

STDC3000 PRODUCT BRIEF

A COMPLETE CONTROLLER SOLUTION FOR COLOR LASER PRINTERS & MFPS

SIGMATEL, A LEADER IN MIXED-SIGNAL, MULTIMEDIA SEMICONDUCTORS, OFFERS COMPLETE SYSTEM ON CHIP (SOC) SOLUTIONS FOR THE MULTI-FUNCTION PRINTER (MFP) MARKET.

SigmaTel MFP solutions offer the highest level of integration for the lowest bill of materials (BOM) cost, and high quality image capabilities for printing and copying. Our SoCs – comprised of powerful hardware image processing accelerators and codecs, high-bandwidth system I/Os, and a 32-bit microprocessor core – combine with richly-featured software development kits (SDKs) to enable a high performance imaging solution in a faster time-to-market. The STDC3000 is a complete controller solution for color laser printers and MFPS.



BENEFITS

- HIGHLY INTEGRATED SOC DESIGN FOR LOWEST BOM COST
- FASTER PERFORMANCE THAN COMPARABLE DSP AND CPU BASED SOLUTIONS
- PROVIDES HIGH QUALITY IMAGE CAPABILITIES
- SAVE DEVELOPMENT COSTS AND TIME BY DESIGNING ONE CONTROLLER PLATFORM FOR YOUR FAMILY OF COLOR LASER PRINTERS AND MFPS

FEATURES

- TANDEM COLOR LASER PRINTER ENGINE INTERFACE
- POWERFUL HARDWARE IMAGE PROCESSING ACCELERATORS ENSURE MINIMAL RELIANCE ON CPU
- SIMPLIFIED IMAGE QUALITY TUNING BY USING PROGRAMMABLE IMAGING TABLES
- HIGH BANDWIDTH CONNECTIVITY INCLUDING USB 2.0, ETHERNET 10/100, AND PCI 66
- SDK PROVIDES SIGMATEL'S FIRMWARE ARCHITECTURE FOR MFP
- AVAILABLE HOST SOFTWARE SOLUTIONS FOR COLOR LASER MFP

PRINTER SUPPORT

- 40 ppm Tandem color laser printing of 4-bit contone data
- USB 2.0 HS and Ethernet 10/100 Printing supported
- Scalable support for both GDI and PDL-based printing

SCANNER SUPPORT

- 25 spm color scanning at 600 dpi
- Flatbed and ADF scanners supported, including timing and motor control
- Integrated CCD / CIS analog front end enables direct input of analog RGB signals
- Scan pre-processing supports gamma, shading, white-level, and black-level corrections

COPIER SUPPORT

- 20 cpm ADF multipage color copying at 600 dpi scan & print
- Tunable photo / text segmentation logic ensures best copy quality of mixed images
- Independent FIR filters, color space conversion tables, and dither tables for photo & text
- Capable of DMA'ing RGB pixels to external Counterfeit Detection (CD) ASIC

FAX SUPPORT

- Fax controller with complete protocol stack for leading V.34 and V.17 modems
- Optional embedded fax for lowest cost V.17 solution

EXTERNAL MEMORY SUPPORT

- DDR333 supported: 500 MB/s bandwidth and up to 1GB of system memory
- Field upgradeable using 32 bitDIMM

CONNECTIVITY / INTERFACES

- USB 2.0 High-Speed device & hosts
- PCI Bus – 32-bit, 33/66 MHz, Bus Master/Target capable, Bus Arbiter capable
- Peripheral bus with DMA support
- UARTs
- Parallel Port / 1284
- TFT or STN Graphical LCD controller
- Counterfeit detection chip interface

PROCESSOR / CPU

- 32-bit, 210 MHz RISC Microprocessor with MMU
- Compact 16/32 bit instruction set, offering reduced code size and higher performance

DEVELOPMENT ENVIRONMENT

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

