

# CX92125 (DC1250) Color and Monochrome Laser and Inkjet MFP SoC

## ImagingSmart™ Product Brief



# Features an ARM926EJ-S Processor with MMU/VFP

## Product Overview

The CX92125 (DC1250) is a comprehensive controller solution for color and monochrome inkjet and laser MFPs. The device integrates many advanced features that improve the image processing speed along with 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 BOM costs.

The CX92125 features an ARM926EJ-S processor with an MMU to deliver the power required for high-speed imaging applications. Along with the ARM processor, the CX92125 contains dedicated hardware modules that support scanner inputs, inkjet and laser printer control, and a dedicated hardware image processing pipeline that improves the image processing speeds as well as the output image quality.

The CX92125 integrates many I/O features, including a USB 2.0 high-speed device port, two USB 2.0 high-speed host port (e.g., WiFi devices, PictBridge, and thumb drives), an Ethernet MAC, a memory card controller, an LCD controller, and serial peripheral buses (e.g., UART, SPI, and I<sup>2</sup>C).

The CX92125 supports Conexant's embedded firmware that enables BCI (e.g., Google Cloud Print™ and Apple AirPrint™) and ACI (e.g., Cloud Image Xfer and Cloud Document Print). Conexant's cloud imaging firmware and IP enables an SFP/MFP to print to any shared printer with any document, on any devices (e.g., SFP/MFP, tablet, Smart phone, etc.) that range from consumer through enterprise products.

The CX92125 supports Conexant's serial V.34 high performance fax modems with SmartDAA technology.

Conexant offers a hardware EVK along with an SDK and MDK to simplify product development efforts, and allows designers to deliver product-to-market more quickly.

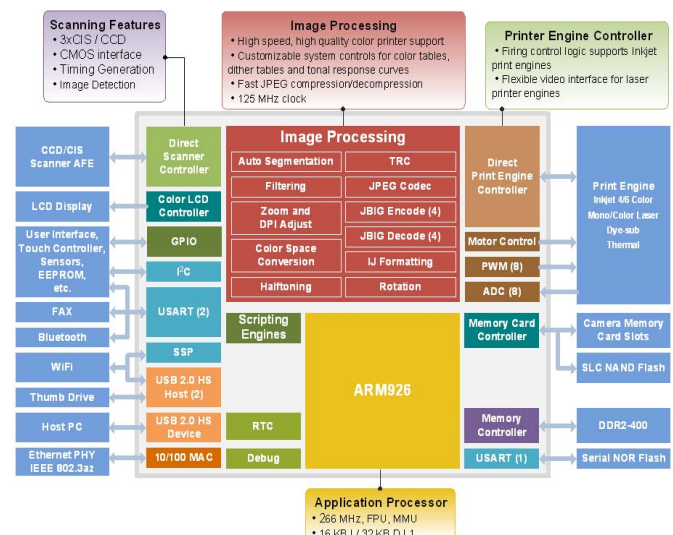
## Applications

- Mid-range inkjet MFP
- Mid-range monochrome laser MFP
- Low-end color laser MFP

## Key Features

- ARM926EJ-S processor
  - 16K/32K instruction/data caches
  - MMU
  - VFP
  - Boot from serial flash
- DDR2 memory subsystem—Up to 128MB support
- Hardware image processing accelerators:
  - Programmable image processing pipeline
    - Finite impulse response filter
    - Image scaler
    - Brightness and contrast adjustment
    - Six independent TRC tables
    - CSC
    - Half toning
    - Auto-segmentation
  - JBIG and JPEG hardware image compression and decompression
  - Hardware rotation block
- Integrated LCD controller
- Embedded memory card controller

## System Block Diagram



### Additional Features

- Real-time clock with battery backup
- Laser print engine controller:
  - Four video output channels
  - PWM function for each video channel
- Inkjet print engine controller:
  - Simultaneous dual inkjet head printing with six-color borderless printing
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  - Control all motors and timing signals
- Multi-channel 10-bit A/D
- Scanner support:
  - External AFE support
    - 3x CIS
    - CCD
  - Clock and control timing generation
  - Motor control for scan and ADF
  - Customizable gamma and shading tables
- Fax support:
  - External V.34 fax chipset support
  - Color fax capability
  - Data transfer access and manipulation
- Networking:
  - Integrated 10/100 Ethernet MAC
  - WiFi (802.11 b/g/n) support
- Standard interfaces:
  - USB 2.0 device—High speed
  - USB 2.0 host ports (2x)—High speed
  - I<sup>2</sup>C (1x), SDIO and SPI/UART (3x) support
- Supports Energy Star low power requirements
- GPIO total: 118
- 289-pin fpBGA package

### Ordering Information

Ordering Part Number	Part Number	Description	Package
CX92125-11Z	CX92125	Color and Monochrome Laser and Inkjet MFP SoC	289-pin fpBGA Package

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