

GamePark GP2X

A Linux-based handheld game system

Bill Kendrick
Linux Users' Group of Davis
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What's the GP2X?



- Handheld game console and media player
- Open architecture (anyone can develop and run software)
- Linux-based

Source: http://en.wikipedia.org/wiki/File:GP2X_01.JPG
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What's inside the GP2X? (F series)

- 200MHz ARM CPU
- 200MHZ ARM coprocessor
- 64MB Flash ROM
- 64MB RAM
- SD Card port
- 320x240 3.5" backlit LCD
- Expansion port
 - USB 1.0 host
 - TV-out
- 2x AA batteries
- Joystick (F100) or directional pad (F200)
- Touchscreen (F200)

What's inside the GP2X? (Wiz)

- 533MHz ARM (3D accelerator)
- 1GB Flash ROM
- 64MB RAM
- SD Card port
- 320x240 2.8" Active-Matrix OLED
- Microphone
- Expansion port
 - USB 2.0 host
 - TV-out
- 2000mAh Lithium Polymer Battery
- Dual directional pads
- Touchscreen

Software for the GP2X (commercial)



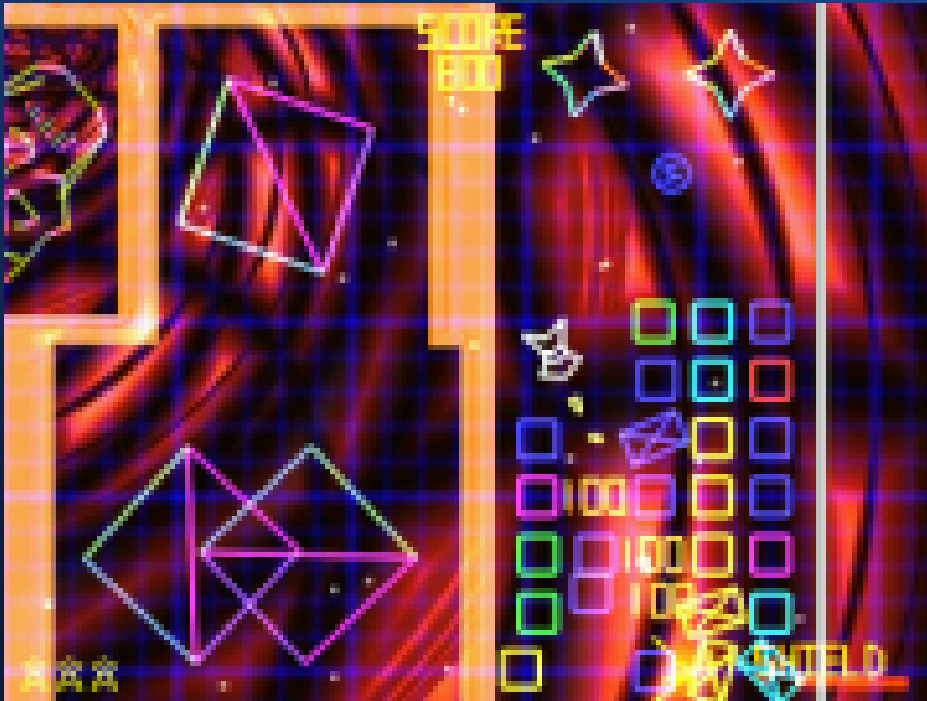
- “Payback”
 - Top-down 3D game with tons of lighting effects
 - Kind of like “Grand Theft Auto”
 - I saw a demo of it on a friend's GP2X and it was: memorable

Payback demo...

Software for the GP2X (comm. cont'd)

- Vektar

- First GP2X commercial title
- Shoot'em up with modern retro graphics



Vektor demo...

Software for the GP2X (homebrew)



- Tons of open source games ported
- Many homebrew games made specifically for the GP2X



Software for the GP2X (emulators)



- Acorn
- Amstrad
- Apple
- Arcade
- Atari
- Bandai
- Coleco
- Commodore
- Game Park
- GCE
- IBM
- Magnavox
- Mattel
- MGT/SAM/WCC
- NEC
- Nintendo
- Sinclair
- Sega
- SNK
- Sony
- Tandy
- Texas Instruments
- Thomson
- Watara

Videos on the GP2X

- Using the default software, it can play two different video formats: DivX, XviD, and two different audio formats: MP3, OGG Vorbis.
- MP2x (modified version of the default player) adds the ability to play AAC and AC3 formats.
- Example to convert a video to GP2X-ready format:
 - `mencoder VID.mp4 -o VID4GP2X.avi -ovc xvid \`
`-xvidencopts bitrate=300 -vf scale=320:240 \`
`-ofps 30 -oac mp3lame -lameopts cbr mode=3`

Video demo...

Developing for the GP2X

- Download cross-compiler toolchain and libs:
http://wiki.gp2x.org/wiki/Installing_the_Open2x_toolchain
- Libraries readily available:
 - SDL, plus SDL_image, _mixer, _tff & _gfx
 - OGG & Vorbis, SMPEG
 - XML
 - Bzip2, libz
 - readline, ncurses

Developing for the GP2X (cont'd)

Makefile variables to help cross-compile an SDL-based app:

```
CROSS_PATH=/opt/open2x/gcc-4.1.1-glibc-2.3.6/  
CFLAGS=-Wall `$(CROSS_PATH)/bin/sdl-config --cflags`  
LDFLAGS=`$(CROSS_PATH)/bin/sdl-config --static-libs`  
CC=$(CROSS_PATH)/bin/arm-open2x-linux-gcc
```

The GP2X Wiki has tons of info:

<http://wiki.gp2x.org/>

Pandora



Source: <http://en.wikipedia.org/wiki/OpenPandora>

The Pandora is an upcoming handheld game console built on open source principles. It is developed by OpenPandora, which is made up of former distributors and community members of the GP32 and GP2X handhelds.

The designers have stated that it is more powerful than any handheld video game console that existed when it was announced. It includes several features that no handheld game consoles have previously had, making it a stage between an ordinary handheld console and a Ultra-Mobile PC (UMPC).

The end!