

Platformio on Android-Termux

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Abstract—This manual is a guide to get started with the Arduino UNO on an Android Phone.

1 TERMUX

1. On your android device, install apkpure from

<https://m.apkpure.com/>

2. Install Termux from apkpure
3. Install basic packages on termux

```
#Give termux access to your user directory in
  android
termux-setup-storage
```

```
#Upgrade packages
apt update && apt upgrade
apt install build-essential openssh
```

```
#Mandatory packages
apt install curl git wget subversion proot proot-
  distro python nmap neovim ranger
```

```
#-----End Install Termux-----
-----
```

4. Install Debian on termux

```
proot-distro install debian
proot-distro login debian
apt update && apt upgrade
apt install apt-utils build-essential cmake
  neovim
apt install git wget subversion imagemagick
  nano
apt install avra avrdude gcc-avr avr-libc
```

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```
#-----End Installing ubuntu on
  termux-----

#----- Installing python3 on
  termuxubuntu-----
apt install python3-pip python3-numpy python3
  -scipy python3-matplotlib python3-mpmath
  python3-sympy python3-cvxopt
#----- End installing python3 on
  termuxubuntu-----

#----- Installing platformio on
  termuxubuntu-----
pip3 install platformio
#----- End installing python3 on
  termuxubuntu-----
```

2 ARDUINO DROID

1. Install ArduinoDroid from apkpure
2. Open ArduinoDroid and grant all permissions
3. Execute the following on termuxubuntu

```
cd /sdcard/Download
svn co https://github.com/gadepall/fwc-1/trunk/
  ide/piosetup/codes
cd codes
pio run
```

This will generate the .hex file in

`.pio/build/uno/firmware.hex`

subdirectory.

4. Connect the Arduino to your phone via USB-OTG
5. For flashing the bin files, in ArduinoDroid,

Actions->Upload->Upload Precompiled

then go to your working directory and select

`.pio/build/uno/firmware.hex`

for uploading .hex file to the Arduino Uno.

6. The LED beside pin 13 will start blinking.