



Function Before Form

First things first: what do you need in an ID card? Understanding your basic needs will help both you and your service provider design the right card. Consider how it should function by asking the following questions:

- How many employees, contractors and visitors will need cards?
- Will separate card designs be required for each?
- How many different areas of the organization will interact with the cards?
- Will different levels of security clearance be required for each?
- Does the card design need to comply with any government regulations?
- How will the identity of each cardholder be verified and authenticated?



Card Technology

Achieving an effective ID card involves three key elements: functionality, authentication, and validation.

Scanner specifications. A barcode symbology will require certain dimensions and contrast levels to be effectively read by a scanner. The scanner may work in one or more wavelengths and may or may not be able to "see" the barcode when used with some background and overlaminant colors.

Magnetic stripe placement. The stripe's position is governed by ISO standards, but card manufacturers may offer slightly different stripe heights. Altering the stripe's height can leave more room for your design.

Transmission technologies. If your card has multiple radio frequency technologies, you will want to design the personalization graphics to avoid the areas where those components may affect the card surface. Alternatively, you can consider printer technologies (Reverse Transfer) that manage printing on irregular surfaces effectively.



Visual Appearance Challenges

Your ID card should faithfully represent your brand, but consider the following factors:



Orientation and layout

Portrait or landscape? There is no "right" answer, it depends on:

- How the card will be displayed and used, for example with or without a badge holder and lanyard
- The location of card electronics
- The card's fixed elements, like smart card contacts, magnetic stripes and visual security elements
- Whether layout or orientation will function as a quick, at-a-glance verification aid, with one orientation for full-time employees and another for visitors and short-term contractors



Photo dimension

Photos should be consistent — large enough to discern from a reasonable distance (i.e. from across a table), cropped tightly to allow easy visual authentication and printed on both sides of the card, since ID badges on a lanyard often flip over.

Of course, ID cards are only as strong as their users and verifiers. Make sure company policies are both understood and followed.

For example:

Are employees required to wear badges at all times?

Are employees trained to challenge/report anyone they do not recognize who is not wearing an ID?

Are there physical areas that require certain credentials (i.e. only BLUE badges are allowed on the tarmac).



Common Features to Detect Fraud

Modern ID cards are difficult to counterfeit, but a few anti-forgery features can help make them even more secure



Optically Variable Inks

These color-shifting inks work by reflecting various wavelengths differently, depending on the angle of incidence to the surface. An unaided eye will see this effect as a change of color when the viewing angle is changed. A simple back and forth rotation of the ID card results in a specific image changing color.



Holograms

Genuine holograms evidence motion or image change when rotated at certain angles. Custom images are significantly more secure than stock, as they require elaborate setup and are only available from a very limited supply chain. Keep in mind that planning is important with this feature, as lead times to create and produce holograms can be lengthy.

In addition, holograms can either be applied to the external surface of the card or to an internal layer. The internal, embedded hologram allows additional personalization over the hologram image.



Invisible Inks

Common on credit cards, currency and travel documents, fluorescing ink provides varying levels of security depending on the light source and ink formulation used. In general, inks that fluoresce red, green, yellow and orange are difficult to acquire and require specific wavelength light sources. Blue/violet fluorescing ink, on the other hand, is inexpensive, readily available, and illuminates with commonly available black lights.

Fluorescing images can be applied at either the card surface level during personalization or at a sub-surface level during card manufacturing.



Guilloche and Micro-fine print

Finally, card designers can use patterns that require ultra-high resolution printing mechanisms not available in any desktop imaging system today.

Guilloche printing uses fine-line, interlocking spot-color patterns to make complex, often multi-color background graphics that are extremely difficult to scan and reproduce.

Micro-fine printing hides miniaturized text within a graphical design and is often used around the photo window to highlight any attempts to tamper with or replace an original, genuine image.

Success with Strong Partnerships and Plans

Badging projects can require significant planning, resources and logistics. Having a detailed plan and an experienced service provider can make a significant difference by reducing total overall costs while ensuring consistently high quality and on-time delivery performance. Look for providers who have experience with multiple technologies, including proximity cards, contact and contactless smart cards, magnetic stripes and bar codes.

In addition, many providers offer secure, webenabled project management from the project's inception to make it easier than ever to manage data transfers and re-order existing formats while simplifying project status tracking and monitoring.





Learn more about how HID Global is partnering with organizations around the world for the ultimate in simple, secure badging programs.

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