Timer Camera X

SKU:U082-X

Tutorial&Quick-Start

Choose the development platform you want to use, view the corresponding tutorial&quick-Start.

Camera-Tool UIFlow Arduino

Description

Timer Camera X is a camera module based on ESP32, integrated with ESP32 chip and 8M-PSRAM. The camera (ov3660) with 3 million pixels , DFOV 66.5 ° and shoot 2048x1536 resolution photo, built-in 140mAh battery and LED status indicator, featuring ultra-low power consumption design. There is a reset button under the LED. Through RTC (BM8563), timing sleep and wake-up can be realized. The standby current is only 2μA. After timing photo taking function(one photo per hour) is turned on, the battery can work continuously for more than one month. The module supports WiFi image transmission and USB port debugging. The bottom HY2.0-4P port output can be connected to other peripherals. Through M5Burner burning firmware, Timer Camera X can be set directly with Camera-Tool, and Timer Camera X data can be processed in UIFlow.

> The low-power power management solution adopted by the Timer Camera series is different from the CORE and StickC devices. When in use, the PWR button is used as a power-on button(long press 2s). If you need to shut down the device, you need to use the software API or press the Reset button on the PCB.When using external power supply, the device will remain powered on.

Product Features

- Design based on esp32
- WiFi image transmission
- Timed sleep wake up
- Status indicator
- Ultra low power design
- Built-in 140mAh battery
- Programming platform：ESP-IDF/Arduino/UIFlow

Includes

- 1x Timer Camera X
- 1x LEGO Adapter
- 1x Wall-1515
- 1x Type-C USB(20cm)

Applications

- Take pictures regularly

- Remote video monitoring

USB Drive problems

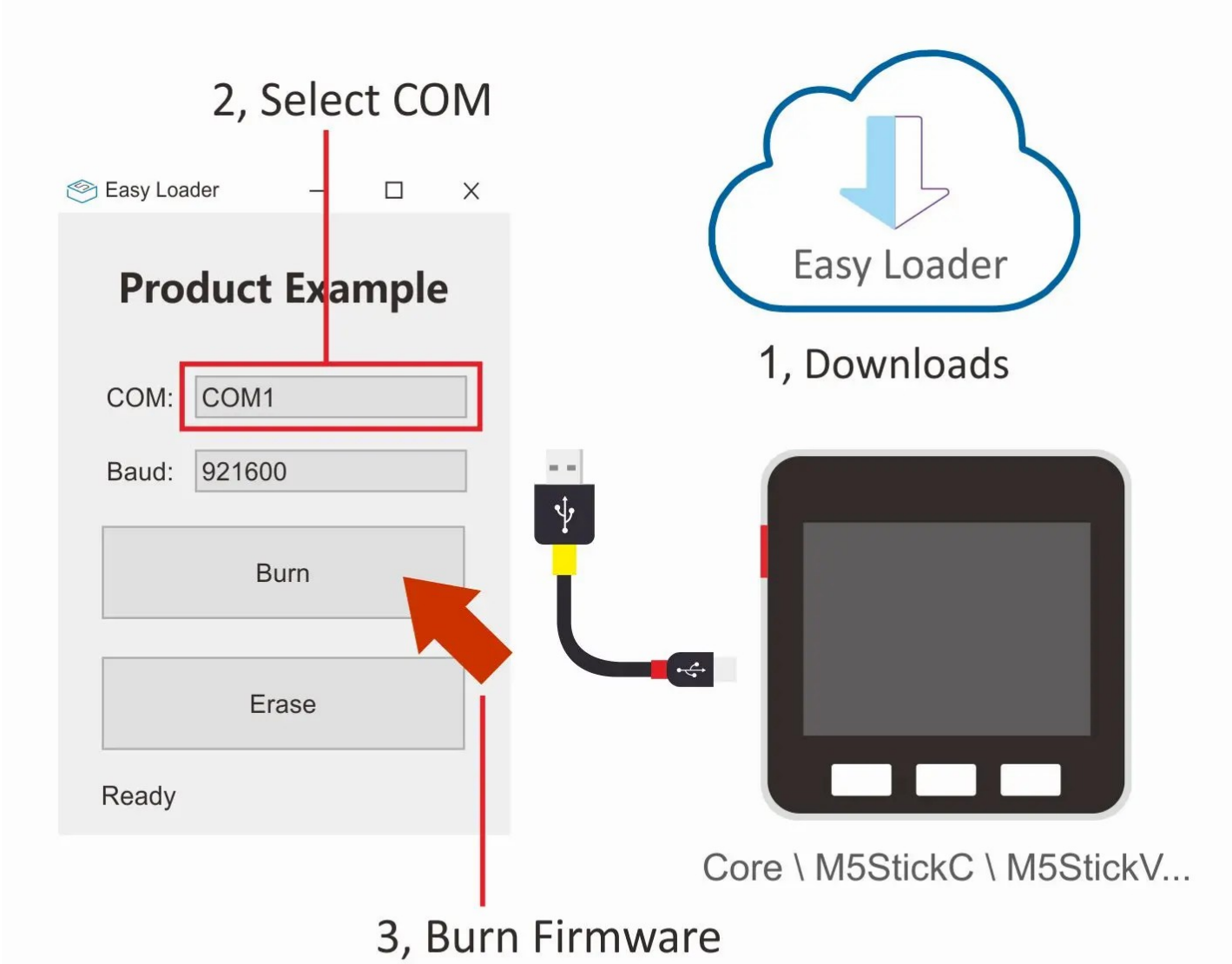
> TimerCAM may not work without driver in some systems. Users can manually install FTDI driver to fix this problem.

Specification

Resources	Parameter
PSRAM	8MB
Flash	4M
Image Sensor	OV3660
Maximum resolution	300w pixels
Output format	8-/10-Bit RAW, RGB and YCbCr output, compression.
Maximum image transmission rate (OV3660)	2048x1536: 15fps / 1080p: 20fps / 720p: 45fps / XGA(1024x768) : 45fps / VGA(640x480) : 60fps / QVGA(320x240) : 120fps
DFOV	66.5°
Battery	140mAh
Net weight	15g
Gross weight	39g
Product Size	48*24*15mm
Package Size	75*45*30mm

EasyLoader

> EasyLoader is a concise and fast program writer, which has a built-in case program related to the product. It can be burned to the main control by simple steps to perform a series of function verification.



Windows MacOS

PinMap

Camera Interface PinMap

Interface	Camera Pin	TimerCamera
SCCB Clock	SIOC	IO23
SCCB Data	SIOD	IO25
System Clock	XCLK	IO27
Vertical Sync	VSYNC	IO22
Horizontal Reference	HREF	IO26
Pixel Clock	PCLK	IO21
Pixel Data Bit 0	D0	IO32
Pixel Data Bit 1	D1	IO35
Pixel Data Bit 2	D2	IO34
Pixel Data Bit 3	D3	IO5
Pixel Data Bit 4	D4	IO39
Pixel Data Bit 5	D5	IO18
Pixel Data Bit 6	D6	IO36
Pixel Data Bit 7	D7	IO19
Camera Reset	RESET	IO15
Camera Power Down	PWDN	-1
Power Supply 3.3V	3V3	3V3
Ground	GND	GND

GROVE Interface

Grove	TimerCamera

Grove	TimerCamera
SCL	IO13
SDA	IO4
5V	5V
GND	GND

LED Interface

LED	TimerCamera
LED_Pin	IO2

BAT Interface

BAT	TimerCamera
BAT_ADC_Pin	IO38
BAT_HOLD_Pin	IO33

Related Link

- **datasheet**
  - ESP32
  - OV3660

Schematic

TimerCAM_A1-ESP32_SUBSYS

TimerCAM_A2-PMS_UART

Example

Arduino

- **TimerCamera X-Arduino**

ESP-IDF

- **FactoryTest**
- **Ali-OSS**
- **Timer-Wake**

Firmware

You can download and burn firmware with M5Burner

Tutorial

Use Camera-Tool to take pictures

Use HTTP Cloud Image Interface Service-UIFlow to get pictures

Use Arduino development

Video

Last updated: 2020-12-14