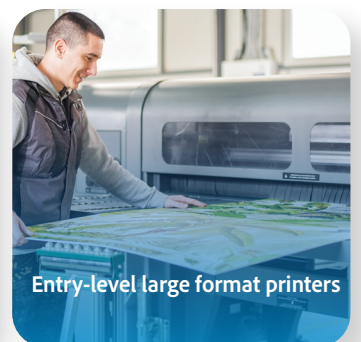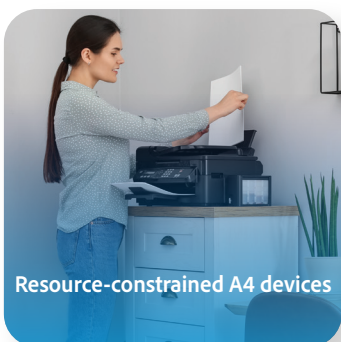# Adobe

Adobe Embedded Print Engine

Meet the one-stop device-agnostic print solution that delivers a consistent print experience from all print paths for all print jobs.

Adobe Embedded Print Engine is the cutting-edge print Raster Image Processor (RIP) technology tailored for office/enterprise printing workflows. A Raster Image Processor (RIP) is a mission-critical software component in printing systems. In the printing process, the first step is to convert the document data into a Page Description Language (PDL) that the printer can understand. As the brain of a printer, the RIP accepts the PDL input and generates a raster output (grid of dots) that the printer subsequently marks on paper.

Adobe Embedded Print Engine processes all print jobs with exceptional precision, powering millions of printers from leading Print OEMs worldwide across a diverse spectrum of device types and ensuring that every print mirrors the quality and intent of the original design.
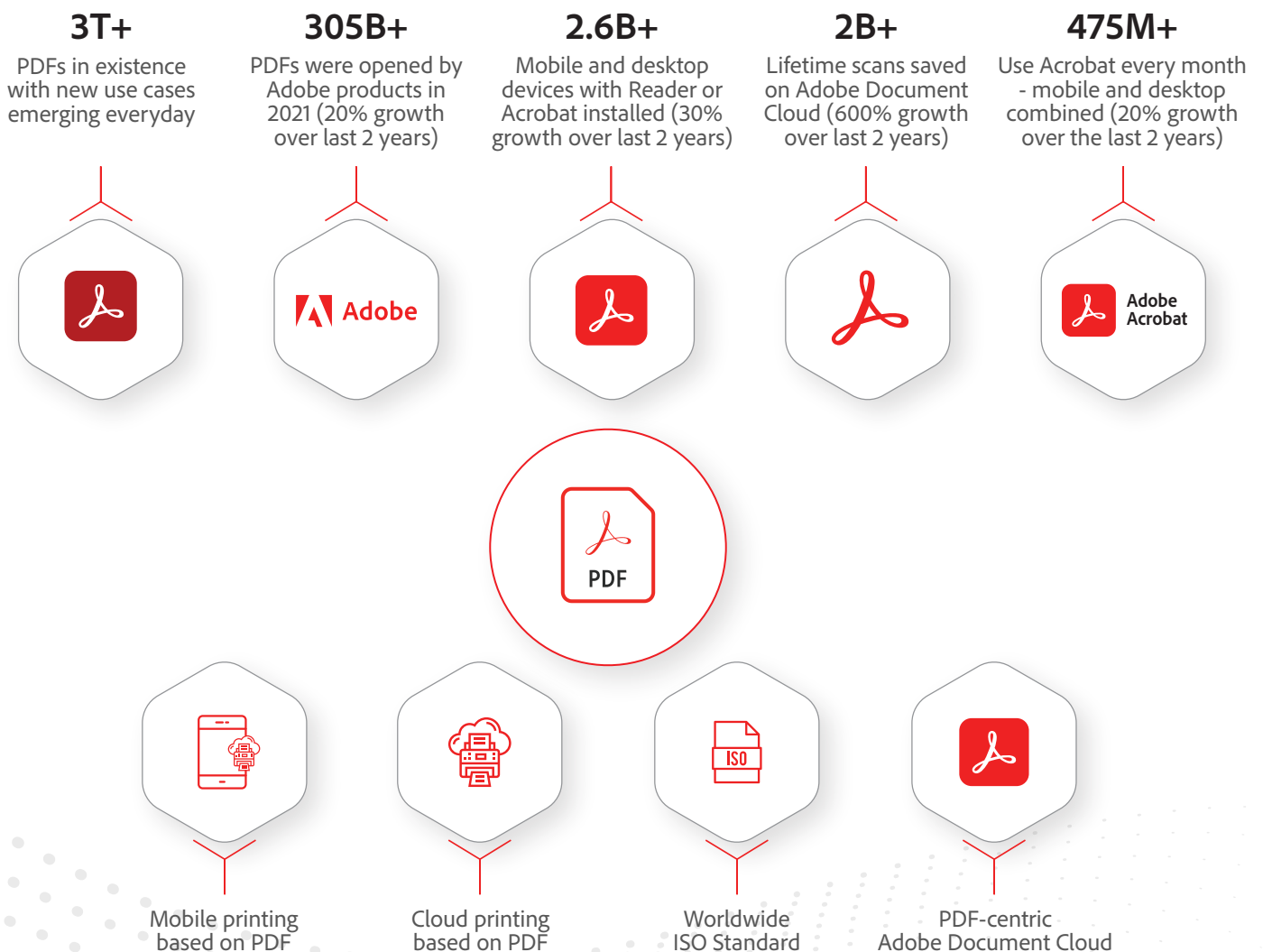
Resource-constrained A4 devices

A4 Multi-function printer

A3 Workgroup devices

Entry-level large format printers

Re-imagine What Your Printers Can Do

Introducing the Adobe Embedded Print Engine-the game-changing Raster Image Processor (RIP) technology for office printing! The Embedded Print Engine is not just a future-proof, next-generation RIP technology, it's also your device-agnostic, one-stop print solution that delivers a consistent print experience from all print paths for all print jobs, regardless of source, type, or size. From resource-constrained A4 devices to A3 enterprise workgroup printers to entry-level large-format printers, you can comfortably embed it within any device. For your raster devices, you can deploy it as a cloud service (on AWS, Azure, or your preferred cloud).

Unlocking the power of native processing for all print formats (Page Description Languages), the Embedded Print Engine is your one-stop shop for all PDLs. Not only does it deliver a consistent print experience across all print paths, but it also enables your devices to be Apple AirPrint certified and Mopria-ready. Its best-in-class quality, performance, and resource utilization make it the go-to choice for leading Original Equipment Manufacturers (OEMs) worldwide. It leverages the same Adobe core technology components used by other Adobe flagship applications to give end users a fully WYSIWYG print experience, ensuring that what one sees on-screen in Adobe Acrobat (the PDF gold standard) is faithfully replicated on paper. The Embedded Print Engine is rigorously field-tested and sets a new standard to meet the evolving demands of modern office printing. Welcome to the future of printing!

PDF: The Document Format Of Choice

3T+
PDFs in existence with new use cases emerging everyday

305B+
PDFs were opened by Adobe products in 2021 (20% growth over last 2 years)

2.6B+
Mobile and desktop devices with Reader or Acrobat installed (30% growth over last 2 years)

2B+
Lifetime scans saved on Adobe Document Cloud (600% growth over last 2 years)

475M+
Use Acrobat every month - mobile and desktop combined (20% growth over the last 2 years)

PDF

Mobile printing based on PDF

Cloud printing based on PDF

Worldwide ISO Standard

PDF-centric Adobe Document Cloud

PDFs are universally recognized as the preferred format for seamless document exchange and printing across devices and platforms. With the rise of standards and services such as AirPrint on iOS, Mopria on Android, various cloud print platforms, and many OEM-specific Android print services, the convenience and efficiency of mobile printing have reached new heights.

As an internationally recognized ISO standard, PDFs facilitate collaboration and ensure print accuracy. As a document format and page description language (PDL), PDFs eliminate the need for conversion before printing, streamlining work-flows and preserving content integrity. In mobile and cloud printing, the compact file of PDFs enables swift transmission over networks while retaining the flexibility for last-minute object-level operations and optimizations. Furthermore, PDF documents are printed at device resolution, guaranteeing unparalleled print quality compared to raster formats generated on mobile devices.

In an increasingly interconnected world, the uniformity of PDFs ensures consistent rendering across diverse environments. With robust features like data encryption and digital rights management (DRM) support, PDFs are indispensable tools for safeguarding sensitive information in office printing scenarios.

Leading Print OEMs trust Adobe Embedded Print Engine

Canon

Canon has developed two major digital printing technologies, electronic photography and inkjet printing, from the ground up, and has enhanced them to meet customers' needs. This allows customers to confidently, safely, and comfortably print a variety of content within the printing environment provided by Canon.

For printing PDF and PostScript files in office work and design workflows, Canon's printing products have integrated Adobe Embedded Print Engine across a wide range of devices, from printers for small offices and hybrid work setups to multifunction printers for offices. This ensures print quality that precisely reproduces what is displayed on the screen.

In the era of generative AI, where there will be a large amount and variety of information, the level of print demand may increase. Canon continues to refine its printing technology and strengthen its partnership with Adobe to deliver value-added products to a wide range of customers in the market.

Digital Printing Planning Center | Senior General Manager
Isamu Sato

Canon | **RICOH** | **SHARP** | **EPSON** | Many more are in the final stages of adoption...

Adobe Embedded Print Engine's unparalleled quality and performance make it the industry's preferred RIP technology. With a commanding 70% market share in the A3 segment, it is **swiftly emerging as the preferred RIP solution in the A4 segment** and is poised to attain a 65% market share by 2026. Additionally, it is gaining momentum in other segments, including entry-level large-format printers, marking a significant industry shift toward Adobe-powered solutions.

One RIP for all your needs

One-stop print solution for all PDLs

Natively supports PDF, PS, MS Office, PCL, PWG Raster, PCLm, and image formats.

One RIP for the full range of devices

Caters to a wide spectrum of devices ranging from low-end A4 to entry-level LFPs. Best designed to support the hybrid work world.

One RIP everywhere: Inside the printer and on OEM cloud

Besides embedded systems, Adobe Embedded Print Engine can now be deployed as a service on your cloud to cater to your resource-constrained raster devices - RIP on your cloud, print on raster devices.
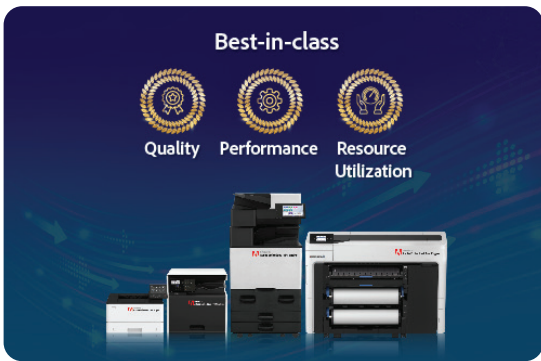

Consistent print experience for all jobs across all paths

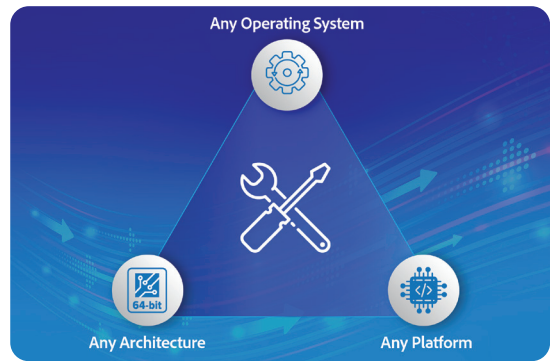The best print experience for any print job from any application, source or print path.

Compliant with the latest industry standards

Enable your devices to be complient and certified by modern driverless printing standards.

Best-in-class quality, performance and resource utilization

Adobe Embedded Print Engine is the gold standard Print RIP, trusted by OEMs worldwide

Highly customizable & platform-agnostic

Highly customizable. Designed for fast & easy porting across any platform, architecture and Operating systems.
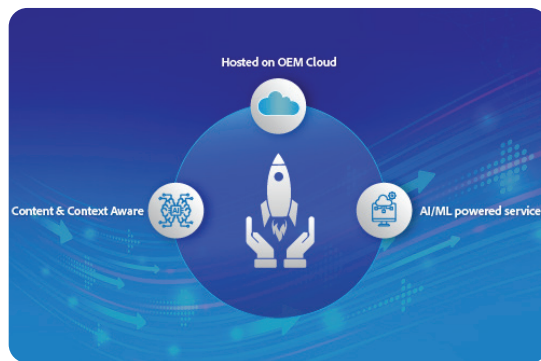
Easy Onboarding

Intuitive product interface and full engineering support to enable rapid deployment.

Global footprint

Adopted by many leading OEMs and many more in the pipeline...

Future-ready

We are leveraging the power of AI/ML and Cloud to create an ecosystem of technologies around our RIP to deliver additional value to your customers.

Product Specifications

Typical market segments
- Resource-constrained A4 devices
- A4 Multi-function printers (Home, Small Office/Home Office printers, All-in-One printers)
- A3 Workgroup devices (MFP, Laser, Business Inkjet)
- Entry-level large-format printers

Typical jobs
Suitable for content from:
- Any application (MS Office, Adobe Acrobat, Creative Cloud, browsers, various industry-specific applications)
- Any device (Desktop, Mobile, Tablet, MFP)
- Any OS (Windows, Apple, Android, Chromebook, Linux)
- Any print path (IPP, Mopria, AirPrint, Cloud)

Bundling
- RIP part of embedded controller
- Deployable on OEM cloud environment

Parallel processing
- Multiple RIPs on the same MFP
- Parallelism across multiple pages
- Parallelism within multiple bands of the same page

PDL Support
- PDF (Latest PDF specification - PDF 2.0)
- PS (PostScript Language Level 3)
- MS Office (.doc, .docx, ppt, pptx)
- PCL
- PWG Raster
- PCLm
- Image (JPEG, PNG, BMP, TIFF)

Recommended processors
- Intel
- ARM

Minimum number of Cores
- One

Operating system
- All flavors of Linux (32 bit, 64 bit)
- Can be made available on custom embedded platforms (including proprietary platforms)

Storage
- Optional

Memory requirements
- Minimum ROM Footprint: 15 MB

Output color models
- Color Models: Device CMYK, Device RGB, Device Gray
- Bit Depth: 1, 2, 4, 8 bits per channel per pixel
- Resolution: Up to 2,400 dpi

PDF standards
- PDF/A-PDF/A-1a, PDF/A-1b, PDF/A-2a, PDF/A-2b, PDF/A-2u, PDF/A-3a, PDF/A-3b, PDF/A-3u
- PDF/UA-PDF/UA-1
- PDF/E-PDF/E-1

Fonts
- All PostScript fonts (Type 0, Type 1, Type 2, Type 3, Type 32, Type 42)
- CID fonts (Type 0, 1, 2, 4)
- Adobe Multiple Master Fonts (for emulating referenced fonts not present in printer)
- TrueType Fonts (encapsulated as Type 42 font)
- Optional OTF bundle

Raster transfer models (for planar & interleaved)
- Banded
- Banded frame (hybrid)
- Full frame

Job ticketing
- Job ticketing via PS, PJL
- OEM custom commands

Layout and imposition
- N-up
- Booklet

Colour management, transparency, screening and other features
- Color rendering dictionary and color space array support for PostScript
- ICC profile support for PDF, PS
- Interface provided to plug in third-party color management systems
- Transparency handling at resolution controlled by OEM
- Object-based custom halftone
- Interface provided for third-party halftone screens
- Limit Toner
- Tag plane

Maximize your Return on Investment

With a legacy spanning over four decades, Adobe has consistently led the way in Print and PDF technology, establishing a track record of partner success. Our commitment to delivering world-class customer service and support remains unwavering. Adobe partners closely with you, ensuring you continue delighting your customers. Trust us for a partnership that maximizes your return on investment, combining innovation, experience, and dedicated support.

Open & flexible licensing model

Choose a licensing model (unit-based royalty, fixed fee, subscription, or any other option) that fits your operational and financial preferences.

Highly customizable and platform-agnostic technology

Highly customizable technology designed for fast & easy porting across any platform, architecture, and operating system.

Trusted market leader

OEMs place exceptional trust in the Adobe brand. Adobe is the market leader by a distance in the A3 RIP segment (>70% market share), and we are on track for >65% market share in the A4 RIP segment by 2026.

Easy onboarding

Intuitive product interface and full engineering support to enable rapid deployment.

One Adobe workflow

Adobe owns the end-to-end content lifecycle - Create in CC, Manage/Preview in Acrobat, and Print using Adobe Embedded Print Engine.

Future-ready

Extending the power of PDF printing to raster devices via our cloud-ready technology and leveraging the power of AI/ML to support your journey from "Printers" to "Printers + Services" by developing Beyond-RIP Print Services.

Continued commitment, continued innovation

Fully committed to advancing our print technology with continued R&D investment and executive sponsorship. We are here to help you optimize your costs and grow your business.

World-class support

Partner with our world-class engineers, who provide support through workshops, training, technical teleconferences, regular engineering interactions, and more.

Single partner for all your PDL customization and support needs

As your singular, dedicated partner for all PDLs, Adobe can help you optimize costs, ensure swift integration, and faster go-to-market.

Tandem account management

Two dedicated Technical Account Managers - one close to you and another to the Adobe Engineering team.

Decades of consulting experience

Deep domain knowledge and experienced team with vast know-how and expertise.

Build once and deploy for a range of devices

With a one-time development effort, you can tailor Adobe Embedded Print Engine for your entire range of devices.

Co-marketing for market expansion

Work with Adobe to amplify your industry outreach, market expansion, and product launch efforts. Leverage the Adobe brand in your MarCom, webpages, hardware, application UI, and more.

Revolutionizing printing with innovative technologies, since 1984

Adobe revolutionized the world of print by creating PostScript in 1984 and then the Portable Document Format (PDF) 10 years later. From Adobe Creative Cloud (to create content) to Acrobat (to manage content) to Embedded Print Engine (to print content) — Adobe's product portfolio turbocharges the entire print workflow.

Get started

For more information on how Adobe Embedded Print Engine can benefit your business, contact us at aepe@adobe.com

or visit www.adobe.com/go/aepe