



MPERIA® **Axian Inkjet** **AX1000 Series**

XIJ Technology for High-Speed,
High-Resolution Marking

MPERIA® Axian XIJ AX1000 is a revolutionary small-character inkjet printer that redefines primary product marking by merging the strengths of Continuous Inkjet, Thermal Inkjet, and Valve Inkjet into a single, high-performance platform.

Designed with proprietary XIJ technology, it provides best-in-class print quality, reliability, and operational efficiency for consumer-packaged goods (CPG) and fast-moving consumer goods (FMCG) marking applications.



XIJ Technology

Utilizing XIJ, MPERIA® Axian Inkjet AX1000 merges the best attributes of Continuous Inkjet (CIJ) and Thermal Inkjet (TIJ) into a single, high-performance platform. Developed by Matthews Marking Systems engineers, XIJ leverages proprietary micro-electromechanical systems (MEMS) technology to deliver a column of ink droplets simultaneously—unlike traditional CIJ systems that eject droplets sequentially. This enables crisp, consistent, high-resolution marks at unprecedented speeds.

- + Full print resolution at faster speeds compared to CIJ
- + User adjustable ink controls for clear, high-quality marks
- + Simultaneously prints 2D codes and multi-line text without reducing line speed
- + Reduced total cost of ownership (TCO)

MEMS vs Traditional Inkjet

Feature	Traditional Inkjet (CIJ/TIJ)	Axian Inkjet (XIJ)
VALVE CONTROL	Mechanical/Electromagnetic	Micro-valve MEMS
RESOLUTION	Up to 70 DPI (CIJ only)	100 DPI
MAINTENANCE	Complex, frequent	Simple, infrequent
FLUID CONSUMPTION	Higher	Lower
ENVIRONMENTAL IMPACT	Solvent fumes (CIJ only)	Closed system, eco-friendly
SPEED & FLEXIBILITY	Limited for 2D codes (CIJ only)	Full speed, 2D/linear codes
MAKE UP FLUIDS	As needed	Not needed

XIJ Closed Ink System

MPERIA® Axian Inkjet (XIJ) closed ink system eliminates the need for solvent additives, reducing emissions and supporting eco-friendly operations. The system draws less than 25 watts of power and features a stainless-steel enclosure for nearly maintenance-free use.

Ink Delivery System (IDS)

- + **Fill Pump:** Draws ink from cartridge to reservoir
- + **Reservoir:** Stores ink for continuous operation and hot swapping
- + **Pressure Pump/Dampener/Sensor:** Maintains optimal ink pressure
- + **Filter Kit:** Include two filters, ensures ink purity; quick-change design
- + **PTM Board:** Regulates system function, receives MPERIA® commands and converts to printhead commands
- + **Jetting Module:** Ejects ink droplets; tool-free replacement in under two minutes; removable/disposable

Performance Highlights

- + **Speed:** Up to 200 ft/min (60 m/min)
- + **Resolution:** Up to 100 DPI
- + **Print Height:** Up to 0.50" (13 mm)
- + **Lines of Text:** Up to five
- + **Throw Distance:** Up to 8 mm
- + **Startup Time:** Under one minute
- + **Ink System:** Single 800 ml cartridge, no make-up solvent required

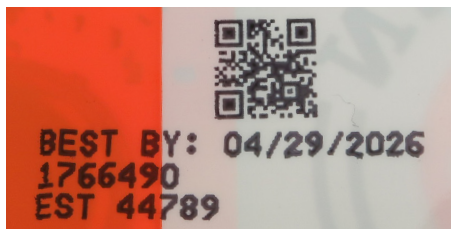


PET bottles

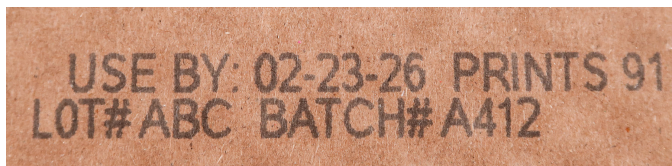
Versatile Substrate Compatibility

Mark with confidence on a wide range of materials.

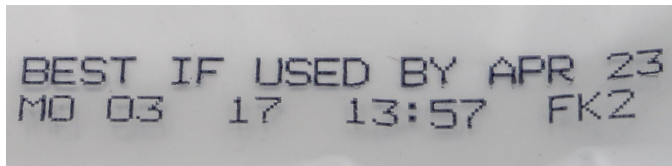
Flexible films (PET, OPP)



Coated cardboard



Plastics (PVC, HDPE, LDPE)



ENVIRONMENTAL & OPERATIONAL BENEFITS

- + **Closed System:** No solvent fumes or emissions
- + **Lower Power Consumption:** Reduced carbon footprint
- + **Compact Design:** Easy to install and position on manufacturing lines



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