

ESP32-C3 Toolchain Installation Tutorial

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1 Introduction

This tutorial will guide you through the steps to install the ESP32-C3 toolchain on your system.

2 Prerequisites

Before you begin, ensure you have the following:

- A computer running Ubuntu
- Internet connection
- Basic knowledge of terminal commands

3 Step 1: Update and Upgrade Your System

Open your terminal and run the following commands to update and upgrade your system:

```
sudo apt update
sudo apt upgrade
```

4 Step 2: Install Required Dependencies

Run the following command to install the required dependencies:

```
sudo apt install git wget flex bison gperf python3 python3-pip
python3-setuptools cmake ninja-build ccache libffi-dev libssl-dev
dfu-util
```

5 Step 3: Download the ESP-IDF

Clone the ESP-IDF repository from GitHub:

```
mkdir -p ~/esp
cd ~/esp
git clone --recursive https://github.com/espressif/esp-idf.git
```

6 Step 4: Set Up the Environment Variables

Navigate to the ESP-IDF directory and set up the environment variables:

```
cd ~/esp/esp-idf
./install.sh esp32c3
. ./export.sh
```

7 Step 5: Verify the Installation

To verify the installation, run the following command:

```
idf.py --version
```

8 Step 6: Test Hello World Example

Get Starter Code for Hello World Example and Build the Project:

```
cp -a examples/get-started/hello_world ~/esp/
cd ~/esp/hello_world
idf.py set-target esp32c3
cd build
ninja
idf.py flash
idf.py monitor
```

9 Conclusion

You have successfully installed the ESP32-C3 toolchain. You can now start developing your projects using the ESP-IDF.