



## At the core of smart print applications

When building components and applications for print workflows, you want to be certain you have made the right choice of SDK to handle PDF and other PDLs such as PCL or XPS. You need a tool that will scale with you, from simple file interrogation, conversion or thumbnailing tasks to creating multi-PDL viewers, editors, and custom workflow components.

You need Mako, the ultimate print SDK. With decades of print knowledge and expertise encapsulated within, Mako is purpose-built to provide unmatched capabilities, flexibility,

and reliability that your projects demand. Whether you aim to optimize workflows or pioneer cutting-edge print solutions, Mako is your indispensable tool for success. Powered by the Intelligent DOM (iDOM), our robust document object model, you'll attain unrivaled control and precision, elevating your print projects to unprecedented levels of excellence.

Mako also gives you access to our Apex technology, GPU-based rendering that will generate color-correct rasters at blistering speed from complex, transparency-laden PDF jobs.

### Features and benefits

- Unleash the power of intelligence: decades of print intelligence built in
- Effortless high-speed handling of large documents, gigabytes of data and millions of pages
- Extended gamut support and precision color management
- Unify development across multiple Page Description Languages (PDLs)
- Your trusted partner in ISO standards compliance
- Unlock savings and streamline operations: consolidate your document processing
- Simplify integration with Mako's APIs across multiple programming languages
- Cross-platform development for cloud, mobile, and desktop
- Seamless PDL Conversion
- Rapid rendering on CPU
- Turbo-charged rendering on GPU, with optional Apex™ technology
- Innovative graphics engine
- Add flow text using the built-in Layout Engine
- PDF viewing with overprint simulation
- Comprehensive PDL analysis
- Flawless transparency flattening using raster and vector techniques
- Streamline PDLs through preflighting and optimization
- Generate new documents from scratch, or with templates and data for VDP applications
- Create accurate master images for camera- and scanner-based vision systems
- Simple price and licensing with Mako Core's partner-centric approach

### Performance

Mako's highly efficient, multithreaded, and thread-safe architecture empowers speedy processing of PDFs and other fixed-format PDLs. Mako Core is built to handle colossal PDFs, encompassing millions of pages and spanning multiple gigabytes in size, while maintaining industry-leading speed and performance.

### Even greater performance with GPU rendering

With Mako 8.0 and later, you can rasterize PDF or any Mako-supported PDL with Apex, the world's first fully GPU-native PDL renderer. Apex is available as an option to Mako, with which it is fully integrated.



## Unleash the power of Print Intelligence with iDOM

What makes Mako Core stand out among other SDKs is the iDOM, or Intelligent Document Object Model. This advanced functionality grants comprehensive access to every element within a document, including fonts, images, vector art, layers, metadata, and more. What sets Mako apart is its unique ability to handle multiple PDLs simultaneously, a distinguishing feature absent from other libraries.

Use the iDOM for:

**Seamless PDL conversion:** effortlessly convert between different PDLs

**Fast rasterization:** Swiftly render any page to a raster and save to the image format of your choice with built-in encoders

**View with precision:** Render with accurate overprint simulation for on-screen PDF proofing

**Comprehensive analysis:** Thoroughly analyze PDF and all supported PDLs to enhance your workflow solutions

**Effortless handling of large documents:** Easily manage gigabytes of data and millions of pages

**Flawless transparency flattening:** Achieve seamless transparency flattening using both vector and raster techniques

**Preflight and optimization:** Streamline PDLs through preflighting and optimization

**Advanced color:** Handle complex color operations, with full support for ICC profile-based color conversions and extended color

**Dynamic document creation:** generate new documents, such as brand new PDFs from variable data

**Cross-platform development:** Cloud, mobile and desktop. Mako's core code is built for Windows, Linux, macOS, iOS, Android, Windows UWP and Raspberry Pi. Linux support includes Ubuntu, Alpine, Centos, and RHEL. Solutions developed with Mako range from fast and fluid interactive tablet apps to scalable, cloud-based systems processing hundreds of documents per hour.

**Cloud:** Mako's versatility allows it to be used in various scenarios: thanks to its small footprint, Mako is perfect for Docker containerization, and an ideal choice for scalable cloud implementations on platforms like Amazon Web Services (AWS) or Microsoft Azure..

**Mobile:** Mako provides platform-tuned rendering for iOS and Android, allowing it to take full advantage of the hardware-accelerated rendering capabilities of these platforms. Build apps with a fast and fluid document viewing experience, regardless of the operating system or device you are using.

**Desktop:** Create robust Windows applications that can load, visualize, edit, process, and save documents. To help get you started, a minimally viable product of a PDF viewer/editor, the Mako PDF Editor, is available as a foundation to build upon. This is a C# WPF application written in an MVVM pattern, making it easy to brand and extend. It can be used to build a dedicated workflow component for a specific task or as a standalone application. This approach can also be applied to macOS or Linux applications with equal ease.

## Simplify integration with Mako's APIs in your choice of coding language



Mako offers you the flexibility to work in your preferred programming language, whether that's C++, C#, Java or Python. Furthermore, Mako provides a range of ready-made sample code in each programming language, making it easy for you to get started and understand how to use the APIs.

## Extended gamut support and precision color management

Mako's color management module, powered by ColorLogic CMM, ensures ICC profile compatibility and consistent color rendering. Its versatile APIs facilitate accurate evaluation and transformation of color properties, simplifying corrections and automating workflows. Mako supports extended gamut color for vibrant reproduction beyond CMYK. Whether working with PDF, XPS, PostScript, or PCL formats, Mako provides precise and confident color management for print applications.

## Conform with confidence: Mako Core, your trusted partner in ISO standards compliance

Mako simplifies ISO compliance for PDF standards, including PDF 2.0 (ISO 32000-2) and PDF 1.x. You can save PDFs in various ISO formats like PDF/X-4 (ISO 15930-7:2010), PDF/X-1a (ISO 15930-4:2003) for prepress, and PDF/A-1b (ISO 19005-1) or PDF/A-2b (ISO 19005-2) for archiving.



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