Morpho
C108/ C216/ C108P/ C216P

High Performance Inkjet Printing Engine for VDP

- *Full color*
- *Print Resolution up to 600dpi*
- *Print width up to 216mm (8.5")*
- *Up to 200m/ min. (656ft/ min.)*
- *Based on Kyocera KJ4 print heads*
- *UV, water-based dye, pigment, or MICR ink*
- *Involving multiple patented technologies*
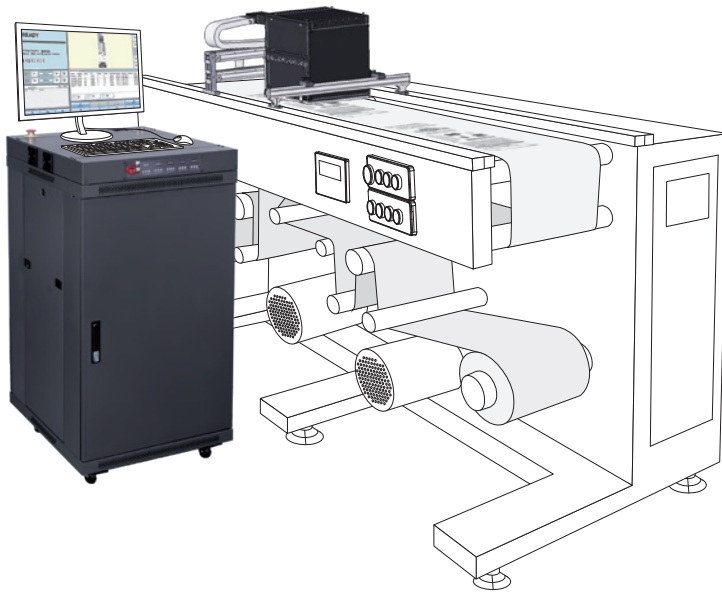
Morpho Color Series
for Roll-to-roll & Sheet-fed Transport
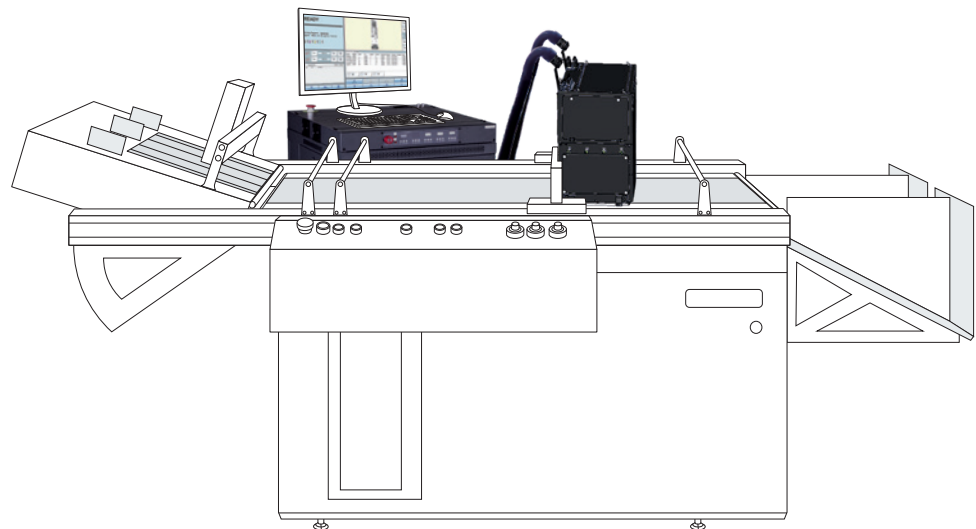
Morpho Color Series
Supporting Multiple Print Head Modules

CE

As a developer and manufacturer of industrial inkjet solutions established in 1988, Amica has been specializing in industrial image graphics and inkjet technologies for over 27 years. As early as 2008, Amica launched its first single-pass inkjet print engine for printing books and packaging boxes. Now Amica has been granted over 200 patents worldwide. The majority of Amica's products are compliant with CE or TUV standards carried out in Europe, or cTUVus standards in North America.

Morpho Color series is available in 4 models - C108/ C216/ C108P/ C216P - for full-color variable data printing (VDP) applications.

Utilizing Kyocera KJ4 print heads, the high speed and high resolution piezo inkjet print head technology, Morpho Color series meets the increasing and rigorous demands for printing barcodes, serial numbers, dates, logos, images, time, and texts on coated or uncoated substrates.

Morpho Color series is suitable for web printing, sheet-fed printing, and both online and offline targeted marking printing. The modular design offers greater flexibility to combine the Morpho Color with different technologies, such as feeding, UV curing, camera inspection, or host PC. Moreover, different head modules of Morpho Color series and Morpho series can be combined to make a more complicated printing system for different print widths and print positions.

Morpho Color series prints clear and sharp edges at a high resolution of 600×600dpi. Text as small as 4pt is perfectly legible.

Morpho Color series inkjet printing engine includes:
- Data Imaging Board
- Printing Control Cabinet
- Print Head Module
- Aluminum mounting cross frame (Optional)
- MagicPage VDP Software/ MagicPRINT PDF Software (Optional)
- ColorPRINT RIP Software (Optional)
- Professional Printer Control Software (PCS Pro)

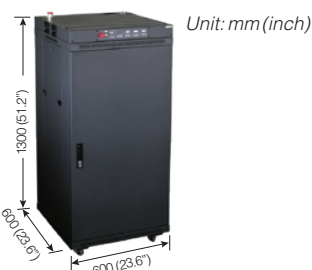## Technical Specifications

Data Imaging Board
- The Data Imaging Board is installed on PC. It connects to the PC motherboard via PCIe interface.
- It supports sustained 240M Bytes/ Second from 1 to 8 Kyocera KJ4 heads in grayscale mode.

Printing Control Cabinet
- Automatic ink supply system with a large 3 liters ink reservoir
- Ink Meniscus Pressure Control System with the digital display

Print Head Module
The Print Head Module is available in 4 models: Morpho C108, C216, C108P and C216P
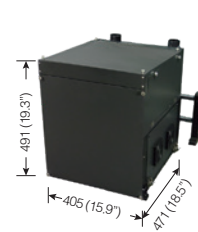- Head power management and head temperature controller
- Intermediate ink tanks with ink level sensors
- Sub-tank with anti-overflow function

Unit: mm (inch)

Data Imaging Board

Printing Control Cabinet
1300 (51.2")
600 (23.6")
600 (23.6")

Head Module (Morpho C108)
432 (17.0")
408 (16.1")
336 (13.2")

Head Module (Morpho C216)
491 (19.3")
422 (16.6")
451 (17.8")

Head Module (Morpho C108P)
491 (19.3")
405 (15.9")
471 (18.5")

Key Features

- The patented, multi-angle Head Module adjustment mounting bracket enables the operator to adjust the angle of the X, Y, and Z-axis directions for each print head module
- Field upgradable firmware and system software
- Automatic alarm signaling ink shortage
- Advanced variable droplet size control technology enables 1 to 3 levels of grayscale ink drop size control to improve the print quality of gradations and color.
- Precise Active Meniscus Pressure Control
- Proven ink system
- Online inspection and automatic rectification system ensures accurate printing position by monitoring and analyzing pre-printed marker in real time
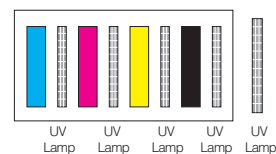
Color Management

Variable Droplet Size Control

Integrated Control for UV Ink Pinning and Curing

Morpho Color offers UV ink pinning and curing solutions for "pinning" of the ink droplets to control dot gain which provides sharper and more vibrant image print quality.

UV Lamp   UV Lamp   UV Lamp   UV Lamp   UV Lamp

UV Ink Pinning and Curing
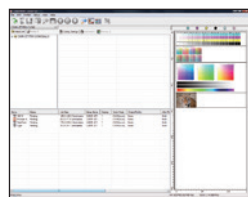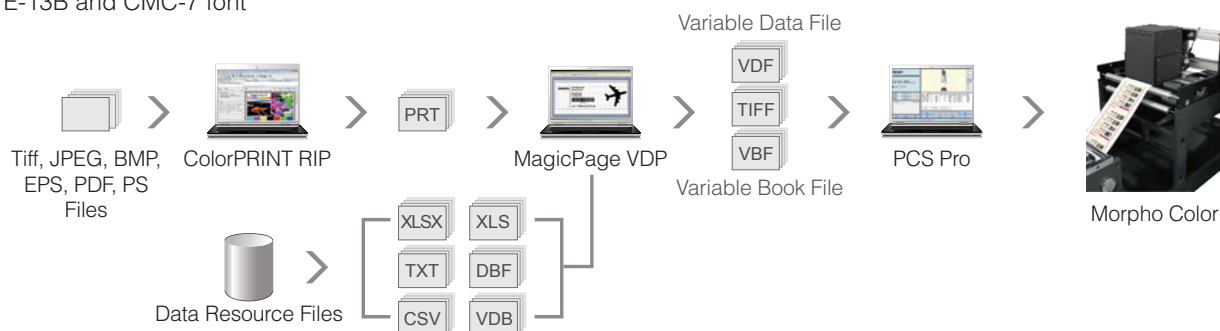
Efficient Workflows

VDP Workflow

MagicPage VDP workflow integrates multiple advanced technologies, from color management, RIP, content collaboration, to output production. The efficient and streamlined workflow enables users to achieve high-speed, accurate, and vivid color variable data printing.
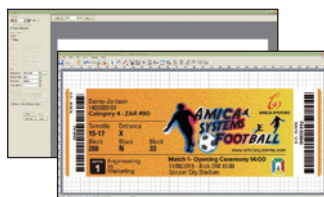
Supported fonts and barcodes:

- Graphics, numeric codes, time, and serial numbers
- True Type and Open Type
- 1-D Barcodes: EAN 13, EAN 8, Code 39, Code 128, Codabar 2 Widths, GS1 DataBar (RSS-14), Interleaved 2 of 5, UPC-A, and USPS PostNet
- 2-D Barcodes: PDF417, QR-Code, and Data Matrix

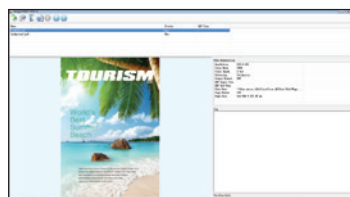**MICR standard support available for check printing:**

- E-13B and CMC-7 font

Variable Data File

VDF
TIFF
VBF

Variable Book File

Tiff, JPEG, BMP, EPS, PDF, PS Files   ColorPRINT RIP   PRT   MagicPage VDP   PCS Pro   Morpho Color

Data Resource Files

XLSX   XLS
TXT   DBF
CSV   VDB

ColorPRINT RIP Software   MagicPage VDP Software   MagicPRINT PDF Software   PCS Pro
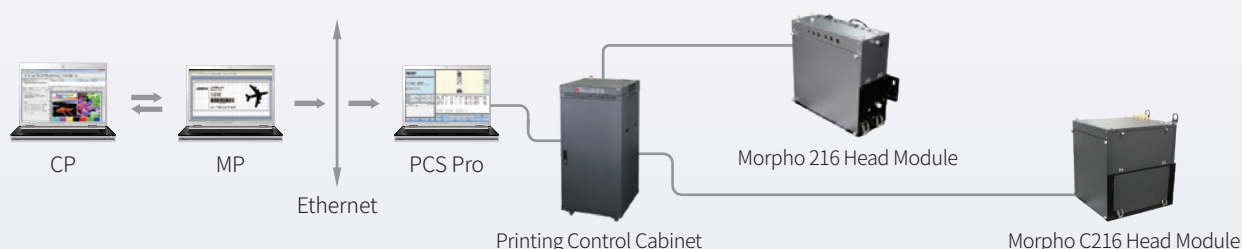
PDF Workflow

PDF workflow is suitable for short-run printing, including color book, envelope, transpromo, magazine and catalog printing. MagicPRINT PDF is professional RIP software. It features a multi-core CPU high speed RIP and ICC color management support.

PDF   MagicPRINT PDF   TIFF   PMT   PCS Pro   Morpho Color
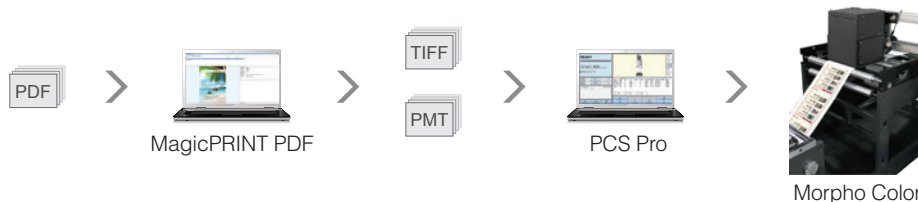
Easily integrated into any existing press as a digital add-on module, turning it into a cost-effective color digital press.

Combination of Morpho Color and Morpho System in One

CP → MP → PCS Pro

Ethernet

Printing Control Cabinet

Morpho 216 Head Module

Morpho C216 Head Module

Basic Specifications

Models	Morpho C108	Morpho C216	Morpho C108P	Morpho C216P
Head Modules*			UV Lamp	UV Lamp
Print Head Model	Kyocera KJ4			
Number of Print Heads and UV Lamps	4 Heads	8 Heads	4 Heads, 4 UV Lamps	8 Heads, 2 UV Lamps
Inks	UV, water-based dye, pigment, or MICR ink		UV ink	
Number of Colors	Full Color			
Resolution	600 dpi			
Dropsize — Water-based ink	5pl, 7pl, 12pl, 18pl			
Dropsize — UV ink	6pl, 7pl, 11pl, 14pl			
Print Type	Images, logos, texts, serial numbers, barcodes, dates, time, MICR Fonts, etc.			
Printing Width	108mm (4.25")	216mm (8.5")	108mm (4.25")	216mm (8.5")

Print Productivity		Standard Print Head / High Speed Print Head *Unit: m/min. (ft/min.)*
Water-based ink	600 × 300 dpi	150/ 200 (492/ 656)
	600 × 600 dpi	75/ 100 (246/ 328)
UV ink	600 × 300 dpi	100/ 150 (328/ 492)
	600 × 600 dpi	50/ 75 (164/ 246)

* Customized versions are available, including different print widths, number of colors, and print resolution.
  Please contact us to discuss your requirements.

Applications

Color Books | Catalogs | Transpromos | Envelopes | Business Forms | Security Printing
Labels | Packaging | Tickets | Plastic Cards | Lotteries/ Bingos