

JAWSTM ripTM 3.1 PDF and PostScript RIP SDK[®]

Jaws is a configurable native PDF 1.7 and PostScript[®] Level 3 and native PDF 1.7 compatible multi-threaded interpreter, designed to run on a wide variety of platforms and operating systems. Since 2000 more than five million copies of the Jaws RIP have shipped to users worldwide. With our latest version, Jaws 3.1, we deliver exceptional performance across a wide range of applications from wide-format inkjet printing and specialty graphics to high-speed file conversion. We know that performance is more than just speed, so we've invested heavily in enhancing reliability, stability and compatibility.

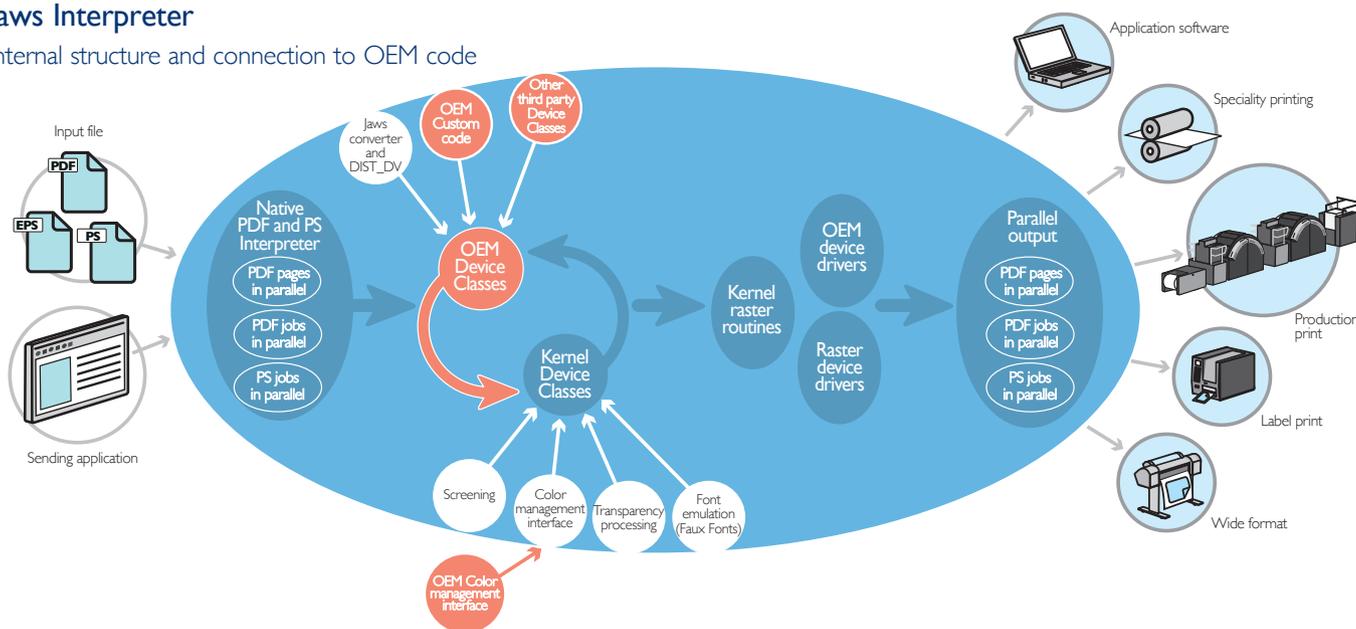
Noted for its ease of integration, Jaws has a highly developed and very flexible API (Application Programming Interface), OEMs get full access to the graphics pipeline via the unique Jaws "device class interface" and can implement a wide variety of features such as custom screening, image enhancement algorithms and color management.

* dependent on available resources including number of cores and available memory

Find out more by contacting: info@globalgraphics.com.

Jaws Interpreter

internal structure and connection to OEM code



New in 3.1

- Full parallel processing: multiple jobs, multiple PDF pages
- Optimized transparency blending
- Dynamic Memory Allocation – 64 bit memory manager
- Re-engineered PDF font handling
- Selectable defaults for latin and CJK fonts



The Jaws RIP is a well-known and widely deployed PDF and PostScript RIP suitable for a wide range of applications. It is used by leading industry players, such as Wasatch, Onyx, and Canon Finetech to drive wide format printers, high speed label printers and high speed production presses. It's also suitable for specialty applications such as textile, ceramic and silkscreen printing.

Jaws 3.1 will provide your customers with a substantial boost in speed and compatibility for greater productivity. Code optimization means they may be able to use less expensive hardware. Plus it's available on Windows®, Mac OSX® and Linux®.

New in Jaws

Full Parallel Processing

With Jaws 3.1, the full resources of modern systems are available to the RIP. Jaws 3.0 can use all the memory and all the cores on the system to process up to 16 pages (PDF) or 16 jobs (PostScript or PDF) in parallel. OEMs can accept the default Jaws allocation of memory and cores or configure this themselves.

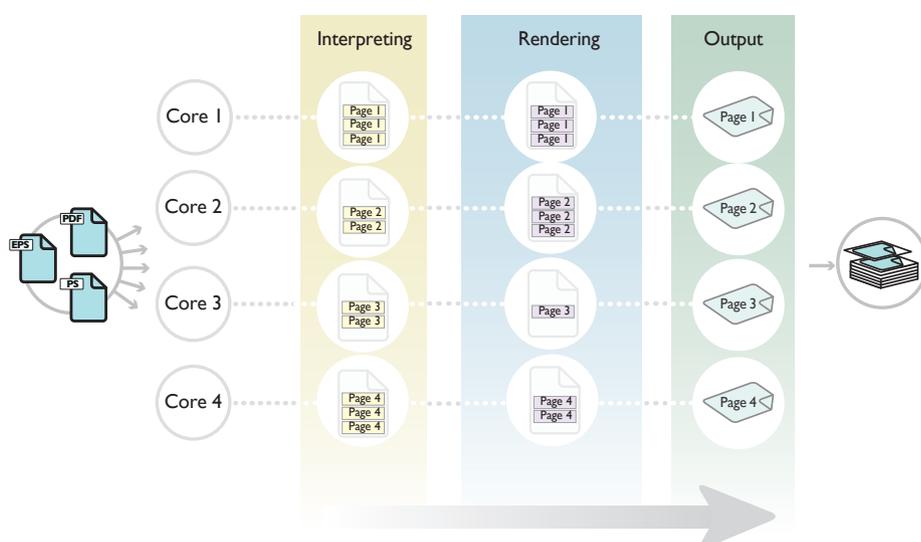
In addition to processing jobs or pages in parallel, Jaws 3.1 also executes multiple parallel threads for a number of processes including transparency blending and color space conversion.

Optimized Transparency Blending

In Jaws 3.1 we look for every opportunity to use multiple threads across multiple cores to accelerate transparency blending. The result is better resource utilization and faster output for today's high speed devices.

Extensive example code and documentation

Jaws 3.1 is supplied with an up to date reference manual as well as HTML help on the complete Jaws API and function dependencies. Example code covers a wide range of functionality from integrating color management and color substitution, to dealing with encrypted PDF files. The example test harness provides a simple introduction to how the Jaws library is integrated into a larger RIP solution.



In Jaws 3.1, portions of the interpretation and rendering steps make efficient use of multi-threading to significantly accelerate output.

Dynamic Memory Allocation

Jaws 3.1's memory management has been re-written and, in addition to supporting 64-bit addressing, Jaws now dynamically allocates memory based on total system memory. This results in default memory allocations suitable for many more use cases yielding better performance with less customization.

More new features in Jaws 3.1

- Optional pre-display list downsampling can improve performance by reducing excess image resolution before extensive RIP processing occurs
- Improved transparency tiling dynamically selects tile sizes yielding better performance

- Large canvas support for all platforms.
- All example device drivers now support ICC color correction
- Files in excess of 2GB are now supported
- 16-Bit Blend support.

Additional Font Features

In Jaws 3.1 our engineers did a full re-engineering of our PDF font systems to assure improved font handling and compatibility. Jaws 3.1 continues to provide our Font Emulation feature for PDF files. New in Jaws 3.1, users can configure unique default (fall-back) fonts for Roman and CJK fonts.

JAWS[™] rip[™] 3.1 PDF and PostScript RIP SDK[®]

Accessibility

Jaws' "device drivers" provide the interface between the rasterizer and the output device, be it a printer controller, interface card or disk file. Source code for various rendering architectures is provided with the Jaws Interpreter, which OEMs can modify for a particular device.

Flexibility

Provides access to graphics before scan conversion, allowing OEMs to add their own custom solutions for screening, image enhancement algorithms, color management, and providing support for non-raster output such as PDF or object based metafiles.

Best-in-Class Value Add

Jaws is designed to allow OEMs to use third-party add-on technologies that best fit their products and markets. This makes it even easier for Jaws OEMs to develop modular, best-in-class solutions for their specific target markets.

Jaws OEM Standard Deliverables

Jaws Kernel

The Jaws 3.1 Interpreter provides a PostScript Language and PDF kernel technology with a complete API for integration in the OEM's product. The Jaws Interpreter supports an open systems approach to building a RIP and includes:

- Jaws binary libraries/object files (for Windows, Mac OS X and Linux,)
- Sample source code for various generic "device drivers"
- Example code for color managed solutions using 3rd party color management modules.

Jaws OEM Optional Modules

Open Interface for CMM provides support for 3rd party color management modules via the unique Jaws Device Class modular interface.

Morisawa Kanji Font Module

The Morisawa SpecialRun operator is implemented, allowing OEMs to use Morisawa fonts (requires separate license agreements with Morisawa).

Global Graphics PostScript 35 font set

Global Graphics standard PostScript 35 Font Set available under license from Shiva Networks Inc. OY (requires separate license agreement with Global Graphics).

Font Emulation

Jaws uses the font descriptor dictionaries in the PDF file to synthesize an approximation to the font from either the StreamSansMM or StreamSenifMM multiple-master fonts.

Printer support line

For expert assistance and answers to your printing questions!

call

+44 01234 567890

Available Monday through Friday
7:00 am to 6:00 pm, BST

or email

helpme@printinganswers.co.uk

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How Jaws is used

<p>Application software QuarkXpress, NTWare, Canon IT Solutions, Sophia, ASG Software Solutions, OneVision</p>	<p>Specialty printing Wasatch, Onyx.</p>	<p>Wide format Wasatch, Onyx, Colorburst, ColorGATE.</p>	<p>Label printing Wasatch, Canon Finetech.</p>	<p>Production print Pitney Bowes, Fujitsu.</p>
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The top graphic is the original text, middle is unemulated and bottom is emulated text using Jaws 3.1 Font Emulation.

Software specifications

Supported Platforms and Build Environments

Development environments

Windows: Visual Studio 2008 / VC9
Macintosh: XCode 3.2
Linux: gcc: 4.4.0, glibc: 2.10.1

Deployed operating systems

Windows: XP SP3 and later (Windows Server 2003/2008, Vista, Windows 7)
Macintosh: OS 10.5 and later, Intel only No support for PPC in Jaws 3.0
Linux: Fedora 12

Libraries for 32 and 64 bit operating systems are provided for all platforms.

File Format Support

PostScript Language level 1, 2, 3 (3015.102)
PDF 1.2, 1.3, 1.4, 1.5, 1.6, 1.7 (ISO-32000-1)

Font Options

35 Type 1 as (CFF)*
Type 0, Type 1, Type 2, Type 3, Type 42
Multiple master fonts
TrueType® fonts, directly and as Type 42
CID fonts (CID Font Type 0, 1, 2, 4)
Morisawa OEM encrypted Kanji fonts**
Monotype Imaging MicroType II PostScript 3 136 font set***

Graphics Support

Separated/composite output:
monochrome 1 bit
greyscale 4, 8, 16 bit
Composite output:
24-bit RGB (8 bits per colorant)
48-bit RGB (16 bits per colorant)
32-bit CMYK (8 bits per colorant)
64-bit CMYK (16 bits per colorant)
Anti-aliased 8-bit, 24-bit or 32-bit color

Screening

Proprietary 'Accurate Screening' solution
FM Screening solution
Supports arbitrary threshold arrays

Color Output Support

Composite or separated
PostScript DeviceN color support

Color Management

Supports PostScript CRDs
API to link to 3rd-party Color Management Systems

Typical Applications

Wide format inkjet printing
Specialty Graphics such as textiles, signage and Point of Sale displays
High speed file conversion
Color proofing
Embedded systems
Label printing

Code Size

Code size approx 2.5MB + fonts + PostScript resources
Available optional fonts and resource
1 MB for 35 standard fonts
3.7MB for fallback CJK font
7MB for PostScript resources (mostly CJK support)

* Requires separate license agreement with Global Graphics

** Requires separate license agreement with Morisawa

*** Requires separate license agreement with Monotype Imaging



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