🔌 ESP32-TUX SmartSwitch

LVGL Framework Implementation on ESP32 IDF

FessiT Solutions - GroHub

⚠ Prerequisites

Before you begin, make sure you have the following installed:

- **ESP-IDF Tools Setup v5.5.1** (Offline installer)
- Git (for repository cloning)
- USB drivers for your ESP32 device

📥 **Download ESP-IDF Tools v5.5.1**

1 Clone the Repository

Open your terminal or command prompt and clone the repository from GitHub:

Bash / Terminal Copy

```
git clone https://github.com/FessiTSolution-GroHub/ESP32-TUX-SmartSwitch.git cd ESP32-TUX-SmartSwitch
```

✔ **Success!** You should now have the project files on your local machine.

2 Configure Your Device

Run the ESP-IDF configuration menu to set up your specific device:

Configuration Command Copy

```
idf.py menuconfig
```

Navigation Path: ESP32-TUX Configuration → Device Config

Select Your Device:

WT32-SC01
SPI - 4MB Flash

WT32-SC01+

8Bit Parallel - 8MB Flash

ESP32S3SPI35
SPI - 16MB Flash

ESP32S335D
16Bit Parallel - 16MB Flash

⚙ **Important:** Ensure you set the correct Flash size and Partition Table based on your selected device.

3 Build the Project

Compile the project with the ESP-IDF build system:

Build Command Copy

```
idf.py build
```

This process may take several minutes on the first build as it compiles all dependencies.

4 Flash to Your Device

Connect your ESP32 device via USB and flash the compiled firmware:

For Linux/Mac:

Linux/Mac Command Copy

```
idf.py -p /dev/ttyUSB0 flash monitor
```

For Windows:

Windows Command Copy

```
idf.py -p COM3 flash monitor
```

📌 **Note:** Replace `/dev/ttyUSB0` (Linux/Mac) or `COM3` (Windows) with your actual port. Use `ls /dev/tty*` or Device Manager to find your port.

🎉 **Congratulations!** Your ESP32 SmartSwitch should now be flashed and running. The monitor will display real-time logs from your device.

Troubleshooting Tips

- **Permission Denied:** On Linux, add your user to the `dialout` group: `sudo usermod -a -G dialout $USER`

- **Port Not Found:** Check device connections and install appropriate USB drivers
- **Build Errors:** Ensure ESP-IDF v5.5.1 is properly installed and environment variables are set
- **Flash Failed:** Try holding the BOOT button while flashing

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ESP32-TUX SmartSwitch Project

View on GitHub

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