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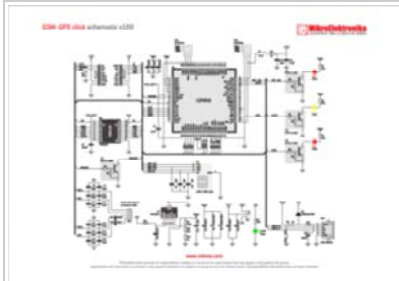


GSM-GPS click

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 mikroBUS™ UART interface, with additional functionality provided by STAT, PWRKEY, RTS, RS, and CTS. Beside the mikroBUS™, 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

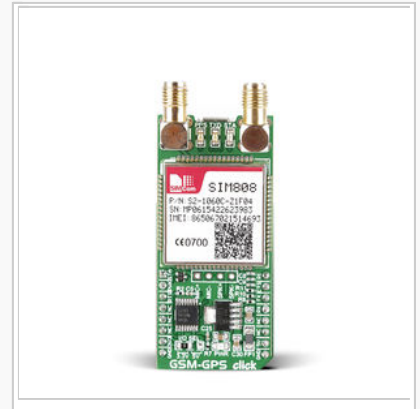
Specification for GPS

- 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>)