Groundstudio Magma Splash development board

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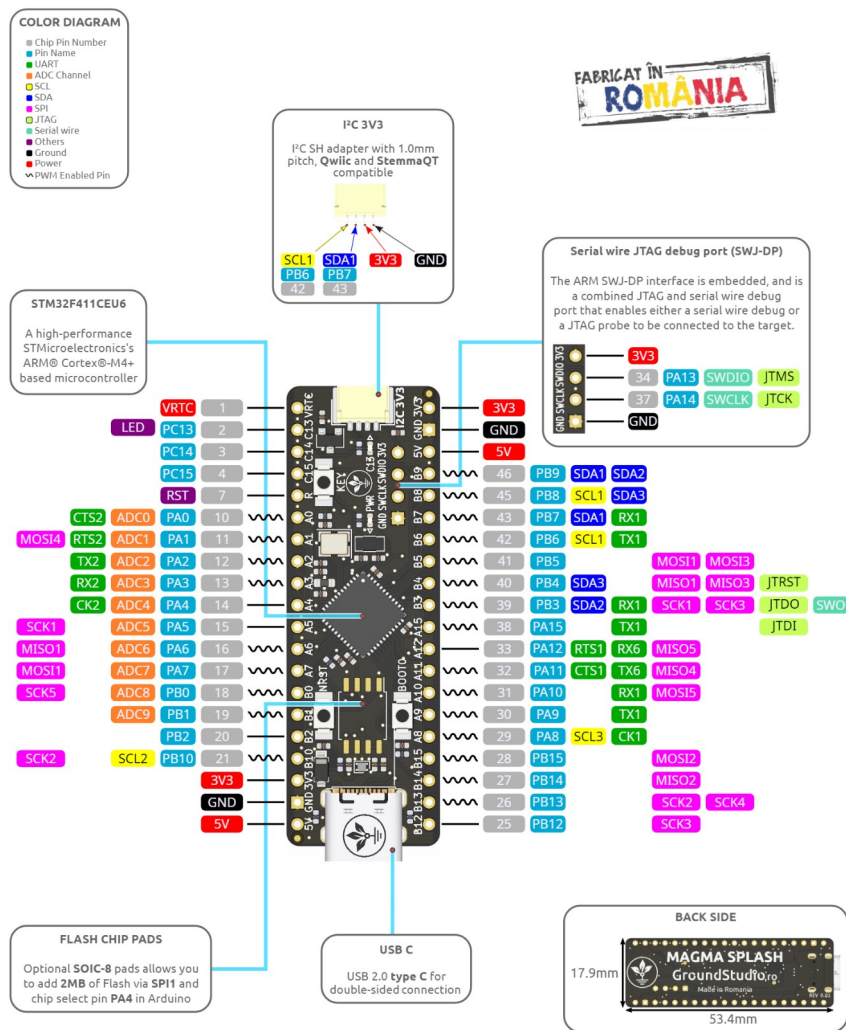
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Board Pinout

Figure 1: GroundStudio Magma Splash pinout [Revision 1]
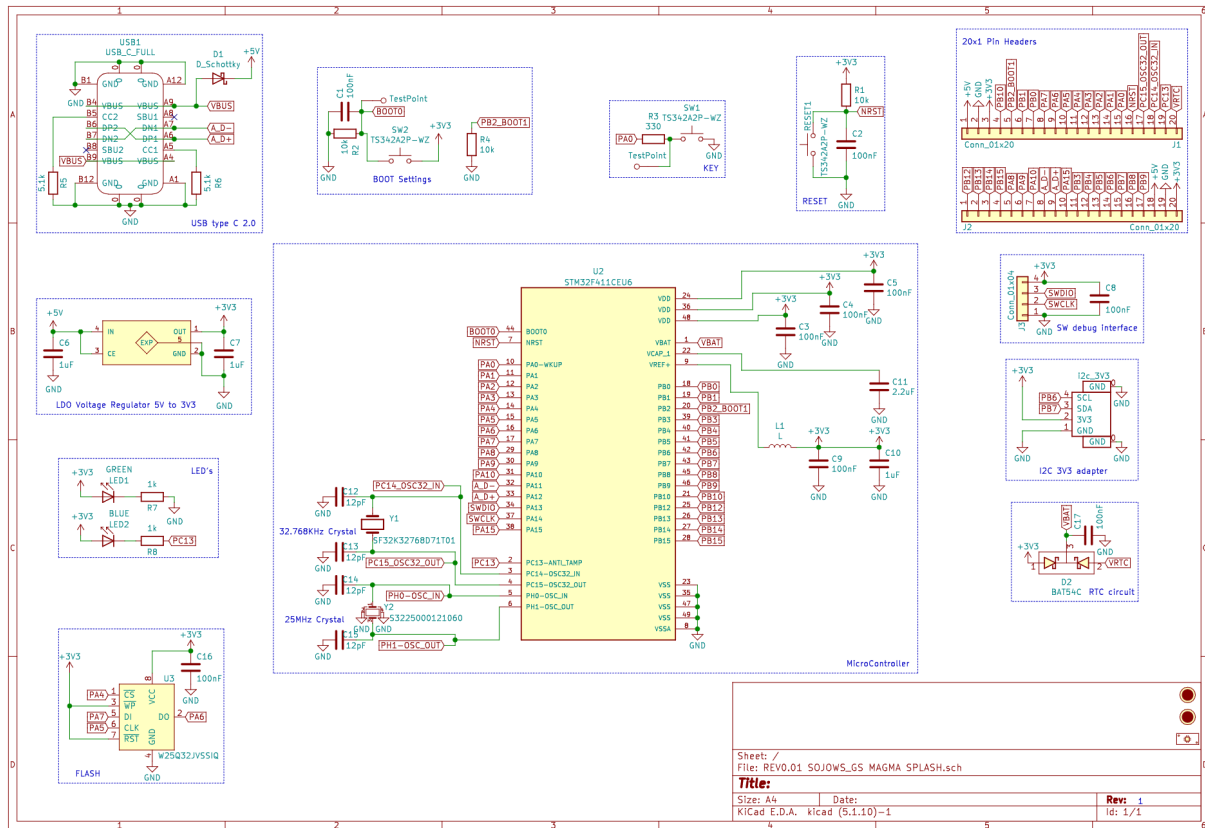
Board Circuit Schematic

Figure 2: GroundStudio Magma Splash schematic circuit [Revision 0.0.1]

Open Source

This is an Open Source project, you can find all the technical documents online:

https://github.com/GroundStudio/GroundStudio_Magma_Splash

License

All documentation for GroundStudio Marble Pico is released under the Attribution-ShareAlike 4.0 International (CC BY-SA 4.0) license. You are welcome to use this for commercial purposes.

Please consider contributing back to this project or others to help the open-source hardware community continue to thrive and grow!

Overview

The GroundStudio Magma Splash development board is based on the STM32F411CEU6 microcontroller that allows you to more easily integrate a powerful STM chip into your project.

This development board incorporates a high-performance 32-bit ARM® Cortex®-M4 processor operating at frequencies up to 100MHz, 512kB Flash memory, 128kB SRAM, 32 digital pins, 10 pins capable of 12-bit ADC, 24 PWM pins and up to 5 SPI interfaces and 3 UART ports.

The board also integrates an I²C 3V3 plug compatible with STEMMA QT or Qwiic connectors for easier interconnection with a diverse range of sensors and modules.

5V tolerant I/O pins: PC13, PC14, PC15, PA1, PA2, PA3, PA4, PA5, PA6, PA7, PB0, PB1, PB2, PB10, PB12, PB13, PB14, PB15, PA8, PA9, PA10, PA15 , PB3, PB4, PB6, PB7, PB, PB9

Standard 3V3 I/O pins: PA0, PB5 (these pins are not 5V tolerant).

Technical specifications

Microcontroller: **STM32F411CEU6**

USB-Serial converter: internally-integrated in the STM32F411CEU6 microcontroller

Voltage stabilizer 3.3V: ME6211C33U4AG-N

Digital pins: **32**

USB 2.0 **type C** adapter

Flash memory: **512kB**

SRAM memory: **128kB**

Interfaces: **ADC, SPI, UART, I2C, I2S**

Maximum processor frequency: **100MHz**

Dimensions approx. pcb: **53.4mm x 17.9mm**

Legal disclaimer notice

This development board is considered a subassembly in accordance with FCC CFR Title 47 §15.101(e):

https://www.ecfr.gov/current/title-47/chapter-I/subchapter-A/part-15/subpart-B/section-15.101#p-15.101(e)

The device does not have a standalone functionality and does not include an enclosure or power supply.

The device is mainly intended for development and prototyping but it can be integrated into a product. In this case it is the responsibility of the developer/manufacturer to obtain all the necessary certifications.

GroundStudio is a registered trademark of ARDUSHOP SRL:

https://www.tmdn.org/tmview/#/tmview/detail/EM500000018364087

Developer info

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Datasheet Revision History

[Revision 1] - Initial version release