



# RetroArch Android (v0.9.8) - Cores Manual

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## 1 Introduction

Listed below are all the cores that RetroArch Android supports.

- SNES9x Next  
Used for: playing SNES games (Super Nintendo Entertainment System)  
Author(s): SNES9x team, OV2, Bearoso, zones, Squarepusher (fork)  
Recommended system requirements: ARM Cortex A9 multi-core device (and up)  
Extensions: "smc|fig|sfc|gd3|gd7|dx2|bsx|swc|zip|SMC|FIG|SFC|BSX|GD3|GD7|DX2|SWC|ZIP"
- VBA Next  
Used for: playing Game Boy Advance games  
Recommended system requirements: ARM Cortex A9 multi-core based device (and up)  
Author(s): Forgotten, VBA-M team, Squarepusher (fork)  
Extensions: "gba|GBA|zip|ZIP"
- FCEUmm  
Used for: playing NES games (Nintendo Entertainment System)  
Author(s): CaH4e3, original FCEU authors  
Extensions: "fds|FDS|zip|ZIP|nes|NES|unif|UNIF"
- NESTopia  
Used for: playing NES games (Nintendo Entertainment System)  
Author(s): Marty  
Extensions supported: "nes|NES|zip|ZIP|fds|FDS"

- Gambatte  
Used for: playing GameBoy / GameBoy Color games  
Author(s): Sinamas  
Extensions supported: "gb|gbc|dmg|zip|GB|GBC|DMG|ZIP"
- Final Burn Alpha  
Used for: playing arcade games  
Author(s): Dave, FBA Team (Barry Harris & co)  
Extensions supported: "zip|ZIP"
- Genesis Plus GX  
Used for: playing Sega Genesis / Master System / Game Gear / Sega CD games  
Author(s): Charles McDonald, ekeke  
Extensions supported: "md|smd|bin|cue|gen|zip|MD|SMD|bin|iso|ISO|CUE|GEN|ZIP|sms|SMS|gg|GG|sg|SG"
- NX Engine  
Used for: playing Cave Story / Doukutsu Monogatari  
Author(s): Caitlin Shaw (rogueeve)  
Extensions supported: "exe|EXE|zip|ZIP"
- PCSX ReARMed  
Used for: playing PlayStation1 games  
Author(s): PCSX Team, Notaz, Exophase (GPU plugin)  
Extensions supported: "bin|cue|img|mdf|pbp|cbn"
- Prboom  
Used for: playing Doom, Doom 2, Ultimate Doom, Final Doom, and mods  
Author(s): Various  
Extensions supported: "WAD|wad|IWAD|iwad"
- Mednafen NGP  
Used for: playing Neo Geo Pocket Color games  
Author(s): Original Neopop authors, Ryphecha  
Extensions supported: "ngp|NGP|ngc|NGC|zip|ZIP"
- Mednafen WonderSwan  
Used for: playing WonderSwan / WonderSwan Color / WonderSwan Crystal games  
Author(s): Original Cygne authors, Ryphecha  
Extensions supported: "ws|WS|wsc|WSC|zip|ZIP"
- Mednafen Virtual Boy  
Used for: playing Virtual Boy games  
Author: Ryphecha  
Extensions supported: "vb|VB|vboy|VBOY|bin|BIN|zip|ZIP"

- Mednafen PC Engine  
Used for: playing PC Engine / Supergrafx 16 / PC Engine CD games  
Author: Ryphecha  
Extensions supported: "pce|PCE|sgx|SGX|cue|CUE|zip|ZIP"

We'll go over each of these.

## 1.1 SNES9x Next

**Version:** v1.52.3

This emulator should run at fullspeed on an Android device with a dual-core ARM Cortex A9-based CPU.

### 1.1.1 CHANGELOG

#### v1.52.3

- Fixed DKC2 graphics inaccuracies
- Fixed issue that could corrupt memory addresses over time - found while deiniting Super Mario Kart.
- Updated to use RGB565 as pixel format.
- Speed hacks for Final Fantasy III/VI - makes it fullspeed for Wii.
- Fixed Super Double Dragon input issue.

## 1.2 VBA Next

**Version:** v1.0.2

This emulator needs at least a dual-core ARM Cortex A9-based CPU and up.

### 1.2.1 CHANGELOG

#### v1.0.2

- Added Pokemon Emerald to built-in vbaover - fixes white screen
- Lessens RAM footprint - makes Mother 3 fit into memory on Wii.
- More consistent syncing.
- Updated to use RGB565 as pixel format.

## 1.3 FCEUmm

**Version:** 98.13 SVN

This emulator has been tested to run at fullspeed on an ARM Cortex A8 single-core CPU. Your mileage may vary on slower devices.

### 1.3.1 CHANGELOG

#### For 0.9.8 point release

- Upgraded to latest SVN (r134)
- Updated to use RGB565 as pixel format.

## 1.4 NESTopia

**Version:** 1.44

This emulator has been tested to run at fullspeed on an ARM Cortex A8 single-core CPU. Your mileage may vary on slower devices.

### 1.4.1 NOTES

- There might still be an audio desync that happens at the half hour mark. Ever since NESTopia 1.36 some kind of APU bug has been inadvertently introduced. We will be researching this.

### 1.4.2 CHANGELOG

#### For 0.9.8 point release

- New port

## 1.5 Gambatte

**Version:** 0.50

This emulator has been tested to run at fullspeed on an ARM Cortex A8 single-core CPU. Your mileage may vary on slower devices.

### 1.5.1 CHANGELOG

#### For 0.9.8 point release

- Now makes use of GBC BIOS color palettes.
- Can also make use of custom color palettes.
- Updated to use RGBX8888 as pixel format.

## 1.6 Final Burn Alpha

**Version:** 0.2.97.28

Performance varies based on the game you're trying to play. Systems like CPS2 and Neogeo have been tested to run at fullspeed on an ARM Cortex A8 single-core CPU. CPS3 needs a dual-core ARM Cortex A9-based CPU for fullspeed gameplay. Your mileage may vary on slower devices.

### 1.6.1 NOTES

- Some games might be stuck in Service mode right now on big-endian systems (ie. PS3/360/Wii). Some games that come to mind are Psikyo SH2 games and Taito games like Darius 2. We will be trying to fix this issue soon and release a point update for it.
- Savestates are hooked up but games can't have their 'state restored' after unloading the game and loading it again.

### 1.6.2 CHANGELOG

#### For 0.9.8 point release

- Upgraded to 0.2.97.28.
- Controls have been revised - most of the controls should now be properly hooked up.
- Button combos have been changed -  
RetroPad L2 + RetroPad R2 + RetroPad L + RetroPad R + Select = Service Menu button  
RetroPad L2 + RetroPad R2 + RetroPad L + RetroPad R + Start = Diagnostic button  
RetroPad L2 + RetroPad R2 + RetroPad L + RetroPad R + Left = Reset button  
RetroPad L2 + RetroPad R2 + RetroPad L + RetroPad R + Right = DIP A Pressed  
RetroPad L2 + RetroPad R2 + RetroPad L + RetroPad R + Up = DIP B Pressed  
RetroPad L2 + RetroPad R2 + RetroPad L + RetroPad R + Down = Test Pressed
- Uses RGBX8888 as a color format for Psikyo SH2 games and RGB565 for everything else.

## 1.7 Genesis Plus GX

### Version: 1.7.3

This emulator has been tested to run regular Genesis and Sega CD games at fullspeed on an ARM Cortex A8 single-core CPU. Virtua Racing runs at half realtime speed on the same hardware and thus needs better system requirements. Your mileage may vary on slower devices.

### 1.7.1 NOTES

- You will need Sega CD BIOS files in your system directory in order to play Sega CD/Mega CD games. They should be named as follows:

bios\_CD\_E.bin (for EU BIOS), bios\_CD\_U.bin (for US BIOS), bios\_CD\_J.bin (for Japanese BIOS).

### 1.7.2 CHANGELOG

#### For 0.9.8 point release

- Upgraded to 1.7.3 ( might report 1.7.1 but is really 1.7.3).
- Updated to use RGB565.

## 1.8 NX Engine

### Version: 1.0.4

This game has been tested to run at fullspeed on an ARM Cortex A8 single-core CPU. Sound syncing however is currently not correct. Your mileage may vary on slower devices.

### 1.8.1 HOW TO USE

You need to copy all the 'datafiles' directory in the repository over. Start the core with doukutsu.exe - it should properly extract the needed archives from the EXE on initial boot. From there on it will use those extracted asset files.

### 1.8.2 NOTES

- NXEngine is not released yet on consoles because it is currently a total glitch fest on all consoles (Xbox 1/360/PS3/Wii). It thus seems that the issues are not endian-related. The only platforms on which it runs fine seem to be PC and Android right now. Will need to research what is up here.
- Savestates are not hooked up - therefore rewind is also not possible.

### 1.8.3 CHANGELOG

#### For 0.9.8 point release

- Upgraded to 1.0.4.
- Did major changes to path handling code and got rid of the hardcoded paths - should now handle paths correctly on \_WIN32 targets.
- Fixed save files not working.
- Updated to use RGB565.

## 1.9 PCSX ReARMed

### Version: r18

This emulator has been tested to run most games at fullspeed on an ARM Cortex A8 single-core CPU. Higher-resolution interlaced games like Tekken 3 and Tobal 2 do not run at fullspeed on the same system and require higher system specs (Cortex A9 and up). Your mileage may vary on slower devices.

### 1.9.1 NOTES

- Although PCSX ReARMed comes with built-in HLE BIOS code, you're recommended to still put BIOS files in the system directory (on Android there is no 'system directory', so instead you put the BIOS files in the same directory as the image you're trying to load). Some of the BIOS files used are: scph1001.bin, scph5500.bin, scph5501.bin, scph5502.bin, scph7502.bin.
- If an image might not load correctly, try it with and without BIOS files in the 'system directory' (read above note about 'system directory' as well).
- This is an ARM architecture-centric port right now - it is not of much use on other architectures and therefore consoles.

### 1.9.2 CHANGELOG

#### For 0.9.8 point release

- New port.

## 1.10 Prboom

### Version: 2.5.0

This game engine has been tested to run most games at fullspeed on an ARM Cortex A8 single-core CPU. Your mileage may vary on slower devices.

### 1.10.1 NOTES

- You need to have prboom.wad in the same directory as the Doom WAD file you're going to load.
- Savestates are currently not hooked up, and therefore rewind is not possible.
- Re-entrancy does not work correctly yet - don't try to load a second WAD file. Instead, exit prboom first and then launch it again (only applies to consoles).
- This is the only Doom port in existence right now where you have the option to play at variable framerates. The option exists to play at 35, 40, 50 and 60fps.



### **1.10.2 CHANGELOG**

#### **For 0.9.8 point release**

- Now uses RGB565 as pixel format.

### **1.11 Mednafen NGP**

**Version:** 0.9.28

This emulator has been tested to run at fullspeed on an ARM Cortex A8 single-core CPU. Your mileage may vary on slower devices.

#### **1.11.1 CHANGELOG**

##### **For 0.9.8 point release**

- New port.

### **1.12 Mednafen Wonderswan**

**Version:** 0.9.28

This emulator has been tested to run at fullspeed on an ARM Cortex A8 single-core CPU. Your mileage may vary on slower devices.

#### **1.12.1 NOTES**

- The music is incorrect on Xbox 360. This seems to be a 360-specific bug.

#### **1.12.2 CHANGELOG**

##### **For 0.9.8 point release**

- Upgraded to 0.9.28 version.
- Fixes save file issues on MSVC-based consoles (Xbox 1/360).
- Now uses RGB565 as a pixel format.

### **1.13 Mednafen Virtual Boy**

**Version:** 0.9.28

You will need at least a Cortex A9 CPU and/or higher for this.

#### **1.13.1 NOTES**

- This is not released yet for Xbox 1 and 360 because there are numerous game compatibility-breaking issues right now.

### 1.13.2 CHANGELOG

For 0.9.8 point release

- New port.

## 1.14 Mednafen PC Engine

**Version:** 0.9.28

This emulator has been tested to run at fullspeed on an ARM Cortex A8 single-core CPU. Your mileage may vary on slower devices.

### 1.14.1 NOTES

- You will need a BIOS file called 'syscard3.pce' in your system directory in order to be able to play PC Engine CD games.

### 1.14.2 CHANGELOG

For 0.9.8 point release

- Upgraded to 0.9.28.
- Fixes save file issues on MSVC-based consoles (Xbox 1/360).
- Updated to use RGB565 as pixel format.

## 2 About Us

Homepage: <http://www.libretro.org>

IRC: #retroarch at freenode

Github (libretro organization): <https://github.com/libretro>

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