

Printing/Encoding and Engraving Solutions

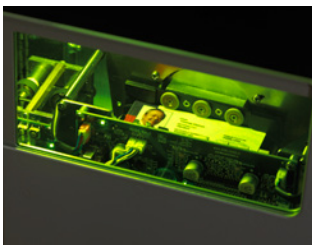


FARGO® HDP8500LE
Industrial Card Laser Engraver





Engrave durability and confidence into ultra-high security credentials.



Laser Engraving Technology in the FARGO® HDP8500LE enables multiple security attributes, including surface relief for tactile authentication, detailed micro-text which defies duplication by standard desktop printers, and lenticular personalization for distinctive multiple laser images (MLI) and changeable laser images (CLI).



High Definition Printing (HDP) delivers the highest image quality, layered on the highest functioning cards. HDP Film fuses to the surface of proximity and smart cards, conforming to ridges and indentations formed by embedded electronics.

Secure Personalization that's Laser Sharp

The new FARGO® HDP8500LE Industrial Card Laser Engraver from HID Global integrates seamlessly with the HDP8500 printer/encoder and lamination modules, enabling increased credential and organizational security by combining high security laser-engraved personalization with superior High Definition Printing™ (HDP®).

Leveraging the most versatile laser engraving technology in card identity systems, HID's HDP8500LE introduces multiple personalization attributes, making forgery and manipulation virtually impossible. Attempts to alter engraved information will result in visible card damage.

Engrave Security into Every Card

HDP8500LE laser engraving etches multi-faceted security elements into identification cards. Laser-engraved data and images are permanent and secure. Any attempts to alter engraved information will destroy the integrity of the image; tampering will be immediately evident. In addition, laser engraving produces raised lettering that can enable verification of authenticity at the touch of a finger.

The camera vision system ensures accurate placement and registration of data on the card surface, and reproduction is so precise that it even allows the engraving of microtext — microscopic type that cannot be read without a loupe or magnifying glass.

HDP8500LE precision lasers can also perform lenticular personalization to produce multiple laser images (MLI) and changeable laser images (CLI), providing additional barriers against counterfeiting attempts via desktop printers.

The Ultimate Interoperable System for Secure Card Issuance

The HDP8500LE is recognized by the government-to-citizen ID market for its superior tamper-evident personalization and its interoperability with the HDP8500 printer/encoder and lamination modules, enabling full-color and laser-engraved personalization of polycarbonate cards that are commonly required in extended-life government identity credentials.

These same advantages make the HDP8500 Industrial Series personalization system ideal for card issuance programs that bear an elevated risk of forgery or identity misrepresentation, including voter or worker registration cards, drivers' licenses and citizen identity permits.

The System-wide Approach to Highly Secure Credentials

The most secure credentials are highly differentiated, employing multiple visual, digital and engraved elements to ensure accurate identification of each individual cardholder while establishing barriers to fraud and counterfeiting. Each module in the interoperable **FARGO Industrial Series** contributes security elements to finished credentials using advanced printing, encoding and engraving technologies and materials:

- HDP8500LE laser engraver**
 carves unique, unalterable text, visual security elements and other images into card surfaces.
- HDP8500 printer/encoder**
 adds overt, covert and forensic visual security elements to high definition print images via fluorescing print ribbon and/or holographic HDP Film.
- HDP8500 lamination module**
 applies clear or custom holographic overlamine patches to cards, increasing durability, card life and fraud protection.

Laser Engraving: Visual Security Elements

Unique identifying data or images are engraved into the card body itself for tamper proof, highly durable personalization, making forgery and manipulation virtually impossible. Attempts to alter engraved information will result in obvious card damage.

Sub-surface image
Laser engraving below the card's top surface, such as this ghost image, delivers the highest durability.

Custom Microtext
Microscopic type of less than 1 point font size, readable only with a loupe, enables covert authentication.

Tactile Surface Relief
Raised lettering provides evidence of authenticity at the touch of a finger.

MLI/CLI - Multiple/Changeable laser image
Engraved images or data change with the viewing angle to permit convenient identity verification.

Custom Holograms: Visual Security Elements

Add one or multiple custom holographic security features to your overlamine or HDP Film for increased protection against ID counterfeiting and tampering:

Overt features (visible to the naked eye):

- Morphing images
- Flip images
- Fine line design
- 2D/3D ribbon
- Pseudo color

Covert or forensic features (require a tool to view and authenticate):

- Hidden text
- Microtext
- Nano text

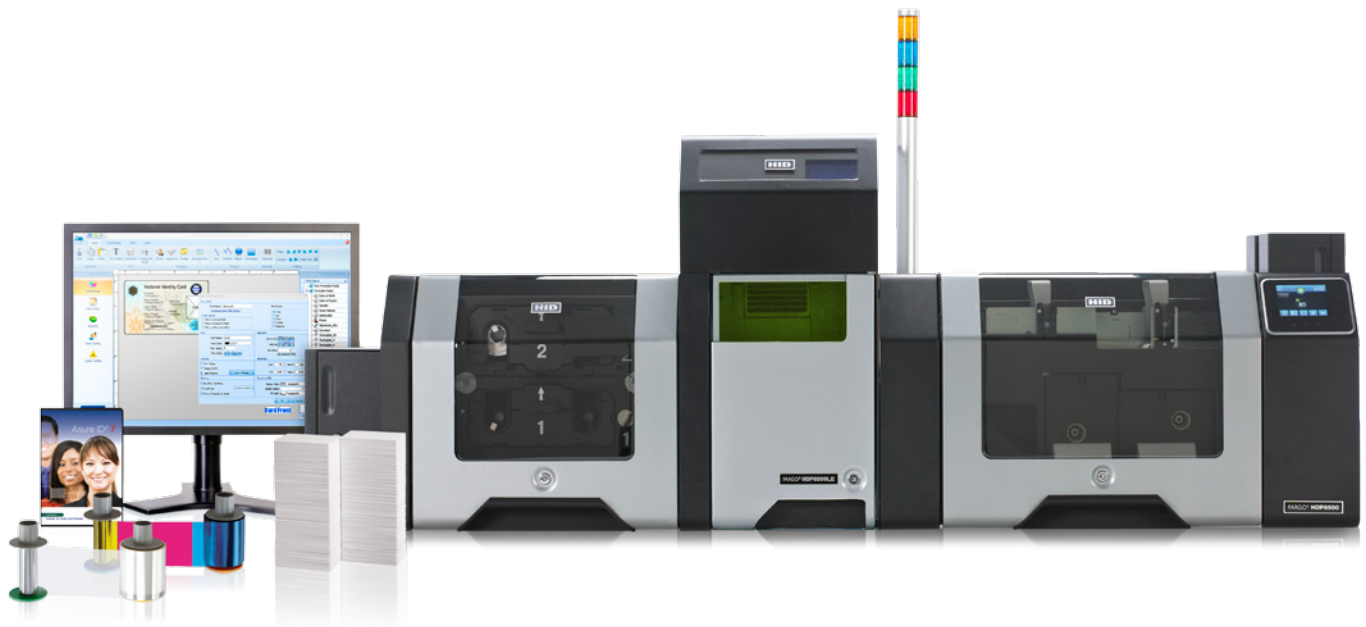


Dye-Sublimation Printing: Visual Security Elements

Fluorescing HDP Print Ribbon

Invisible in normal lighting, printed data fluoresces blue when exposed to ultraviolet light.





Simultaneously print, engrave and laminate cards.

FARGO HDP8500 Industrial Series Personalization System

The HDP8500 Industrial Series Personalization System allows the seamless integration of ID card printing, encoding, laser engraving and laminating into one machine, empowering card-issuing organizations to efficiently, reliably and securely produce multi-layered, secure credentials in a single pass through the system.

The high duty performance FARGO Industrial Series from HID Global is the superior choice for extended-run, high throughput credential personalization and issuance. It's especially suited for the high duty cycle requirements of large government ID card programs, laborious service bureau conditions, and demanding university and large enterprise environments.

In addition to the new HDP8500LE interoperable laser engraver module, the Industrial Series includes the superior HDP8500 printer/encoder – with fifth generation HID Global High Definition Printing (HDP) technology – and an integrated HDP8500 lamination module. The entire HDP8500 system is supported by HID's Asure ID® Exchange Card Personalization Software.

Built Strong

Each module in the sturdy HDP8500 Industrial Series features precision-engineered interior components encased in solid metal cabinetry, providing improved resistance to parts fatigue and general wear from routine and

repeated use. The metal shell and ruggedized components create a stable environment that operates reliably over continuous runs.

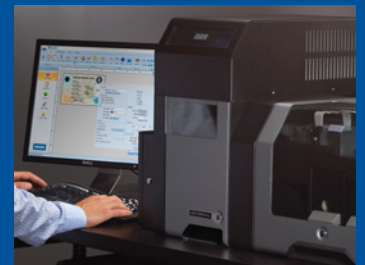
In fact, the HDP8500 Industrial Series is loaded with features that maximize card yield per shift, including multi-card processing capabilities, 400-card input hopper capacity, accessible card path and graphical touch screen interface, and built-in physical and electronic security features. These features work together to ensure continuous production, even in the most demanding environments.

Superior Printing and Encoding

HID Global pioneered High Definition Printing, also called retransfer print technology, in desktop ID card printers. The HDP8500 print engine works with a wide variety of card materials, giving you greater printing flexibility. To produce crisp, high definition images on technology cards—even cards with surface imperfections, the HDP8500 printer/encoder is the clear choice.

Rugged, Tamper-Resistant Lamination

The HDP8500 Lamination module is designed to work with the most durable consumables, ensuring long-life cards for small and large government ID programs. Clear and holographic overlaminates provide higher card durability and extended life to ID credentials, as well as lasting protection from fraud. The HDP8500 lamination module is the ideal system addition for producing ID cards that need to last.



Asure ID: The perfect driver for the ultimate card personalization machine

HID Global's Asure ID Exchange is the perfect accompaniment to the HDP8500 Industrial Series Personalization System. The most advanced card design and issuance software, Asure ID provides a single, intuitive interface for managing data and issuing credentials, including simultaneous printing, encoding, engraving and lamination. The available Asure ID Software Development Kit (SDK) enables integration into any credential management system.

Key Elements for Successful Government ID Personalization Programs

Five key feature areas of the HDP8500 Industrial Series Personalization System ensure the productivity, security and reliability of your operation.

Flexible technology increases options and improves security. FARGO HDP8500 Printer/Encoder dye-sublimation, retransfer technology works with a wider choice of card materials, is more resistant to tampering, and easily handles surface or embedded electronics irregularities.

Several field-upgradable options can be added to meet specialized project requirements, over time. Interoperability with Genuine HID Technology™ guarantees compatibility with other products within the HID ecosystem, enabling organizations to leverage existing investments.

Ease-of-operation and simple routine maintenance means lower training and production costs for card issuance. Simple touch-screen commands enable consistent throughput of multi-layered, high secure, personalized cards in a single pass. The patented input hopper allows automatic selection from two different card types.



Built for maximum reliability in challenging environments, multiple HDP8500 enhancements eliminate card surface debris, help prevent defective prints, improve card handling, and ensure reliable consumable materials handling.

Total system security safeguards equipment and card materials. Physical locks protect materials before, during and after processing. Electronic PIN access prevents unauthorized use, and advanced encryption standards protect electronic data.

Specifications Overview (complete HDP8500LE specs available at hidglobal.com/hdp8500LE)

| FEATURES | |
|--|---|
| Dual-Sided Printing | Standard |
| Warranty | Printer: 3 years; Laser module: 2 years; Laser diode: 5,000 hours |
| LASER ENGRAVER (LE) CHARACTERISTICS | |
| Laser Type | 12W air cooled DPSS laser |
| Card Material Types | Polycarbonate cards recommended; accepts ABS, PC, PET, PETG, composite |
| Laser Personalization Types | Sub-surface and tactile laser engraving • Microtext • MLI/CLI |
| Communication Interface | Ethernet LAN |
| Registration Capability | Optional Camera Vision System |
| Laser Speed | Up to 2300 cards per 8-hour shift depending on card coverage of laser data (laser engraving only) |
| Power Input | 100-240 VAC, 8.5 A MAX, 50 Hz - 60 Hz |
| Certifications | Class 1 Laser, UL, CE, FCC Class-A |
| SYSTEM SECURITY STANDARDS | |
| Password Protection | Yes (Workbench and Display) |
| Locking Card Input and Output Hopper | Yes |
| Lockable Printer/Laser/Laminator Housings | Yes |
| CARD STANDARDS | |
| Card Size | CR-80 only |
| Card Input Capacity (2 Hoppers) | 400 cards (.030" / .762mm) |
| Dual Card Input Hopper Capability | Yes |
| Card Output Capacity (1 Hopper) | 200 cards (.030" / .762mm) |
| Card Thickness | Laser module: 30 mil only (.030"/.762mm) |
| Card Exception Feed | Yes |
| Card Cleaning Station | Two |
| HARDWARE CHARACTERISTICS | |
| Dimensions and Weight (printer) | 15.5" H x 28.2" W x 14.0" D (394mmH x 716mmW x 356mmD); 61 lbs / 27.7 kg |
| Dimensions and Weight (engraver) | 20.5" H x 10.0" W x 20.0" D (521mmH x 254mmW x 508mmD); 88 lbs / 40.0 kg |
| Dimensions and Weight (laminator) | 13.5" H x 15.0" W x 14.0" D (343mmH x 381mmW x 356mmD); 29 lbs / 13.2 kg |
| OPTIONS | |
| Dual-Sided Simultaneous Lamination | Yes |
| ISO Card Flattener | Yes |
| ISO Magnetic / Contact / Contactless Smart Card Encoding | Yes / Yes / Yes |



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