



Top 10 Considerations: Selecting an ID Card Printer That Will Meet Your Needs

INTRODUCTION

With security concerns ever on the rise, today's enterprise corporations, healthcare facilities, K-12 schools, university and college campuses, government agencies and even small-to-medium businesses are seeking reliable, scalable and cost-effective solutions for producing secure ID badges and/or cards on demand. However, because the spectrum of available ID card printing options is quite broad, understanding your technology options and choosing the right solution can seem overwhelming.

This white paper aims to simplify this process by providing you with the top ten things to consider as part of your evaluation process — enabling you to narrow your selections and ultimately choose the best ID card printing solution to meet your organization's unique needs.

The ten considerations discussed in this white paper are:

- Security
- Card durability
- Card printing volume and throughput speed
- Flexible interoperability
- Modularity and scalability
- Ease of use and ongoing maintenance
- Cost and sustainability
- Cloud-ready issuance
- Quality and support
- Partnering with a leader and innovator

1. SECURITY

With ever-increasing security threats, large and small organizations alike are keenly aware that one of the best ways to protect their people, data and monetary assets is to ensure that the ID badges and/or cards they issue are highly secure.

Many printing solutions can support a full range of visual and technical security elements that can help ensure that your organization's identities are always secure and tamper resistant. But which ones are right for you? How secure do your credentials need to be and how much should you invest?

To determine the appropriate level of credential security to implement, it is often helpful to assess your risks. What would happen if credentials were compromised by counterfeitors and unauthorized parties gained access to the sensitive areas within your organization?

Beyond the obvious safeguarding of personnel, consider the impact if your organization's confidential data was accessed and compromised. Such sensitive information could include databases, financial systems, customer and/or patient records or classified documents. The most serious breaches can result in theft of proprietary information or financial fraud that can cause an organization to sustain irrecoverable losses that can cost into the millions of dollars. Given the potential for such losses, it is absolutely essential that those that have access to your organization's buildings, personnel and systems are known, vetted and easily identifiable with robust credentials that cannot be easily duplicated.

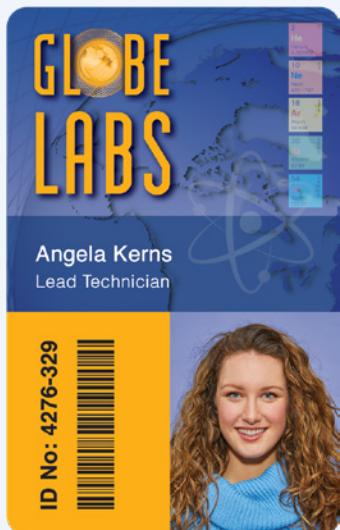
In addition to card security, you'll also want to consider the security of the printer itself. You'll want to ensure that the solution you ultimately choose has built-in features that inherently bolster the security of your entire card program such as data encryption, password-protected operation and optional locks to name a few.



In summary, if security is at the top of your list, it is recommended that you seek the following card and printer security features in any card printing solution you plan to evaluate:

CARD SECURITY FEATURES

- **Built-in card security features at no added cost** — such as a custom watermark overlay option and fluorescent panel printing
- **Support for a full range of visual security elements (VSEs)** and customizable, high-secure overlaminates that can help ensure that your organization's identities are always secure and tamper-resistant
- **Beyond overt visual card security, support for a myriad of covert and forensic security element options** that pose an even more formidable challenge to would-be counterfeiters



PRINTER SECURITY FEATURES

- **AES 256 data encryption** which safeguards cardholder data while in transit, helping to provide data integrity and authentication between your PC and the printer
- **Resin scramble data protection** — a unique feature that adds an additional layer of security by scrambling and subsequently concealing any information printed with a resin panel. Used ribbon panels are rendered indecipherable, safeguarding cardholder data from fraudulent use.
- **Password protection** — where user-defined passwords lock down printer access ensuring that unauthorized personnel cannot use the printer to print fraudulent cards or steal personal information
- **Optional locks** for card hoppers and/or consumables access

2. CARD DURABILITY

Ultimately, the efficacy of any secure issuance system comes down to how effectively the issued credentials meet the demands of use over the desired life of the card. When considering card durability, think about the expected length of your card life and the environments or conditions to which cards will be exposed.

Is the end credential an employee badge that will be worn outdoors and exposed to the elements? Or perhaps a magstripe card that may be swiped through card readers multiple times a day for access to secured locations? Knowing how the card will be used and for how long can help you determine the level of durability you'll want to incorporate into your solution.

For more durable credentials, consider the following:

- **Laminate your cards.** Overlaminates increase durability and extend card life.
- **Leverage High Definition Printing (HDP®), or retransfer printing.** HDP/retransfer print technology can provide distinct advantages over direct-to-card printing (DTC®) if you are not planning to use overlaminates. The HDP film that is used in the retransfer printing process inherently protects printed images, creating more durable credentials and providing clear visual evidence if tampering is attempted.
- **Select a retransfer printer with a multi-pass function.** Printers that support multi-pass allow for more than one layer of retransfer film to be applied to the card, thus increasing the card's durability without the need for lamination.
- **Use either a composite polyester or polycarbonate card as opposed to using a card constructed of PVC only.** Although less expensive, PVC cards are more vulnerable to cracking and warpage — and are more likely to need replacement earlier than cards constructed of more resilient materials.

3. CARD PRINTING VOLUME AND THROUGHPUT SPEED

For how many employees, students, contractors, visitors or citizen constituents will you be issuing cards? How many cards will you issue in a month or a year? Will you implement separate card designs to distinguish employees from visitors?

At what intervals will you be printing cards? Will you only need new cards printed intermittently throughout the week, month or year — or will you need to print large, high-speed batches of cards several times a year?

These questions are important because not all printers are created equal. Estimating how many cards you'll produce over time, and at what speed to best meet your program requirements will help you right-size your card production system — so you don't buy too little, or too much.

For larger overall volumes, significant batch runs or increased throughput requirements, you'll want to explore card printing solutions that:

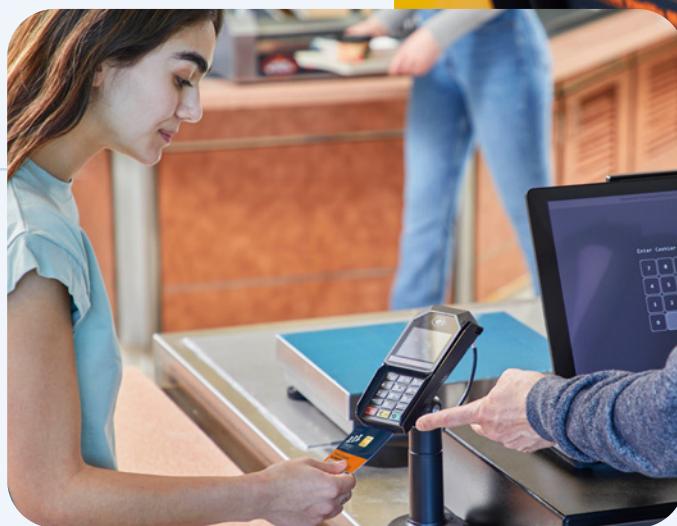
- **Accommodate large yield consumables, such as color ribbons or laminates.** This will maximize productivity as your operators won't constantly be changing out and replacing materials.
- **Have large capacity input and output hoppers** so that batches can run uninterrupted before card stock must be replenished
- **Support inline card personalization.** Integrated, inline personalization enables organizations to personalize cards inside and out in one seamless step during the printing process — facilitating rapid encoding and eliminating time-consuming and error-prone manual data entry.
- **Can employ multiple simultaneous applications** to your cards, such as encoding and lamination. Printers that can perform multiple functions simultaneously inherently facilitate faster card issuance.
- **Offer a dual-input hopper option.** If two different card types are being issued by the same printer, a dual-input hopper option facilitates the automatic selection between two card types to produce the correct credential for each print request, thus eliminating the need for manual hopper changes during mid-production.
- **Heat up quickly and self-regulate temperature to remain “ready”.** This will eliminate critical downtime, which is especially beneficial for large volume but intermittent issuance scenarios. High-volume, intermittent issuance is common for organizations that instant-issue hundreds of IDs per day but assist customers one at a time. Good examples of this are the Department of Motor Vehicles (DMV) or a university campus at the beginning of its academic year.



4. FLEXIBLE INTEROPERABILITY

When thinking about your ideal card issuance solution, think about it holistically. What other ways might an ID badge be used in your organization? With what other systems might your solution need to integrate? Whether your organization seeks to migrate simple ID badges into multifunctional technology cards or to increase security by tying into a physical access control system (PACS), it is highly recommended that you carefully consider:

- **Evaluating printers from only those providers that offer a full spectrum of interoperable secure identity solutions.** Providers that only focus on stand-alone badge-printing products limit your ability to incorporate and take full advantage of newly available, complementary technologies. So, it is a good idea to consider ID card printing solutions from those providers that also manufacture card readers, controllers and other related solutions.
- **Products that were built with cross-system compatibility specifically in mind** to ensure they always operate as intended and won't potentially open gaps or expose weak points in your security infrastructure. By selecting a solution that at its core, supports interoperability, you ensure that you can incorporate additional technologies into your infrastructure as needed, and that they will work together harmoniously to enhance your enterprise security and reduce risk.



5. MODULARITY AND SCALABILITY

As you narrow your selections for evaluation, it is highly recommended that you consider both current and future card issuance needs to make the most of your investment. As such, you'll want to evaluate:

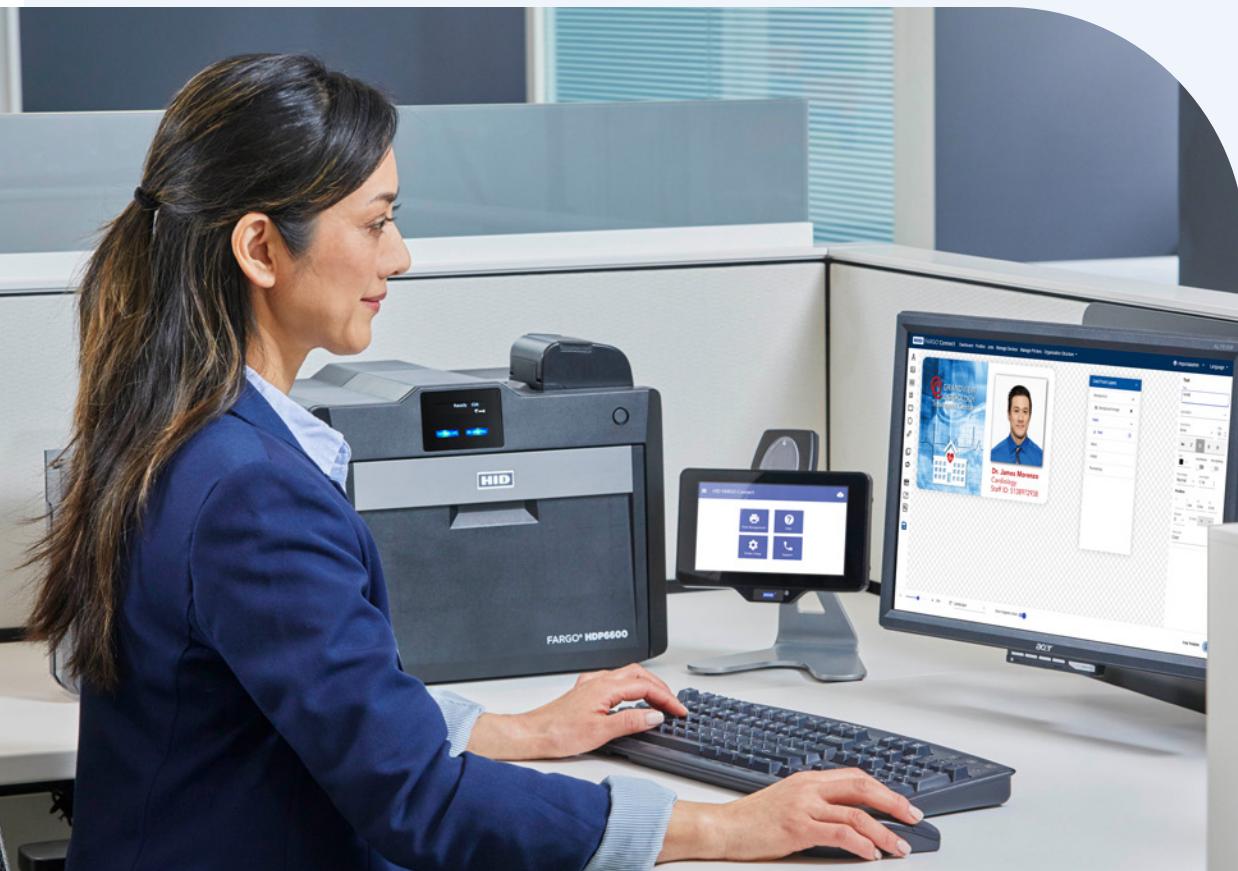
- **Fully modular, field-upgradable solutions** that can support new card personalization and security needs as your requirements change over time, thus eliminating costly replacements. Examples include solutions to which new encoders may be easily added to support advanced, multifunctional smart cards and/or printers to which new modules may be added such as lamination.
- **Solutions that easily scale** such as those to which you can add dual-input and/or increased-capacity card hoppers to accommodate increased card volume as your organization grows — or those that support seamless migration from single-side to dual-side printing should your credential requirements change

Opting for open and adaptable platforms lays a solid foundation for adding new technologies and capabilities as they are needed, allowing your organization to invest with confidence, reduce your total cost of ownership over time and protect your initial investment for years to come.

6. EASE OF USE AND ONGOING MAINTENANCE

Whether your card printer operator(s) are seasoned IT professionals or novice users, solutions that are easy to set up, use and maintain over the long term will ensure your card program runs smoothly for years to come. For best results, it is recommended that you seek out solutions that offer:

- **Easy-to-follow prompts** for setup, operation and routine maintenance such as cleaning
- **Built-in diagnostic tools** and color management assistance
- **Easy card path access** to quickly remedy card jams



7. COST AND SUSTAINABILITY

Card printing solutions that require fewer resources, use fewer consumables and create less waste will not only support your organization's green initiatives, but also have the potential to significantly lower card program costs. To reap sustainability and cost-saving benefits, look for card printing solutions that:

- **Provide card rewrite functionality.** Rewrite support allows card text to be erased and reprinted — making it ideal for any organization that routinely issues temporary-use cards such as contractor or visitor badges. Rewrite functionality cuts costs by enabling you to reuse existing card stock instead of having to buy new. In addition, rewritable cards help reduce overall consumables waste.
- **Are designed for efficient energy consumption** resulting in a significant energy savings over comparable printers.
- **Offer eco-friendly refill ribbons.** Stocking a reusable printer cartridge with refill ribbons eliminates the need for single-use cartridges that would otherwise have to be disposed of with each ribbon change. What's more, refill ribbons are typically less expensive than disposable cartridge-based ribbons.
- **Leverage wasteless lamination technology.** Wasteless lamination reduces needless waste by eliminating the need for the laminate material carrier film and subsequent take-up core found in traditional lamination consumables. Subsequently, wasteless lamination can reduce consumables costs by as much as 40 percent for large card programs that laminate cards in high volumes.



A traditional overlaminating roll with lamination patches, carrier film and take-up core.



A wasteless lamination roll with no carrier film or take-up core required.

8. CLOUD-READY ISSUANCE

Are you considering cloud-based issuance? If so, what type of cloud solution will best serve your organization — and are the card printers you plan to evaluate cloud-ready? To leverage the cloud to create and issue superior-quality, multifunctional employee badges and other secure identity credentials, be sure to seek:

- **Cloud solution-compatible DTC and HDP/retransfer card printers**
- **Card issuance software that supports issuing cards from anywhere**, using any device, without having to install any additional software — not even a printer driver — as this will eliminate painful and time-consuming Windows® updates
- **A cloud solution that is designed to seamlessly integrate** with popular access control and university One Card solutions, thus streamlining operator experience as users will no longer be required to toggle back and forth between record management and card issuance applications
- **A cloud-based platform that can be fully hosted or on-prem** for optimal flexibility
- **An application that enables the ability to send print jobs safely and securely to remote locations** without having to keep printers in a locked room or to physically mail cards to remote locations — as this will mitigate card shipping costs and security risks



9. QUALITY AND SUPPORT

It goes without saying that when you're talking about security solutions, quality and support are paramount. Solutions worth considering are those that:

- **Are produced out of ISO 9001-certified facilities.** An ISO 9001 registration certifies that the provider's quality system governing the design, manufacture, sales and distribution of their products has been verified by objective third-party audits.
- **Include full, multi-year warranties** on printers and multi-year or lifetime warranties on related critical accessories such as printheads
- **Are manufactured by providers that offer a broad array of training options** ensuring that both their customer support personnel and valued channel partners are optimally poised to deliver unrivaled service and provide the expertise required to best serve your card personalization needs



10. PARTNERING WITH A LEADER AND INNOVATOR

When seeking best-in-class solutions, it is recommended that your organization focuses on only those offered by proven leaders with a history of technological innovation in the industry as these are good indicators of what you can expect going forward.

Seek out providers that have:

- **A longstanding reputation as a trusted source** for innovative products, services, solutions and know-how related to the creation, management and use of secure identities
- **More than a 25-year history** specializing in the issuance of secure identity credentials
- **A rich history of customer-inspired, industry-first innovations** evidenced by a long list of inventions and a host of issued patents

When providers develop innovative solutions with consumers' needs in mind, they not only demonstrate true thought leadership but also a real dedication to their customers — both of which are qualities that will prove beneficial to any organization that selects solutions from such a provider.



CONCLUSION

Although the spectrum of available card printing solutions can seem overwhelming at first glance, by understanding your technology options and taking the aforementioned ten factors into consideration, you will be able to effectively narrow your selections and confidently choose the right card personalization and issuance solution to best meet your unique needs.

Visit the HID website to learn more about [HID FARGO® Card & ID Badge Printers](#) or [contact us](#) to speak with someone from HID about your organization's printing needs.

ABOUT HID

HID is the trusted source for innovative products, services, solutions and know-how related to the creation, management and distribution of secure identities for millions of customers around the world.

For more than 25 years, enterprise corporations, government agencies, healthcare facilities, financial institutions, transit authorities, service bureaus, small-to-medium businesses, colleges, universities and K-12 schools have all relied on HID Secure Issuance to deliver the world's broadest, feature-rich portfolio of card printers, laser engravers, encoders, software and solutions for the custom personalization and issuance of secure identity credentials and financial cards.

Ranging from plug-and-play, entry-level printers to the industry's most sophisticated cloud-based and industrial issuance implementations — HID FARGO and HID ELEMENT™ solutions are reputed among the best in the industry.

With a history of pioneering patented technologies and expertise, business integrity and long-standing customer confidence, HID leads the way in secure card issuance innovation.

For more information, visit <https://www.hidglobal.com>.