

For your full appreciation of our integrated technology, we are pleased to provide you with this advanced technical note from the lab!



2D/3D flipping background with unmatched level of depth.

Wire framing / texture mapping of the image / person for full conversion from 2D graphic to real 3D with left to right parallax.

Our [DRIP](#) technology allows twice as much visual / frame than the best second alternative technology. This is allowing us to include, if required, optical security feature, such as the floating arrow, which remains in perfect focus regardless of the total projection and apparent displacement / difference of orientation. This feature cannot be copied by any other technology.

Customizable 3D static or animated background, depending on client's graphic standard. This area can contain the name of the cardholder, job title, ID number, etc. Graphics on 3D access cards and layout can be fully customized to client corporate image.

The proof / mock-up we are providing for approval purpose is the exact replica of the finished product. Our 3D Access Cards are produced directly on our HD imaging processor. This production method assures a maximal optical quality. **There is no** second generation / digital printing mass production process involved which would imply a visual degradation of the 3D Access Cards compared to the actual proof / mock-up.

IMPORTANT NOTE: Our proofs / mock-ups can be produced in a few business days to accommodate rush presentation schedules. Any design feature of the 3D Access Card can be adjusted to the finest detail (depth, sharpness, visual content, corporate image personalization, etc.). Our policy is to work closely with our customers and produce additional proofs / mock-ups until we reach full satisfaction.

About HD Dynamic 3D Printing Process and image conversion:

Based on patented technology in the field of 3D imagery, our production process consists of taking normal employee 2D digital photos and converting them into photorealistic 3D models. We then save views around the model to allow stereoscopic depth / pop-out and a head rotation / animation. When the Access Card is moved from left to right, the head rotation is an important differentiator and security feature. It is common to see lenticular printing with foreground objects on flat layers. We have a unique process to generate 3D animated files from a single ordinary 2D / flat photo. As a result, with our product, the nose looks closer (projected) in front of the face, and the ears look farther away.

Our technical specifications take into consideration both our HD dynamic printing requirements and our proprietary DRIP technology (Dense Raster Image Processor – USPTO patent #7433076). The amount of head rotation (number of views), and depth of the face are all adjustable parameters that have been set for optimal printing.

As part of our pre press procedures, the 3D model is saved in an animated sequence, which is inserted between the foreground and background graphics. The dedicated software performing that task is made to read the employee information from a simple easy to manage Excel spreadsheet, which is then placed as text on top of the graphic design. Each face rotation is then saved into a single file and delivered in batches for the image interlacing step.

From a branding stand point:

From a branding point of view, 3D Access Cards are also a unique selling feature. 3D animation that pops out from a flat card looks very innovative. People are excited to see themselves in 3D.



From a security stand point:

Lenticular images have the same security advantage as metallic holograms: if they are photocopied, the movement disappears. Attempting to tamper with the card to counterfeit it would also be very difficult, since the high-resolution lenticular interlacing requires a high degree of precision alignment. A security problem would arise if it was possible to change the information and put the layers back together again. That is simply not possible. It would require a precise sequence of very difficult steps including:

- Getting a 3D model of the new face.
- Generating the correct number of views around the face / subject.
- Interlacing razor-thin strips of the images (so that there are a large number of strips of images behind every micro-lens on the laminate).
- Being able to print with extremely high resolution, beyond anything commercially available including our patented DRIP technology.
- Aligning the lenticular laminate with the image that is printed (which at a resolution of 4800 dpi, cannot be off register by even 1 dot per inch)
- If someone would succeed to get any laminate apart the Access Card would be destroyed. In brief, there is no way the card can be altered and put back together.

Product specifications (access badges):

Format: 3.375" (h) x 2.125" (w) - peel-off lenticular adhesive personalized stickers

Colors: Four-color process 4,800 DPI printing

Sticker: To be affixed to an RFID (Radio Frequency Identification) access card or alternate security access card technology

Visual effects: 3D, flip, video animation or combination thereof.

Options: Graphics and layout can be fully customized to client corporate image and brand. We can manage multiple access card versions to accommodate employee categories, visitors or temporary access cards.



About Photogram:

Photogram is an industry leader in High-Definition Dynamic Printing (Lenticular), recognized internationally both for its exceptional product quality and impressive achievements. With activities spanning *Canada, the U.S., Europe and Asia*, Photogram is able to provide top quality at highly competitive rates to businesses from small size to Fortune 500, from very small pieces up to mural size architectural design lenticular pieces.

For more information visit our web site www.photogramtech.com .

