

FIRMWARE FLASH WITH ESP EASY (from Allterco Robotics)

Instructions for the Shelly Firmware Flash

Original: https://miralabs.bg/shelly1_flash_en/

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SHELLY1 – WHAT IS IT AND HOW TO FLASH IT WITH ESPEASY?

NEW!

FOR THOSE OF YOU WHO DO NOT HAVE TIME OR SUFFICIENT KNOWLEDGE TO FLASH BOARDS, WE HAVE STARTED A NEW PROJECT – FLASHEDFIRMWARE.COM. YOU CAN BUY SMART HOME PRODUCTS(SHELLY1 IS ONE OF THEM) FLASHED WITH YOUR FAVOURITE FIRMWARE!

Last week Alterco Robotics announced new product from the Shelly family – [Shelly 1](#). The new device is a WiFi connected relay for controlling electrical appliances. The characteristic that impresses the most is the size of the device. The engineers from Alterco Robotics managed to fit the electronics in a nice enclosure with size of 4.1cm x 3.6cm. which allows the module to be installed in a wall switch console.

Specifications:

- ESP8266ex with 2mb of SPI flash
- 16A relay
- Power source can be 12V DC, 24v-60v DC and 110-230AC
- Switch input

Shelly1 vs Sonoff Basic

Size	41 x 36 x 17 mm	88 x 38 x 23 mm
Max current	16A	10A
Power Supply Voltage	DC: 12V, 24-60V AC: 110V-230V	AC: 90V-250V

[Shelly 1](#) is aimed at DIY enthusiasts who prefer to flash their own code to the smart devices. The engineers have placed a header with TX, RX, 3v3, GND and GPIO 0 pins thanks to which, we can flash the embedded MCU with our own code.

In the following lines I will guide you through the process of flashing the ESP8266 MCU with ESPEasy firmware.

ESPEasy is a nice firmware for the ESP8266 which allows us to program the MCU without writing a single line of code. It has a good looking web interface where all the configuration is done.

Required materials:

- [Shelly 1](#)
- USB to UART convertor
- Breadboard(recommended)
- Jumper wires

Steps for flashing the MCU:

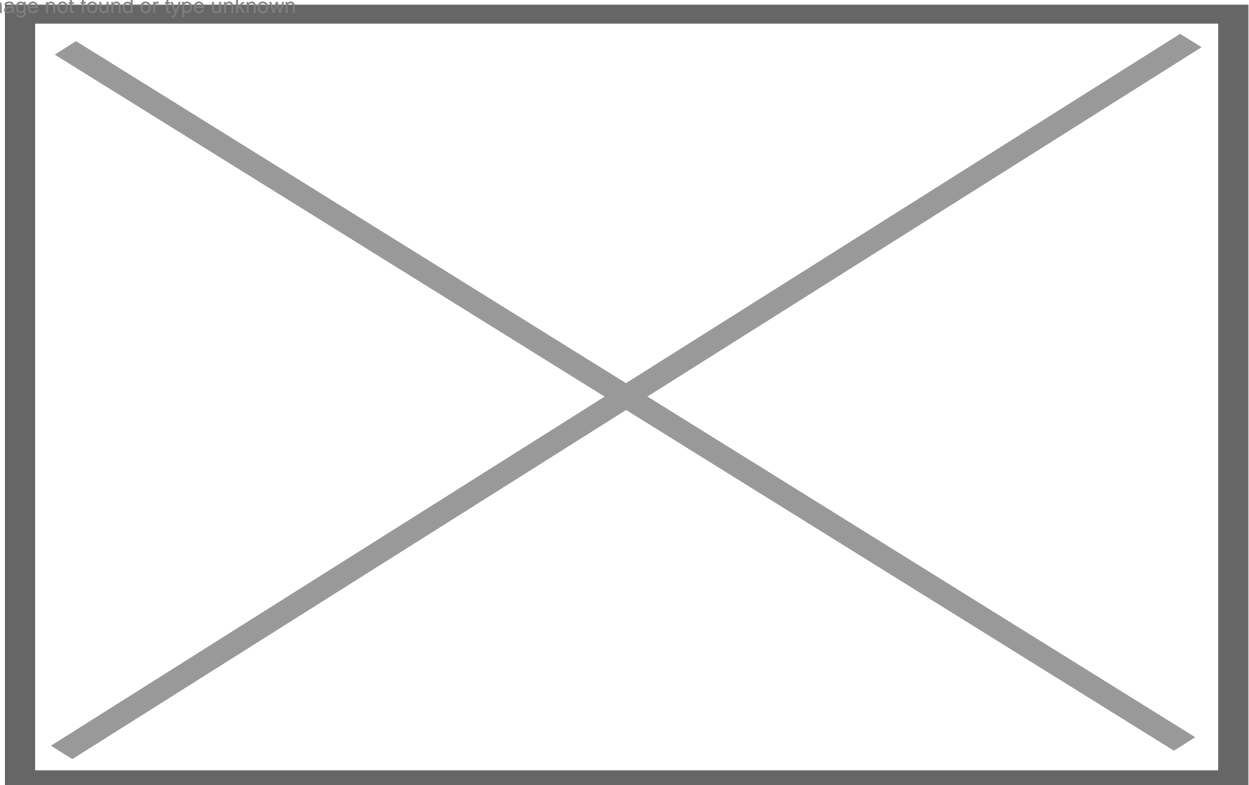
Step 1: [Download ESPEasy firmware](#)

Step 2: Connect [Shelly 1](#) with the USB to UART convertor following the pinout diagram below.

60-shelly1-pinout-400x400-png

- In order to boot the ESP in flash mode GPIO 0 must be connected to GND when powering on the device.
- In this case I am using a breadboard and the orange jumper is connecting GPIO 0 and GND.
- After powering on the device we can remove the jumper between GPIO 0 and GND.

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Step 3: Check on which COM port is the USB to UART convertor.

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- In this case its COM 6.

Step 4: Open ESPEasy Flasher from the ZIP archive that we just downloaded.

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- Choose the COM port on which the convertor is connected and select the normal_ESP8266_1024.bin file from the Firmware drop-down menu.
- Since the ESP in [Shelly 1](#) has 2mb of flash we choose the firmware for 1mb flash.
- Press the flash button and wait for the firmware to upload.

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Step 5: Setup Wifi

- After we have successfully flashed the ESP, it will make a WiFi hotspot with SSID ESP_Easy_0 and password configesp. The web interface is accessible on 192.168.4.1. More information [here](#).

Step 6: Connect with Domoticz

- From the web interface go to Controllers section to add a new controller. From the drop-down menu select Domoticz MQTT.
- We fill in only the following fields:
 1. In Controller IP we fill in the IP address of the MQTT broker.
 2. In Controller port we fill in 1883
 3. In Controller User and Controller Password we fill in the credentials for the MQTT broker ONLY IF WE HAVE CREATED ONE! If not leave blank.
 4. Put a tick on Enabled and click submit.

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Step 7: Setting up devices

- The only thing left is to add the Shelly's relay and switch input as devices in the Devices section.
- In Devices section we add all sensors and actuators that are connected to the ESP. In our case we have to add two records – one for the relay on GPIO 4 and one for the switch input on GPIO 5.
- For the relay we choose device type "Output – Domoticz MQTT Helper" and for the switch "Switch Input – Switch".
- Fill in the fields as shown below and for IDX fill in the IDX of the virtual devices that you have created in Domoticz.
- Click on Enabled on both devices and also click on Send to Controller on the Switch settings.

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We are ready!  or type unknown