ID Card Printer
Buying Guide
Congratulations!

By researching your many options for identification card printing, you have taken the first important step to starting an ID security program that will protect your organization and its employees from identity fraud.

Identification cards today go far beyond a simple ID badge displaying a photo and name. Today’s ID card printers are capable of creating cards with physical security features, data-driven encoding technologies, and access control - all while sporting designer-quality branding.

Your card issuance requirements will determine which ID card printer best aligns with your organization’s needs. This buying guide will navigate you through the various printer capabilities, technologies and features available in the market.

**Buying Guide Takeaways**

This ID Card Printer Buying Guide will help you answer the following questions:

- ✓ How much information will appear on my ID Card?
- ✓ Is additional card security and durability a concern?
- ✓ Will I need to store additional data about the card-holder on the badge?
- ✓ What if my organization controls entry access on one or more door?
- ✓ Is there a check list for all this?
- ✓ So... which ID card printer should I select?
5-Step Criteria Check

Organizations in healthcare, government, education, corporate, or event management industries all have unique requirements pertaining to card issuance. Identify key printer features and functionality that match your requirements in 5 easy steps.

STEP 1 Determine your card printing volume

STEP 2 Consider the amount of data that will be displayed / stored on the card

STEP 3 Review available printing methods

STEP 4 Determine security and durability concerns

STEP 5 Consider additional printer-related amenities

STEP 1 Determine Your Card Printing Volume

The number of cards you print and the frequency of printing is an important ID card printer consideration.

- How many cards do you need to print per year?
  Card volume correlates to printer durability and reliability. Low = <1,000 cards; mid = 1,000-5,000 cards; high = >5,000 cards.

- How frequently do you print?
  Healthcare, education, government and financial institutions reprint cards regularly for security purposes. If you print frequently, especially at medium- to high-volumes, you’ll want a printer that can stand up to the wear and tear. If you produce cards infrequently, then printer burden is relatively low.

- How quickly do you need cards printed?
  Print speed enters the equation at this juncture. Event management also presents the need to print a high volume of cards quickly.

Quick Tip

For enhanced efficiency & speed, choose a printer with a high capacity card hopper. Select models accept a second hopper to enhance output.
STEP 2  Consider the Data Displayed on the Card

A critical success factor of your employee and visitor authentication program hinges on card credentials. Once you have vetted your credential requirements, you’ll know if you need to print on one or both sides of a badge card. Printers come in Single-sided and dual-sided modes.

- **The basics**
  The anatomy of a basic photo ID card typically includes a company logo, background design, cardholder photo, cardholder name and employee ID number.

- **Other common ID badge content**
  Additional ID badge content includes company contact info, cardholder signature, issue/expiration date, security access level and instructions for returning lost cards.

- **Barcode graphics**
  Barcodes display additional cardholder data when scanned with a barcode reader connected to a computer device. They can be produced by any ID card printer using the black resin panel of a ribbon.

**Quick Tip**

Other data encoding, like magnetic stripes and smart cards, impact card design. Advanced encoding is discussed further in this guide.

---

**Single-sided card**

**Double-sided card**

Property of Reagen Memorial Hospital.
Please return this card to reception desk if found.
Now that you have reviewed your required card information, it’s time to select whether you need a single- or a dual-sided printer.

**Single-Sided ID Card Printer**

Print on **one side** of an ID card. Ideal for limited cardholder information and low-volume printing. Select a single-sided printer if:

- You require limited card credentials
- Your organization prints less than 500 cards per year
- A compact size is preferred

*Note:* Single-sided printers can print on both sides of a card, but require the card be turned over and reloaded, which may result in printhead damage.

**Quick Tip**

Certain single-sided printers can be upgraded for dual-sided card printing. Field upgrades allow you to meet your needs in the future.

**Dual-Sided ID Card Printer**

Print on **both sides** of a card in a single pass - no need to reload cards. Select a dual-sided printer (also called a duplex printer) if:

- Credential data includes detailed information
- Speed & efficiency are factors
- Cards will include membership, reward, event, or emergency instructions

**Quick Tip**

Duplicate credentials on the back side of your cards to ensure critical ID information is always visible, even if the badge becomes twisted – **essential in healthcare.**
STEP 3  Review Available Printing Methods

There are two types of ID card printing technologies: **direct-to-card printing** or **retransfer printing** (also called reverse transfer). Both use a process called **resin thermal transfer** (to render sharp black text and barcodes) and dye sublimation (to produce full-color imagery). The difference comes with the imprint technology. However, both methods are available in single- or dual-sided models.

**Direct-to-Card or Retransfer Printers**

**Direct-to-Card ID Card Printer**

Imprints directly onto the card surface. The most commonly used type of printer, direct-to-card models work well for most card-issuance programs.

**CAPABILITIES**

- Ideal for producing full-color plastic cards
- Photographic-quality images in up to 16.7 million hues
- Available in a wide price range; often **lower cost** than retransfer technology
- Accepts standard PVC cards

**GOOD TO KNOW**

- Cards print with a white border – the printhead cannot come in contact with uneven surfaces
- Not a good fit if you prefer full card coverage
- Printhead component is vulnerable to dust, debris, and oil contaminants from the card surface - **use caution to avoid expensive damage repairs**
- Lower supply costs - uses a single ribbon that translates to a lower cost-per-card.

**Quick Tip**

Direct-to-card printers are sensitive to imperfect surfaces. Cards with smart chips and technology cards with raised edges may cause printer damage or produce inconsistent quality.
Retransfer ID Card Printer

Uses a two-step printing process called reverse transfer to imprint onto the reverse side of a clear film rather than directly on the card. The film is heat rolled or thermally fused to the card surface. Since the printhead never makes contact with the card, retransfer printer components tend to last longer.

CAPABILITIES
• Over-the-edge, full bleed card printing - no white border frame
• Photographic-quality images in up to 16.7 million hues
• Produce consistent print quality in vivid, saturated colors
• Retransfer film protects cards for enhanced durability
• Printed cards are more resistant to tampering and forgery
• Accepts a wider variety of card types including technology cards (smart cards, proximity cards)

GOOD TO KNOW
• Generally, more expensive than direct-to-card printers
• Higher supply costs: both a color ribbon and retransfer film is needed
• The two-step print process yields a slower print speed compared to direct-to-card printers
• All retransfer printers come with a lifetime printhead warranty

Quick Tip
Retransfer card printers perform best with composite PVC-PET card stock.

Direct-to-Credit Printing
Direct-to-card printing leaves an unprinted border around the card. Less vivid, saturated colors.

Retransfer Printing
Over-the-edge printing covers the entire surface of the card. Vivid, saturated colors.
Determine Security & Durability Concerns

High security standards are imperative at institutions where the welfare of patients, students or sensitive information is at risk. Just like greater card durability is imperative for organizations whose cardholders expose cards to harsh conditions or prolonged use. Ask yourself if special features including data encoding and lamination are relevant to your card issuance program.

- **How much wear and tear will cards endure?**
  Cards regularly exposed to direct sunlight or other harsh elements will fade quickly without added protection, reducing their longevity. Likewise, magnetic stripes and other card graphics consistently swiped through card readers will erode over time, decreasing security effectiveness. Any cards intended for long-term use should be treated with a protective overlaminate.

- **Does my organization require enhanced security data for authentication?**
  If your organization has decided to implement a high-security credential verification program, then basic ID badge components won’t suffice; you’ll need an ID card printer that is capable of imposing physical card attributes that deter fraudulent activity, advanced access to personal data, or a combination of both.

**Quick Tip**

Overlays are ribbons that are NOT laminates, but that may be used in dye sublimation printers to still apply a very thin, clear overlay panel (also called the “O” panel).
Lamination & Data Encoding Configurations

Laminating ID Card Printer

Use lamination to strengthen plastic cards and protect against scratches, cracking, dye migration, and fading - common results from daily wear and UV exposure. Resists tampering and increases the overall security of card-holder credentials.

HOW IT WORKS

• Laminate film is applied as a separate, clear or holographic layer to the card surface during the printing process. Depending on the model, the layer can be applied to one or both sides of the card. You must use composite PVC-PET cards with a laminating printer.

TYPES OF LAMINATES

• Clear laminate is the standard film used for added durability.
• Holographic laminates offers enhanced security since holograms cannot be fraudulently duplicated (come pre-printed or may be custom designed).

LAMINATION METHODS

• Overlay laminate covers the entire card, but is thinner and less durable.
• Patch laminate leaves an unlaminated border, but it is thicker and more durable.
• Laminates for use with magnetic stripe cards and smart chip cards are available.

Quick Tip

Some ID card printers feature built-in single-sided or dual-sided lamination, while others can be upgraded for lamination with the addition of an optional lamination module.
Advanced Encoding Configurations

Plastic badge cards can be encoded to include secure and confidential cardholder credentials. Several encoding options exist for high-level authentication that allow secure access control, time and attendance tracking, cashless payment, reward point tracking, public transportation ticketing, and more.

MAGNETIC STRIPE ENCODING

- Secure and relatively inexpensive
- Offer limited storage space when compared to a smart card
- Subject to wear since they need to be swiped by a reader device to access the encoded data
- Can be rewritten to update cardholder information

CONTACT & CONTACTLESS SMART CARD ENCODING

- Feature embedded computer technology to store personal data
- These technology cards perform various on-card functions activated by a smart card reader
- Tamper-proof, and able to store 100x more data than mag stripe cards
- Can be reconfigured to add, edit, or erase data
- The most secure encoding method - ideal for hosting financial information, biometric data, personal records, and other highly sensitive or classified information

A contactless smart card has a chip and an antenna. To be "read," it needs to come within a specified distance to the reader, but doesn’t need to make direct contact. A contact smart card has an integrated chip. A contact smart card must come into direct contact with the reader be read.

Quick Tip

To use magnetic stripe cards, you will need an ID card printer with magnetic stripe encoding capabilities and mid-level or fully-featured ID software. Be sure to order the appropriate magnetic stripe card stock.

To use smart cards, you will need an ID card printer configured with smart card encoding. Be sure to order the appropriate card stock for smart cards.
STEP 5  Consider Additional Printer-Related Configurations

The following features include additional ID card printer characteristics to consider as you shop.

- **Field Upgrades**
  Field upgrades are add-on modules that enhance printer capabilities. Many of the features we reviewed in this guide can be added to standard model printers to expand card printing needs as they grow. Look for the words “field upgradable” or “field upgrades” when reviewing card printer specs.

- **System Compatibility**
  Be sure to select a printer model that is compatible with your computer operating system. Most card printers are Windows-based, but certain models include Mac drivers.

- **Connectivity**
  Most ID card printer will come standard with USB connectivity, which is adequate for small print operations. If you need to provide printer access to multiple users across a network, look for a printer with Ethernet connectivity. For remote access to your card printer, choose a model that offers a WiFi connectivity option (often available as a field upgrade).

- **Warranty and Support Plans**
  ID card printers typically include a manufacturer’s warranty ranging from 1 to 3 years. Certain manufacturers and retailers offer printer loaner coverage to ensure that your card printing program can continue uninterrupted if your card printer is out for repair. This service is especially important for high-volume printing programs.

**Ready to Shop ID card printers?**

If you are ready to shop card printers, use the checklist on the following page to ensure your selection meets your requirements. We invite you to browse our selection of industry-leading ID printers online at [www.southeastid.com](http://www.southeastid.com). If you are still uncertain which ID card printer and supplies are right for your card issuance program, our Identification Specialists are available to speak with you directly.

**Call**: (800) 749-0514  
**Email**: sales@SoutheastID.com

**Southeast ID**
1191 West Newport Center Dr  
Deerfield Beach, FL 33442
ID Card Printer Buying Guide

Checklist

Mark any of the following printer features that are important to your card printing application.

Keep this checklist handy while shopping and comparing printer models. Share these printer needs with an identification solutions salesperson to ensure your requirements are included in a future purchase.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single- or Dual-sided Printing</td>
<td>□ Single-sided printing  □ Dual-sided printing</td>
</tr>
<tr>
<td>Print Volume</td>
<td>□ Low- to mid-volume printing    □ High volume printing</td>
</tr>
<tr>
<td>Print Quality</td>
<td>□ Direct-to-card printing (edge-to-edge)    □ Retransfer printing (over-the-edge)    □ High resolution imagery</td>
</tr>
<tr>
<td>Resin Erase &amp; Rewrite</td>
<td>□ Yes                                        □ Not necessary</td>
</tr>
<tr>
<td>Security &amp; Durability</td>
<td>□ Lamination: single-sided □ Lamination: dual-sided □ Supports holographic ribbons □ Supports microtext printing</td>
</tr>
<tr>
<td>Data Encoding</td>
<td>□ No encoding needed  □ Magnetic stripe encoding  □ Contact smart card encoder □ Contactless smart card encoder</td>
</tr>
<tr>
<td>Connectivity</td>
<td>□ Standard USB interface  □ Ethernet connectivity for networking □ WiFi connectivity for mobile access</td>
</tr>
<tr>
<td>Platform compatibility</td>
<td>□ Windows-compatible □ Mac-compatible</td>
</tr>
<tr>
<td>Printer size</td>
<td>□ Small/compact size □ Size not a factor</td>
</tr>
<tr>
<td>Warranty &amp; Support</td>
<td>□ Optional extended warranty □ Optional printer loaner coverage</td>
</tr>
</tbody>
</table>