Linux RetroArch User Guide

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Preface

Overview

This document is going to introduce how to use Retroarch.

Product Version

Chipset	Kernel Version
RK3036/RK3128/RK3326/RK3328/RK3399	Linux4.4

Intended Audience

This document (this guide) is mainly intended for:

Technical support engineers

Software development engineers

Revision History

Version	Author	Date	Change Description
V1.0.0	Zack.Huang	2020-06-12	Initial version

Contents

1. Overview

Retroarch is a powerful cross platform simulator, it can not only simulate as many different game hosts, but also provide open source code, which can be ported to major operating platforms such as Linux, Window, and Android. The implementation of RetroArch API includes video game system simulators, media players, game engines, and more general 3D programs. The program is instantiated as a dynamic library, called "Libretro Core". The libretro core written in C or C++ can run on many platforms seamlessly and hardly needed to porting. "Libretro Core" contains mainstream emulator cores such as 4do, 81, mane, etc., which can perfectly run games in many formats such as gba.

2. Source Code Modules and Custom Compilation

2.1 RetroArch Source Code Modules Introduction

RetroArch source code is located in the SDK/buildroot/output/rockchip_rkxxxx/build/retroarch-xxxxxxx

RetroArch modules index (it is going to introduce several core modules below selectively):

```
audio                 Audio module code
bootstrap             Bootstrap front-end framework code
camera                Camera module code
cores                 Core contains the core libraries supported by
RetroArch itself, including ffmpeg, imageviewer, mpr libraries, etc.
menu                  Menu code of RetroArch
network               Network module code
wifi                  wifi module code
```

There are many detailed introduction to other modules in the official document https://docs.libretro.com/, please refer to them when needed.

2.2 Custom Compilation RetroArch

```
make menuconfig
```

Select Target packages -> Libretro cores and retroarch -> retroarch.

You can select the emulator core you need in Target packages -> Libretro cores and retroarch -> Retroarch Cores.

You can also select Target packages -> Libretro cores and retroarch -> retroarch assets to load the default UI resources.

Exit menuconfig after selection:

```
make savedefconfig
```

Build：

```
make retroarch
```

Notice: when you use custom compilation RetroArch, the firmware space occupied by the rootfs containing RetroArch will become larger, you need to modify the SDK/device/rockchip/rkxxxx/parameter-buildroot.txt file, (rkxxxx indicates the chip model you used) to expand the partition of rootfs. For detailed modification methods, please refers to Chapter 3 "文件内容说明" in docs/tools/"Rockchip-Parameter-File-Format-Version1.4.pdf".
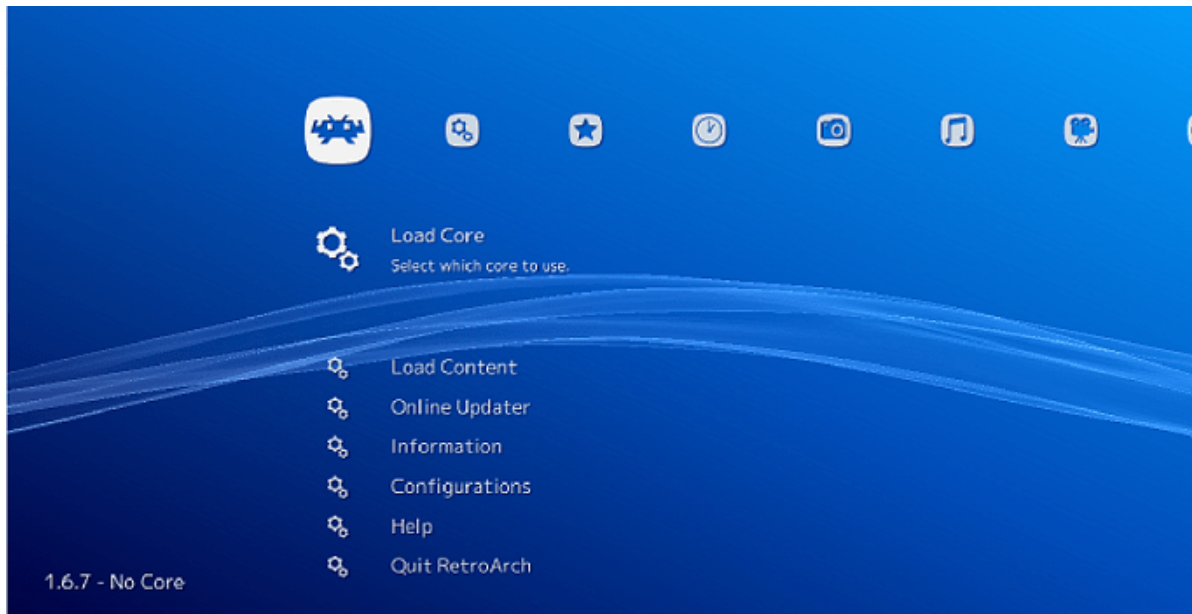
3. Run RetroArch

3.1 Use Command Line to Start RetroArch

Enter the command line of the target board: (start the main interface of RetroArch)

```
/usr/bin/retroarch -c /oem/retroarch.cfg
```

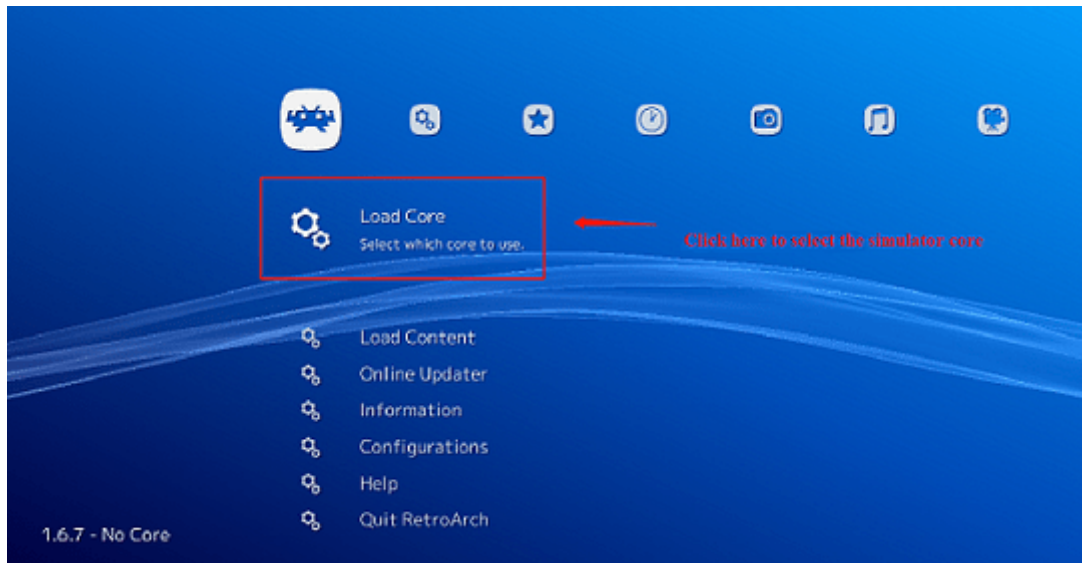Below is a screenshot of the RetroArch start interface:

We store the set configuration file retroarch.cfg in /oem, and the emulator core file in /usr/lib/libretro/. Of course, you can also specify the load core file and game ROM when starting: (start the game directly)

```
/usr/bin/retroarch -c /oem/retroarch.cfg` -L /usr/lib/libretro/*.so<emulator core> <game_rom>
```

3.2 Use a Mouse to Start RetroArch

Connect the target board, mouse, display device and other peripherals. When the display desktop appears after the system is started, the SDK will automatically generate the RetroArch icon on the desktop, double-click to open it.

In the RetroArch start interface, you need to load the emulator core first:

Then you can choose the core you need:

After loading the emulator core, you need to choose to load the game content:

Load Core
Select which core to use.

Load Content ← Click here to select the game to load
Online Updater
Information
Configurations
Help