

M5Stack Unit–Step16 I2C Protocol																	V1 (FW Version)	
REG MAP (Addr: 0x48)																	2025/7/4	
REG MAP (Addr: 0x48)		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	note
Step16 Value		0x00 R	Value															Value: 0x00–0x0F
Step16 LED Configuration		0x10 R/W	Config															Config: 0–0xFE 0x00: Always Off 0xFE: Always On 0–0xFD: If the device’s position, status, and brightness remain unchanged within the specified time, it will enter sleep mode and automatically wake up upon the next state change. Unit: seconds. default: 0xFE
Step16 LED Brightness		0x20 R/W	Brightness															Brightness: 0–100 default: 50
Step16 Switch		0x30 R/W	Value															Value: 0–1 0: Counterclockwise Increase 1: Clockwise Increase default: 1
Step16 RGB Configuration		0x40 R/W	Power	Brightness														Power: 0–1 0: OFF 1: ON default: 1 Brightness: 0–100 default: 50
Step16 RGB Color		0x50 R/W	RGB_R	RGB_G	RGB_B													RGB_R/G/B: RGB Value value: 0–255 default: 0
Save configuration to flash		0xF0 W	Write value															Write 1 to save the configuration of LED, and write 2 to save the configuration of RGB.
Firmware Version		0xF0 R														Version		Version: Software Version
I2C Address		0xF0 R/W														Address		Address: I2C Address value: 0x08–0x77 default: 0x48

Register Description:

1、 Step16 LED Configuration

Controls the operating status of the indicator light, allowing it to be set to always on, always off, or turn off after a specified time.

2、 Step16 LED Brightness

Controls the brightness of the LED.

3、 Step16 Switch

Switches the rotation direction. The default is clockwise to increase, and counterclockwise to decrease.

4. Step16 RGB Configuration

Enables RGB and sets its brightness. Note that after enabling RGB, wait approximately 50ms for voltage stabilization before refreshing it.

5. Save Configuration to Flash

Write 1 to this register to save the current configuration to the internal Flash.

Configuration content includes:

Step16 LED Configuration

Step16 LED Brightness

Step16 Switch

Write 2 to this register to save the current configuration to the internal Flash.

The configuration includes:

Step16 RGB power

Step16 RGB brightness

7. I2C Address

After successful configuration, the I2C address will be stored in internal Flash memory, will not be lost during power-down, and will take effect immediately.

Notes :

- 1、 Writing to Flash requires first erasing the internal Flash, which takes some time, approximately 20ms.
- 2、 To extend the lifespan of the Flash, avoid frequent write operations.
- 3、 If the value to be written is the same as the current value stored in Flash, the write operation will be skipped to avoid unnecessary erase cycles, further extending the Flash's lifespan.