MiniEncoderC Hat

SKU:U157

Description

MiniEncoderC HAT is a rotary encoder extension base for M5StickC/C-CPlus, which integrates a rotary AB encoder, with button function, and comes with standard Lego hole to facilitate the expansion of structural parts; It contains a 200mAh polymer lithium battery and an SK6812 RGB LED. This product can be used to remotely adjust RGB lighting and remotely control robot joints.

Features

- 30-bit pulse coding knob (30 pulses per revolution)
- SK6812 programmable RGB LED
- Press the key input
- HY2.0-4P interface
- 4x LEGO connectors

Includes

- 1x MiniEncoderC HAT
- 1x lanyard

Applications

- Adjust the lights remotely
- Remote control of robot joints

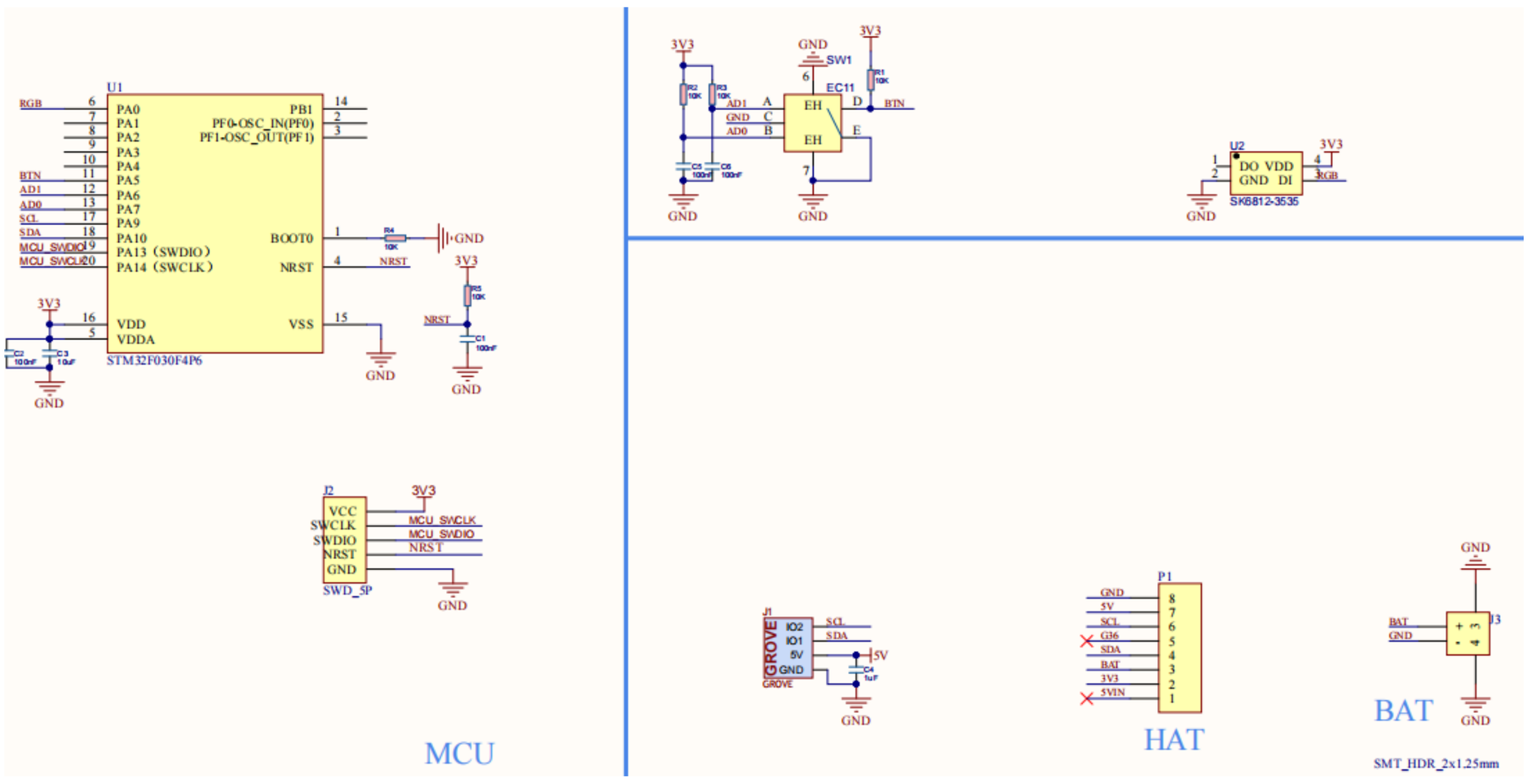
Specification

Resources	Parameters
MCU	STM32F030F4P6
support voltage	3.3V
RGB	SK6812-3535
Battery level	200mAh
Product Size	81.05mm × 29mm × 24mm
Package Size	101mm × 27mm × 22mm
Product Weight	19.3g
Package Weight	24.5g

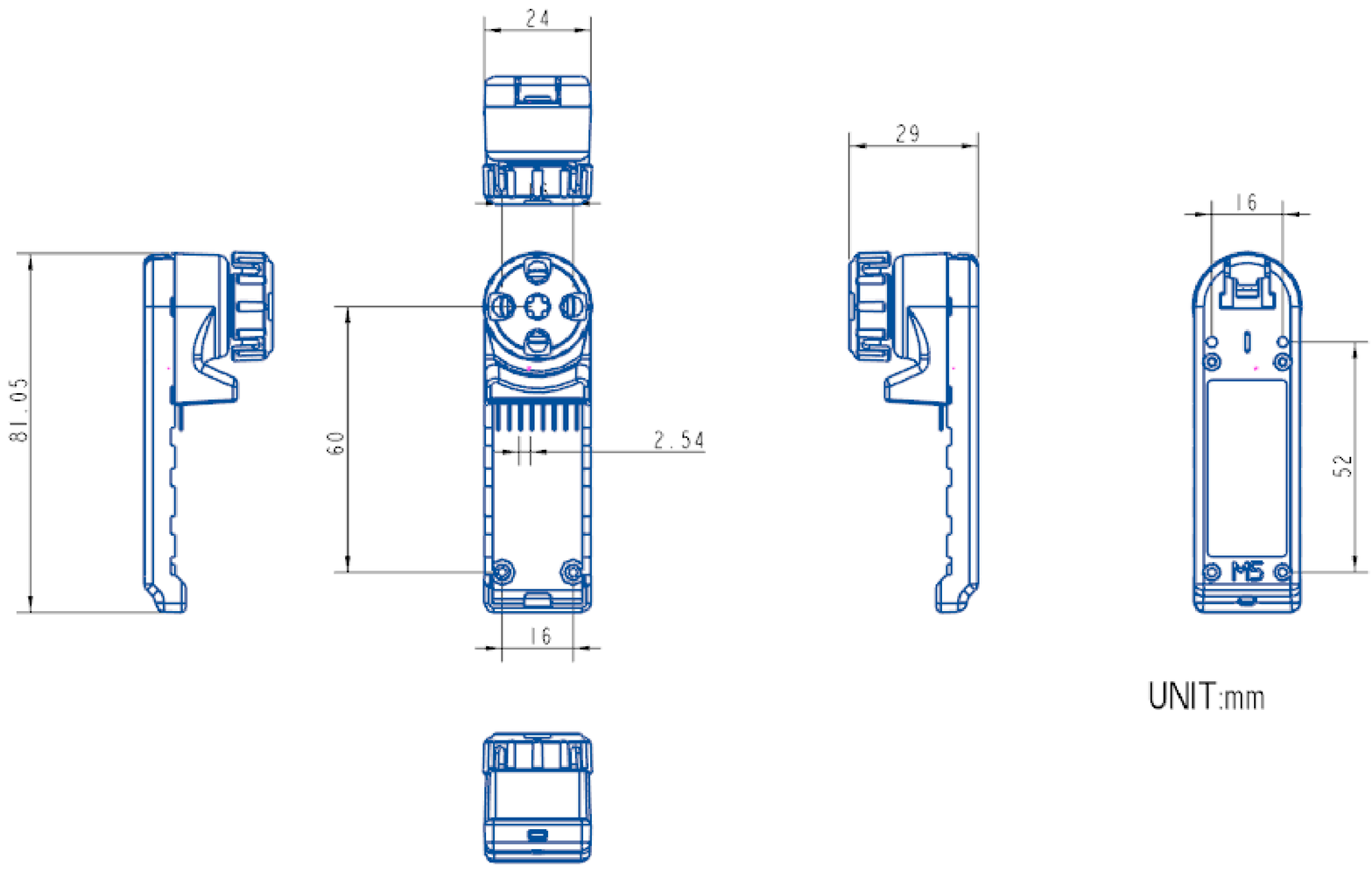
Related Link

- STM32F030F4P6

Schematic



Module Size



Examples

Arduino

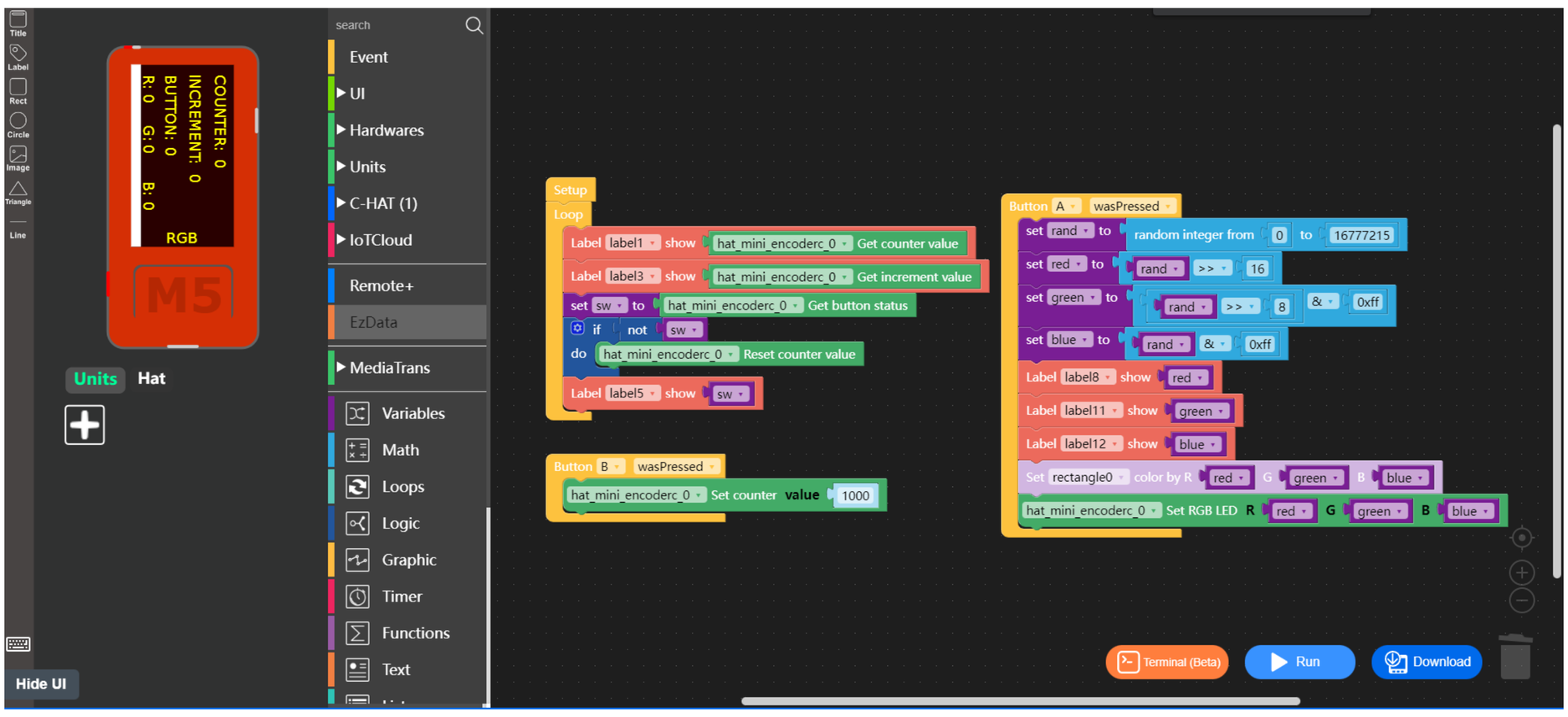
- Arduino Example

- MiniEncoderC HAT Firmware

M5Stack Hat Encoder I2C Protocol																	V1 (FW Version) 2022/11/1
REG MAP (Addr:0x42)		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	note
Counter Value (accumulate)	0x00 R/W	Cnt-byte0	Cnt-byte1	Cnt-byte2	Cnt-byte3													**Cnt:** -2147483648-2147483647 (will be reset after set reg 0x40)
Increment Value	0x10 R	Inc-byte0	Inc-byte1	Inc-byte2	Inc-byte3													**Cnt:** -2147483648-2147483647 (will be reset after get)
Button Value	0x20 R	BNT																**BNT:** 0~1
RGB	0x30 R/W	LED-R	LED-G	LED-B														**R/G/B:** 0~255
Counter Reset	0x40 W	Cnt-RST																**RST:** write 1 to reset counter
Firmware Version	0xF0 R															Version		**Version:** firmware version number
I2C Address	0xF0 R/W																Address	**Address:** 1~127

UIFlow

- Uiflow Example

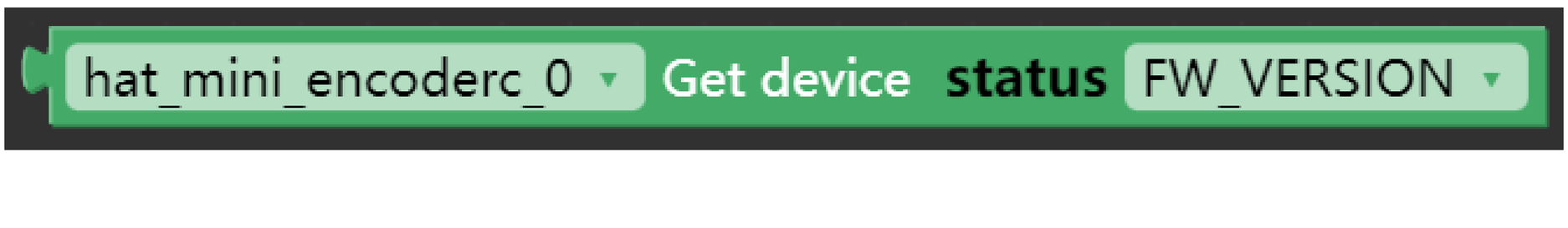


UIFlow Blocks

- Init I2C address

- Get counter value

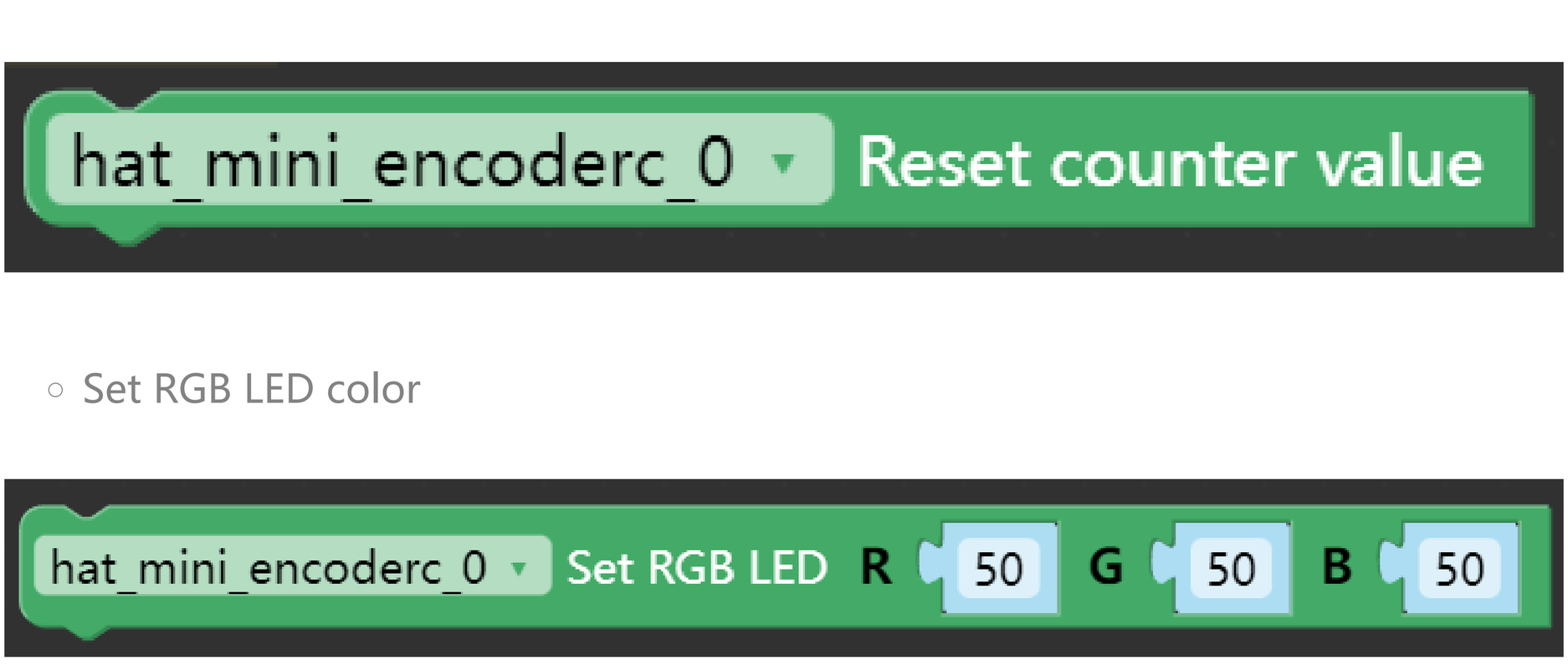
- Get increment value



- Get button status

- Get device status (FW version / I2C address)

- Set counter value



- Reset counter value

- Set RGB LED color

- Set device I2C address