

Product Brief

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XP1 is Zoran's embedded XHTML-Print interpreter software. It enables printers and multifunction peripherals (MFPs) to print from information and imaging appliances such as PDAs, wireless phones, set-top boxes and digital cameras. IPS XP1 supports the XHTML-Print language, which is adopted by Bluetooth Basic Printing Profile and Universal Plug and Play

(UPnP) PrintBasic as their standard printing language for non-PC devices. XP1 can be implemented in home, SOHO and office inkjet and laser printers and MFPs. IPS XP1 can be implemented alongside traditional Page Description Languages (PDLs), such as PCL and PostScript, or can be implemented in raster-based printing devices.

Benefits

- Supports Bluetooth's Basic Printing Profile (BPP), as XHTML-Print is the BPP mandatory printing language
- Supports UPnP PrintBasic printing (Wi-Fi), as XHTML-Print is the PrintBasic mandatory printing language
- Developed specifically for printers and MFPs, to meet their unique requirements
- Multiple configurations meet the requirements of a wide range of printing devices, from home inkjet printers to office MFPs

Key Features

- Supports XHTML-Print, which requires compliance with subset/superset of XHTML, XHTML Basic, XHTML Enhanced, XML, CSS 1.0, CSS 2.0, CSS 2.1, JPEG, etc.
- Supports industry-leading font renderers and fonts, including stroke-based Asian fonts, from Monotype Imaging
- Supports print resolutions up to 1800 dpi
- Can stand alone or be combined with the other languages in IPS-IPS FIVE, IPS PS3, IPS PDFt and IPS XPS—for complete print functionality

Description

Non-PC Printing

XHTML-Print, defined by the Printer Working Group (PWG), an affiliate of the IEEE Industry Standards and Technology Organization, is quickly becoming the standard data format between both information and imaging appliances and printers both on wired network (corporate and home) and wireless connections. In fact, the Mobile Imaging and Printing Consortium selected XHTML-Print as the mandatory printing language for both Bluetooth BPP and UPnP PrintBasic (WiFi) printing.

Unlike the traditional PC printing languages, which require PCs to have printer-specific drivers, appliances and PCs that have an XHTML-Print data emitter (driver) can print to any printer or MFP with XHTML-Print capability, allowing the user to print anywhere. A user may print at a hotel business center, an office conference room or at a friend's home, from many different PC and non-PC devices.

XHTML-Print

Zoran's XP1 fully supports XHTML-Print, which requires compliance with a defined subset and superset of XHTML, XHTML Basic, XHTML Enhanced, XML, CSS 1.0, CSS 2.0, CSS 2.1 and JPEG. Web browsers available today are typically designed for PCs with an abundance of CPU and memory resources, or for small screen devices with low resolution displays. Zoran has developed its own XML processor and XHTML engine, as well as other important components of the XHTML-Print interpreter, in order to meet the specific requirements of the printing market. These requirements include limited ROM/RAM space and CPU capability, high printing

resolution, CMYK color space and lack of frame buffer. In doing so, Zoran drew heavily on our expertise in PCL, PostScript, PDF and XPS embedded interpreters, as well as our detailed understanding of Internet Printing Protocol (IPP).

As new types of information and imaging appliances emerge, Zoran's XHTML-Print interpreter will evolve to accommodate new features. We are committed to following the evolution of the standard, as we have tracked PDL standards over the past 15 years.

Available Configurations

XP1 is available in two customizable configurations:

- IPS™ XP1 Configuration is tightly integrated with Zoran's IPS, sharing resources and services provided by the IPS printing architecture. This configuration is most suitable for office network printers and MFPs, with full features including PCL, PostScript, PDF and XPS capabilities and addition to XHTML-Print functionality
- APS XP1 Configuration does not require any other IPS languages. It is a complete yet lightweight XHTML-Print interpreting system, suitable for inkjet and low-end laser printers and MFPs.

For either configuration, Zoran's XP1 products are provided with complete source code and comprehensive engineering documentation to give OEMs maximum flexibility in customizing for their specific market and product requirements.

Embedded XHTML-Print Interpreter

Product Brief

Description (continued)

Related Technologies

Zoran's XP1 products are fully integrated with industry leading font renderers and fonts from Monotype Imaging. The APS XP1 configuration also integrates the stroke based Asian font technologies from Monotype Imaging, which significantly reduce a printer's ROM requirements.

Zoran offers both a UPnP PrintBasic protocol stack and a Bluetooth BPP protocol stack. OEMs intending to develop UPnP or Bluetooth printing devices can choose to use Zoran's protocol stacks or can choose a third party's stacks.

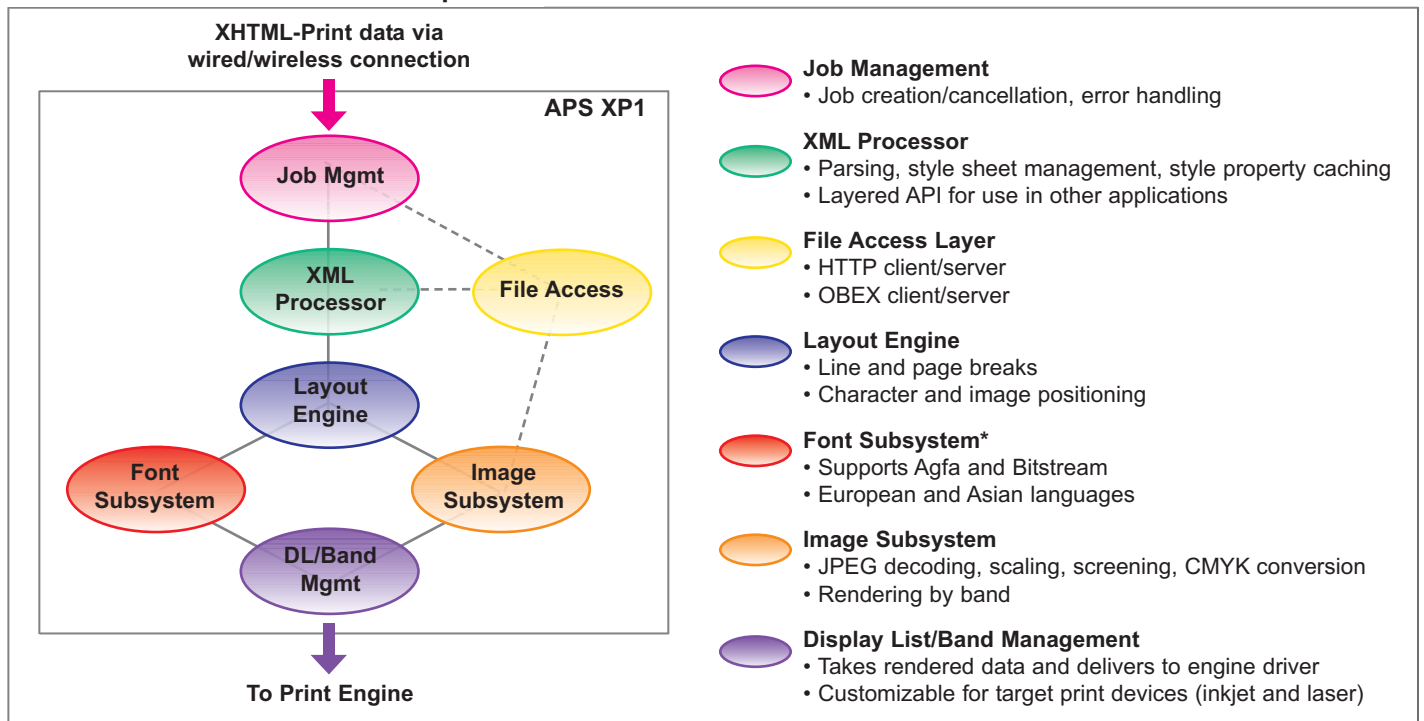
Zoran's commitment to XHTML-Print goes beyond the embedded XP1 software. We work with the information and imaging appliance vendors and developers of related products to implement XHTML-Print emitting capability in their devices. In addition, Zoran is a member of various industry consortia including UPnP Forum, Bluetooth Special Interest Group, and Printer Working Group.

Zoran Engineering Support Services

Zoran offers Source Code Maintenance and Engineering Support Programs that can shorten development cycles and ensure that the latest XHTML-Print language features are available as new controllers are developed. The XP1 source code license includes technical support, software integration training and source code maintenance. The Source Code Maintenance Program provides extended source code maintenance and technical consulting, including informative technical bulletins and software patches and updates.

Zoran's Engineering Support Program provides direct software integration assistance and design recommendations to optimize the interface between the XHTML-Print compatible interpreter and the controller. OEMs can also work with a Zoran-authorized development partner. These companies have experience in Zoran's XP1 software integration and can offer fixed-cost, turnkey controller development for a range of controller configurations and print engines.

XP1 Embedded XHTML-Print Interpreter



* Font renderer and fonts require a license from their vendor.

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