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 2.3.1

2.4. Connect the Vaman-ESP pins to the seven segment display according to Table 2.4.1

3 Blink LED

3.1. On termux,

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

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

TABLE 2.3.1

ESP	SEVEN SEGMENT DISPLAY
5V	COM
18	DOT

TABLE 2.4.1

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
```