PCSX2 1.4.0

Readme

Overview

PCSX2 is a PlayStation 2 emulator for Windows and Linux, started by the same team that brought you PCSX (a Sony PlayStation 1 emulator).

The **PCSX2** project attempts to allow PS2 code to be executed on your computer, thus meaning you can put a PS2 DVD or CD into your computers drive, and boot it up!

The project has been running for 15 years now, and since its initial release has grown in compatibility. From initially just being able to run a few public domain demos, its current state enables many games to boot and actually go in game, such as the 'famous' **Final Fantasy X**, **Devil May Cry 3** and **God of War**. You can always visit the PCSX2 homepage to check the latest compatibility status of games with more than 2000 titles tested.

Following our new release scheme as described here, v1.4.0 is an **official, stable release**.

What's new in 1.4.0?

Windows

Core:

- microVU fixes for Dreamworks games, later Tony Hawks games, Evil Dead and others.

- Fixes to New GIF unit to solve regressions

- microVU bugs fixed (affecting Extreme-G Racing and others)

- CDVD fixes (Impossible Mission now boots)

- Path 3 arbitration and timing refinements

- MFIFO fixes for DDR games

- Huge DMAC bug fix solving most of the problematic videos. (Baldurs Gate 2, Katamari Damacy and more)

- Memorycard support improved in many games, now supports PSX memorycards also

- Multitap support improved greatly

- Many game fixes for COP2 problems inherent with emulation. (Ace Combat, Forbidden Siren and others)

- VIF Unpack optimizations

- VU Delays added to fix the graphics of Snowblind engine games (Champions of Norrath, Baldurs Gate 2)

- Various other game specific fixes in GameDB

- NVM file creation (if one doesn't exist) now fills in iLink ident. (Age of Empires 2)

SPU2-X:
- Improved DMA system

- Fixes to reverb

GSdx:

- Improved adapter selection for detecting of videocards

- CLUT (Color LookUp Table) fixes for games such as Disney Golf

- Texture Offset options added to help improve upscaling artifacts

- OpenGL mode added (Experimental currently)

- Various CRC hacks

- Hack for NVIDIA cards, solves problems with stretching on drivers above 320.18

- New shader resources! Complete PCSX2 FX Revised 2.0 by Asmodean has been integrated

DEV9ghzdrk:

- Improved support for Gran Turismo 4 online play

Linux

Core:

- Support for external patch (pnach) files

OnePad changes:

- Bugfixes for multiple button presses

- Bugfixed memory leaks

ZZogl:

- Added support for MESA drivers

- Bump OpenGL requirement to 3.0 with floating texture

- Various OpenGL fixes

SPU2-X:

- Added SDL Backend

Known issues in release 1.4.0

- GSdx DX9 Hardware mode lacks various features that DX10 mode has.

- Game database not complete (it's an ongoing WIP).

- Patches browser is not implemented yet.

- Interpreters are somewhat unstable

Configuration

A very detailed guide is available on the PCSX2 homepage which is already translated in several languages!

You can consult it [here](#).

A shorter quick-start guide has been written by avih which is less detailed but much smaller. Read it [here](#).

List of current hotkeys

F1 -- Saves state into the current slot

F2 -- Changes to the next save slot

Shift+F2 -- Changes to the previous slot

F3 -- Loads state from the current slot

Shift+F3 -- Loads state from the backup slot

F4 – Frame Limiter Type (Normal / Off / Value)

Shift+F4 – Frame skip toggle

F6 -- Toggles the GS window's Aspect Ratio (stretch, 4:3, 16:9)

F8 (also **Shift+F8** & **Ctrl+Shift+F8**) -- Takes a snapshot of the image inside the GS window (saved in snaps folder)

F9 -- Hardware/Software Renderer Toggle for GSdx

F10 – Toggles logging

F11 -- Freezes the GS

F12 – Toggles Video Capture for GSdx

TAB -- Turbo On / Off toggle

Shift+TAB -- Slow motion toggle

Alt+ENTER – Full screen toggle

ESC -- Pauses the emulation

Ctrl+KP_ADD -- Zooms into the GS window

Ctrl+KP_SUBTRACT -- Zoom out of the GS window

Ctrl+KP_MULTIPLY -- Resets the zoom on the GS window

These shortcuts change the vertical zoom of the image, thus stretching/squishing it:

Alt+Ctrl+KP_ADD -- Stretches the image

Alt+Ctrl+KP_SUBTRACT -- Squishes the image

Alt+Ctrl+KP_MULTIPLY -- Resets the image

These shortcuts move the whole image inside the GS window:

Alt+Ctrl+UP -- Moves the image up

Alt+Ctrl+DOWN -- Moves the image down

Alt+Ctrl+LEFT -- Moves the image left

Alt+Ctrl+RIGHT -- Moves the image right

Alt+Ctrl+KP_DIVIDE -- Re-centers the image

GSdx-specific keyboard hotkeys

F5 -- Toggle De-Interlacing Modes

F7 – Cycle Pixel Noise modes (Internal "TV-like" shaders)

INSERT – Toggle Software mipmapping

HOME – Toggle FX shader

PAGE_UP – Toggle FXAA (HW and SW)

DELETE – Toggle Software anti-aliasing (AA1)

Status

PCSX2 has come a long way since its starting point back in 2001. Current features include:

- Separate recompilers for Emotion Engine (EE) , Vector Unit 0 (VU0) and Vector Unit 1 (VU1).

- Triple core support, with the Graphics Synthesizer (GS) running on a second thread and the VU1 running on a third thread when MTVU is used

- Usage of MMX, SSE1, SSE2, SSSE3, and SSE4 extensions.

- Proper SPU2 emulation featuring Time Scaling and Reverb.

- Full gamepad support featuring Dual Shock 2, analog controls and even supporting analog movement over keyboard (using some external plugins).

- Many more :)

Sections that still need work:

- Dev9, FireWire and USB are all just partially supported.

- Image Processing Unit (IPU) emulation (which is responsible for the FMV playback) is slow and not completely fixed yet.

- MIPS cache could be properly implemented, but currently only one title is known to rely on it.

- The complex timing between PS2 components is an on-going work in progress.

How can you help?

As most of you are aware, the PCSX2 team is working on this project at the expense of their free time and provides it without charge.

If you want to show your appreciation to these people and motivate them, you can donate any amount of money you feel is right to the team's PayPal account found on the official site.

These funds will be used for the team members to get new, more modern hardware in order to test and debug more efficiently and even implement new features (just like dual core support for example).

If you are a programmer and you are interested in helping the PCSX2 team by making additions or corrections to the code, you are free to browse through the public Github repository here after taking into account PCSX2 is under the (GPL) v3

The Coding Team

Below you can see 3 tables, showing the current team members who are actively coding at the present time, the current team members who have been inactive for some time and the older team members who for some reason quit along the way, which include the previous project leader Linuzappz, and our last "semi project leader" Jake Stine, to both of which we send our best regards J

Nickname	Real Name	Place	Comments
refraction	Alex Brown	England	General Coding DMA/VIF etc.
arcum42		USA	Linux compatibility and porting
gregory		France	Linux compatibility, translation
gigaherz		Spain	General coding, spu2ghz (later SPU2-X), cdvdGigaherz
pseudonym		England	EE recompiler, GSdx renovations
rama		Germany	Resident hacker, general coding, testing
Gabest		Hungary	GSdx creator, recompiler optimizations
avih		Israel	GUI coding, Memory Card editor

Nickname	Real Name	Place	Comments
drkIIRaziel		Greece	Memory management, emulation theory, recompiler design
florin	Florin Sasu	Romania	Master of HLE. Master of cd code and bios HLE…
Nachnbrenner		Germany	patch freak :P
aumatt		Australia	a bit of everything mostly handles CDVD cmds
saqib		Pakistan	Project leader, fixing bugs around (FPU, Interpreter, VUs…)
Shadow	George Moralis	Greece	Project founder, master of CPU, master of bugs, general coding…
Goldfinger		Brazil	MMI,FPU and general stuff
loser		Australia	obscure CDVD related stuff
zerofrog		USA	Recompilers, ZeroGS, x86-64, Linux, optimizations, general work

Nickname	Real Name	Place	Comments
Linuzappz		Argentina	Project founder, master of The GS emulation and so many others..
basara			Recompiler programmer. general coding
cottonvibes		USA	FPU and VU recompilers, general coding
Jake Stine		USA	wxGUI, MTGS, counters, general coding,SPU2-X, x86 emitter
[TyRaNiD]			GS programmer, general coding
Roor			General coding
tmkk		Japan	VUs, recompilers, x86asm

Additional coding and help:

F|RES, fumofumo, Nneeve, Nocomp, Pofis, _Riff_, Shadow Lady

The Beta Tester Team

Beta testers are people (slaves/mindless grunts :P) who constantly test new PCSX2 beta builds to report any new bugs, regressions or improvements. While this might sound simple to most, what many people do not know is that testers also debug with the coders, maintain the huge game compatibility list, create dumps and logs for the coders and so much more. As above, active, inactive and ex members are listed alphabetically.

Current active members:

Bositman, Falcon4Ever, Prafull, Parotaku, GeneralPlot

Current inactive team members:

Belmont, CKemu, Crushtest, Knuckles, Krakatos. Raziel, RudyX, Shadow Lady

Ex-team members:

Chaoscode, CpUMasteR, EFX , Elly, JegHegy, Razorblade, RPGWizard, Seta San, Snake875

Additional thanks and credits

Duke of NAPALM: For "3D stars", the first demo that worked in PCSX2 :)

Tony Saveski (dreamtime): For his great ps2tutorials!!

F|res: Author of dolphin, a big thanks from shadow..

Now3d: The guy that helped shadow at his first steps..

Keith: Who believed in us..

Bobbi & Thorgal: For hosting us, for the old page design and so many other things

Sjeep: Help and info

BGnome: Help testing stuff

Dixon: Design of the old pcsx2 page, and the pcsx2.net domain

Bositman: PCSX2 beta tester :) (gia sou bositman pare ta credits sou)

No-Reccess: Nice guy and great demo coder :)

NSX2 team: For their help with VU ;)

Razorblade: For the old PCSX2 logo & icon.

Snake: He knows what for :P

Ector: Awesome emu :)

Zezu: A good guy. Good luck with your emu :P

Hiryu & Sjeep: For their libcdvd (ISO parsing and file system driver code)

Sjeep: For the SjDATA file system driver

F|res: For the original DECI2 implementation

libmpeg2: For the mpeg2 decoding routines

Aumatt: For applying fixes to pcsx2

Microsoft: For VC.Net 2003, 2005, 2008 and now 2010.

NASM team: For nasm

CKemu: Logos/design

…and probably to a few more.

Special Shadow's thanks go to...

My friends: Dimitris, James, Thodoris, Thanasis and probably to a few more… and of course to a lady somewhere out there…