HBridge v1.1 Unit

Description

Meet the **HBridge v1.1 Unit** – a state-of-the-art DC motor drive module that redefines motor control. Powered by the **"STM32F030+RZ7899"** scheme, this module enables seamless **I2C** communication with the M5 host, offering precise **PWM** control for speed adjustment, as well as easy management of forward, reverse, and braking functions.

Safety and reliability take center stage with built-in safeguards against over-current, over-voltage, and over-temperature situations. The module's total power MOSTUBE switch circuit allows dynamic motor control through programming, while the integrated total current acquisition circuit ensures safe motor operation.

Adapting to diverse needs, the module incorporates a smart 6-12V and 5V switching circuit. It's a perfect fit for a range of applications, from robotics, motor drives, and industrial automation to smart homes. Elevate your projects with the HBridge v1.1 Unit – where cutting-edge technology meets simplicity and versatility.

Features

- Overcurrent, overvoltage, overtemperature protection
- Power switching
- I2C address: Default 0x20
- current detech
- Programming platform: Arduino, UIFlow

Includes

- 1 × Hbridge V1.1 Unit
- 1 × VH3.96-4P
- 1x HY2.0-4P Cable(20cm)
- 1x M2 Hex Wrench
- 1x 470uf aluminum electrolytic capacitor

> Aluminum electrolytic capacitors connected to the positive and negative poles of the power input can provide buffer protection for the circuit. Be careful not to connect them in the opposite direction

Applications

- robot
- Motor driven
- Industrial automation
- Smart home

Specification

| Resources	Parameters
MCU	STM32F030F4P6
DC bidirectional motor driver chip	RZ7899
Current acquisition chip	INA199A1DCKR
External access DC voltage	MAX 12V
I2C mailing address	Default 0x20 (can be modified by toggle of the encoding switch)
Maximum allowable current	3A
Use temperature	0-40°C
Product Size	48mm* 24mm*8mm

Package Size	136mm* 92mm*13mm
Product Weight	9.1g
Package Weight	14g
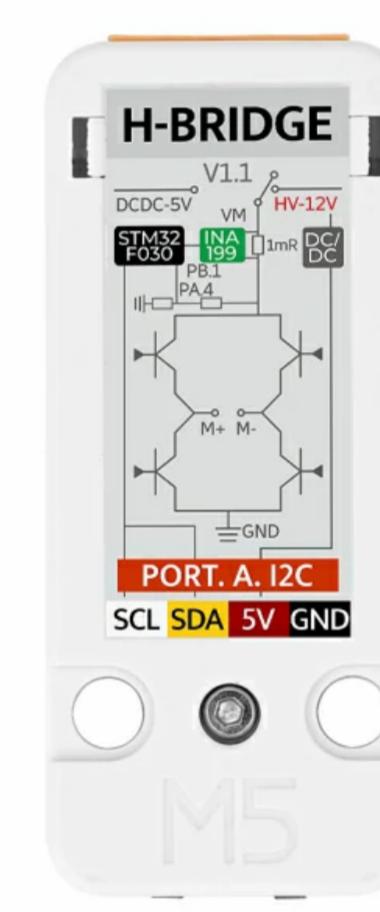
Products related to this item

CoreS3 (K128)

CORE2 (K010)

TOUGH (K034)

BASIC-V27 (K001-V27)

M5StickC PLUS (K016-P)

ATOM Lite (C008)

AtomS3 Lite (C124)

Related Link

- STM32F030F4P6
- RZ7899
- INA199A1DCKR

Schematic

Voltage Select

I2C Select
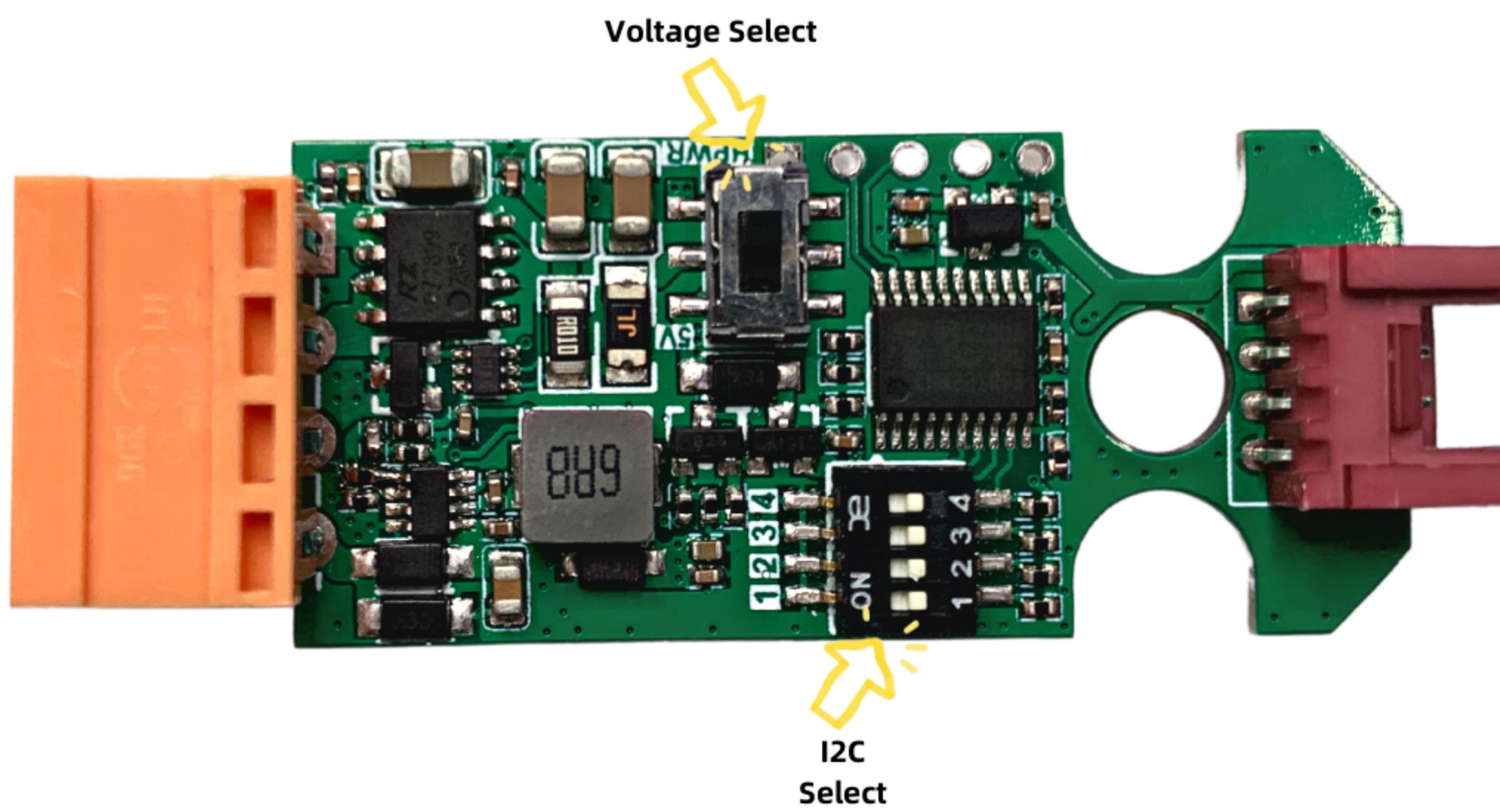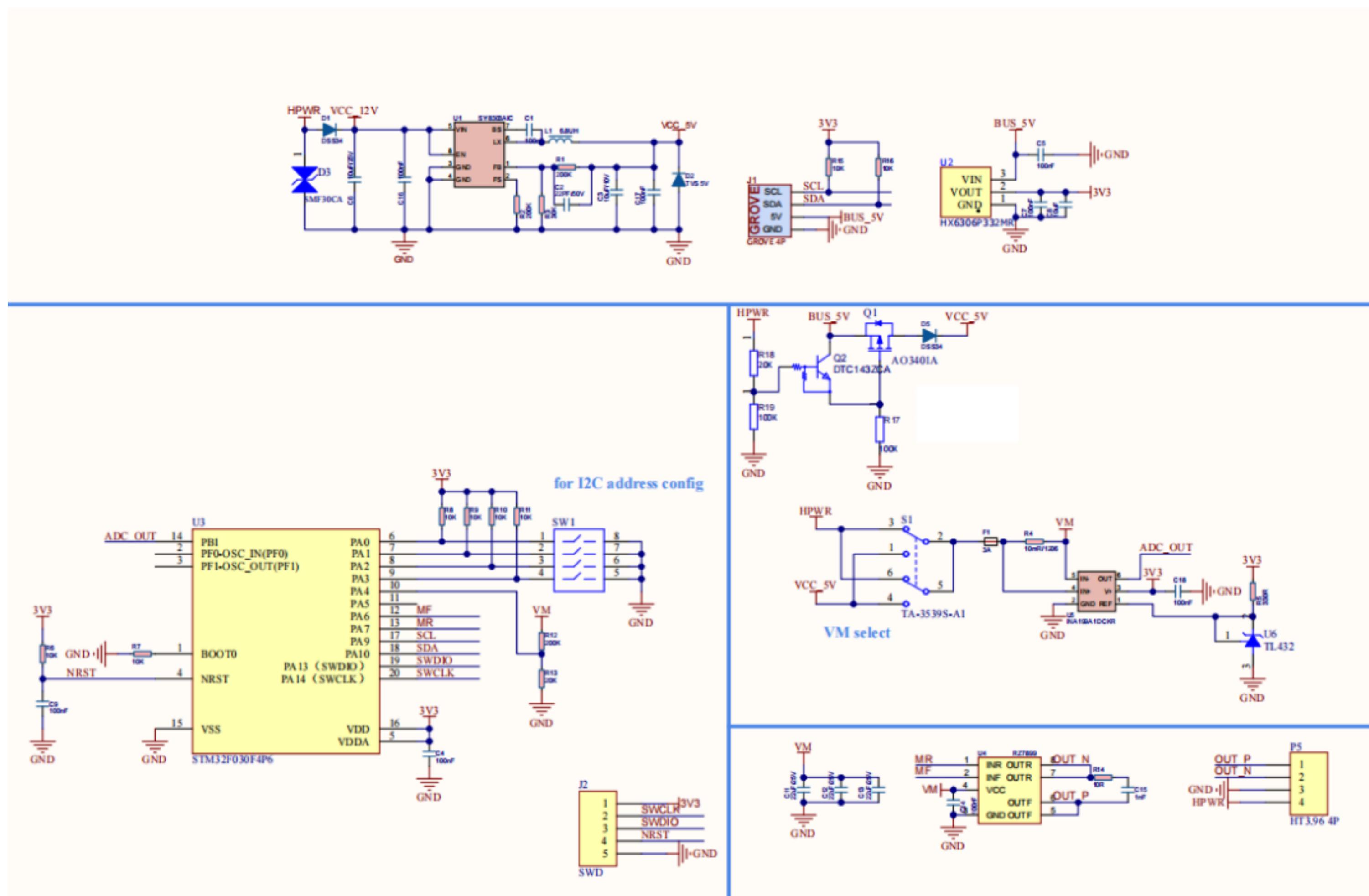
Turn the switch to the corresponding position based on the input power supply.

Module Size
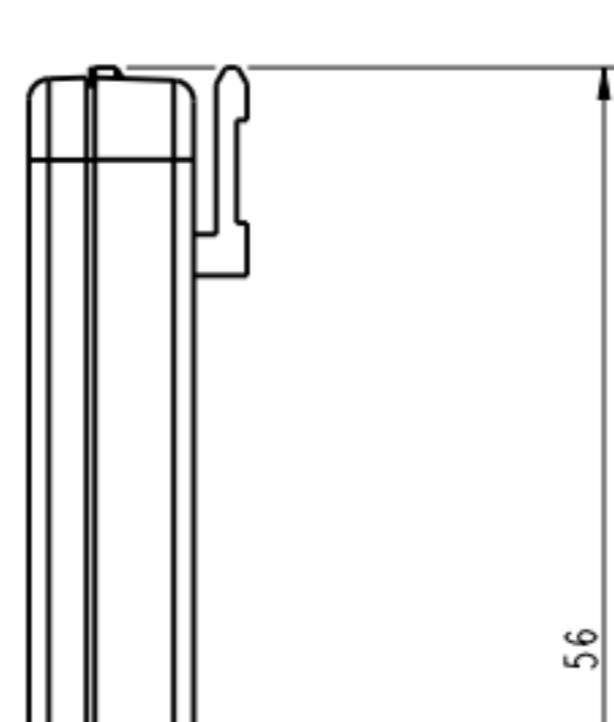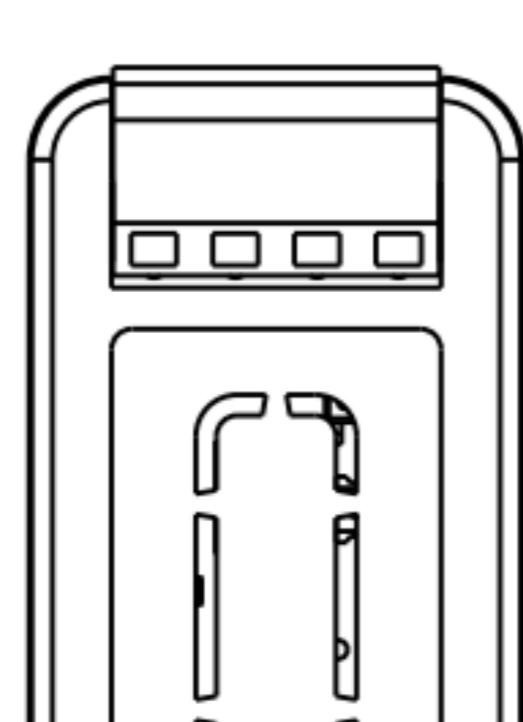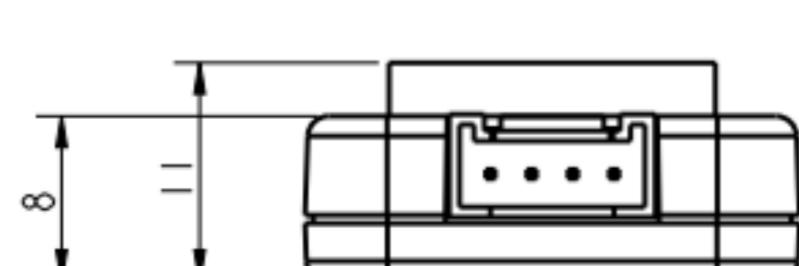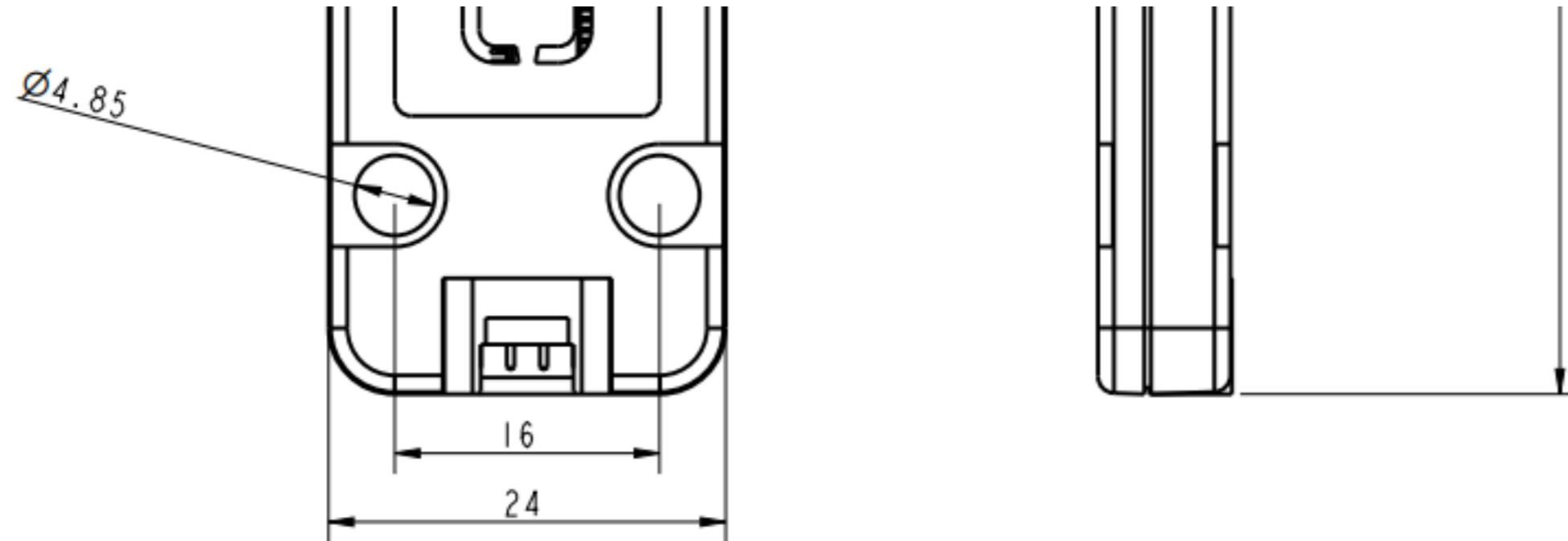
Examples

Arduino

- [Hbridge Unit Firmware](#)

- [Hbridge Unit Demo](#)

UIFlow

- [Hbridge Unit UIFlow Demo](#)
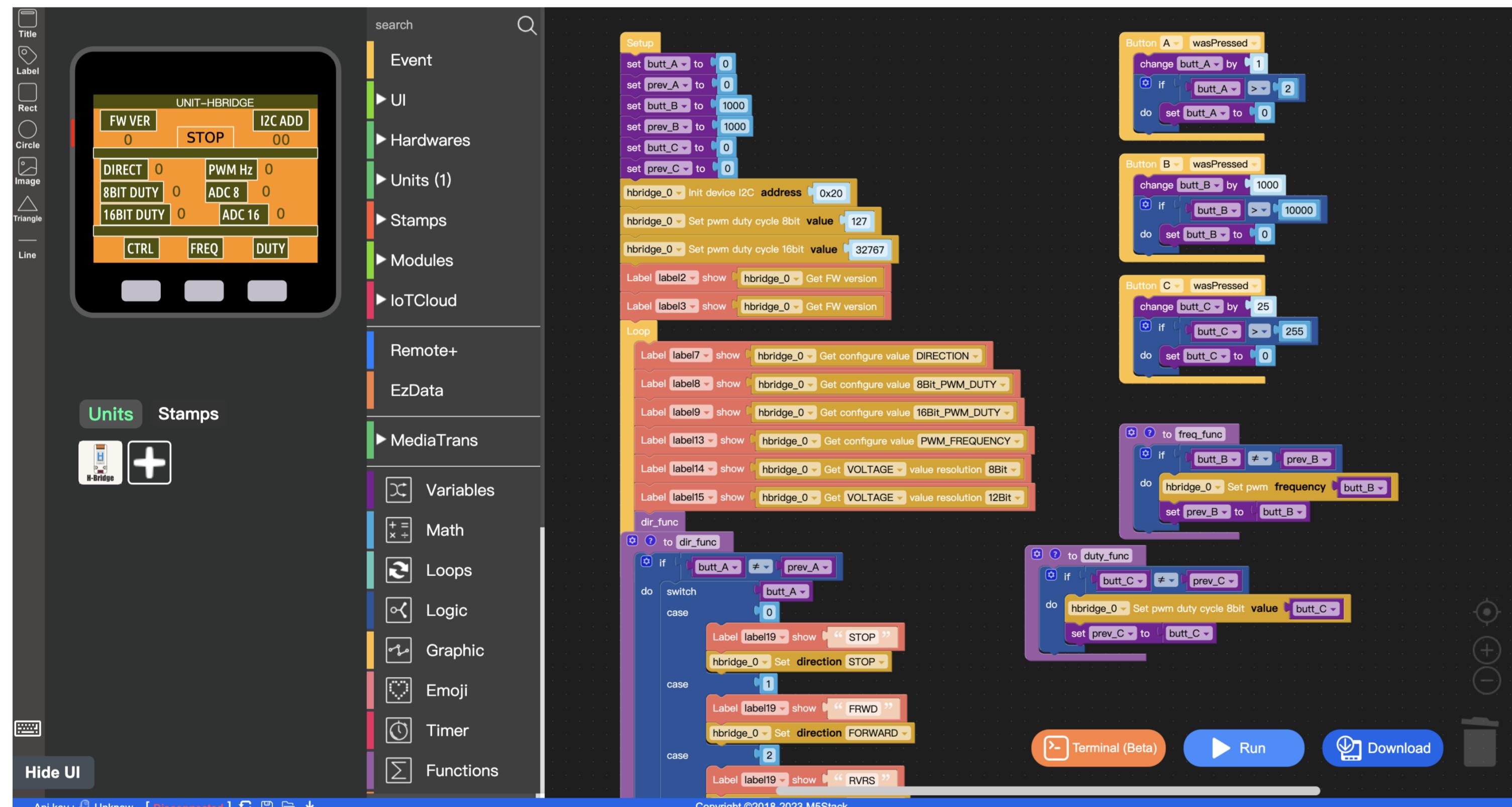
UIFlow Blocks

- set pwm frequency
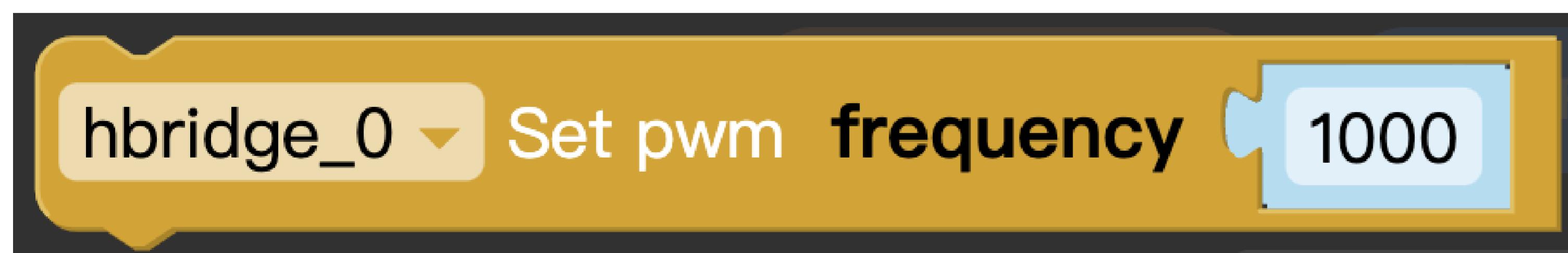
- set pwm duty cycle (16 bit)

- get configure value

hbridge_0 Get configure value DIRECTION

- init device 's i2c

hbridge_0 Init device I2C address 0x20
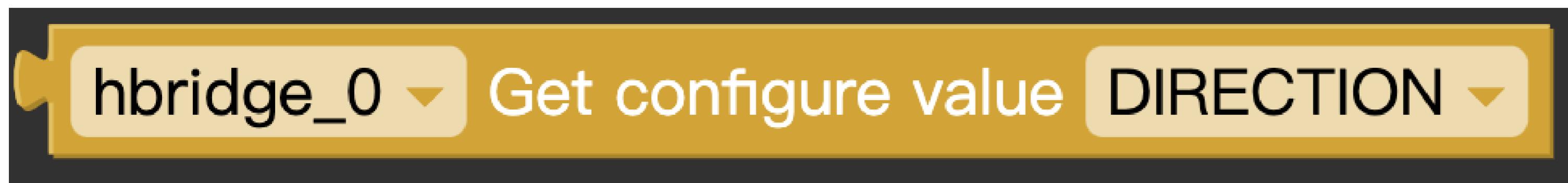
- set direction
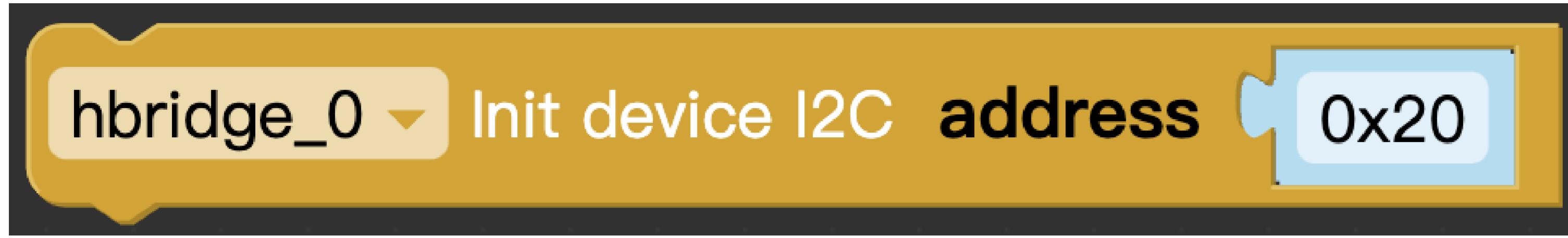
hbridge_0 Set direction STOP
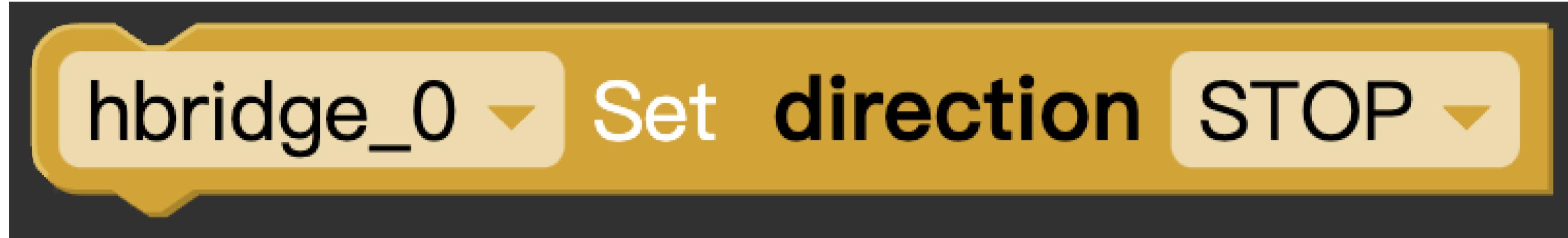
- Get voltage / adc raw value

hbridge_0 Get VOLTAGE value resolution 8Bit

- Set pwm duty cycle 8bit value

hbridge_0 Set pwm duty cycle 8bit value 127

- Get FW version
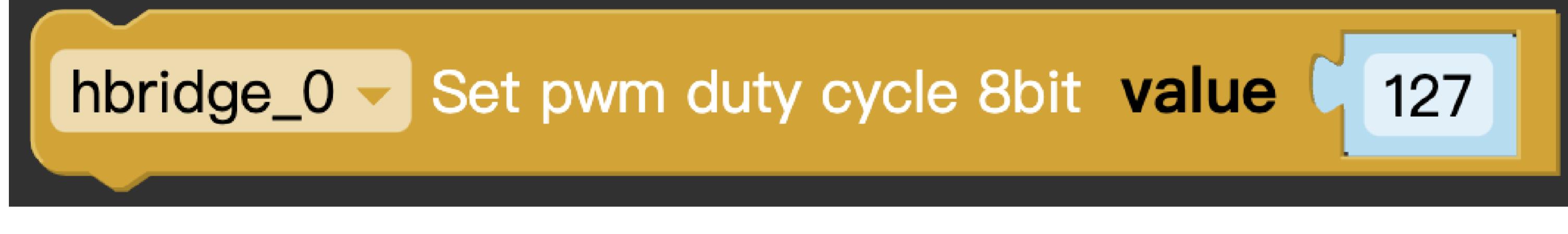
hbridge_0 Get FW version
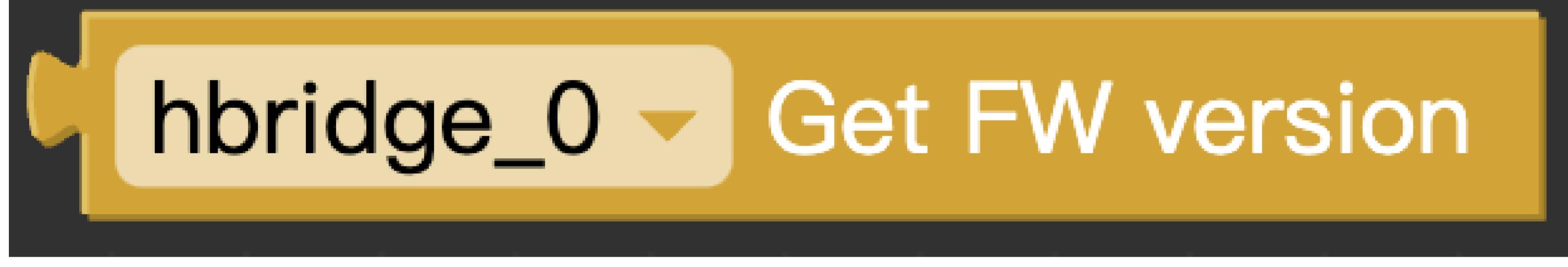
Video

- HBridge V1.1 Unit Control Servo

Version Change

Release	Product Changes	Notes

Date Release	Product changes	Notes
/ Date	First Release	/
2023.8	Upgrade to verson v1.1	Optimize the circuit and add current detection function