PC Engine SuperGrafx

The PC Engine SuperGrafx (a.k.a. PCエンジンスーパーグラフィックス, Pī Shī Enjin SūpāGurafikkusu, PC Engine 2) is a fourth-generation videogame console developed by NEC. It was released in Japan on December 1989 and France on May 1990.

Technically the successor to the PC Engine, and the first console by NEC to be “true” 16-bit instead of partially using 16-bit components. It was primarily marketed as an upgrade to the existing PC Engine instead of a replacement, compatible with all the already existing PC Engine HuCards in addition to its own. It was also compatible with the CD-ROM² add-on, although no CD-based games were produced that took advantage of the SuperGrafx's superior hardware.

The hardware itself was rushed to the market, releasing several months before its initial release date of 1990.

This system scrapes metadata for the “supergrafx” group and loads the `supergrafx` set from the currently selected theme, if available.

Quick reference

- **Emulator:** RetroArch
- **Core:** libretro: Mednafen_SuperGrafx
- **Folder:** `/userdata/roms/supergrafx`
- **Accepted ROM formats:** `.pce`, `.sgx`, `.cue`, `.ccd`, `.chd`, `.zip`, `.7z`

BIOS

The BIOS file requirements are the same as the PC Engine/TurboGrafx.

This BIOS file is required.

MD5 checksum	Share file path	Description
38179df8f4ac870017db21ebcbf53114	`bios/syscard3.pce`	Super CD-ROM2 System V3.xx

These BIOS files can also work, however they are known to have compatibility issues with certain games:

MD5 checksum	Share file path	Description
	`bios/syscard2.pce`	CD-ROM System V2.xx

MD5 checksum	Share file path	Description
	`bios/syscard1.pce`	CD-ROM System V1.xx
	`bios/gexpress.pce`	Game Express CD Card

ROMs

Place your Supergrafx ROMs in `/userdata/roms/supergrafx`.

To load CD-ROM content, a CUE sheet is *required*. CUE sheets can be recovered if lost.

The preferred format for disc compression is CHD. CHDs, by their nature, include the CUE sheet information.

Emulators

RetroArch

RetroArch (formerly SSNES), is a ubiquitous frontend that can run multiple “cores”, which are essentially the emulators themselves. The most common cores use the libretro API, so that's why cores run in RetroArch in Batocera are referred to as “libretro: (core name)”. RetroArch aims to unify the feature set of all libretro cores and offer a universal, familiar interface independent of platform.

RetroArch configuration

RetroArch offers a **Quick Menu** accessed by pressing `[HOTKEY]` +  which can be used to alter various things like RetroArch and core options, and controller mapping. Most RetroArch related settings can be altered from Batocera's EmulationStation.

Standardized features available to all libretro cores: `supergrafx.videomode`, `supergrafx.ratio`, `supergrafx.smooth`, `supergrafx.shaders`, `supergrafx.pixel_perfect`, `supergrafx.decoration`, `supergrafx.game_translation`

ES setting name `batocera.conf_key`	Description ⇒ ES option `key_value`
Settings that apply to all cores of this emulator	
GRAPHICS API `supergrafx.gfxbackend`	Choose which graphics API library to use. Vulkan is better, when supported. ⇒ OpenGL `opengl`, Vulkan `vulkan`.
AUDIO LATENCY `supergrafx.audio_latency`	In milliseconds. Can reduce crackling/cutting out. ⇒ 256 256, 192 192, 128 128, 64 64, 32 32, 16 16, 8 8.

ES setting name `batocera.conf_key`	Description ⇒ ES option `key_value`
THREADED VIDEO `supergrafx.video_threaded`	Improves performance at the cost of latency and more video stuttering. ⇒ On `true`, Off `false`.

libretro: Mednafen_SuperGrafx

A libretro port of Mednafen's PCE-Fast core.

libretro: Mednafen_SuperGrafx configuration

ES setting name `batocera.conf_key`	Description ⇒ ES option `key_value`
Settings that apply to all systems this core supports	
REDUCE SPRITE FLICKERING `global.sgx_nospritelimit`	Enhancement. Remove the sixteen sprites per line limit. ⇒ Off `disabled`, On `enabled`.

The remaining settings can be adjusted from RetroArch's **Quick Menu** (`[HOTKEY]` +  in-game) → **Options**.

Controls

Here are the default SuperGrafx's controls shown on a Batocera Retropad:

RetroPad	User 1 - 5 input descriptors	PCE Joypad 2-button	PCE Joypad 6-button
	I	I	I
	II	II	II
	III	II Turbo On/Off	III
	IV	I Turbo On/Off	IV
[SELECT]	Select	Select	Select
[START]	Run	Run	Run
D-Pad Up	D-Pad Up	D-Pad Up	D-Pad Up
D-Pad Down	D-Pad Down	D-Pad Down	D-Pad Down
D-Pad Left	D-Pad Left	D-Pad Left	D-Pad Left
D-Pad Right	D-Pad Right	D-Pad Right	D-Pad Right
[L1]	V		V
[R1]	VI		VI
[R2]	Mode Switch	Mode Switch	Mode Switch
[L3]		Alternate II Turbo On/Off	
[R3]		Alternate I Turbo On/Off	

Troubleshooting

Further troubleshooting

For further troubleshooting, refer to the generic support pages.