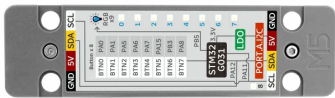
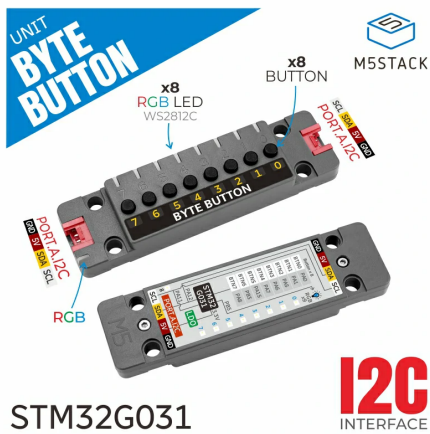
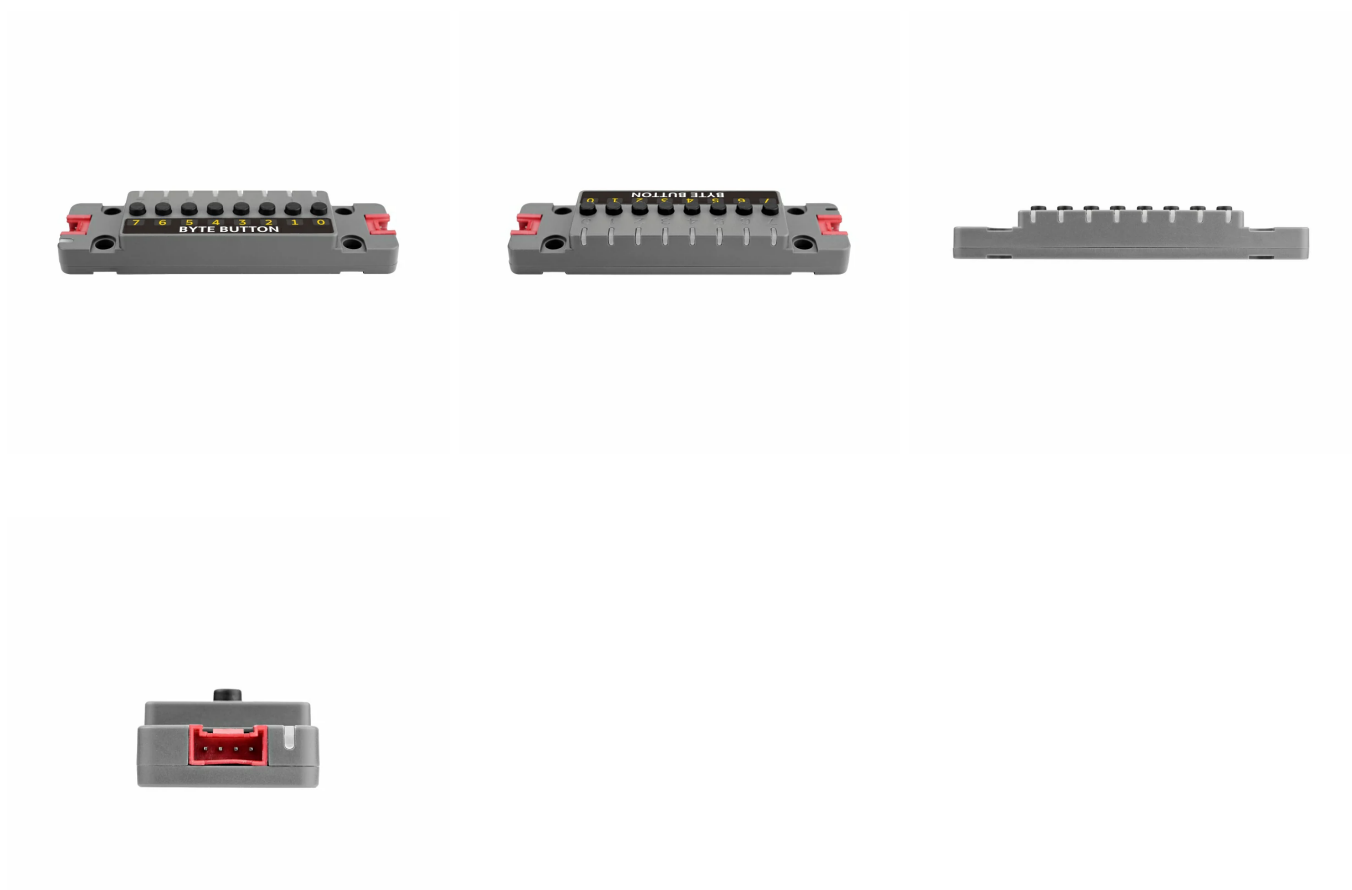


Unit ByteButton

SKU:U192





Description

Unit ByteButton is an 8-button touch switch input unit equipped with 8 button inputs and 9 WS2812C RGB LEDs. It uses the STM32 microcontroller and supports I2C communication. The board includes two **Port A** interfaces and supports cascading multiple Unit ByteButton modules, making it suitable for complex systems. It can achieve button input detection and dynamic lighting feedback, ideal for smart home control, gaming devices, educational platforms, industrial status displays, and interactive exhibitions.

Features

- 8 independent button inputs
- 9 WS2812C RGB LEDs

- STM32 microcontroller
- I2C communication interface

| Included

- 1x Unit ByteButton
- 1x HY2.0-4P cable (20cm)

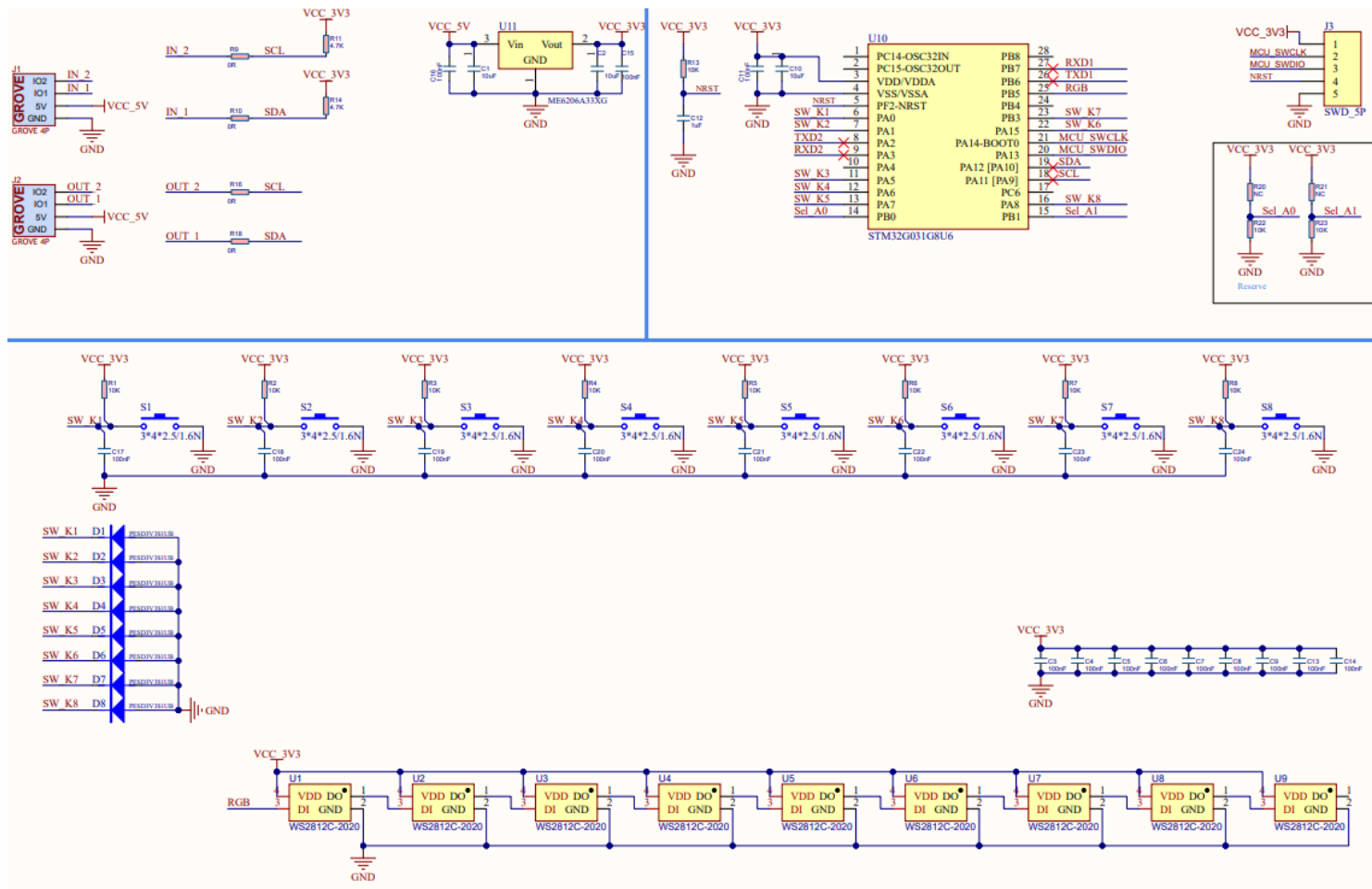
| Applications

- Smart home control panels
- Gaming or entertainment device controllers
- Educational and laboratory development platforms
- Status control and feedback devices
- Portable device debugging tools
- Interactive exhibitions or scene controllers
- User interface for small instruments

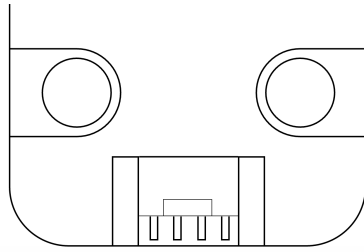
| Specifications

Specification	Parameter
MCU	STM32G031G8U6, 32-bit ARM Cortex-M0+ core, 64 MHz
Button Count	8 independent button inputs
Button Type	Capacitive touch buttons
RGB LEDs	WS2812C-2020 (9 LEDs)
Communication	I2C @ 0x47
Grove Interface	2 (I2C bus expansion)
Standby Power	DC 5V@8.94mA
Operating Temp	0-40°C
Product Size	88*24*12mm
Package Size	169*119*13mm
Product Weight	15.1g
Package Weight	21.5g

Schematics



PinMap



HY2.0-4P	Black	Red	Yellow	White
Define	GND	5V	SDA	SCL

STM32	PA0	PA1	PA5	PA6	PA7	PA15	
KEY	SW_K0	SW_K1	SW_K2	SW_K3	SW_K4	SW_K5	

Module Size

M5Stack Unit Byte Button I2C Protocol																	V1 (FW Version)					
REG MAP (Addr:0X47)		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	note				
Read	Byte of Button Value (Each button value is combined into one byte)	0x00 R	Byte of Button Value															Byte of Button Value: bit0: button 0; bit1: button 1; bit2: button 2; bit3: button 3; bit4: button 4; bit5: button 5; bit6: button 6; bit7: button 7;				
	Button Value (Each button value is a separate byte)	0x50 R	Button0	Button1	Button2	Button3	Button4	Button5	Button6	Button7								ButtonX: 0~1				
LED	LED Brightness & LED Show Mode	0x10 W/R	LED0 Brightness	LED1 Brightness	LED2 Brightness	LED3 Brightness	LED4 Brightness	LED5 Brightness	LED6 Brightness	LED7 Brightness	LED8 Brightness	LED Show Mode (Can be save to flash)						LED Brightness: 0~255 LED Show Mode: 0: Self define 1: Sys define				
LED Self define	RGB888 (Self define)	0x20 W/R	LED0_RGB-B	LED0_RGB-G	LED0_RGB-R			LED1_RGB-B	LED1_RGB-G	LED1_RGB-R			LED2_RGB-B	LED2_RGB-G	LED2_RGB-R			LED3_RGB-B	LED3_RGB-G	LED3_RGB-R		
		0x30 W/R	LED4_RGB-B	LED4_RGB-G	LED4_RGB-R			LED5_RGB-B	LED5_RGB-G	LED5_RGB-R			LED6_RGB-B	LED6_RGB-G	LED6_RGB-R			LED7_RGB-B	LED7_RGB-G	LED7_RGB-R		
		0x40 W/R	LED8_RGB-B	LED8_RGB-G	LED8_RGB-R																	
	RGB233 [®] (Self define)	0x50 W/R	LED0	LED1	LED2	LED3	LED4	LED5	LED6	LED7	LED8											RGB233: bit5-bit7:R bit3-bit5:G bit0-bit2:B
LED Sys define	RGB888 Button=0 define (Can be save to flash)	0x70 W/R	LED0_RGB-B	LED0_RGB-G	LED0_RGB-R			LED1_RGB-B	LED1_RGB-G	LED1_RGB-R			LED2_RGB-B	LED2_RGB-G	LED2_RGB-R			LED3_RGB-B	LED3_RGB-G	LED3_RGB-R		
		0x80 W/R	LED4_RGB-B	LED4_RGB-G	LED4_RGB-R			LED5_RGB-B	LED5_RGB-G	LED5_RGB-R			LED6_RGB-B	LED6_RGB-G	LED6_RGB-R			LED7_RGB-B	LED7_RGB-G	LED7_RGB-R		
	RGB888 Button=1 define (Can be save to flash)	0x90 W/R	LED0_RGB-B	LED0_RGB-G	LED0_RGB-R			LED1_RGB-B	LED1_RGB-G	LED1_RGB-R			LED2_RGB-B	LED2_RGB-G	LED2_RGB-R			LED3_RGB-B	LED3_RGB-G	LED3_RGB-R		
		0xA0 W/R	LED4_RGB-B	LED4_RGB-G	LED4_RGB-R			LED5_RGB-B	LED5_RGB-G	LED5_RGB-R			LED6_RGB-B	LED6_RGB-G	LED6_RGB-R			LED7_RGB-B	LED7_RGB-G	LED7_RGB-R		
System	Flash write back	0xF0 R/W	Flash write back																write 1 save to flash			
	IRQ Setup [®] (Can be save to flash)	0xF0 R/W	IRQ Setup																0: Disable; 1: Enable need to restart			
	Firmware Version	0xF0 R															Version	Version: firmware version number				
	I2C Address (Can be save to flash)	0xF0 R/W															Address	Address: 1~127				

- Unit ByteButton Protocol

Examples

Arduino

- Unit ByteButton Arduino Library

Internal Firmware

- Unit ByteButton Internal Firmware

Videos

- Unit ByteButton Introduction and Example

[unit bytebutton video.mp4](#)