

<https://github.com/leaflabs/maple/blob/master/maple-r5/maple-r5-schematic.pdf>

te=0x057ce1c0 [0, 0]

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specification

STM32 F103RB: a 32-bit ARM Cortex M3 microprocessor

Clock Speed: 72 MHz

Operating Voltage: 3.3V

Input Voltage (recommended): 3.0V-12V

39 Digital I/O Pins (GPIO)

16 Analog Input Pins

12-bit ADC resolution (ADC)

15 PWM pins at 16-bit resolution (PWM)

Dedicated USB port for programming and communications (USB)

External JTAG interface (USB)

128 Flash and 20KB SRAM

64 Channel nested vector interrupt handler (including external interrupt on GPIOs)

Integrated SPI (SPI)

Integrated I2C (I2C)

7 Channels of Direct Memory Access (DMA)

3 USART devices

Four 4-channel Timers (Timers)

Supplies up to 500mA @ 3.3v

Support for low power and sleep modes (<500uA)

serial flash

Press boot 0, press reset, release reset, release boot 0

```
dpavlin@nuc:/nuc/stm32$ git clone https://github.com/jsnyder/stm32loader
```

```
dpavlin@nuc:/nuc/stm32/stm32loader$ ./stm32loader.py -p /dev/ttyUSB0
```

```
Bootloader version 22
```

```
Chip id: 0x410 (STM32 Medium-density)
```

```
dpavlin@nuc:/nuc/stm32/stm32loader$ ./stm32loader.py -p /dev/ttyUSB0 -e -w -v maple_rev5_boot20.b
```

```
Bootloader version 22
```

```
Chip id: 0x410 (STM32 Medium-density)
```

```
Write 256 bytes at 0x8000000
```

```
Write 256 bytes at 0x8000100
```

```
...
```

maple boot loader

```
dpavlin@nuc:/nuc/stm32/stm32loader$ wget http://docs.leaflabs.com/static.leaflabs.com/pub/leaflab  
dpavlin@nuc:/nuc/stm32/stm32loader$ ./stm32loader.py -p /dev/ttyUSB0 -e -w -v maple_boot.bin
```

STM32 Arduino upgrade

bootloader

- <https://github.com/rogerclarkmelbourne/STM32duino-bootloader>

```
dpavlin@nuc:/nuc/stm32/stm32loader$ wget https://github.com/rogerclarkmelbourne/STM32duino-bootlo
```

maple r5 is not reported with dfu-util

<https://github.com/rogerclarkmelbourne/STM32duino-bootloader/pull/20>

build

```
dpavlin@nuc:/nuc/stm32/STM32duino-bootloader$ make maple-rev5
```

...

Copying to binaries folder

```
cp build/maple_boot.bin bootloader_only_binaries/maple_rev5_boot20.bin
```