

# Supported Boards and Platforms

This page is permanently under construction, for hardware recommendation, please visit our forum and Discord channel.

Also, you can find some [additional information on this page](#).

And see [How to choose a board](#).

Finally, if you are looking to purchase a new board, the best is fist to check the available emulators for each of them [on the compatibility matrix](#).

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## Raspberry Pi Zero

### Description

Single core ARM processor clocked at 1Ghz with 512 MB DDR2 Ram. Newer model has Wireless and Bluetooth built in.

### Limitations

You cannot play beyond SNES/Sega Megadrive games (16-bit generation)

### Needed Accessories

- Mini HDMI to HDMI
- Micro USB to USB
- Possibly a hub if you have more than one accessory

### Suggestions

If you want to play something more than Gameboy or NES, get a Pi 3, Pi4 or an Odroid Xu4 or N2. However, it's a popular choice when used in conjunction with a [Retroflag GPI Case](#) for handheld emulation.



## Raspberry Pi

### Description

Basically the same specs as pi zero but clocked at 700Mhz. This board has gone through multiple revisions but the newest looks identical to later models with the 4 USB ports. Today, original Raspberry Pis are outdated, and you should look into newer Pi3 or Pi4 models for better emulation performance.

### Limitations

Same as Pi Zero

### Needed Accessories

- Power Cable
- HDMI Cable

### Suggestions

If you want to play something more than Gameboy or NES, get a Pi 3, Pi 4 or Odroid Xu4 or N2.

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## Raspberry Pi 2

### Description

### Limitations

### Needed Accessories

### Suggestions

Outdated model, if looking to purchase, buy a Pi 3 or Pi 4, that is now cheaper and easier to find.

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## Raspberry Pi 3

### Description

### Limitations

### Needed Accessories

- quality power supply (otherwise you'll run into issues)

### Suggestions

Good for a wide range of emulators, but if you want to take it further, look at Pi4 or Odroid XU4 or N2.

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## Raspberry Pi 4

### Description

### Limitations

### Needed Accessories

- quality power supply (the official one is a good choice)
- mini-HDMI to HDMI Cable

### Suggestions

The latest addition to the Raspberry family. Support on Batocera is still young, but you should get results at least as good as RPi3+, and will become better and better over time.

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## Odroid C2

### Description

### Limitations

**Needed Accessories**

**Suggestions**

Good for a wide range of emulators, but if you want to take it further, look at Odroid XU4 or N2.

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**Odroid C4**

**Description**

**Limitations**

**Needed Accessories**

**Suggestions**

Good for a wide range of emulators, this board provides performance close to Raspberry Pi 4.

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**Odroid XU4**

**Description**

**Limitations**

**Needed Accessories**

**Suggestions**

Aside from a PC, this device is one of the best for emulating more intensive systems, only topped by

the more recent Odroid N2 and N2+.

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## Odroid N2 and N2+

### Description

Even if the SBC is a bit larger than a Raspberry Pi, it's still very small for bartop/arcade projects. It's also much more powerful and completely fanless.

### Limitations

### Needed Accessories

Compared to a Raspberry Pi, the Odroid N2 and N2+ don't provide wifi or bluetooth controllers out of the box (but many USB wifi or BT dongles are compatible).

### Suggestions

Aside from a PC, these devices are some of the best for emulating the latest systems, up to Gamecube.

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## Odroid Go Advance / Super

## Description

Available in several variants:

- original Odroid Go Advance - launched in January 2020
- Odroid Go Advance Black Edition - launched in June 2020, which provides a USB-C power connector, integrated wifi, and two smallish R2/L2 additional buttons
- Odroid Go Super - launched in January 2021, with a larger 5" screen, two analog controllers, dedicated volume buttons (but no integrated wifi any more)

There are other handheld "clones" of the Odroid Go Advance available on the market, powered by the same SoC, that are fully compatible with the same Batocera build, like RK2020 and Anbernic RG351P.

## Limitations

- If you want to use wifi and/or bluetooth on the original Odroid Go Advance, you must add a dongle that provide the two at same time because there is only one USB port. [Compatible Dongles list](#)

## Needed Accessories

- SD Card
- WIFI USB Dongle (To add internet for original OGA or OGS)
- Bluetooth USB Dongle (for multiplayer for Original OGA or OGS)

## Suggestions

More Powerful than a Raspberry Pi/GPi Case, the Odroid Go Advance is currently one of the best handheld platforms for Batocera and emulation in general.

The OGA has 6 buttons under the screen: from left to right

```
[ SELECT ] [ VOL - ] [ VOL + ] [BRIGHT - ] [ BRIGHT + ] [ START ]
```

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## Khadas VIM2

### Description

[Khadas VIM2](#) has a beefy Amlogic S912 SoC: x4 Cortex A53 performance-cores (1.5Ghz), and x4 Cortex A53 efficiency-cores (1.0Ghz) are merged into a octo-core configuration, coupled with a Mali-T820 MP3 GPU running at 600 MHz.

This board is powered by open source Mesa panfrost driver and therefore currently limited to OpenGL ES 2.0. Support for OpenGL ES 3 will be available when Mesa supports it on this GPU.

Support introduced in Batocera.linux **29**.

For compatibility information, check <https://batocera.org/compatibility> and use s912 as reference.

### Limitations

At the time of writing:

- This board needs testing, please report any issues and we will add them to this list.

### Needed Accessories

- SD Card

### Suggestions

If board keeps booting into Android, you need to erase the onboard eMMC (Sorry!). Check [VIM2 Documentation](#) for procedure.

To change resolution, edit `/boot/extlinux/extlinux.conf`.

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## Khadas VIM3

### Description

[Khadas VIM3](#) has a powerful Amlogic A311D SoC: x4 Cortex A73 performance-cores (2.2Ghz), and x2 Cortex A53 efficiency-cores (1.8Ghz) are merged into a hexa-core configuration, and fabricated with a 12nm process to maximise performance, thermal and electrical efficiency.

Support introduced in Batocera.linux **5.27**.

For compatibility information, check <https://batocera.org/compatibility> and use Odroid N2 as reference.



## Limitations

At the time of writing:

- Wifi is unstable. Firmware often fails to load
- Kodi isn't enabled
- 8bitdo SN30Pro USB controller isn't always recognized
- Power-off button isn't working
- Video splash is disabled
- HDMI CEC is disabled in EmulationStation

## Needed Accessories

- SD Card

## Suggestions

If board keeps booting into Android, you need to erase the onboard eMMC (Sorry!). Check [VIM3 Documentation](#) for procedure.

To change resolution, edit `/boot/extlinux/extlinux.conf`.

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## Other SBC

(This section needs to be updated)

Batocera also supports other SBC such as:

- ROCKPro64
  - Asus Tinkerboard
  - MQmaker MiQi
  - Amlogic S905 and variants
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## 32-Bit PC

### Description

### Limitations

Being 32-bit, some of the newer 64-bit emulators will not work. Only PC older than 2010 should fall into that category, more recent PC should use the 64-bit version.

### Needed Accessories

- Flash drive
- Controller

### Suggestions

Easy to come by and play nearly all emulators except 64-bit ones. Try 64-bit if you can.



## 64-Bit PC

### Description

### Limitations

The sky's the limit! Virtually **no limitation** 😊

However, depending on your hardware (mostly CPU and GPU), the performance of the emulators can vary significantly. For some of them, if your hardware is powerful enough, you can even use upscaling to have a better rendering than the original consoles. Take a look [at this page for PC performance comparisons](#).

### Needed Accessories

- Flash drive
- Controller

### Suggestions

No suggestions really - anything in the last few years should play fine. Having a powerful GPU helps for the most intensive emulators (PS2, PS3, Wii, WiiU, 3DS...). Some comparative data can be found [on this page](#).

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