



Portable Computing & Entertainment Platform

General Description

The Portable Computing & Entertainment Platform is a combination of state-of-the-art display, connectivity, storage and mediaprocessing technologies. The product serves two purposes:

- A development platform for cost sensitive derivatives, where time-to-market is essential
- An easily servicable state-of-the-art component in professional systems.

Starting point for it's key specifications, portability, high speed versatile connectivity, high quality display and sufficient storage capacity assure both optimal media reproduction experience and a comfortable graphical user interface for control. Careful tuning and custom hardware acceleration allows for highest possible quality at very low power dissipation. Low power, managed by a dedicated infrastructure microprocessor, is not only important in portable appliances. It also proves beneficial in stationary products featuring low noise (no-fan), power supply hazard insensitivity and the ability to operate in sealed enclosures.

Features

Hardware

The extremely flexible system is built on the MiniPCI industry standard interface bus. All “volatile” elements are implemented on removable cards. This guarantees long-term state-of-the-art electronics capabilities.

The implemented video hardware surpasses the usual display capabilities in portable appliances, with it’s maximum resolution of 1280 x 1024 (SXGA) the *PCEP* matches a multitude of stationary high performance applications such as promotion terminals. Through it’s versatile industry standard busses philosophy virtually any relevant function can be made available. *PCEP* accepts MiniPCI, Cardbus, PCMCIA, ITU 656 and USB peripherals.

- “Motherboard” with Processor slot
 - 3 MiniPCI extension slots
 - Interfaces for legacy audio/video, USB, Ethernet 10/100
 - Infrastructure processor for power management, touchpanel control, serial channels, RC5
 - Touchscreen controller, Analog audio Codec & amplifier
- Slots (example):
 - XScale processor + 128 Mbyte Flash + 128 Mbyte RAM + MiniPCI
 - Video decompression accelerator
 - Display controller
 - Various Cardbus/MiniPCI interfaces
 - Wifi, Bluetooth, USB2.0, IEEE1394, DVB-T receiver, etc.
- Uart based interfaces
 - Com, GPRS, GPS, etc.

Software

The implemented operating system is Linux 2.4.18, launched by embedded ECOS. Windows CE can be made available on request. A multitude of custom peripheral drivers is available.

Further implementations include

- the Xfree graphical shell
- UPnP stack including streaming media

Both extensions allow a broad audience of (hardware unaware-) application developers to create a diverse collection of complex applications.

Applications

- Networked system control point
 - Touch Panel UI
 - Display resolution up to SXGA (1280 x 1024)
 - Connectivity (Eth 10/100, 802.11, IEEE1394, RC5, USB...)
 - Data encryption / security
- Connected environment components
 - UPnP Media Server, Renderer and Controller.
 - UPnP remote IO controller
- Standalone Media player
- Pont of Sale Promotion terminal
 - Central area controlled
 - Touch screen navigation
 - Accelerated rendering of MPEG, DivX, Flash, Jpeg, 2D/3D graphics
 - Wired and-or wireless network communication
- (detachable) Automotive workstation
 - GPS terminal & navigation
 - Media rendering from DVD and-or HDD
 - DVB-T reception (including GPRS return channel)
 - Miscellaneous data capturing, monitoring and signal processing
- And more ...
 - Portable interactive imaging
 - Medical PDA
 - Secure encrypted communication
 - Remote secure & real-time patient monitoring
 - Mobile diagnostic and data capture
 - Detachable monitors (Myra)
 - Video conferencing terminal
 - Etc...

Contact information

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