



# Top 10 Considerations when Selecting ID Card Printers for Higher Education Institutions

## *Understanding all Technology Options Leads to Choosing the Best ID Card Printing Solution*

Institutions of higher education are seeking reliable, scalable and cost-effective solutions for producing secure ID badges on-demand. These credentials come in many forms and can serve multiple purposes – from a simple photo identification (ID) card to smart cards that allow building and network access or cashless vending. The spectrum of available secure issuance technology solutions is quite broad and the choice can be overwhelming. This Executive Brief will simplify the process by identifying the top ten things to consider during the evaluation process to ensure selection of the right ID card printing solution to best meet your school's unique needs.

### **1. Start with Security**

Security concerns are ever on the rise and today's college campuses are no exception. The many levels of security to consider are becoming increasingly complex. Many printing solutions can support a full range of visual and technical security elements that can help ensure that your university's identities are always secure and tamper-proof. Which ones are right for you, how secure must your credentials be, and how much should you invest?

**Assess Risks.** A good place to begin to determine the appropriate level of credential security to implement, is to assess your risks. What would happen if credentials were compromised by counterfeiters and unauthorized parties gained access to the sensitive areas within your organization? Given the potential for substantial 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 easily be duplicated.

**Hardware Security.** Next, evaluate solutions that support a variety of security technologies. These can range from standard or custom holographic overlaminates and those that encompass more complex visual security features, such as morphing images and microtext to those that support encoding for mag stripe or embedded smart chips.

**Flexibility.** Selecting a secure issuance solution with hardware that can support a broad range of credential security measures ensures that your investment is protected. As your security needs change or increase over time, you need only purchase new consumables or accessories – but your core printer investment remains intact.

**Printer Security.** Another often over-looked aspect of a secure issuance solution is the security of the card printer itself. The first level of a secure card issuance system should limit operator access to its physical components. Mechanical locks should restrict access to printers, including card input and output. This will prevent cards printed with sensitive personal information and protected credentials encoded on the card from being removed from the printer. Further, physical locks should be placed on all access points to protect ribbon and film consumables so that these materials are not accessible to would-be counterfeiters.

**Electronic Security.** Finally, electronic security should be in place such that operator access to each printer is controlled via personal identification numbers (PINs). Print job data packets should meet or exceed advanced encryption standards, such as (AES) 256-bit data encryption, to ensure system privacy, integrity and authentication to the final issuance endpoint.

## 2. Credential Durability: Multiple Options Depending on Your Needs

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. As you consider the options, keep in mind the expected length of your card life and the environments or conditions to which cards will be exposed.

**Option One:** Leverage high definition printing (HDP®), or re-transfer printing. HDP 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 re-transfer printing process inherently protects printed images, creating more durable credentials and providing clear visual evidence if tampering is attempted.

**Option Two:** Laminate your cards. Overlaminates are available in varied levels of thickness and will extend card life. Highly durable overlaminates can extend card life by as much as ten years.

**Option Three:** Use a high durable, on-card film with a HDP card printer. This option is ideal for campuses that may not require as much durability as is provided by lamination, or where the use of overlaminates is cost-prohibitive. A high durable film is three times more durable than standard re-transfer films and can extend the life of a card by two to four years – all without requiring additional investments in separate lamination hardware and protective card overlaminates. Forgoing these additional products can reduce the cost of card personalization equipment by up to 45% and the cost of materials by 25% or more.

## 3. Card Printing Volume is a Key Determining Factor

How many cards will you be printing and at what intervals? Will you only need new cards printed intermittently throughout the year or will you be printing large batches of cards at a time, several times a year? These questions are important because not all printers are created equal. Some models are equipped to print larger volumes over time but only intermittently, whereas others were built to print significant volumes in single large batch runs. Still others were designed for smaller volume demands or even hand-fed, one-at-a-time print jobs. For larger overall volumes or significant batch runs, you'll also want a card printer that supports 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. When supporting higher volume demands, it is also recommended that you select models that have large capacity input and output hoppers so that batches can run uninterrupted before card stock must be replenished.

## 4. Simultaneous Functions and Card Throughput Speed are Critical

Another critical factor to consider is whether or not you will employ multiple simultaneous applications to your cards, such as encoding and lamination, and at what rate finished cards must be disbursed. Many contemporary card printing and encoding systems are capable of performing multiple operations simultaneously, yielding card throughput efficiency and speed. Each individual station can work independently, yet simultaneously with other printer/encoder units, to seamlessly print visual personalization, encode data via one or multiple technologies – magnetic stripe, smart card, or proximity – and finally, to apply layers of secure, protective lamination.

**Multiple print mode settings introduce varied card throughput rates, based on the organization's card design.** Higher card personalization throughput for cards requiring only graphics, may be alternated with higher definition, high resolution image and text quality requirements - and the flexibility to print at more traditional card throughput speeds.

**Dual input hopper enhances throughput.** This is a particularly useful feature when you need to print more than one kind of card – with different kinds of credentials – at one time, such as student IDs versus staff in the educational environment. In these instances, when one card type is being issued, the printer will pull blank cards from the full

hopper, while the second hopper is being refilled, enabling continuous operation. If multiple card types are being issued, each printer can automatically select between two card blanks to produce the correct credentials for each card request, eliminating the need for manual hopper changes during multi-card-type production.

### **5. Interoperability with your Physical Access Control System**

When thinking about your ideal secure issuance solution, think about it holistically. What other ways might an ID badge be used in on your campus? What other systems / functionality do you need to keep in mind when selecting a secure issuance solution? Whether you seek to transition simple ID badges to multi-functional technology cards or to increase security by tying into a Physical Access Control System (PACS), it is highly recommended that you carefully consider 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. Products that were not built with this kind of cross-system compatibility specifically in mind may not always operate as intended. This can potentially open gaps or expose weak points in your security infrastructure. By selecting a solution that at its core, supports interoperability, you ensure that your previous investments will still be relevant, 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.

### **6. Connectivity Provides Flexibility and Convenience**

Do you have a need for remote or wireless printing? Do you require solutions that allow you to do mobile, on-the-spot printing and encoding of secure IDs? If so, look for solutions that can support multiple connectivity options spanning USB for single PC connectivity, Ethernet for network printing, and Wi-Fi® for convenient wireless card printing. This will ensure you have the flexibility you need to print from any location and easily change locations or connectivity methods as needs change. Because many available products do not support all three connectivity types, be sure to check with your dealer or integrator to ensure your final selection will fit seamlessly into your computing environment.

### **7. Operational Convenience: Automatically Diagnose Issues Before They Become Problems**

Today's secure issuance solutions are quite sophisticated and as such, they require routine maintenance to perform optimally, particularly when issuing potentially thousands of ID cards a day. Advanced printers are engineered to minimize operator time and effort required for maintenance, thus maximizing uptime and system throughput. But when repair is necessary, the more quickly a technician can identify the problem and implement a solution, the more quickly that printer gets back online – which in some instances can be mission-critical. Best-of-breed printers and encoders are equipped with automated diagnostic systems that can alert even non-technical operators to issues that arise, making it easier and quicker to resolve any problems that may surface. Alert mechanisms like andon lights or graphic displays / touch screens, however, are not limited solely to indicating when repair is necessary. These features also alert your operators when materials are low or cleaning is required, which will help to lower the total cost of operation while reducing downtime.

### **8. Modularity and System Scalability to Reduce Total Cost of Ownership**

It is best to consider only fully modular, field-upgradable solutions that can support new card personalization and security needs as your requirements change over time. Solutions should be modular with the ability to add features that allow for technology migration or program expansion. For example, printers with built-in encoders that can assign permissions to your door or your data at the time of card printing combines what previously were multiple processes into a single, in-line card personalization step. Doing so significantly boosts issuance speed, reduces the chance of "human error" in encoding the wrong permissions onto a particular card, and increases the user's convenience and efficiency. Opting for field-upgradeable units enables organizations that already own a card printer to add an encoder at any time so they can leverage smart card benefits well into the future. As your university grows

and your card issuance needs increase or require migration to more advanced card technologies, a field-upgradeable and truly scalable solution can be expanded in defined increments to meet those demands as they are required, further reducing your total cost of ownership for years to come.

### **9. Cost-saving, Environmentally Sustainable Laminating Technology**

Producers of secure ID cards in high volumes are constantly seeking ways to cut costs and improve the efficiency of their laminating technology. GreenCircle® certified wasteless lamination printing technology can be the right solution for educational institutions seeking to reduce costs while demonstrating environmental responsibility.

**Consumables.** Traditional lamination methods utilize an additional core and carrier film that increase the cost of manufacturing while producing a considerable amount of waste. Over time and when printing in high volume, this waste has a measurable impact in terms of landfill contribution. Wasteless lamination, single-core technology reduces the cost of consumables by as much as 50%, resulting in lower cost-per-card while minimizing environmental impact.

**Energy Efficiency.** Traditional lamination printers consume significant amounts of energy to heat up and maintain optimal operating temperature. GreenCircle® certified wasteless lamination printers with features such as “instant on” and intelligent temperature control, heat more rapidly and maintain operating temperature while conserving energy costs.

### **10. Partnering with a Leader and Innovator**

The spectrum of available secure issuance solutions can seem overwhelming at first glance. By understanding your technology options and taking these factors into consideration one by one, you will be able to effectively narrow your selections and confidently choose the right secure issuance solution to best meet your unique needs.

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