# Introduction to ESP32 using Vaman

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Abstract—This document provides a simple introduction to programming the ESP32 on Vaman using the Arduino framework

## 1 Software

All codes used in this document are available at the following link

```
https://github.com/gadepall/vaman/
    tree/master/esp32/setup/codes
```

## 2 Hardware Setup

2.1. Connect the USB-UART to raspberry pi through USB.

2.2. On the rpi

```
dmesg | tail
lsusb
```

you should see the USB-UART connector detected.

2.3. Connect the USB-UART pins to the Vaman ESP32 pins according to Table

| VAMAN LC PINS | UART PINS |
|---|---|
| GND | GND |
| ENB | ENB |
| TXD0 | RXD |
| RXD0 | TXD |
| 0 | IO0 |
| 5V | 5V |

TABLE 2.3.1

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## 3 Blink LED

3.1. On termux,

```
svn co https://github.com/
    gadepall/vaman/trunk/esp32/
    setup/codes
cd codes
pio run
```

3.2. Transfer the bin file to the rpi

```
scp .pio/build/esp32doit-devkit
    -v1/firmware.bin pi@192
    .168.50.252:./hi/.pio/build/
    esp32doit-devkit-v1/firmware
    .bin
```

3.3. On rpi,

```
cd /home/pi/hi
pio run -t nobuild -t upload
```