

SOURYA

CODE DUMPING USING ST-LINK V2 (SWD INTERFACE)

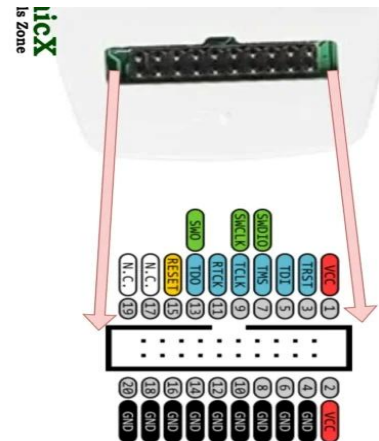
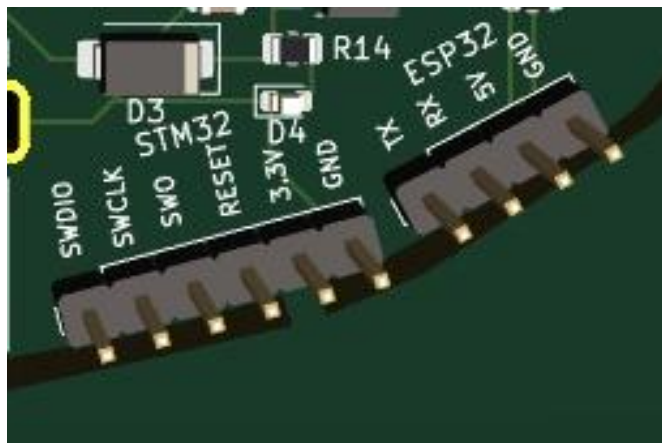
1. Introduction

ST-LINK V2 is a popular programmer and debugger used for STM32 microcontrollers. It supports communication via the SWD (Serial Wire Debug) interface and allows users to program, debug, and read (dump) the firmware stored in the microcontroller's flash memory.

Code dumping is the process of extracting firmware from a microcontroller and saving it as a binary or hex file for analysis, backup, or migration.

2. Pin Connections (SWD Mode)

ST-LINK V2 Pin	STM32 Pin
SWDIO	SWDIO
SWCLK	SWCLK
GND	GND
3.3V	VCC
RST	NRST



3. Connection Setup

- Connect ST-LINK V2 to Sourya using SWD pins.
- Connect ST-LINK to PC using USB.
- Click Debug or Run in STM32CubeIDE to dump the code into Sourya

CODE DUMPING USING FTDI MODULE INTO ESP32

1. Introduction

The ESP32 microcontroller supports UART-based programming and debugging. Using an FTDI USB-to-TTL converter, firmware code can be uploaded, monitored, and, in certain conditions, dumped (read back) from the ESP32 flash memory.

Code dumping is the process of extracting firmware from the ESP32 flash memory and saving it as a binary file. This process is useful for backup, analysis, or firmware migration.

2. FTDI to ESP32 Connections

FTDI Pin	Esp32 Pin
TX	RX
RX	TX
GND	GND
3.3V	3.3V

3. Entering Flash Mode

To put ESP32 into flashing mode:

- Hold BOOT (GPIO0 = LOW).
- Press RESET.
- Release RESET.
- Release BOOT.

Then the code starts uploading after entering flash mode and waits a few seconds before finishing.