

Product Brief

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Overview

IPS DDK, Zoran's feature-rich high performance driver development kit, is targeted to color and monochrome printers and multifunction peripherals (MFPs). Drivers built using IPS DDK provide a consistent user interface and feature set across Windows operating systems, including Windows XP, Windows Vista, Windows 7, Windows Server 2003, Windows Server 2008, and Windows Server 2008 R2. Additionally, such drivers emit all current printing languages, including JBIG, PCL 5, PCL XL (PCL 6), PostScript and XPS, while using a consistent user interface, with customizable options depending on the language specified.

Benefits

- Drivers created using IPS DDK can be configured to exercise the GDI print path through Unidrv and PScript as well as the XPS print path through Zoran's IPS XPS rendering technology
- Full customization capabilities and control over user interface design and feature set
- Easy integration of OEM intellectual property: proprietary color management, halftone algorithms (error diffusion and screens) and other image quality improvement algorithms, finishing options, document processing and other device features
- Source code availability provides independence and design flexibility and facilitates value-added customization
- Single code base that can be easily localized to all native Windows languages and locales

Description

GDI Printing Architecture

Zoran's IPS DDK is specifically designed to comply with Microsoft's GDI printing architecture, to ensure complete compatibility with legacy Windows operating systems. IPS DDK takes full advantage of the standard spool system, I/O architecture and OS-supplied components in Windows XP and Windows Server 2003, including x64 editions. Using IPS DDK, OEMs can create drivers using:

- Microsoft's Unidrv-based PCL 5 and PCL XL
- Microsoft's PScript-based PostScript
- Zoran's JBIG and inkjet raster emitters
- OEM proprietary formats

XPSDrv Printing Architecture

Zoran's IPS DDK complies with Microsoft's XPSDrv printing architecture. IPS DDK offers complete compatibility with the XPSDrv print path provided in Windows Vista, Windows 7, Windows Server 2008, Windows Server 2008 R2 and Windows XP (with .NET 3.x Framework or later). Additionally, IPS DDK includes extensible support for PrintTicket and PrintCapabilities, as well as XPS-to-PDL conversion. Using IPS DDK, OEMs can create XPS drivers that emit PCL 5, PCL XL (PCL 6), PostScript, JBIG raster and XPS.

To meet OEM requirements for features, customization, performance and print quality, Zoran's IPS DDK significantly extends the capabilities of Microsoft's Unidrv and PScript for GDI drivers. IPS DDK also supports the XPSDrv filter pipeline architecture for drivers to be used in the Windows Vista, Windows 7, Windows Server 2008, Windows Server 2008 R2 and Windows XP (with .NET 3.x) operating systems. Zoran's IPS DDK uses the IPS XPS rendering core as part of the XPSDrv filter pipeline to create powerful and feature-rich drivers that can take advantage of the newest printing advancements available.

Key Features

- Easily customized user interface design, portable Unidrv, PScript and XPSDrv, and compliant with both Microsoft in-box and OEM UI specifications
- Full range of features including page and device preview, watermark generation, N-up formatting, complex booklet printing, reverse ordering, manual duplex and scaling features
- Fully tested against Driver Test Manager (DTM)
- High-fidelity color and quality, object-specific rendering and digital halftoning
- Integrated high-speed, assembler-optimized, JBIG compression module for raster page devices
- Reference implementation for page (e.g. laser) and serial (e.g. inkjet) raster devices and PDL devices

Plug-In Architecture

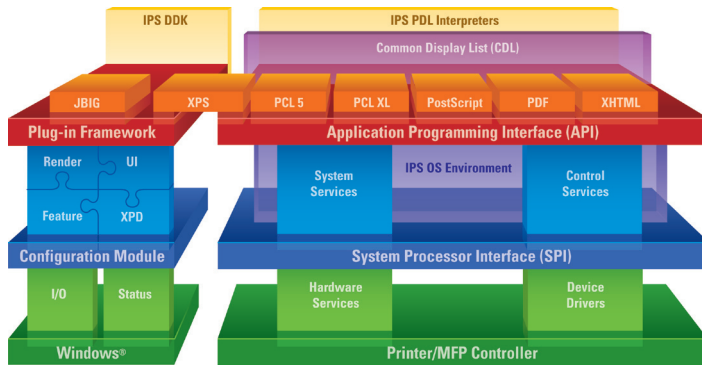
Zoran has built on the Unidrv, PScript and XPSDrv architectures with an innovative plug-in model that takes full advantage of the Microsoft core components and adds powerful functionality and customization capabilities. The IPS DDK plug-ins are implemented as a small number of DLLs.

User Interface Plug-In

Full customization of the driver's user interface is provided by the User Interface Plug-In. Various OEM custom designs are possible, including rich graphics such as logos, printer configuration images and page preview. The user interface is controlled through a combination of extended Generic Printer Description (GPD) files or PostScript Printer Description (PPD) files, while more complex UI constraints are supported by easily debugged source code. With the User Interface Plug-In, a fully customized look-and-feel can be applied to a family of drivers, including raster and multiple PDLs, in a single design and development effort.

Product Brief

Description (continued)



IPS Architecture

Feature Plug-Ins

Features that are not natively supported by Unidrv, PScript and XPSDrv are implemented using advanced controls and processing options in the Feature Plug-Ins:

- Document Transformation features add functionality to application features, including zooming, watermarks, N-up, booklet and more
- An enhanced Page Preview allows the user to see at a glance what print options are active (e.g. watermarks, N-up, booklet printing, binding options, etc.)
- Interactive Printer Configuration Preview graphically reflects the current hardware configuration of the printer and the selected settings and finishing options
- Manual Duplex and Reverse Print Order provide double-sided printing without a mechanical duplexing device installed in the printer

Ease of Development

IPS DDK is provided as source and object code with extensive documentation and reference driver source code. The highly object-oriented code base does not require proprietary development tools; the entire development environment is integrated into Microsoft Visual Studio.NET. Since interfaces are based on the Common Object Model (COM), customized extensions are forward- and backward-compatible.

Ease of Localization

All strings in the user interface and help system can be fully localized into all native Windows languages and locales using Unicode—including support for double-byte and right-to-left layouts. A preview utility is provided with the DDK to enable localization experts to easily match each string ID to its location and size in dialogs. Multiple languages can be combined in a single binary if desired by the OEM. To speed OEM time-to-market, reference localized text has been provided for all common features and selections in EFIGS (English, French, Italian, German and Spanish), Asian (Japanese, Traditional Chinese, Korean) and Hebrew.

Support for In-Box and Windows Update

Drivers built with IPS DDK can be dynamically switched between the Microsoft standard Common Property Sheet User Interface (CPSUI), or “tree view”, and the OEM-specific dialog designs. This allows a single driver development effort to meet both Microsoft and OEM UI requirements for broadest distribution with a single binary.

Qualified Against DTM

IPS DDK has been thoroughly tested against Microsoft’s DTM suite and WHQL certification requirements. Sample drivers created using IPS DDK have earned several certifications from Microsoft.

Zoran Engineering Support Services

Zoran offers Source Code Maintenance and Engineering Support Programs that can shorten development cycles and ensure that the latest operating system and print language features are available as new drivers are developed. The Source Code Maintenance Program also provides technical consulting, including informative technical bulletins, service packs and updates. Zoran’s Engineering Support Program provides direct software integration assistance and design recommendations, or NRE development, to optimize the quality, feature set and performance of the driver collection.