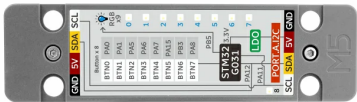
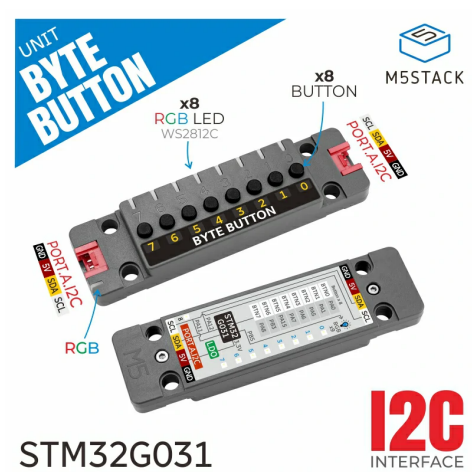
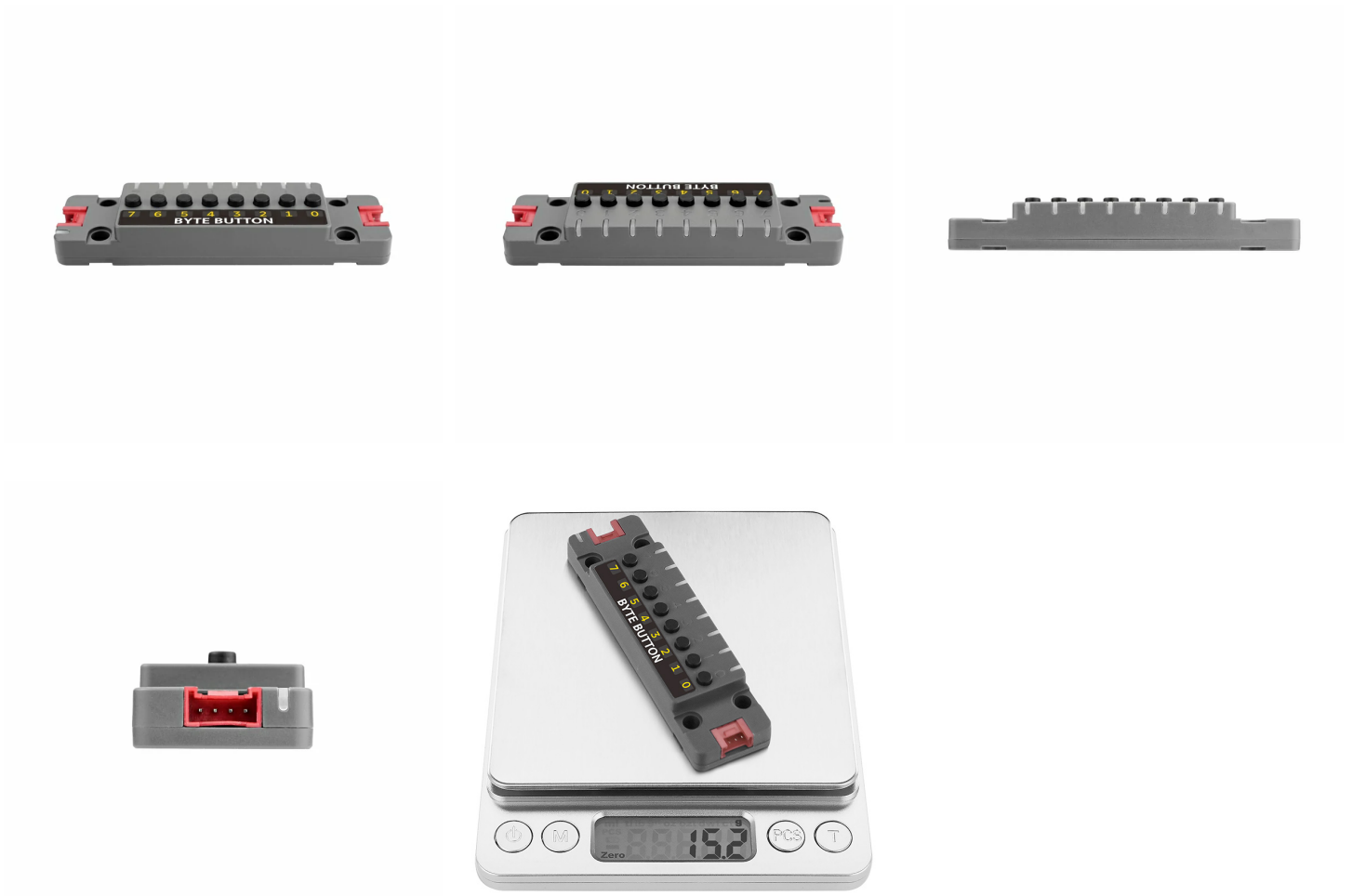


Unit ByteButton

SKU:U192





Description

Unit ByteButton is an 8-channel tactile switch input unit equipped with 8 button inputs and 9 WS2812C RGB LEDs. It uses STM32 as the main controller, supports I2C communication, and comes with two **Port A** interfaces, allowing multiple Unit ByteButton modules to be **cascaded** to meet the needs of complex systems. It can achieve button input detection and dynamic light status feedback, making it suitable for smart home control, gaming and entertainment devices, educational development platforms, industrial status displays, and interactive exhibitions.

Features

- 8-channel button input
- 9 WS2812C RGB LEDs
- STM32 main controller
- I2C communication interface
- Development platforms:
 - UiFlow1
 - UiFlow2
 - Arduino IDE

Includes

- 1 x Unit ByteButton

- 1 x HY2.0-4P Grove cable (20cm)
- 1 x Button indicator label

Applications

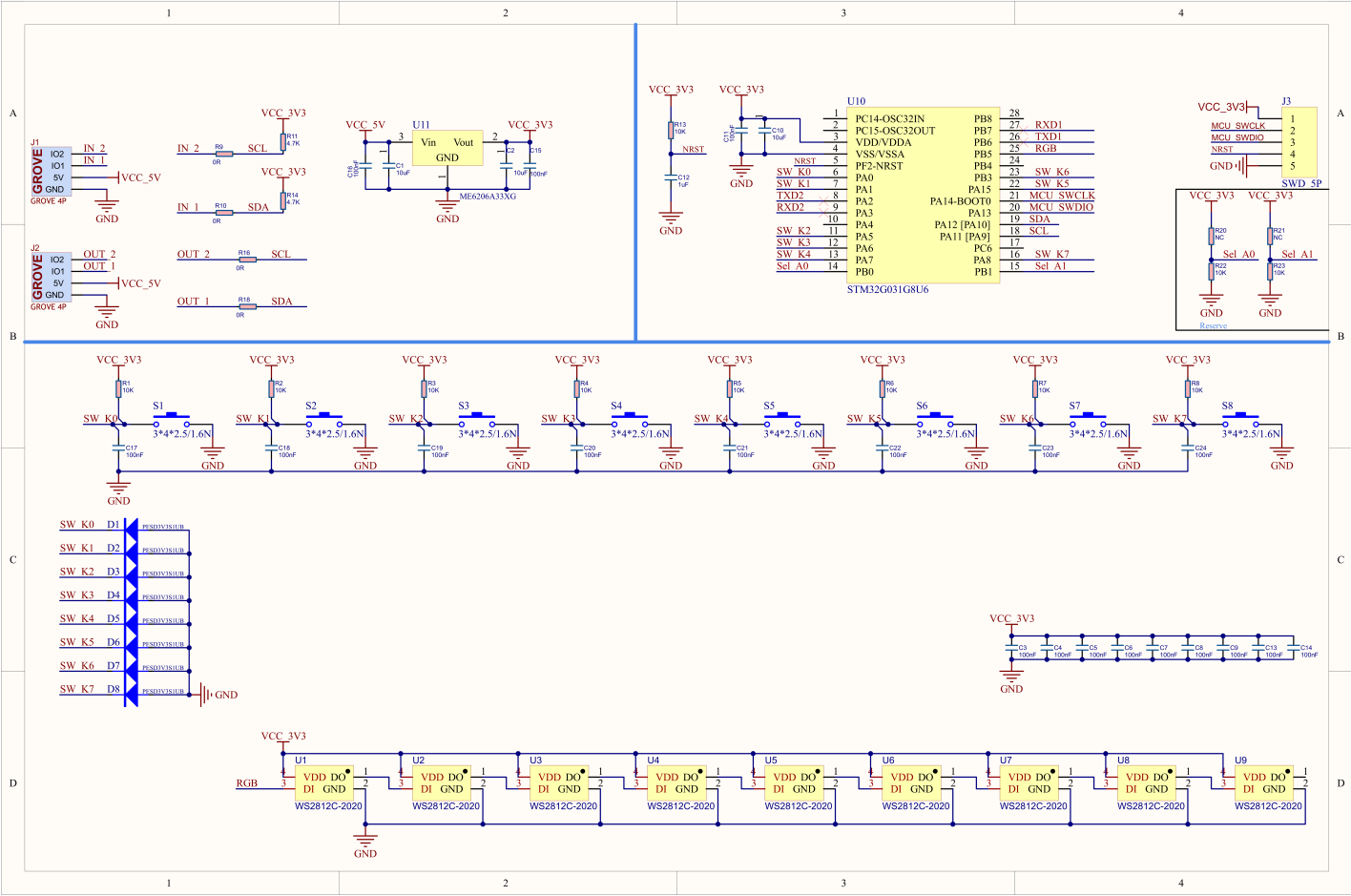
- Smart home control panels
- Gaming or entertainment device controllers
- Educational and laboratory development platforms
- Status control and feedback devices
- Portable device debugging tools
- Interactive exhibitions or scene control
- User interfaces for small instruments

Specifications

Specification	Parameters
MCU	STM32G031G8U6, 32-bit ARM Cortex-M0+ core, 64 MHz clock speed
Button Count	8 independent button inputs
Button Type	Tactile buttons
RGB LEDs	WS2812C-2020 (9 pcs)
Communication Interface	I2C communication @0x47
Grove Interface	2 (I2C bus expansion)
Standby Power Consumption	DC 5V@8.94mA
Operating Temperature	0 ~ 40°C
Product Size	88.0 x 24.0 x 12.0mm
Product Weight	15.2g
Package Size	170.0 x 120.0 x 15.0mm
Gross Weight	21.8g

Schematics

- [Unit ByteButton Schematics PDF](#)



PinMap

Unit ByteButton

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

STM32

STM32	PA0	PA1	PA5	PA6	PA7	PA15	PB3	PA8	PB5
KEY	SW_K0	SW_K1	SW_K2	SW_K3	SW_K4	SW_K5	SW_K6	SW_K7	RGB

Model 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							Button0C: 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 TM (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 TM (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

UiFlow2

- Unit ByteButton UiFlow2 Docs

Video

- Unit ByteButton Product Introduction and Case Demonstration

unit bytebutton video.mp4