

*A single integrated system to power personalization of statement and marketing collateral printing.*



# IBM Infoprint Color Plus Full Color Digital Printer

## Highlights

**New, state-of-the-art printing system designed for complex, variable-content full-color printing**

**Up to 138 full-color impressions per minute with 4 bits per spot and 212 line screen for superior output quality**

**Supports printing of applications utilizing AFP, Adobe PostScript and PDF 1.3**

**New printer controller incorporates IBM's RISC hardware with RIP control software to maximize multiprocessing power**

**Supports object caching for Encapsulated PostScript, PDF 1.3 and IBM's new Color Plus image objects**

**Combines error recovery, data integrity, and resource management capabilities of IBM Advanced Function Printing with the graphics strength of PostScript**

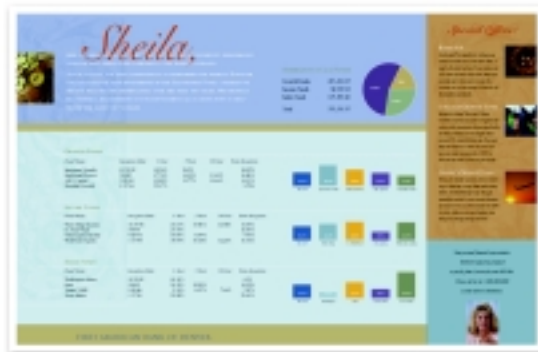
**Fully automated density and registration system for more efficient operation and consistent print quality**

The IBM® Infoprint® Color Plus powers personalized communications with groundbreaking technology that provides the ability to print fully variable content pages at very high print speeds and excellent print quality. Support for variable data has been integrated with IBM's optional Infoprint Manager, which allows each copy of the print run to be made unique with individualized images and data. Infoprint Manager and Print Services Facility™ (PSF™) for S/390® maximizes the production of the Infoprint Color Plus.

Popular composition tools from IBM and third-party application providers allow integration of page-layout programs with database information to produce customized and personalized communications. Variable-data objects can be created from design applications, including QuarkXPress™, Adobe® InDesign™ and PageMaker®, and can be merged with files as they are printed.

## High-throughput personalized printing

New IBM technology supports a broader range of variable content applications on a single system at speeds up to 30 percent faster than our previous offering. At the heart of the Infoprint Color Plus solution is the Advanced Function Common Control Unit™ (AFCCU™), the printer controller that incorporates IBM's latest RISC technology. The controller features configurations of 4- or 6-way 450 or 500 MHz processors, up to 6 GB of high-speed memory, and up to 108 GB of high-speed storage. RIP control software utilizes page parallel processing to distribute the RIP workload across the AFCCU's multiple processors. The controller system manages the raster image processing and caching of objects for the highest color system performance yet.



*Response rates increase dramatically with variable data pictures, product offerings and text messages that are unique to a specific customer.*

*IBM patented technology enables powerful RIP and print performance, delivering highly complex, fully variable content at high speeds.*

The Infoprint Color Plus, along with new enhancements to IBM's Infoprint Manager and PSF/MVS™ software and servers, helps make it easy to turn your statements, invoices and marketing brochures into 1:1 marketing tools with graphic arts quality.

This solution, with Infoprint Manager for AIX® included, combines the benefits of AFP's job management and page-level error recovery capabilities with the ability to print full-color applications generated in Adobe® PostScript® Level 3 and PDF.

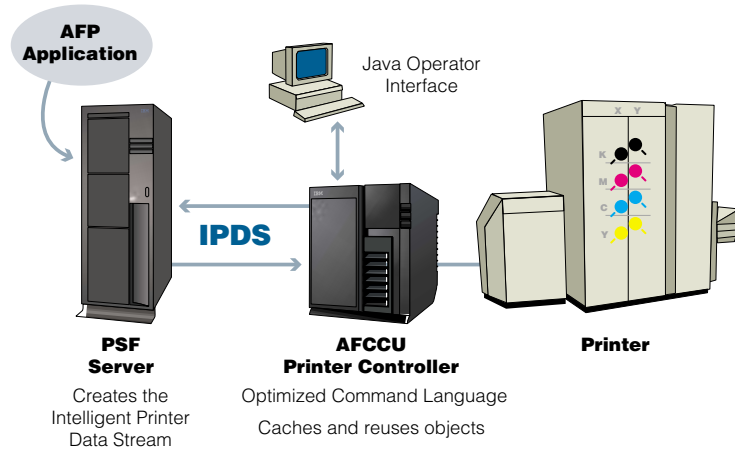
The AFP printing solution can now support applications that use EPS (Encapsulated PostScript), TIFF, GIF and JPEG input as resources for variable data documents. Any EPS or PDF image can be placed into cache memory, ripped, then stored as an object without the need to re-rip the image at the time of printing.

Included with the printing system is a new conversion tool based on the AFP object-oriented architecture. The new tool takes in TIFF, GIF and JPEG files and creates the

new image object called Color Plus. The conversion tool breaks an image into smaller "tiles", then selects the best available compression technology for line art tiles or image tiles. The converted Color Plus images provide very high RIP-and-print performance for 4-bits-per-spot color printing. The Color Plus image can be

managed as an object resource in the AFP system. In non-AFP applications, Adobe PostScript and PDF applications are rasterized and converted into Color Plus objects, then directed to the printer using the Intelligent Printer Data Stream™ (IPDS™) data flow. Processing is streamlined resulting in higher production output.

**AFP architecture provides high performance**



**Infoprint Color Plus supports a broad range of applications**

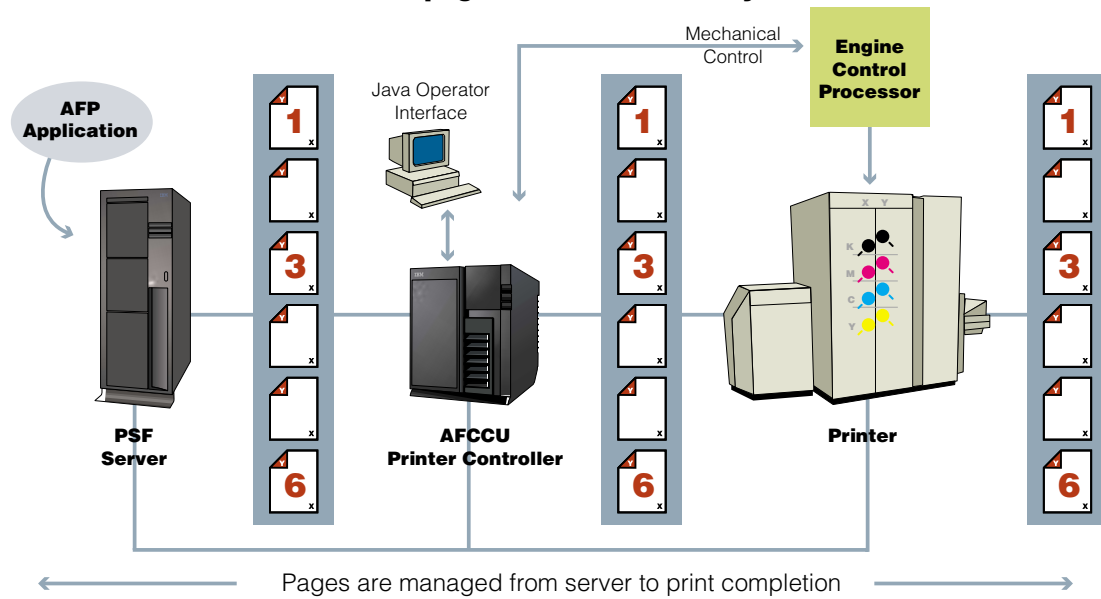
With Infoprint Manager for AIX included in the solution, Infoprint Color Plus can print full-color applications generated in Adobe PostScript Level 3 and PDF. All the benefits of AFP's job management and page-level error recovery capabilities are available for full-color PostScript high-volume production applications.

AFP utilizes IPDS to provide page-level error recovery for all applications printed on the Infoprint Color Plus. AFP helps ensure that the correct objects (text, graphics and images) are printed accurately on the page, and tracks object resources for each page from the server to completion of printing. Page-level error recovery, when compared with systems

*The Infoprint Color Plus combines the data integrity and resource management capabilities of AFP with the graphics strength of PostScript.*



## AFP page-level error recovery



that provide job-level recovery, can significantly reduce production costs associated with waste from lost pages and labor required to recreate print jobs.

The new AFP Viewer allows viewing of production output for proofing or application development, or for viewing archived documents. AFP Viewer displays full-color documents from AFP applications on Microsoft® Windows® NT® systems.

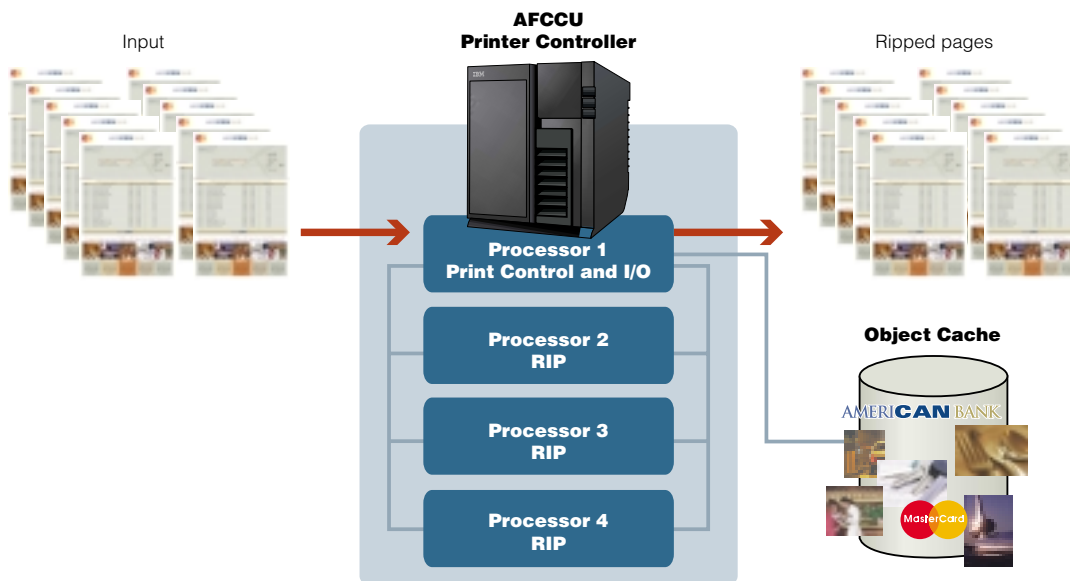
### Excellent print quality

The new Color Plus screening technology developed by IBM for the Infoprint Color Plus provides classic screening at 600 dpi with 212 line screen resolution on fully variable pages. A screening algorithm developed by IBM Research is implemented on the new color interface card for superior performance. High-quality, continuous-tone image processing is maintained while producing high-speed RIP-and-print throughput.

The Infoprint Color Plus' print registration and toner density control system can help produce consistent print quality by automatically measuring every page or a set number of pages. The system will dynamically adjust registration and density without operator intervention.

New toner version 3 delivers better print quality, light fastness and improved process stability. Operation costs can also be lowered since the developer mix can last twice as long as toner version 2.

## Parallel page processing



## For more information

Contact your local IBM Printing Systems representative or call the Printer Selection Center at (800) 358-6661, option 3.

## IBM Service and Supplies

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## IBM Infoprint Color Plus Full Color Digital Printer at a glance

|   |   |
|---|---|
| <b>Print Speed (impressions per minute)</b> | Up to 138 letter size ipm with paper stock < 170 gsm bond<br>Up to 105 letter size ipm with paper stock > 170 gsm bond<br>Linear paper speed of 6.3 in./sec. (16.0 cm/sec.)<br>with paper stock < 170 gsm bond<br>Linear paper speed of 4.8 in./sec. (12.25 cm/sec.)<br>with paper stock > 170 gsm bond |
|---|---|

|                          |                                       |
|--------------------------|---------------------------------------|
| <b>Usage<sup>1</sup></b> | Maximum 700,000 impressions per month |
|--------------------------|---------------------------------------|

### AFFCCU III Print Controller

| RIP processing           | Minimum  | Maximum |
|--------------------------|--|---------|
| RISC Multiprocessors:    | 4 way  | 6 way   |
| Processor Speed:         | 450 MHz  | 500 MHz |
| High Speed Memory:       | 4 GB   | 6 GB    |
| SSA DASD:                | 72 GB  | 108 GB  |
| System Memory Bandwidth: | 2 GB per second x 3 buses for a total of 6 GB per second |         |

|                              |   |
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| <b>Paper Characteristics</b> | <b>Web-fed roll input:</b>                              |
|                              | — 60 gsm to 240 gsm — 22 lb. to 92 lb. cover            |
|                              | — 16 lb. to 64 lb. bond — 41 lb. to 169 lb. text        |
|                              | — 19.7" to 20" (500 to 508 mm) width                    |
|                              | — Coated or uncoated media                              |
|                              | — See IBM Infoprint Color Print Media Guide             |
|                              | <b>Output stacker/jogger:</b>                           |
|                              | — Variable length, cut-sheet delivery                   |
|                              | — Output lengths from 11" (279 mm) to 39.37" (1,000 mm) |

|                       |  |
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| <b>Object Caching</b> | Encapsulated PostScript, Single-Page PDF, Color Plus |
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| <b>Image Print Quality</b> | Image Bit Depth: 4 bits per spot<br>Line Screening: Classic screening at 212 lines per inch |
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| <b>Print Image Area</b> | Maximum width: 18.7" (475 mm); 17" (432 mm) with auto density |
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| <b>System Attachments</b> | Fast Ethernet, FDDI, Parallel Channel (RPQ), Gigabit Ethernet, ESCON, FICON |
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|                            |   |
|----------------------------|---|
| <b>Data Stream Support</b> | AFP/IPDS (Requires separately priced PSF/MVS or Infoprint Manager)<br>PostScript Level 3 (Requires separately priced Infoprint Manager for AIX)<br>PDF (Requires separately priced Infoprint Manager for AIX) |
|----------------------------|---|

| Physical Characteristics | Height     | Width      | Depth      | Weight        |
|--------------------------|------------|------------|------------|---------------|
| Component                | inch (mm)  | inch (mm)  | inch (mm)  | lb. (kg)      |
| Paper Supply             | 48 (1,200) | 39 (980)   | 40 (1,004) | 627 (285)     |
| Print Tower              | 90 (2,280) | 64 (1,620) | 70 (1,760) | 2,475 (1,125) |
| Output Jogger            | 23 (590)   | 39 (985)   | 24 (610)   | 99 (45)       |
| Console                  | 92 (2,350) | 99 (2,480) | 52 (1,320) | 110 (50)      |
| Cooling Unit             | 20 (508)   | 19 (483)   | 46 (1,160) | 218 (99)      |
| AFCCU                    | 24 (610)   | 19 (483)   | 28.7 (728) |               |

|                |   |
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| <b>Options</b> | — Fast Ethernet — FDDI — Parallel Channel (RPQ) |
|                | — Gigabit Ethernet — ESCON — FICON              |

|                           |  |
|---------------------------|--|
| <b>Power Requirements</b> | 208-240V, 3 phase, 60 Hz, 50 amp<br>380-415V, 3 phase, 50 Hz, 40 amp<br><b>Power Consumption:</b> 18.5 kVA |
|---------------------------|--|

|                                 |   |
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| <b>Environmental Conditions</b> | <b>Optimal temperature and humidity ranges:</b><br>Humidity: 27% to 62% RH at 68°F to 28% to 53% RH at 77°F<br>Temperature: 68°F (20°C) to 77°F (25°C)<br><b>Acceptable temperature and humidity ranges:</b><br>Humidity: 15% to 65% RH at 59°F to 25% to 50% RH at 77°F<br>Temperature: 59°F (15°C) to 86°F (30°C)<br><b>Acoustics:</b> 71 dBA/71 bels |
|---------------------------------|---|

|                 |                 |
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| <b>Supplies</b> | Toner version 3 |
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<sup>1</sup>This figure represents a maximum monthly printing rate. IBM does not recommend printing this monthly maximum on a consistent basis.