

Install EndeavourOS Desktop on Arch Linux ARM

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The storage device for the Operating System will be either a Micro SD card or an eMMC card. The micro SD card must be at least 32GB, 64 GB or 128 GB gives more head room for logs, data, and etc. Use a good name brand micro SD such as Samsung or SanDisk ultra, not an off brand. SD cards come in different speed classes, 2, 4, 6, and 10, with 10 being the fastest. Since the advent of 4k devices, there is also UHS class speed 1 and UHS class speed 3. UHS = Ultra High Speed. Get at least a class 10 HC1 device. Here is what to look for.



The speed class is the number 10 inside what looks like a C. The speed class is followed by A1 which is a new specification I am not familiar with.

The UHS speed is the number 1 inside a U and also referred to as HC1. This one sold for \$8.98 USD at amazon including a Micro SD to SD adapter.

The Odroid N2 and Odroid XU4 will also run off of eMMC

Theoretically you can install EndeavourOS on any ARM device that Arch Linux Arm supports. To see if your SBC device is supported, go to <https://archlinuxarm.org/> Hover the cursor over "Platforms" then the "Architecture", brand name, etc. to see if your device is supported. Click on your device and get a page with overview and installation tabs.

The first step is to install an Archlinux Arm base image on a uSD or eMMC card, On a Raspberry Pi 4 series, installing the 32bit OS allows installation on an external USB SSD.

1. Follow the installation instructions for your SBC device on the Archlinux Arm web site.
2. There is a script for the Odroid N2, Odroid XU4, or Raspberry Pi 4 series that will install the Archlinux Arm base image for you available at:
<https://github.com/endeavouros-arm/image-install>
Instructions are in the README.mb

For the listed devices, number 2 is the recommended way to install the Archlinux Arm base image. Otherwise number 1 will be necessary.

Install EndeavourOS on ARM

The following SHOULD work with any ARM SBC (Single Board Computer) once Arch Linux ARM base is installed on the device.

The default user is *alarm* with the password *alarm*, the default root password is *root*.
FYI, alarm = Arch Linux ARM and it is also the default hostname.

To perform the install, the SBC will need to be connected to a keyboard, the ethernet, and a HDMI PC monitor or television. For RPi 4 series, WiFi should work after installation.

After the SBC boots up:

```
Login as root          (enter root for the username and root for the password)
# ping -c 4 endeavouros.com    (check internet connection, should get 4 good pings)
    If the ping does not work, mostly involving Rpi 4b, enter the following
    # systemctl enable dhcpcd.service
    # systemctl start dhcpcd.service    ( then re-check with ping)
```

Use vi or nano to edit /etc/pacman.d/mirrorlist. Change this

```
## Geo-IP based mirror selection and load balancing
Server = http://mirror.archlinuxarm.org/$arch/$repo
```

To this by adding a # in front of Server to comment out that line

```
## Geo-IP based mirror selection and load balancing
# Server = http://mirror.archlinuxarm.org/$arch/$repo
```

Then un-comment servers near you by removing the # from in front of desired mirror URLs.

```
# pacman-key --init
# pacman-key --populate archlinuxarm
# pacman -Syu git libnewt wget    (always update the OS before installing packages)
```

The install script will be installing Numerous Packages, to make the downloading go faster:

```
# vi /etc/pacman.conf
```

Scroll down to

```
#ParallelDownloads = 5
```

Uncomment this line by removing the # and if desired, change 5 to 8 or however many parallel downloads you want to run. For my ISP 8 works well

Save the file, then

```
# reboot  & Login as root    (do NOT log back in as user "alarm" and use sudo)
```

RUN SCRIPT TO INSTALL EndeavourOS

```
# git clone https://github.com/endeavouros-arm/install-script.git
# cd install-script
# ls -l
-rwxrwxr-- 1 root root 5607 May  5 01:39 endeavour-ARM-install-V2.X.sh
```

If endeavour-ARM-install-V2.X.sh is not executable, use chmod to alter it and recheck

```
# chmod 774 endeavour-ARM-install-V2.X.sh
```

```
# ./endeavour-ARM-install-V2.X.sh (run the installer script)
```

Choose to install a desktop environment, and answer the questions for the install options. The following procedures are performed.

base-devel and other commonly used packages are installed. The packages are installed as per the package lists from x86_64 EndeavourOS. The ARM install is, as much as possible, package for package the same as a x86_64 install. After a bit of configuration, the packages for the selected Desktop Environment are installed. Finally, the EndeavourOS welcome and additional packages from the EndeavourOS-arm repository are installed. After the script runs, it should reboot into the appropriate Desktop Manager.

Arch Linux ARM uses the same AUR as regular Arch. The script also installs yay, so you are ready to use the AUR right out of the box.

The script installs three alias's:

alias la='ls -al --color=auto' I think of it as "list all" including dot files

alias lb='lsblk -o NAME,FSTYPE,FSSIZE,LABEL,MOUNTPOINT' think "ls blks" (partitions)

alias ll='ls -l --color=auto' I think of as "list long".

I believe that some ARM devices do not support sleep mode or hibernation. If you experience a problem, it is recommended in power management for your DE to disable sleep and hibernation if possible.

The storage capabilities of micro SD cards is limited. There are three ways to remedy this.

1 Keep your data on a LAN file server, NAS or whatever.

2 If you are installing a on a Raspberry Pi 4 series SBC with the 32 bit OS, you can install the OS on an external USB SSD of whatever size you desire.

3 If the installation is on a uSD, consider installing an external USB SSD for an external /home directory. It makes your data more transportable between devices, and it is also easy to back up your data to another USB3 SSD using rsync. Since the data and config files are separate from the uSD card, you can re-install and not touch the data. All you have to do is, after the re-install edit the fstab file to mount your USB SSD enclosure on /home. Because all of your dotfiles are in your home directory, when you launch your various applications, they'll find all of your settings, preferences, and data.

If you want to add an external USB SSD enclosure as the /home directory, it is best to do so immediately after installation.

Instructions for Installing an external SSD as the /home directory are here:

https://github.com/endeavouros-arm/manuals/blob/master/Add_USB-SSD_as_home.pdf

Have fun customizing your vanilla DE.

Flash an eMMC card on Odroid XU4

Very few people will need this procedure

On an Odroid XU4, if you opt to use a emmc card as the boot device, then additional steps are necessary. There are many opinions on micro SD VS emmc. The choice is yours.

To create an emmc card, first create a micro SD card as above including booting up the Odroid-XU4, installing keys, and update. Now that everything is working up to this point, place the emmc card on the emmc to microSD converter card. Then into the USB SD READER. Boot up the x86_64 computer with the latest EndeavourOS ISO.

Now repeat the above steps for the micro SD card but with the emmc card. When you shut down the x86_64 computer come back here and do the following.

Set the boot switch on the Odroid-XU4 board next to the HDMI jack to the uSD position (to the left). Ensure the micro SD card is in the XU4 SD slot. On the back side of the Odroid-XU4, Connect the eMMC module to the XU4, ensuring you hear a click when doing so.

Connect a monitor, keyboard, ethernet, & apply 5VDC.

The default user is *alarm* with the password *alarm*, the default root password is *root*.

Login as root

```
# cd /boot
```

```
# sh sd_fusing.sh /dev/mmcblk0
```

fusing should take place without errors. Poweroff the Odroid. Remove the micro SD card.

Switch the boot selector switch to emmc (to the right). Power up the Odroid. You should now be running on the emmc card. Login as root.

```
# pacman-key --init
```

```
# pacman-key --populate archlinuxarm
```

```
# pacman -Syu
```

Now go back to page 4 “Install EndeavourOS on ARM” section and continue installation.