



ColorCore™ 3

Rendering Technology Software Development Kit (SDK)



ColorCore is a highly efficient halftoning and photo imaging Software Development Kit that supports next-generation technology, such as Windows Vista's XPS 16-bit per-channel color and delivers stunning photo quality output.

ColorCore™ 3

Color Rendering Technology Software Development Kit (SDK)

The ColorCore SDK accelerates your photo printing development efforts by simplifying integration of the highest quality stochastic screening, error diffusion and ordered screening into Third Party Drivers, Raster Image Processors (RIPs), Embedded Systems and Application Software.



COLORCORE™

Features & Benefits

Supports Full Range of Platforms:

- Consistent output regardless of target software/hardware
- Easily deployable for Macintosh, Windows, Linux and various embedded operating systems

Halftoning and Color Matching of Multiple Color Channels:

- Flexibility to integrate up to 8 arbitrary color channels
- Easy to incorporate into any rendering pipeline

Advanced Color System Support:

- Color output benefits from full range of intensity levels
- 16-bit and 8-bit per channel data paths

High Quality Error Diffusion:

- Output is better than conventional error diffusion systems
- 12-bit per channel halftoning

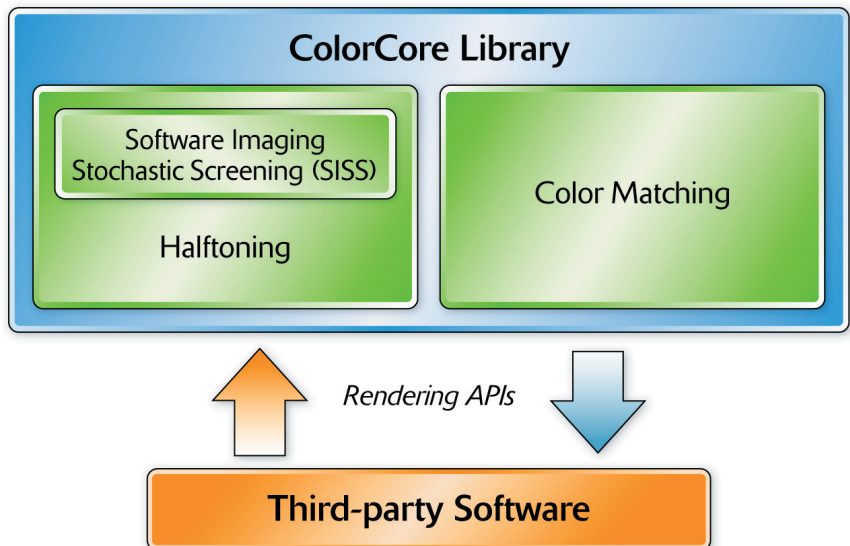
Software Imaging Stochastic Screening (SISS):

- Fast page throughput
- Output that is comparable to Software Imaging's high quality error diffusion

Innovative AutoEZ-Cal™ System

- Easy to use wizard style interface
- Calibrations and characterizations are performed incredibly quickly

The ColorCore Library



Market Leading Rendering Technologies

The principal components of the SDK are a portable code library that provides core halftoning and color management services and the AutoEZ-Cal device characterization / color calibration system along with accompanying documentation. The latest release of ColorCore offers high quality halftoning of 16-bit per channel input on all platforms including embedded systems/controllers, Windows Vista, Linux, and Macintosh OS X. ColorCore is protected by multiple patents.

Straightforward Integration

Integration of the ColorCore library's rendering technologies into third-party software is straightforward. A developer simply calls the ColorCore rendering APIs from their software then the static code library, contained in the SDK, is linked into the third-party software.

Consistency Across Platforms

ColorCore delivers consistency of output regardless of the target platform. ColorCore has been developed to be easily deployable across a range of hardware and software platforms, from desktop operating systems such as Windows, Macintosh and Linux, through to embedded systems. Embedded implementations of ColorCore are also available for the ARM family of embedded processors.

Color Channel Support

ColorCore supports the halftoning and color matching of N color channels for flexible integration into any rendering pipeline.

Color Systems

ColorCore delivers full support for the variety of color systems employed in printers today, including CMYK, photo-ink and Hi-Fi. The common photo-ink combination of light cyan and light magenta is supported alongside use of light black. Additionally Hi-Fi configurations such as CMYKOG and Hexachrome are supported along with CMYKRB.

Multiple Intensity Levels

The support for multiple levels of intensity in ColorCore has been developed through years of inkjet printer research and development. ColorCore output supports a full range of intensity levels, up to 256 continuous levels.

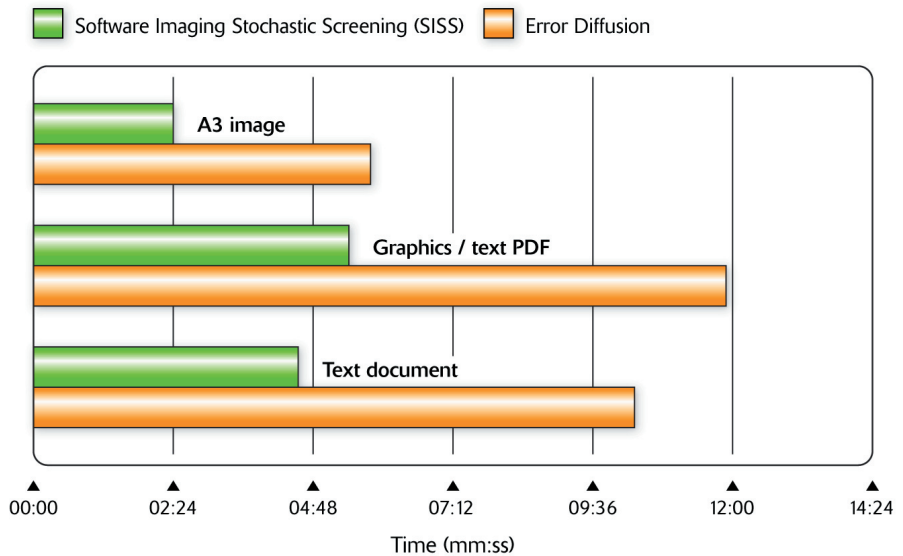
This is in stark contrast to alternative technologies that are typically limited to “2-bit” levels.

16-Bit/Channel Support

ColorCore 3 offers 16-bit/channel support. This allows 16-bit color to be maintained from a Camera Raw source images right the way through to the final printed page. ColorCore 3 enables printed output that is truly faithful to the source image on operating systems like Windows Vista.

Software Imaging Stochastic Screening (SISS)

SISS delivers print quality comparable to error diffusion, but with the tremendous throughput associated with stochastic screening. In terms of raw halftoning processing SISS delivers speeds that are more than 5 times faster than error diffusion. Real world tests clearly illustrate that SISS paves the way for dramatic improvements in page throughput, enabling OEMs to meet the ever increasing demand for both quality and print speed among today’s printing device users. The chart above compares the time taken to print documents to file, using both SISS and a market leading error diffusion method. The figures show that across a full range of document types the use of SISS itself in the workflow results in prints at least twice as fast.



High Quality Error Diffusion

Software Imaging’s PrintMagic™ raster technology is renowned within the industry for the quality and speed of its error diffusion halftoning. ColorCore provides the rendering service to PrintMagic and is available for integration into third-party print systems. Efficient algorithms bring the benefits of 12-bit per channel halftoning to a high performance 8-bit pipeline. The result is the elimination of visible steps in printed graduated areas. This is traditionally a problem in the printed highlights on glossy photo papers using standard 8-bit halftoning.

Better Ordered Screens

Also included is Software Imaging’s Better Ordered Screen (BOS) generator. This allows for the easy creation of high quality ordered screens including features such as elliptical dot support. This means that advanced screen options for RIPs and printer drivers are easily generated. In addition there is support for third-party threshold array screens. In this way ColorCore can support both third-party AM and FM screens.

AutoEZ-Cal™

A key component within the color management system of ColorCore is the advanced technology of AutoEZ-Cal (AEC), an integrated ICC compatible utility that allows calibrations and characterizations to be performed incredibly quickly. AEC is a wizard driven process that generates color tables to be subsequently used within ColorCore.

Color Management Module (CMM) engines from companies such as GretagMacbeth, Heidelberg and Monaco may be used for OEM specific requirements.



Multi-Platform

The ColorCore library is portable to different software and hardware platforms. The SDK contains ColorCore static code libraries for the following operating systems.

Windows 64-bit

- Microsoft Windows Vista x64
- Microsoft Windows XP x64 edition

Windows 32-bit

- Microsoft Windows Vista
- Microsoft Windows XP
- Microsoft Windows 2000
- Microsoft Windows NT4

Windows 16-bit

- Microsoft Windows Me
- Microsoft Windows 98
- Microsoft Windows 95

Macintosh

- Mac OS X
- Mac OS 9

Linux

- Intel/AMD 32-bit and 64-bit distributions

Other hardware and software platforms are available on request

ColorCore is protected by multiple patents.

About Software Imaging

Software Imaging is well respected as one of the most influential and reliable technology providers in the print and imaging industry.

For over twenty years the company has been at the forefront of global innovation in print and imaging software, delivering significant time-to-market and cost advantages to customers through its Printer Driver Technologies, Embedded Systems and Specialty Applications. Software Imaging is the Microsoft development partner for Unidrv and is actively working with Microsoft on Windows Vista and the new XPS document format.

Headquartered in the UK with offices worldwide, Software Imaging licenses technology to the world's largest suppliers of printers, digital copiers, and print-related services.

Contact Us

Contact us today to discuss how ColorCore can help you bring your imaging device to market on-time and under budget. For more information:

Web: www.softwareimaging.com
Email: info@softwareimaging.com