

GlobalTop Technology Data Logger Technology

For GlobalTop GPS Modules



Version A01
3 December 2010

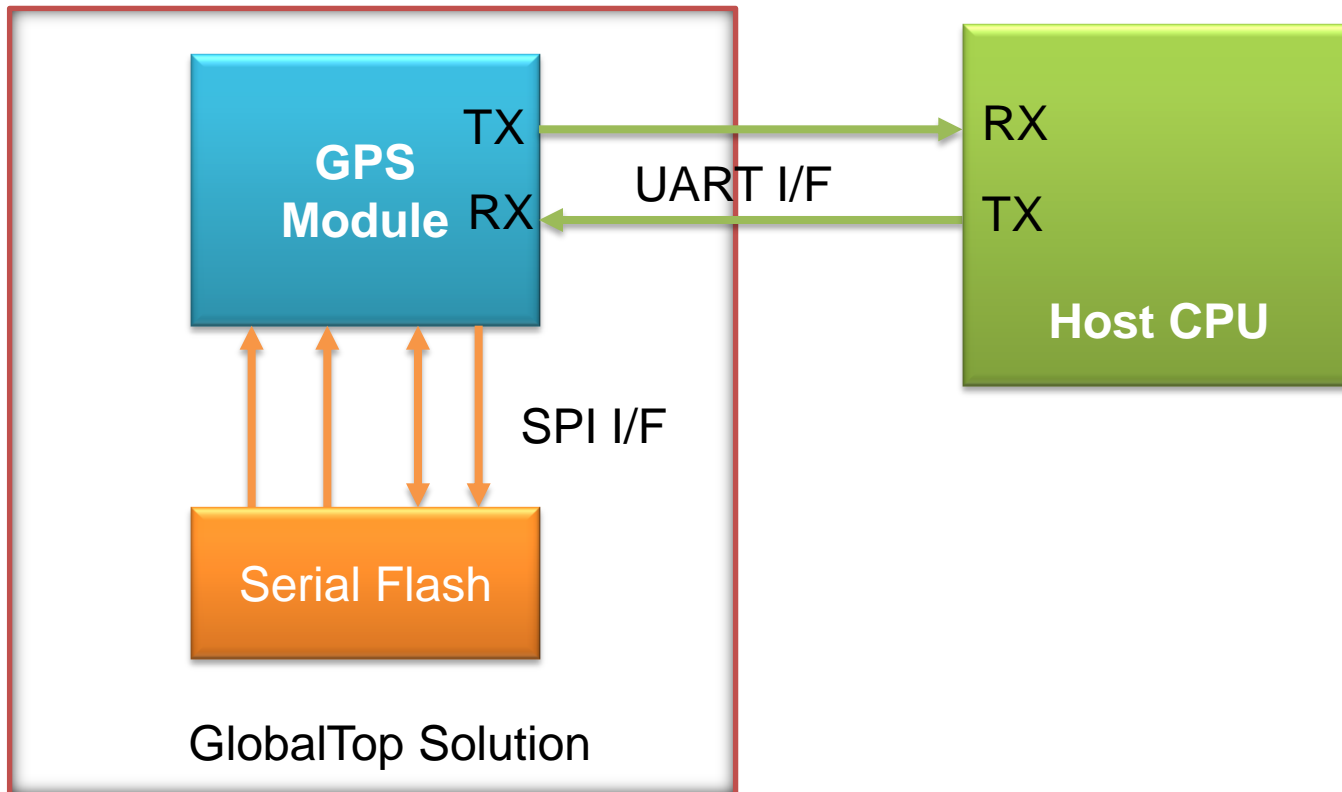
Thank you for choosing GlobalTop Technology as your GPS module and solution provider. With the ever increasing adoption of GPS function in today's electronics, the role and the burden of multi-tasking on the central processor becomes even more prevalent.

GlobalTop's data logger solution, which this document will explicitly describe, is the perfect way of easing the processing power by having the GPS module handle the data logging function. If you have questions or concerns, please feel free to contact us sales@gtop-tech.com .

GlobalTop data logger solution is in many ways different from the typical solution of using MCU implementation since majority of related algorithm and parameters settings are already embedded directly into the GPS firmware. Considerable time and programming efforts are saved by using this easy-to-implement solution when developing data logger function on GPS and related products.

Features:

- Algorithm and parameters embedded for reducing coding effort
- Ability to use command packet to adjust algorithm behavior
- PC AP tool for easy implementation
- Support 20 kind of parameters for data recording

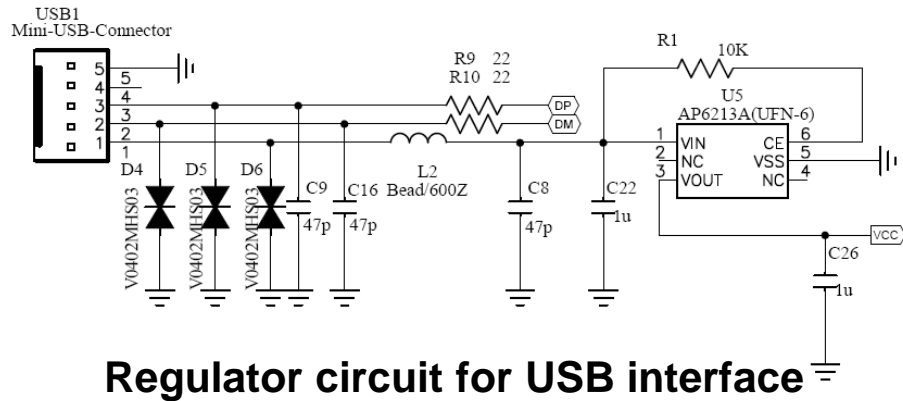


Note: It is recommended to use those serial flash in our support list (next page)
If you need to use other component, please check with your supplier.

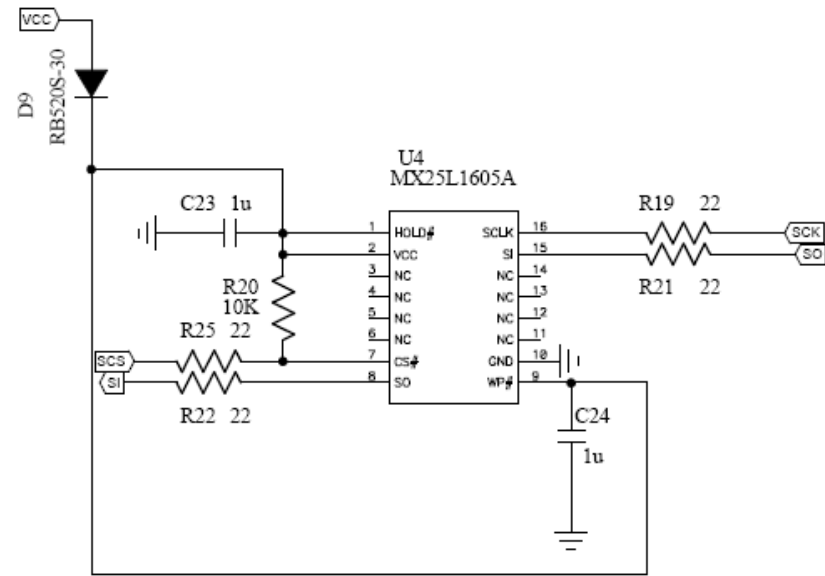
Flash Rom support List

Manufacturer	Part No.	Memory Size	Note
EON	EN25F080	8Mbit	
MXIC (Macronix)	MX25L1605	16Mbit	Recommended
MXIC (Macronix)	MX25L3205	32Mbit	Recommended
MXIC (Macronix)	MX25L6405	64Mbit	Recommended
WINBOND	W25X16	16Mbit	
WINBOND	W25X32	32Mbit	
WINBOND	W25X64	64Mbit	
SST	SST25VF016	16Mbit	
SST	SST25VF032	32Mbit	
SST	SST25VF064	64Mbit	

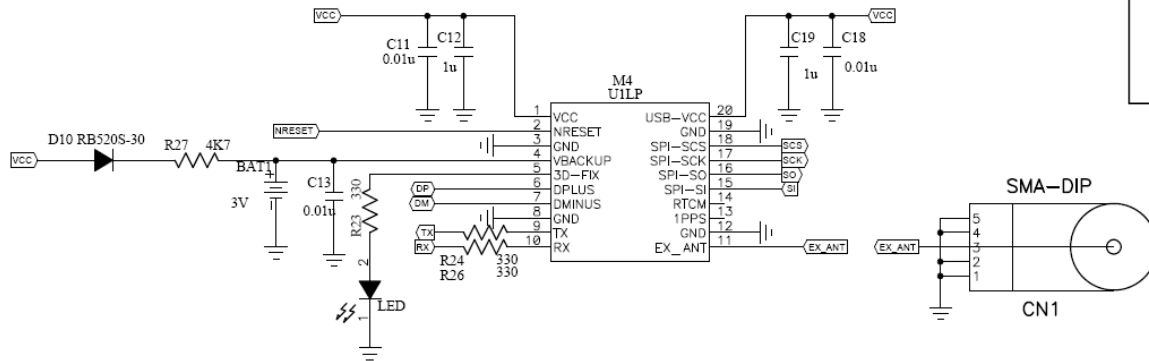
Reference Design Circuit (GPS + Flash)



Regulator circuit for USB interface



Flash

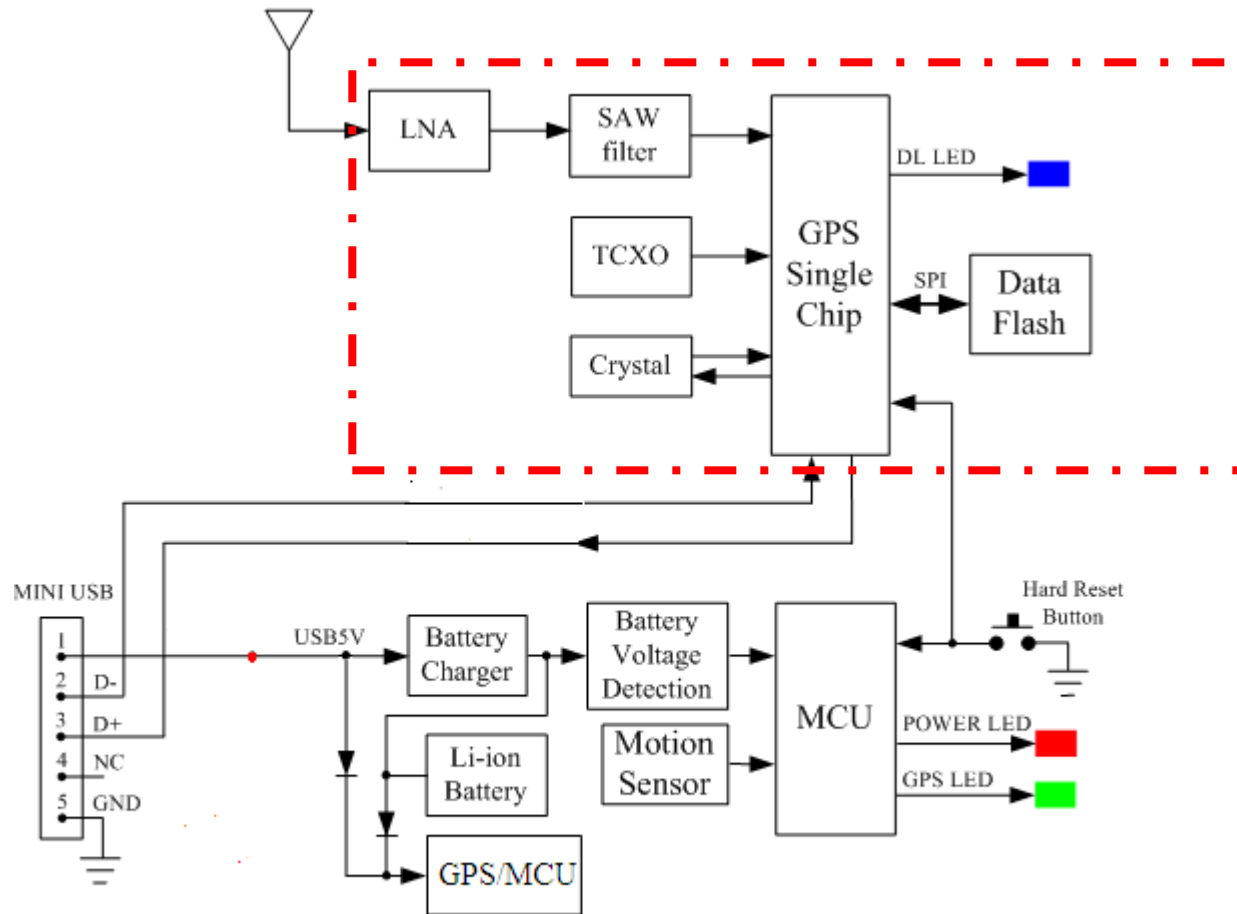


Gms-u1LP

Note:

Currently GlobalTop Data Logger solution is only available on Gms-u1LP GPS module as the solution needs an SPI interface to operate.

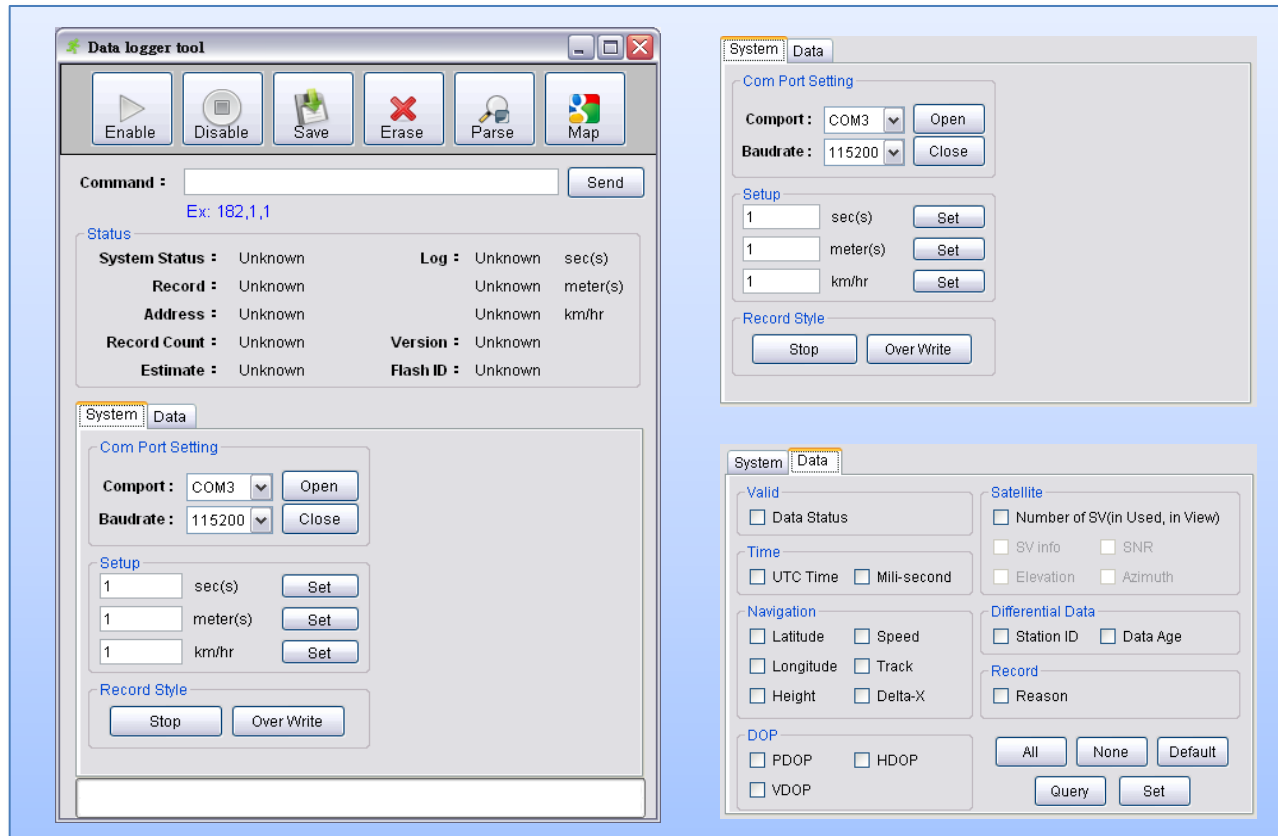
Data Logger Block Diagram (Reference Only)



Gtop Data Logger Solution

GlobalTop Data Logger Tool

A simple to use tool is available for Windows operating system that can setup parameters for data logger and export logged data from flash memory.



Note: For instructions on operating the Data Logger Tool for Windows, please refer to the GlobalTop data logger tool operation manual.

Data Logger Commands(1)

Also available is a comprehensive set of commands that can be used to set detail parameters on the data logger, read data logger status, and export logged data

Example: Format Register Definition

FMT_REG : FORMAT Register (4bytes)							
7	6	5	4	3	2	1	0
DSTA	TRACK	SPEED	HEIGHT	LONGITUDE	LATITUDE	VALID	UTC
15	14	13	12	11	10	9	8
AZI	ELE	SID	NSAT	VDOP	HDOP	PDOP	DAGE
23	22	21	20	19	18	17	16
RES	RES	RES	RES	DIS	MS	RCR	SNR
31	30	29	28	27	26	25	24
RES	RES	RES	RES	RES	RES	RES	RES

Note: For command details please refer to the Data Logger User Guide

Example: Log Status Format

Status Name	Status ID	Description
INIT	0	Initialized State
DISABLE	1	Disable Data Logger Function
IDLE	2	Under Normal Operation State
RECORD	3	Under Recording Mode State
WPAT	4	Under Writing Data State
WSTATIC	5	Under Writing STATIC_BLOCK State (Note 3)
ESTATIC	6	Under Erasing STATIC_BLOCK State
SET	7	Unused
WDYN	8	Under Writing Dynamic Parameters State
LOG_DATA_OUTPUT	9	Under Reading Flash Memory State
REC_WRITE	10	Under Recording Write Status State

Note: For command details please refer to the Data Logger User Guide

Thank You For Choosing GlobalTop!

If you are interested in implementing Data Logger solution to GlobalTop GPS Modules, or have questions regarding technological aspects of Data Logger, please feel free to contact us!



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