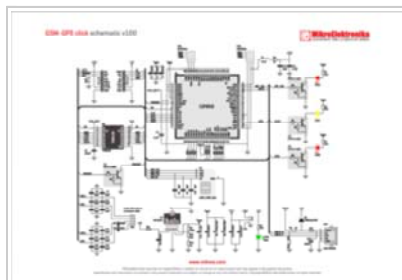


GSM-GPS click

From MikroElektronika Documentation

GSM-GPS click carries a SIM808 module that combines GSM/GPRS and GPS into a single device. Ideal for remote tracking devices in any shape or form.

Features and usage notes



Schematic also available in PDF (http://cdn-docs.mikroe.com/images/2/20/GSM-GPS_click_schematic_v100.pdf)

The high-performance GSM/GPRS engine works on quad-band GSM frequencies: 850, EGSM 900, DCS 1800, PCS 1900 MHz. The GPS has a 1 second TTF (Time To First Fix) from a hot star and tracking sensitivity of -165 dBm.

The board has two antenna connectors, one for GSM the other for GPS. The bottom side has a SIM card slot and a Micro USB connector for interfacing with a PC.

GSM-GPS click communicates with the target board MCU through mikroBUSTM UART interface, with additional functionality provided by STAT, PWRKEY, RTS, RS, and CTS. Beside the mikroBUSTM, the board has additional pins for connecting speakers and a microphone to the

GSM engine.

GSM-GPS click uses either a 3.3V or 5V power supply.

The following are the most important features of the GPRS module:

Quad-band 850/900/1800/1900MHz

•GPRS multi-slot class 12/10 •GPRS mobile station class B

•Compliant to GSM phase 2/2+ – Class 4 (2 W @ 850/900MHz)

– Class 1 (1 W @ 1800/1900MHz)

•Dimensions: 24*24*2.6mm

•Weight: 3.3g •Control via AT commands (3GPP TS 27.007, 27.005 and SIMCOM enhanced AT Commands) •Supply voltage range 3.4 ~ 4.4V

•Low power consumption

•Operation temperature: -40°C ~85°C

Specification for GPS

•Sensitivity

-Tracking: -165 dBm

-Cold starts : -148 dBm

•Time-To-First-Fix

-Cold starts: 32s (typ.)

-Hot starts: <1s

-Warm starts: 3s

•Accuracy

-Horizontal position : <2.5m CEP

Specifications for GPRS Data

•GPRS class 12: max. 85.6 kbps (downlink/uplink)

•PBCCH support

GSM-GPS click



GSM-GPS click

IC/Module SIMCO

(http://simcom.ee/documents/SIM808/SIM808%20SPEC_V1507.pdf)

Interface UART, STAT, PWRKEY, RTS, RI, CTS

Power supply 3.3V, 5V

Website www.mikroe.com/click/gsm-gps
(<http://www.mikroe.com/click/gsm-gps>)

- Coding schemes CS 1, 2, 3, 4
- PPP-stack
- USSD

Specifications for SMS via GSM/GPRS

- Point to point MO and MT
- SMS cell broadcast
- Text and PDU mode

Programming

This code snippet sends an SMS message with current GPS position coordinates.

```

1 void gsm_act_send_info()
2 {
3     char tmp[ 60 ] = { 0 };
4     char msg[ 160 ] = { 0 };
5     strcpy( tmp, "AT+CMGS=" );
6     strcat( tmp, tmp_num );
7     strcpy( msg, "LAT : " );
8     strcat( msg, latitude );
9     strcat( msg, "\r\nLON : " );
10    strcat( msg, longitude );
11    strcat( msg, "\r\nALT : " );
12    strcat( msg, altitude );
13    at_cmd( tmp );
14    at_cmd_addition( msg );
15 }

```

Code examples that demonstrate the usage of GSM-GPS click with MikroElektronika hardware, written for mikroC for ARM, AVR, FT90x, PIC and PIC32 are available on Libstock (<http://libstock.mikroe.com/projects/view/1892/gsm-gps-click>).

Resources

- GSM-GPS click example on Libstock (<http://libstock.mikroe.com/projects/view/1892/gsm-gps-click>)
- Vendor's data sheet (http://simcom.ee/documents/SIM808/SIM808%20SPEC_V1507.pdf)
- mikroBUS standard specifications (<http://download.mikroe.com/documents/standards/mikrobus/mikrobus-standard-specification-v200.pdf>)