



**6**

**ESSENTIAL FEATURES  
THAT MATTER IN ANY  
ID CARD PRINTER**

## BEFORE WE JUMP INTO POWER FEATURES, IT HELPS TO UNDERSTAND HOW ID CARD PRINTERS WORK.

Having a card printing solution onsite to serve on-demand ID cards is a winning decision. However, choosing the right ID card printer can be a frustrating task due to the exhaustive list of categories, features, and price ranges available in the market. This whitepaper will help demystify the information, breakdown essentials, and pinpoint the value of each feature for business fulfillment.

### WHAT IS AN ID CARD PRINTER?

Commercial desktop printers operate in similar ways, but the technology used is what differentiates them. Unlike inkjet and laser printers, card printers can accomplish far more complex print tasks and they run on advanced printing methods of direct heat transfer onto card surfaces. ID card printers use plastic PVC cards from the feeder to issue large volumes of cards in minutes. Card personalization and production are managed by software specifically designed for these high-tech printers.

Here are some common card issuance applications:

- BANK CARDS
- INSURANCE CARDS
- MEMBERSHIP IDS
- STUDENT IDS
- STAFF IDENTIFICATION
- HEALTHCARE BADGES
- VISITOR TAGS
- LOYALTY AND GIFT CARDS

### HIGH-PERFORMANCE FUNCTIONS

The average card printer is capable of performing simultaneous tasks while card printing is in progress. Some go as innovative as encoding magnetic-stripe cards, proximity cards, and even encoding smart card chips. The process of encoding and printing data onto a card is entirely managed from the convenience of the printer's identity card personalization software.



For both public and private sectors, it is fundamental and substantially resourceful to own an ID-card system to effectively fulfill on-demand card requests. Industries with more demanding production requirements look for printer features beyond just printing quality. This is where selecting the right ID card printer can get critical. Printer brands vary with their ribbon ranges, support levels, design flexibility, and upgrade options.

**Let's get straight to the heart of what matters.**

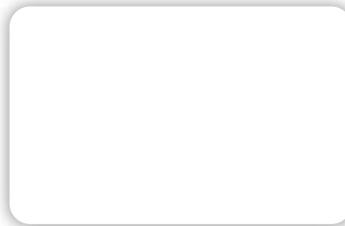
# 6 MUST-HAVE FEATURES OF REALLY GOOD ID CARD PRINTERS

## 1 MODULAR PRINTING MODES

### SINGLE-SIDE PRINTING MODE:

Printing to only one surface of the card.

The [single-side printer](#) is the preferred choice of businesses that require partial amounts of information on the card's surface or use predesigned card templates and need to only print the variable fields.

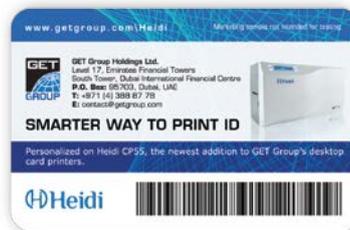


### DUAL-SIDE PRINTING MODE:

Dual-side card printers work on both sides of the card.

They are aided by a flipping unit that is automated to flip the card within the printing process.

Printers with [dual-side printing](#) capacity are time and cost-efficient. Even if you print on a single side, it is worthy to consider a dual-side printer to manage both sides of the card at later stages.



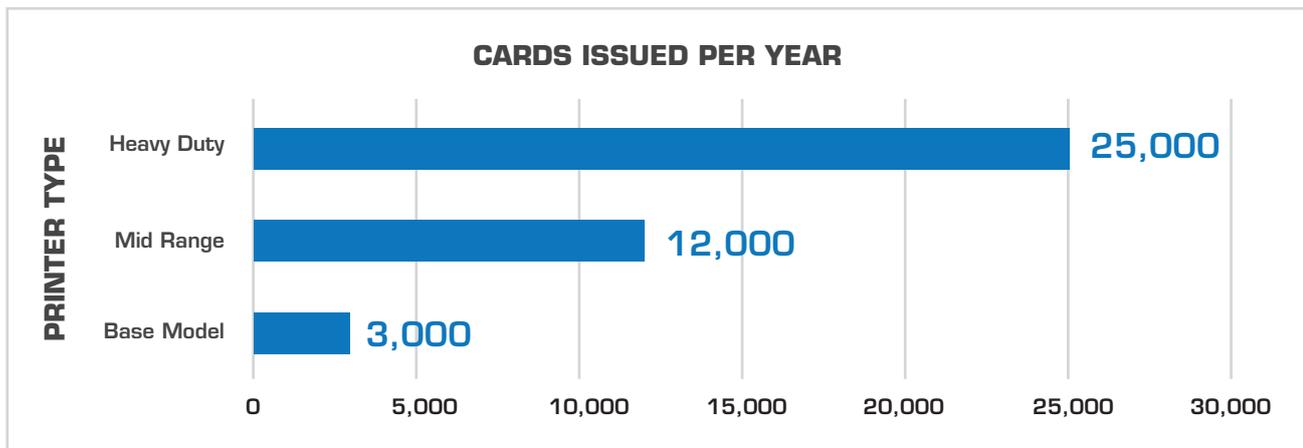
**ESSENTIAL FEATURE 1** – Select a printer with a field-upgradable flipping unit option.

## 2 PRINTING VOLUME CAPACITY

**KNOW YOUR ANNUAL CARD PRINTING VOLUME.** Estimate the total cards your business is expected to print including replacements, planned events, the average daily operations, and projects. Once you have assessed the maximum output required, your printer selection criteria can be further defined.

Assuming the estimated output is less than 3,000 cards a year, a reasonable choice would be an entry-level ID card printer or what is more broadly known as a 'Base Model' printer.

The following chart helps clarify printer types in proportion to issuance volume:



**BASE MODEL PRINTERS:** As the name implies, a basic category of card printers that do not support upgrades such as a flipping unit or encoding module. It cannot process high printing volumes.

**MID-RANGE PRINTERS:** When the required output is low-to-medium, between 8,000 and 15,000 cards per year, a mid-range printer would be the ideal solution. This printer category saves a considerable amount of time, labor costs, and consumables.

**HIGH-VOLUME PRINTERS:** Operations that have an output scope of over 25,000 cards per year can only be sustained by high-volume card printers. This case is common with insurance companies that implement high-performing printers to support bulk issuance requests without experiencing technical downtime.

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**ESSENTIAL FEATURE 2** – Select the printer that matches your issuance count.

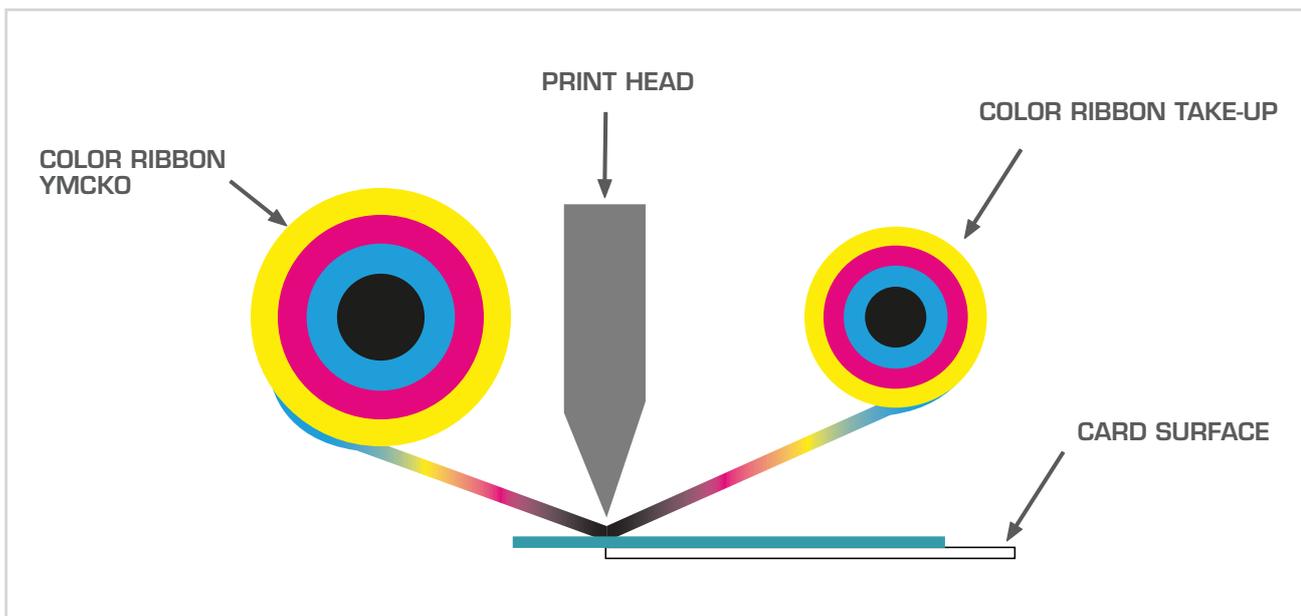
### 3 SUPERIOR PRINTING METHODS

Two printer categories that support edge-to-edge printing methods that result in flawlessly printed cards and they are features of advanced card printers:

- DIRECT-TO-CARD PRINTING
- RE-TRANSFER PRINTING

**DIRECT-TO-CARD PRINTERS USE PLAIN PVC CARDS AND ARE IDEAL FOR SIMPLE DESIGNS.** Printers supporting this method are also referred to as DTC models. Direct-to-card printers transfer heat directly onto the card through dye-sublimation. They are listed under the categories of entry-level to mid-range printers. The only consumables applicable to this category of printers are ribbons.

Cards issued by DTC printers have a lifespan of two years with a cost-per-card relatively lower than that of re-transfer models. This is mainly because direct-to-card printers only require ribbons as consumables.



**DIRECT-TO-CARD PRINTING**

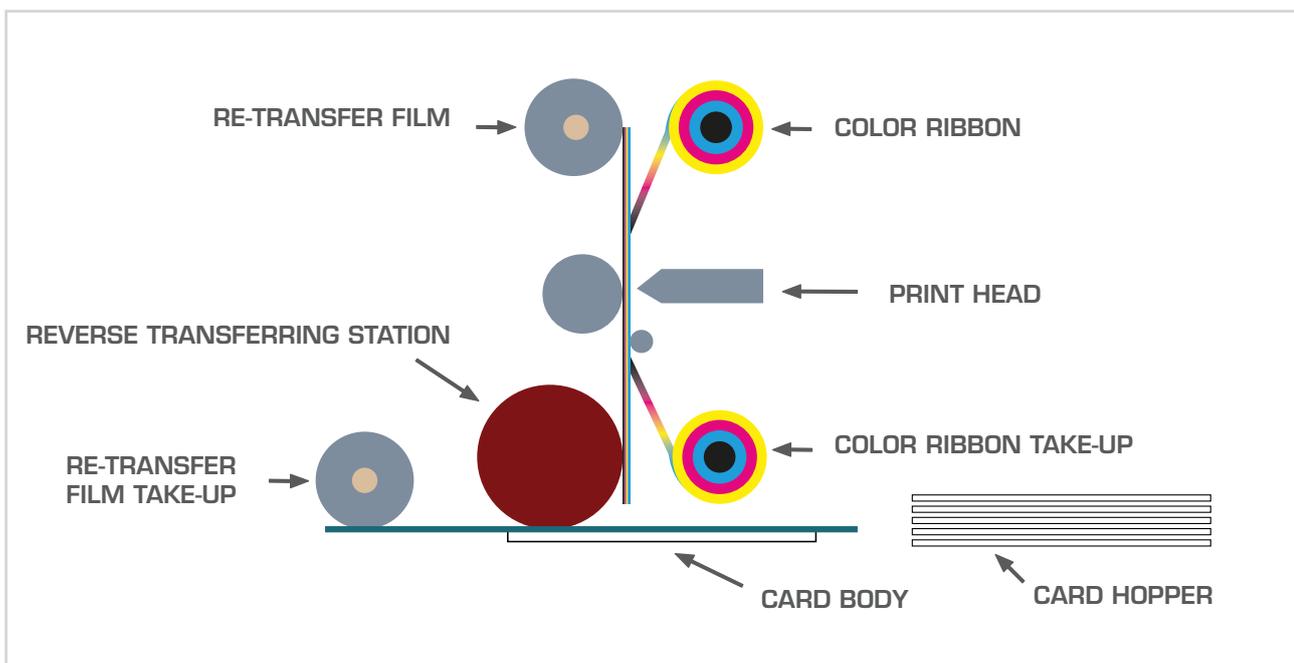
## RE-TRANSFER PRINTING STANDS FOR REVERSE TRANSFER PRINTING.

A high-definition printing technology carried out in two steps using ribbons with retransfer films.

In the first step, the retransfer process prints a reversed high-resolution image directly onto a clear receiving layer known as an intermediate film. Through dye-sublimation, the image is printed onto the film.

Then, the printer uses heat and pressure to thermally transfer the image and the entire image-receiving intermediate film onto the card's surface. During this process, the print head does not make direct contact with the card, resulting in the output of advanced cards.

Re-transfer is best used for smart-encoded cards, full-color card designs, and cards with a longer lifespan.



### RE-TRANSFER PRINTING

**ESSENTIAL FEATURE 3** – Choose a printer that supports direct edge-to-edge printing methods.

## 4 DATA ENCODING CARDS

Data encoded cards securely store critical information and are classified as smart card applications issued by printers equipped with contact or contactless encoders. Some encoders are built in the card printer and others are offered as field-upgradable units for direct-to-card or re-transfer models.

Encoders are optional security features that can be added to a printer at advanced stages.

**DETERMINE WHAT SECURITY FEATURES THE ISSUANCE PROJECT REQUIRES.** Magnetic-stripe cards are the result of encoding technology used to store data in the magnetic section of the card. These cards are ideal for the production of access management and payment cards. To issue magnetic-stripe cards, the printer must have an embedded encoder.

[Smart card encoders](#) are classified under two categories:

**CONTACT SMART CARD ENCODERS.** This is an EMV-compliant security printing feature that encodes data onto the chip of a card. A card reader would require direct contact with the card to read the data, as seen in the case of most banking cards.

**CONTACTLESS SMART CARD ENCODERS.** These encoders are used to process data onto a card that is equipped with an embedded chip and antenna. In this case, the card reader can be used within specific proximity and would not require direct contact. The distance between the card and the reader may vary depending on the reader type.

When choosing a printer with a smart card encoder, make sure that you have the correct smart cards with adequate storage capacity to accommodate the data type. Modular ID card printers can be upgraded with smart units and encoders when required.

Some common types of data that would require smart encoding:

- PERSONAL INFORMATION
- FINANCIAL DATA
- BIOMETRIC DATA



**ESSENTIAL FEATURE 4** – Choose an upgradable printer to advance your printing experience.

## 5 LAMINATE SECURITY LAYERS

Printers with the laminate feature increase the lifespan of issued cards and add layers of security onto the cards. The standard lifespan of cards printed on PVC is two years. However, you can extend this considerably by adding a security laminate that protects the card against physical tear and wear.

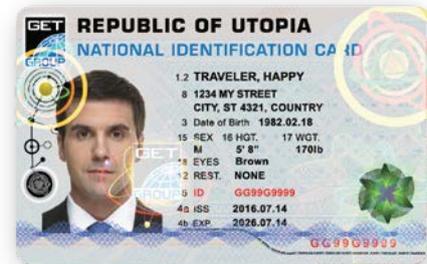
If you opt for laminated cards, the printer you choose should be upgraded with a laminator unit. This module is often available within mid-range and re-transfer printer models, but not in base-model printers.

### CHOOSING BETWEEN LAMINATED AND STANDARD CARDS DEPENDS ON THE APPLICATION.

The key advantages of laminating an ID card:

- **CARD SURFACE:** Protected from scratches and fading.
- **CARD THICKNESS:** Increased by approximately 25%.
- **CARD PROTECTION:** Against forgery and fraud.

Most manufacturers offer a laminate roll that can be optionally purchased and personalized. Cards with a personalized laminate stand out by giving a more professional appearance.



Logo printing using laminate rolls incurs additional costs known as the origination fee. Also, an MOQ (Minimum Order Quantity) is requested by the vendor. Vendors may offer a standard secure logo as a cost-efficient alternative.

**GO THE EXTRA MILE WITH AN ULTRA-VIOLET (UV) SECURITY LAYER.** This is the quintessential ribbon of cutting-edge card security. It delivers an additional fluorescent layer of overt/covert security unique to any other ribbon and prints rainbow-like holograms onto the card's surface. Only a few brands offer the Ultra-Violet security feature and you can find it on the Heidi website under [YMCKUVO Blue](#) ribbons.

Here are some unparalleled benefits to applying a UV fluorescent security layer:

- **ANTI-COUNTERFEIT**
- **IDENTITY AUTHENTICATION**

Print cannot be replicated by any other printing technique

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**ESSENTIAL FEATURE 5** – Select a printer that supports advanced security layers.

## 6 PRINTER CONNECTION OPTIONS

Printer interfaces can communicate the printing task through various modes:

**USB CONNECTIVITY:** a default setting and a standard model found in all printer types. This connection type is ideal for a ratio of 1 printer to 1 user.

**ETHERNET AND WI-FI INTERFACES:** modes by which a printer is connected through a network to enable multi-user access from a central location. These are field-upgradable options recommended for workplaces with one or more employees managing ID card printing tasks.

Ethernet and Wi-Fi are field-upgradable options.

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**ESSENTIAL FEATURE 6** – Select a printer that has a field-upgradable connection.

## HEIDI PRINTING ESSENTIALS

Introduced by GET Group, HEIDI printers aim to help public and private entities issue cards faster and manage identity credentials more easily. Heidi CP55 printers offer high printing quality, unique security features, and card personalization at competitive rates.

**PLUG AND PRINT** – Easy to use and maintain with minimal training.

**ECONOMICAL** – High resolution at a lower cost per card, for a wide range of applications.

**SMART DESIGN** – Compact size and unique design, ideal for limited workspaces.

**COMPLETE SOLUTION** – Build all-inclusive bundles of printers, software, accessories, and consumables.

Heidi CP55 is available in two models:

- CP55-S SINGLE-SIDE PRINTER
- CP55-D DUAL-SIDE PRINTER



Heidi CP55-S is easily upgradeable to support contact, contactless and magnetic stripe encoding, incorporates a USB unit that can be upgraded to an Ethernet or Wi-Fi module, print in full color, monochrome and ultra-violet. Furthermore, CP55-S can be easily upgraded to CP55-D by adding a flipper module to support printing on both sides of the card.

**HEIDI PRINTERS INCLUDE A COMPLIMENTARY GET IDENTITY® PERSONALIZATION SOFTWARE.** Experience versatile printing and personalization, within a few seconds.

Personalized data can either be entered manually or retrieved from an existing database using ODBC connectivity. The GET Identity® software offers various data-integration options through its compatibility with different database types such as MS Access, Excel, SQL Server, and Oracle databases. For advanced-level database integrations, a software upgrade would be required to enable advanced functions.

**INDUSTRIES BENEFIT FROM THE ADVANCED FEATURES OF HEIDI CP55 PRINTERS.**

The compact design and durability make the printer ideal for all kinds of sectors such as corporate, education, healthcare, insurance, leisure, transportation, hospitality, retail, and others.

For more details on Heidi products, we are available in an email to [heidi@getgroup.com](mailto:heidi@getgroup.com)