MicroMod STM32 Processor Board

DEV-17713

Product Overview

10/03/2022

For the most up-to-date information, visit www.mouser.com or the supplier's website.

Description

SparkFun Electronics MicroMod STM32 Processor Board provides an economical and easy-to-use development platform for more power with minimal working space. This STM32 processor board is equipped with an ARM® Cortex®-M4 32-bit RISC core and an M.2 MicroMod connector and can operate up to 168MHz frequency range. The STM32F405 processor comes with an additional 128Mb (16MB) serial flash memory chip added to the underside of the board.

This MicroMod STM32 processor board features a Floating-Point Unit (FPU) single precision, supporting all ARM single-precision data-processing instructions and data types. The processor board implements a complete set of DSP instructions and a Memory Protection Unit (MPU), enhancing application security. This processor board utilizes the DFU bootloader to upload code and incorporates an extensive range of enhanced I/Os and peripherals.

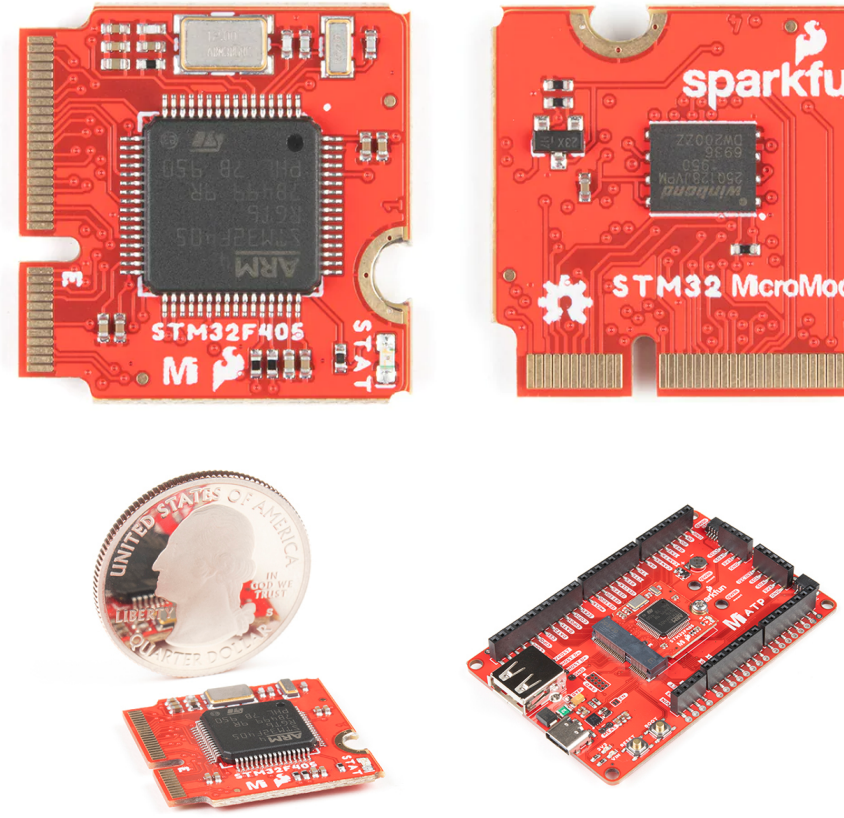
Features

- STM32 general features:
  - ARM® 32-bit Cortex®-M4 CPU with FPU:
    - Adaptive Real-Time accelerator (ART Accelerator™) allowing 0-wait state execution f rom flash memory
    - Frequency up to 168MHz
    - Memory Protection Unit (MPU)
    - 210DMIPS/1.25DMIPS/MHz (Dhrystone 2.1)
    - DSP instructions
- 1Mbyte of flash memory
- 192Kbytes of SRAM including 64Kbytes of CCM (Core Coupled Memory) data RAM
- Flexible static memory controller supporting compact flash, SRAM, PSRAM, NOR and NAND memories
- Clock, reset and supply management:
  - 1.8V to 3.6V application supply and I/Os
  - 32kHz oscillator for RTC with calibration
- Low-power operation:
  - Sleep, stop and standby modes

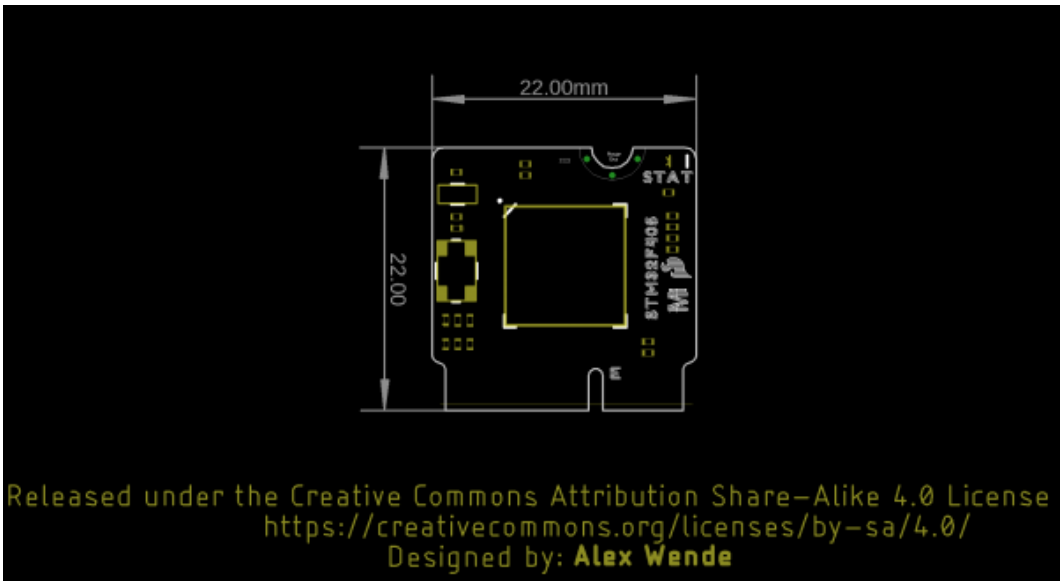
Features

- Debug mode:
  - Serial Wire Debug (SWD) and JTAG interfaces
  - Cortex-M4 embedded trace Macrocell™
- Advanced connectivity:
  - USB 2.0 full-speed device/host/OTG controller with on-chip PHY
  - USB 2.0 high-speed/full-speed device/host/OTG controller with dedicated DMA, on-chip full-speed PHY and ULPI
  - 10/100 Ethernet MAC with dedicated DMA: supports IEEE 1588v2 hardware and MII/RMII
- Specific peripherals available on MicroMod STM32:
  - UART
  - Two I²C buses
  - SPI Bus
  - PDM audio processing
  - Two dedicated analog inputs and 15 total analog input capable inputs
  - Two dedicated digital I/O pins
  - Two dedicated PWM pins and 24 total PWM capable
  - Nine general purpose I/O pins

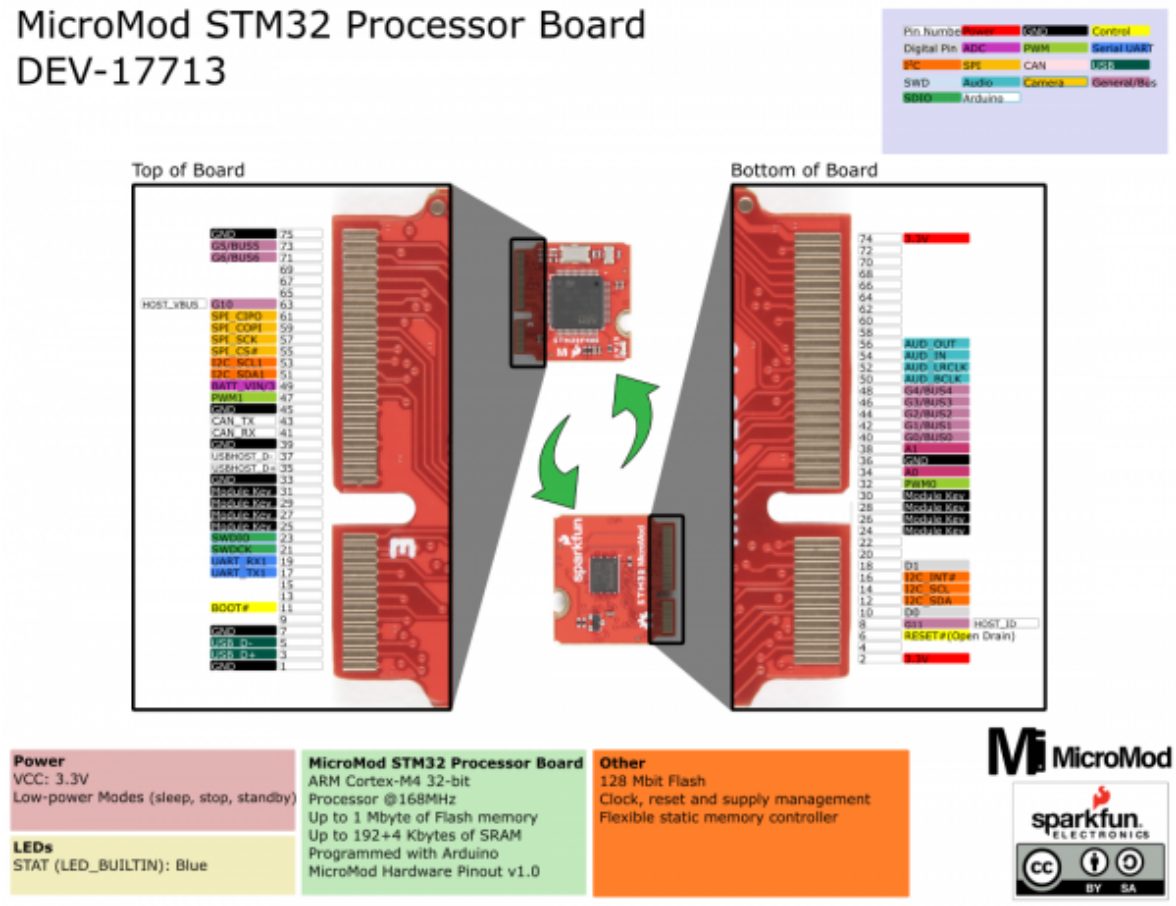
Board Overview



Board Dimensions



Graphical Datasheet



Additional Resources

- Schematic
- Datasheet

Mouser Part Number

View Part

To learn more, visit https://www.mouser.com/new/sparkfun/sparkfun-micromod-board/