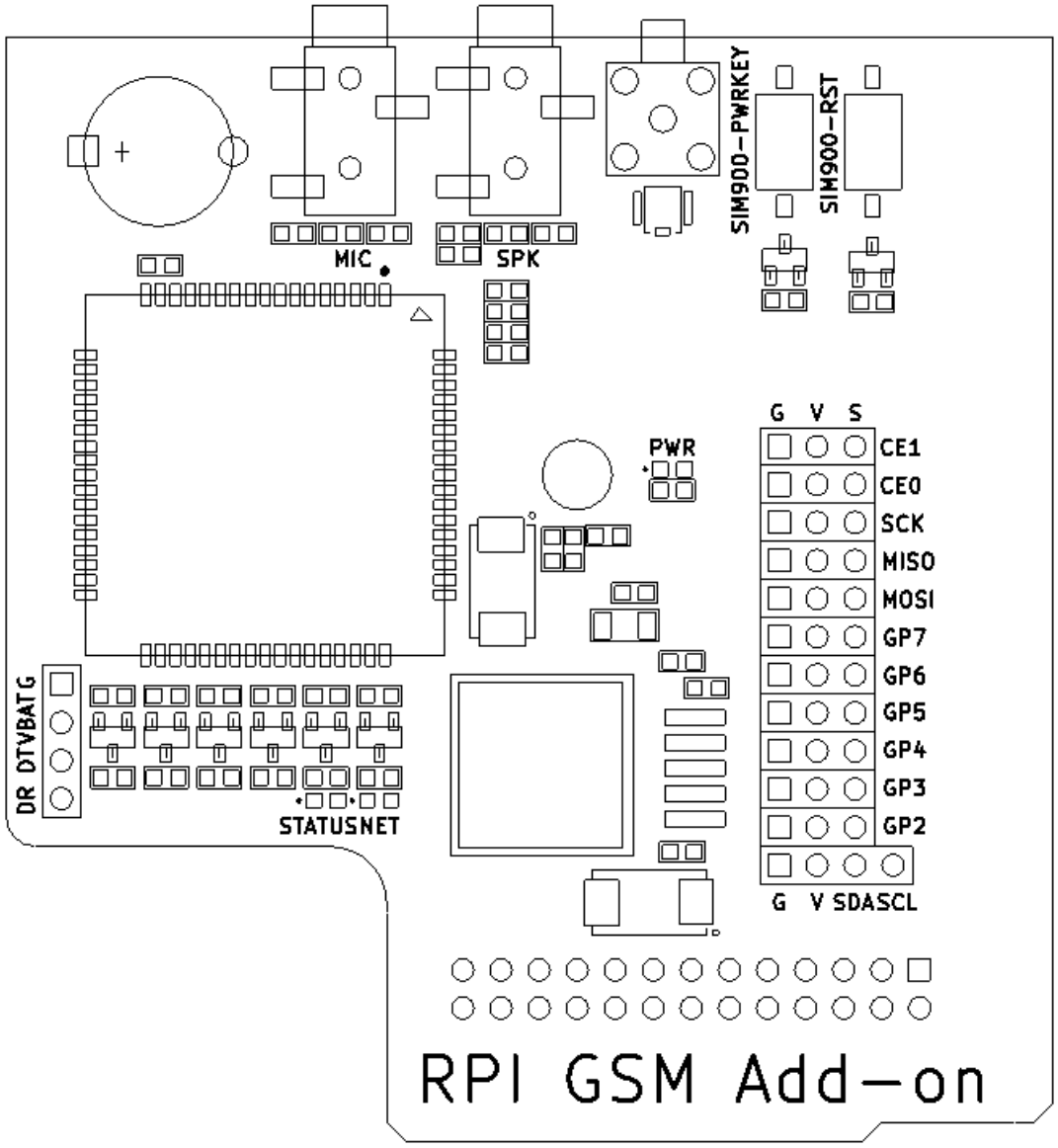
Specifications

PCB size	73.8mm X 70mm X 1.6mm
Input voltage	5V
Interface	UART
Baud rate	9600 (default)

Electrical characteristics

Parameter	Min.	Typical	Max.	Unit
Supply voltage	-	5	5.5	VDC
Current consumption (average)	-	500	-	mA
Instantaneous current consumption	-	-	2	A

Hardware



Pinmap

Raspberry PI interfaces

Raspberry PI Pin N.O.	Pin name	Pin of SIM900 Module	Description
11	GPIO0	SIM900-PWERKEY	Powering-on key via software
12	GPIO1	SIM900-RST	Resetting key via software
13	GPIO2	-	
15	GPIO3	-	
16	GPIO4	-	
18	GPIO5	-	
22	GPIO6	-	

7	GPIO7	-	
3	SDA0	-	
5	SCL0	-	
24	CE0	-	
26	CE1	-	
19	MOSI	-	
21	MISO	-	
23	SCLK	-	
8	TXD	SIM900_RX	Receiving end for SIM900 serial port
10	RXD	SIM900_TX	Sending end for SIM900 serial port
2	+5V	-	
1	+3.3V	-	
6	GND	-	

Other interfaces

Pin name	Description
DR	Receiving end for SIM900 debugging serial port
DT	Sending end for SIM900 debugging serial port
VBAT	SIM900 supply 4.2V
G	Ground
V	Electronic brick interface supply pin 3.3V

Indicators

1. PWR
   Power: When there is normal supply to the board, the indicator keeps on.
2. STATUS
   SIM900 status: When SIM900 works normally, the indicator keeps on.
3. NET
   SIM900 network status: used to indicate network status, the working status of the indicator is as below:

Network indicator status	SIM900 working status
OFF	SIM900 does not work
64ms on/800ms off	SIM900 does not find network
64ms on/3000ms off	SIM900 registers the network
64ms on/300ms off	GPRS communicates

Keys

1. SIM900-PWRKEY
   SIM900 powering-on key: Keep pressing the key for more than 1 second, SIM900 will be powered on; keep pressing the key for more than 1 second after the board is powered on, SIM900 will be powered off.
2. SIM900-RST
   SIM900 resetting key: press the key, SIM900 will be reset.

Note

The module does not support hot swapping.

Revision record

Version	Description	Written by	Date
v1.0	Initial edition	Stan Lee	27th, Dec., 2013