

# Inkjet Photo All-in-One SoC

STDC2150

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

# A Complete Controller Solution for Inkjet Photo All-in-Ones

Conexant's portfolio of communication peripheral devices and system-on-chip (SoC) solutions is the most complete product line of highly integrated imaging solutions in the industry. The STDC2150 Inkjet Photo All-in-One SoC is part of Conexant's SigmaTel<sup>®</sup> product line, which offers complete SoC solutions for the multi-function printer (MFP) market

Conexant's SigmaTel MFP solutions offer the highest level of integration for the lowest bill of materials (BOM) cost, while providing photographic image quality for printing and copying. Our SoCs — comprised of powerful hardware image processing accelerators and codecs, high-bandwidth system I/O interfaces and a 32-bit microprocessor core — combine with richly featured software development kits to enable a high performance imaging solution with a fast time to market. The STDC2150 controller is a comprehensive solution for inkjet photo all-in-ones (AIOs).

# **Benefits**

- Lowers BOM costs due to the high level of SoC integration
- Provides photographic quality prints and copies
- Connects and prints directly to most of the inkjet printheads on the market
- Supports advanced photo printing features such as six-color printing, memory cards, LCD graphic displays, Bluetooth<sup>®</sup>, Wi-Fi<sup>®</sup> and networking
- Speeds time to market with proven in-production firmware and controller solutions
- Saves development costs and time by allowing designers to use one controller platform for an entire family of inkjet photo AlOs



# **Distinguishing Features**

- Direct interface connections to many inkjet printer interfaces
- Integrated camera card and LCD display controllers
- High-bandwidth connectivity via USB 2.0 high-speed ports and a peripheral bus
  - Supports PictBridge cameras and flash drives
  - Supports Bluetooth, Wi-Fi 802.11b/g, and 10/100 Ethernet
  - Supports V.34 Fax modems
- Conexant's SigmaTel firmware AIO architecture
- Host software solutions for inkjet AIOs are also available

Part Number STDC2150

**Description** Inkjet Photo All-in-One SoC

## **Features**

## **Printer Support**

- Direct inkjet printer connections support the maximum printhead printing speeds
- · Photographic quality printing
- · PC and network printing supported

#### Scanner Support

- Flatbed and automatic direction finder (ADF) scanners supported, including timing and motor control
- Integrated charge-coupled device/contact image sensor (CCD/CIS) analog front end (AFE) enables direct input of analog RGB signals
- Scan pre-processing supports gamma, shading, white-level and black-level corrections
- Network scanning, scan-to-flash drives and scan-to-camera cards supported

#### Copier Support

- Stand-alone color copying with zooming and enlargements
- · High-performance ADF color copying

#### Fax Support

- V.34 color and mono faxing supported in conjunction with an external fax modem chip
- Complete firmware protocol stack for leading V.34 and V.17 modems
- Optional embedded fax for lowest cost V.17 solution

# **External Memory Support**

- DDR memory supported: 400 MBps bandwidth supported
- Serial and NAND flash/ROM supported

#### Connectivity/Interfaces

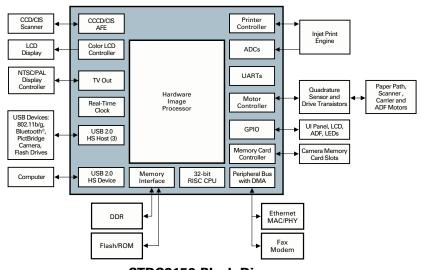
- USB 2.0 high-speed device port and multiple USB 2.0 high-speed host ports
  - Supports PictBridge cameras and flash drives
  - Supports Wi-Fi 802.11b/g, Bluetooth and 10/100 Ethernet
- Camera card interface controllers support the major media card formats
- · Peripheral bus with DMA support
- UARTs/USARTs
- Thin Film Transitor (TFT) graphical LCD controller

# Processor/CPU

· High-performance 32-bit RISC microprocessor

#### **Development Environment**

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



STDC2150 Block Diagram

#### Conexant Product Portfolio

Conexant's comprehensive product portfolio includes solutions for imaging, audio, and video applications, and analog modems that enable cost-effective Internet access. The company's broadband access products include end-to-end solutions for xDSL networks, and PON solutions for fiber optic applications.

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