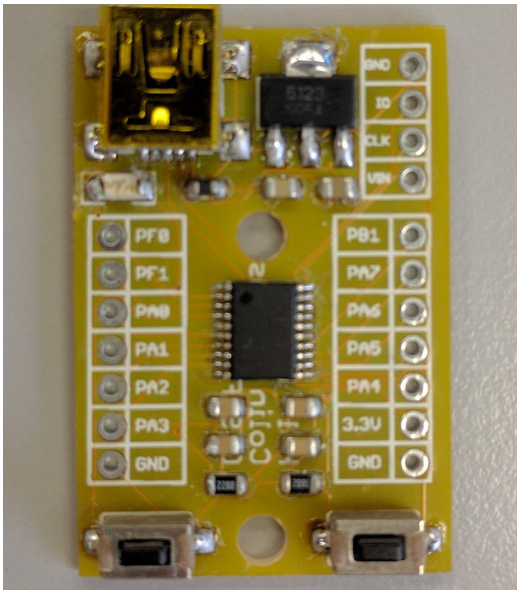
Halo Mini V.2

September 14, 2016

Product Overview

Halo Mini is a multi purpose hardware platform intended for applications that don't require many GPIO or are constrained to small spaces.



Hardware

- STM32f042 MCU (48Mhz)
- 16Kb or 32Kb Flash
- 6Kb Sram
- 11 GPIO
- 4.5V to 10V with 800ma
- Boot and Reset Buttons
- Power LED
- USB Port for Power and Data
- 2x 7 Pin Headers for GPIO
- ISP Port for ST-LINK

Details

- Halo mini can be programmed through either an ST-Link V2 using the connection at the top right or DFUSE software provided by ST using the USB port.
- Most pins can be reassigned to other functions such as ADC, I/O, etc.

Board and Schematic Repo

- https://github.com/cgidzinski/CesrfBoard

Parts List

Part	Value	Package	Description
C1	0.1uf	0805	Capacitor
C2	10uf	0805	Capacitor
C3	0.1uf	0805	Capacitor
C4	0.1uf	0805	Capacitor
C5	22uf	0805	Capacitor
C6	10uf	0805	Capacitor
D1	Power	1206	LEDs
J3	Header	1X04	Header 4
J4	USB-MINIB	USB-MINIB	Mini-USB "B"
JL	Header	1X07	Header 7
JR	Header	1X07	Header 7
L1	220Ω	0805	Ferrite Bead (BLM18PG221SN1D)
R1	10K	0805	Resistor
R2	220	0805	Resistor
S1	BOOT	SMD	NO switch
S2	RESET	SMD	NO switch
U1	STM32F042F	TSSOP20	STM32F042Fx microcontroller
U2	1117-3.3V	SOT223	Voltage Regulator LM1117

Notes

STM32cubeMX software can be used to help select pin functionality and create base code and then edited in the free version of Keil.

Errata

- Silkscreen label is on wrong side and missing from buttons