

Insider's Guide to ID Card Printers

An ID card printer is a beneficial addition to any business or organization. With so many features, models, and manufacturers available, picking the right printer can be difficult. Understanding the basics of ID printing makes finding and choosing the ideal printer much easier. In this guide, you'll learn about different types of ID card technologies, some of the many ways that ID cards are used, and how to find the right card printer

for you.



Technology Types

Whether your ID program requires basic name badges or fully-functional access control cards, choosing the appropriate features and security options is extremely important when buying a printer. ID card printers come with a wide variety of printing and encoding options that help you customize your desired ID card solution. Options may include:

Printing

Single Sided—Single-sided printers are effective for producing cards such as name badges or school IDs when one side of the card is printed at a time. They are also useful for batches of simple double-sided cards if the information on the back remains the same for each card.

Dual Sided—Also called “duplex,” these printers save valuable time by printing both sides of a card in a single run. If you’re looking to print variable or personalized data on both sides of your cards, a duplex system is a must.

Reverse Transfer—Available with some higher-end systems, reverse-transfer printers first print card content onto a special film which is later applied to the card. This process is useful for printing irregularly shaped cards, such as those with embedded electronics, which might not print properly through normal dye sublimation or inkjet methods.

Visual Security

Holograms—Useful for high-security situations, holographic overlays on cards help prevent tampering and fraudulent reproduction. Some manufacturers also offer customized holographs or holomarks for further protection.

Lamination—Lamination, like holographs, helps to prevent unauthorized tampering and card counterfeiting by adding an extra layer of security between the printed area and the outside. Any attempts at physically changing the card’s appearance are immediately obvious. Lamination also increases card durability.

Encoded Security

Bar Codes—Consisting of a series of bars and spaces, bar codes are an easy and inexpensive way to encode information onto ID cards, and are available on most ID printers.

Magnetic Stripes—Magnetic stripes store data in black or brown strips of resin on the back of the card. A special encoder in the printer changes the polarity of the magnetized particles on the card, and special readers are used to detect the data. Magnetic cards can be re-coded and are extremely popular for secure features like time, attendance and access control.

Smart Cards and Contactless Smart Cards—The information contained in smart cards is encoded into tiny embedded microprocessors. This information can be changed and re-coded over and over, making smart cards useful for applications such as public transit cards and school ID badges.

Proximity Cards—Also known as RFID (Radio Frequency ID) cards, proximity cards use antennas implanted in the card to exchange information wirelessly with readers. Though similar to contactless smart cards, RFID cards can only be encoded once and may not be re-coded.

Things to Consider When Looking For an ID Card Printer

An ID card printer can be a beneficial addition to your business or organization—the right printer can help identify employees, retain customers, and augment security. But what is the “right printer”? The most important steps when picking out an ID card printer are determining why you need ID cards, and what you want your cards or badges to achieve. These two factors may seem innocuous, but they play a powerful part in determining the perfect printer. Knowing the answer to these questions can dramatically narrow down the choices you have to make—and the amount of time you spend—on this important task.



Why do you need ID cards? Do you need them for simple identification? Access control? Security? Timekeeping? Loyalty or membership? A combination of functions? Understanding your ID card needs can help you target the type of features that are right for you.

What purpose do you want your cards to serve? Determining the functionality of your cards – whether it’s to open doors, check out library books, identify employees, or serve as currency in a retail environment – will help you specify the types of features required in both your ID printer and ID card software options.

How many cards will you print per year? Will you print hundreds (perhaps thousands) of cards, or just a few? This is an important distinction to make when choosing a printer. Certain ID card printers are built to withstand the rigors of high-volume printing, while others are designed with low-volume applications in mind. Depending on the amount of cards you plan to issue, your options can range from economical entry-level printers with manual single-card feeders, to powerful ID printers equipped with automatic, high-capacity card hoppers.



ID Cards for Schools

Educational institutions of all shapes and sizes are implementing ID card programs to not only increase security, but also to provide a multitude of other unique and convenient functions. Student IDs have long been utilized by colleges and universities, but the functionality of the cards has changed dramatically in recent years thanks to advancements in ID card technology. Today's student ID cards are capable of much more than basic photo identification. Many universities now utilize magnetic stripe, smart card, and proximity card technology to integrate student IDs with everything from access control systems to meal plans and laundry machine operation. Some IDs even work as debit cards for purchases both on and off campus.

University and college student ID functions

- Photo identification
- Access control for residence halls, dormitories
- After-hours access to specific classroom buildings and laboratory facilities
- Meal plans
- Payment programs
- Laundry and vending machine use
- Library privileges
- Admission to student activities
- Student transportation systems

In elementary school and high school settings, photo identification makes it easier to recognize potential threats on school grounds. It's become increasingly common for schools to require all students, faculty, staff, and visitors to wear ID badges. By making the badges mandatory, all visitors who step foot on school grounds must first register at the reception area. More sophisticated school ID badge systems incorporate various card technologies for such applications as access control, attendance tracking, storing student class schedules, and more.



Hospital ID Badge Systems

For most hospitals, it's now standard practice to require all doctors, nurses, and staff to wear photo ID badges. Prominently displayed photo identification allows patients and visitors to quickly and easily identify hospital staffers. Patients also feel a certain degree of comfort in knowing that the appropriate, qualified individuals are caring for them. Without an ID program in place, the threat of random intruders roaming a hospital facility is very real.



Basic hospital ID badges include the cardholder's name, photo, department, and title. Color coding is often used to distinguish departments as well. More sophisticated ID badges might utilize smart card or proximity card technology, allowing for the secure storage of information as well as integration with hospital access control systems.

It's also common for hospitals to implement ID badge systems for patients and visitors. Visitor badges work to prevent intruders from freely wandering the hospital without authorization. While visitor badges are typically somewhat basic in design, it is possible to employ a more advanced system that integrates visitor IDs with existing security systems and data tracking software.

Patient ID cards and badges help to create a more organized and efficient hospital environment. Many utilize smart card technology allowing patient information to be stored securely on an embedded chip rather than in endless piles of paperwork. Such a system speeds up the patient registration process while also reducing waste. Patient IDs are also used to track surgical itineraries and can contain the cardholder's health records, prescriptions and any allergies of note.

Common uses of Hospital ID Badges

- Photo identification for doctors, nurses, and staff
- Access control for hospital buildings and restricted areas
- Accurate patient billing and record keeping
- Time and attendance tracking
- Visitor registration
- Rapid patient registration
- Secure storage of patient information and health records

Company Employee ID Cards

Many companies, both large and small, now turn to photo identification as a way to increase security. Today's employee ID card systems not only help to identify workers, but also serve a multitude of functions while protecting the workplace.

One of those areas is access control. Employee ID badges can operate using a variety of encoding options in order to integrate with access control systems. Popular methods include magnetic stripes, smart card encoding, and proximity card technology. As an example, consider a corporate workplace: In a corporate setting, there are often multiple buildings to secure, the work staff is commonly split between full-time and temporary contract workers, and many employees even work remotely over company networks. By integrating employee IDs with access control, these companies are able to activate and disable cards as needed, say for instance if a temporary worker's contract comes to an end. While magnetic stripe cards must be swiped through a reader to gain entry, proximity cards require the holder to simply wave the card in front of a special proximity device. These cards are gaining in popularity, as are smart cards which contain an embedded smart chip. Smart cards are often used to control access to company computer networks—an extremely convenient tool for employees working remotely.

The ability to incorporate multiple operations into a single card is one of the greatest assets of today's ID badge systems. Multifunctional employee IDs offer not only enhanced security, but also added convenience in numerous areas.

ID card functions for companies and corporations

- ▮ Photo identification
- ▮ Access control for buildings and restricted areas
- ▮ Secure access to company networks and computers
- ▮ Time and attendance tracking
- ▮ Meal plans
- ▮ Parking and transportation programs
- ▮ Visitor ID solutions



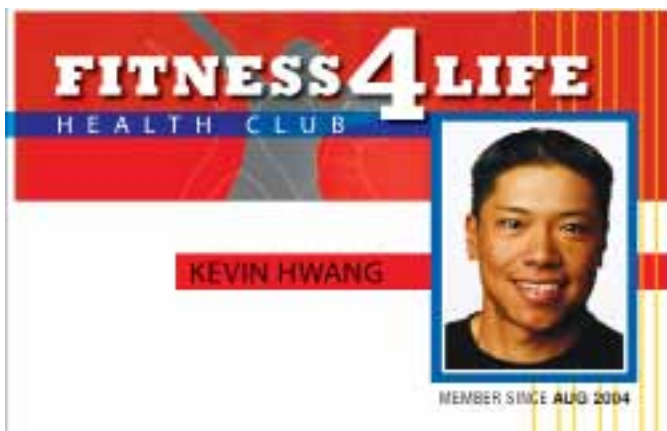
Membership ID Cards and Badges

All clubs can benefit from high-quality, professional ID cards. From country clubs and gyms to volunteer organizations, fan clubs, and various sporting groups, the need for convenient member identification is ever-present. While early forms of membership IDs were typically printed on paper, today's ID card printers are capable of producing glorious full color plastic IDs with crisp logos, images and text, along with a host of advanced encoding options, when applicable.

Membership ID cards serve a number of purposes: They help in building up the professional image of an individual club or business. They ensure that only actual members, not imposters, reap the benefits inherent with the membership, and they act as free promotion each time a card is flashed. Additionally, thanks to advancements in card technology, these ID cards can serve a variety of functions from access control to equipment checkout, payment programs and much more.

Membership ID card functionality

- Member identification
- Access control for club facilities
- Equipment checkout
- Payment programs
- Establishes club's presence and professional image
- Serves as a form of promotional advertising
- Data encoding of unique ID numbers, and member info



Secure Government IDs

Government ID projects demand the highest level of card protection and security. Because government-issued cards typically involve extremely valuable credentials, it's critical that they're thoroughly protected. Think about drivers' licenses, national IDs, and government employee badges—these are cards which require sophisticated technology to prevent fraudulent reproduction and tampering, and to guard valuable information.

In order to produce secure government IDs, a powerful and versatile ID card maker must be used—one equipped to handle advanced operations such as smart card encoding, holographic lamination, data encryption, and quite possibly the inclusion of biometrics. Additionally, the printer itself must be protected from unauthorized use. Many of today's ID card printers feature locking mechanisms, password protection, and secure network connectivity in order to prevent illegal operation.

Government ID applications push ID card technology to the limit, resulting in exciting innovations, and more effective and secure cards and badges.

Examples of Technologies Used in Government ID Cards

- Contact and contactless smart code encoding
- Proximity card technology
- Biometrics such as fingerprints and iris scans
- Powerful data encryption
- Custom watermarks holographic lamination

