Color and Monochrome Inkjet and Laser MFP SoC (DC1250)

CX92125

Conexant's portfolio includes a comprehensive suite of semiconductor solutions for communications and consumer applications.

A complete controller solution for color and monochrome inkjet and laser MFPs

Conexant's product line of highly integrated imaging solutions and system-on-chips (SoCs) is one of the most complete in the industry. The CX92125 (DC1250) is a comprehensive controller solution for color and monochrome inkjet and laser multi-function printers (MFPs) and digital photo printers. The device integrates many advanced features that improve the image processing speed as well as the output image quality. The modular design of the firmware allows manufacturers to develop multiple products with a single imaging SoC, which reduces engineering development and bill-of-material (BOM) costs.

The CX92125 features very high-speed hardware image processing accelerators, system I/O and a powerful ARM 926EJ-S core with a memory management unit and a vector floating point processor to deliver the power required for high-speed imaging applications.

The CX92125 integrates many advanced features such as an Ethernet MAC, a memory card controller, a LCD controller, and contains an enhanced image processing pipeline that improves the pixel processing speed as well as the output image quality. Two USB 2.0 high-speed ports and a peripheral bus support connections to cameras, memory cards and USB peripherals, including Bluetooth[®] and WiFi[®] 802.11 b/g/n devices, and V.34 fax modems.

A complete hardware and software development kit is offered to simplify product-development efforts and allows designers to deliver product to market more quickly.

Benefits

- Highly integrated SoC design for lowest BOM cost
- Provides high-quality imaging capabilities
- Allows fast RIP for network printing and PC-less PDF printing
- Save development costs and time by designing one controller platform for your family of laser and inkjet printers, photo printers and MFPs



Distinguishing Features

- Very high performance image processing
- Embedded vector floating point processor allows fast raster image processing for supporting various PDLs
- Integrated camera card and LCD display controllers
- Integrated 10/100 Ethernet MAC
- Integrated USB 2.0 high-speed ports and a synchronous serial peripheral bus
 - Supports cameras and flash drives
 - Supports Bluetooth and WiFi 802.11 b/g/n
 - Supports V.34 fax modems
- Software development kit to enable customers to develop products quickly

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Features

Printer Support

- USB 2.0 high-speed and 10/100 Ethernet printing supported
- Scalable support for both graphics device interface (GDI) and page description language (PDL)-based printing

Scanner Support

- Flatbed and automatic document feeder (ADF) scanners supported, including timing and motor control
- Charge-coupled device/contact image sensor (CCD/CIS) control
- Scan pre-processing supports gamma, shading, white-level and black-level corrections, 3xCIS data arrangement support

Copier Support

- Up to 60 copies per minute (cpm) ADF multi-page monochrome copying at 600 dpi scan and print
- Independent finite impulse response (FIR) filters, color space conversion tables and dither tables for photo and text

Fax Support

Fax controller with complete protocol stack for leading Conexant fax modems

External Memory Support

• DDR2-400 supported: Up to 1 Gb of system memory

Connectivity/Interfaces

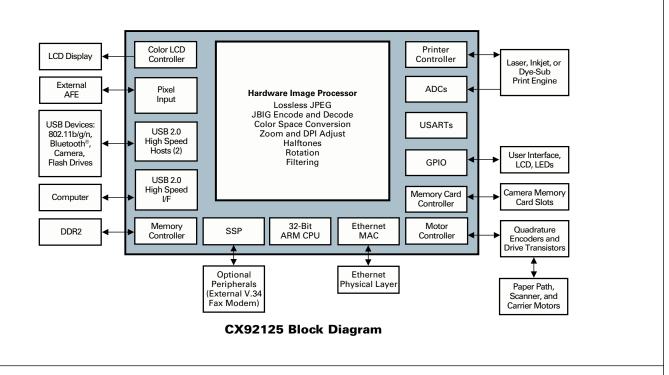
- USB 2.0 high-speed device and hosts
- Synchronous serial bus configurable for: 1-bit, 4-bit or 8-bit highspeed MMC/SD/SDIO; 4-bit or 8-bit CE-ATA mode; SPI; 1-bit MS; TI SSI
- 1²C
- UARTs
- Thin Film Transitor (TFT) or Super-twisted Nematic Display (STN) graphical LCD controller

Processor/CPU

- 32-bit, RISC microprocessor with Memory Management Unit (MMU) and vector floating point processor
- Compact 16-/32-bit bit instruction set, offering reduced code size and higher performance

Development Environment

- Conexant's Integrated Development Environment (IDE)
- C/C++ Compiler/Assembler/Linker
- PC Command Line Debugger/Profiler
- JTAG Emulator/ICE and Debugger



Conexant Product Portfolio

Conexant's comprehensive product portfolio includes solutions for imaging, audio, video and embedded-modem applications.

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