Key Advantages

A simplified card production process
JETcard 3D is a true Card Factory which can replace up to 5 traditional pieces of equipment - offset press, collator, lamination press, die cutter & personalization printer/encoder.

Dramatic cost reduction
Since the JETcard 3D requires a single operator - instead of 3 to 5 with traditional processes – this reduces dramatically the cost burden and achieves a breakthrough high productivity level.

On demand production
The JETcard 3D combines the qualitative/quantitative advantages of an offset press (speed, output, inks) with the flexibility of digital printing technology (variable data printing and on-demand production capabilities).

Variable data
MGI's inkjet technology and the integrated RIP allows all types of variable data printing with all JETcard 3D inkscoatings - including the UV security ink.

Ease of use
The JETcard 3D is designed for seamless plastic card production. A single operator can supervise the whole production - even for a 250,000 card batch. Everything is automated and fully digitally controlled.

Reduced footprint
Because each square meter represents additional costs, JETcard 3D requires only 50 m² to operate, where the 5 traditional pieces of equipment needed 500 m². 10 times less space translates into more margin for your business.

Amazing production speed
Every single hour, JETcard 3D delivers 8,000 simplex cards or 4,000 duplex cards fully printed, personalized, encoded, coated and verified.

Integrity & quality controls
JETcard 3D includes several on-board camera systems which guarantee that each card is properly encoded, printed and the front side matches exactly the back side.

Optimize your stock and storage spaces
With the JETcard 3D, there is no need to store thousands of pre-printed card shells for your customers that are awaiting final personalization. You just need to store raw plastic & paper cards that you will print & personalize in just one pass, in the exact quantity required.

Stop outsourcing
Don't farm your card production (and profits) out any longer - bring your profits back in-house with the JETcard 3D.

Environmentally friendly solution
The JETcard 3D is a marked evolution from traditional plastic card manufacturing due to the utilization of eco-friendly technology, saving resources, eliminating waste (inks, electricity, no plates or screens) and harmful emissions (ozone free, no solvents, no chemical waste) while reducing the overall electrical consumption compared to traditional methods. In addition, the JETcard 3D can print on environmentally friendly paper cards, a sustainable alternative to PVC with the same standard thickness (760 µ) and made of 100% recyclable and natural materials.

Technical Specifications

Printing technology
MGI's Drop-on-Demand (DOD) inkjet technology. Piezo heads mounted on a solid plate covering the entire width. Single pass printing

Print resolution
Up to 720 x 2160 dpi

UV inks
4-Color printing (C,Y,M & K) and additional UV inks (pre-coating, security ink, UV coating, white opaque ink, spot colors, etc.)
Full-bleed card printing.

New Enhanced Printing functions
Printing with spectacular embossing 3D effects or flat print effect
Opaque white UV ink now available
Signature panel printing
Variable Data Printing even on embossed 3D effects

Production speed*
Up to 8,000 simplex cards per hour. First card out in 16 seconds.
No preheating or system latency

Card size specifications
ISO CR-80 compliant (width x length) - 53.98 mm x 85.60 mm or 2.13" x 3.37"
Increased format size capabilities (larger than CR-80), such as coupons, key cards/key fobs and combo cards (CR-80 card plus key fob)
Thickness - from 300 up to 1000 microns

Substrates
PVC cards with/without treatment, PET, Teslin, PLA, other synthetic substrates. Paper cards using coated materials - such as Arjo Wiggins Sequoia

Feeder
500** card magazine - change on-the-fly during production

Stacker
High capacity feeder mounted on a rotating carousel holding up to 5 key-coded magazines for a total capacity of 5x500=2,500** cards. Change on-the-fly during production

Card transportation system
100% flat path system with double feed detection

UV curing
Automatic and in-line UV curing system. Ozone-free process

Magnetic stripe encoding
HiCo & LoCo compliant. All written data are automatically verified. Defective cards are routed into a rejection bin

Back & Front End System
- Powerful RIP provided on a dedicated PC – key features include color management, variable data printing, and a production cost calculator
- Command WorkStation using another dedicated PC (1st screen + keyboard/mouse at operator level)
- Integrated webcam to monitor card production process (2nd screen at operator level)
- Ethernet connection 10/100/1000BT (RJ-45)

Dry air
A dry airflow is required (6 bar @ 700 l/mn)

Maintenance and remote technical support
Daily maintenance completed in less than 10 minutes. Most procedures automated. From cold start to production in less than 15 minutes. Remote troubleshooting & support via included video/web camera (high speed internet connection required)

Operator panel
Integrated user-friendly touch-screen LCD.

Dimensions (L x W x H)
5.98 x 1.25 x 1.85 meter / 19.7 x 4.1 x 6.1 ft
1 meter / 3.3 ft clearance required on all 4 sides

Weight
3,400 kg / 7,496 lb

Electrical requirements
400V, 20 kVA (3P+N+T/32A P17)

Respecting the environment
Eliminates resource waste (wasted electricity, paper, inks & varnish)
No plates (offset) or screens (screen printing)
No messy cleanup or preparation between jobs
Drastic reduction in amount of consumables and use of bulk packaging. Ozone free. Varnish/ink without solvent

Operating environment
Temperature: 18 to 30°C/64 to 86°F
Relative humidity: between 20 and 70% (no condensation)
Noise level: 69dB(A) at 50Hz

*speed will vary according to printing parameter used
**using 760 micron cards

Europe/Middle East/Africa/Russia
161, Avenue de Verdun
94204 Ivry-sur-Seine Cedex - FRANCE
Tél : +33 (0)1 45 21 06 60
Fax : +33 (0)1 45 21 14 90
info@mgi-fr.com
www.mgi-fr.com

@MGI_HQ
@MGI_USA
facebook.com/MGIonline

Americas/Caribbean/Asia Pacific
3143 Skyway Circle
Melbourne, FL 32934 - USA
Tel: +1 321 751 6755
Fax: +1 321 751 6777
info@mgi-usa.com
www.mgi-usa.com

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MGI
Digital Graphic Technology

30 years
30 years of innovation

JETcard 3D

The Card Factory

Innovation in Motion

JETcard 3D The Card Factory

MGI Digital Graphic Technology, the only French manufacturer of digital presses and finishing solutions, has more than 15 years of experience in printing plastic cards. MGI is a true innovator and market leader, continuously introducing new methods and new materials for plastic card production. With hundreds of plastic card production solutions installed worldwide, MGI has unsurpassed experience and knowledge in PVC printing & finishing.

Typically, a traditional plastic card production chain is using up to 5 pieces of equipment:
offset press - collator - laminating press – die cutter & personalization printer/encoder.
Each piece of equipment has varying productivity levels, requires a specialized operator, and can sometimes be spread across a large site. Combined, these factors result in high production costs. With the ***JETcard 3D*** , MGI streamlines the production chain by bringing all these key processes into one piece of equipment. The ***JETcard 3D*** features MGI's award-winning inkjet technology and is a true reinvention of the traditional plastic card production process.

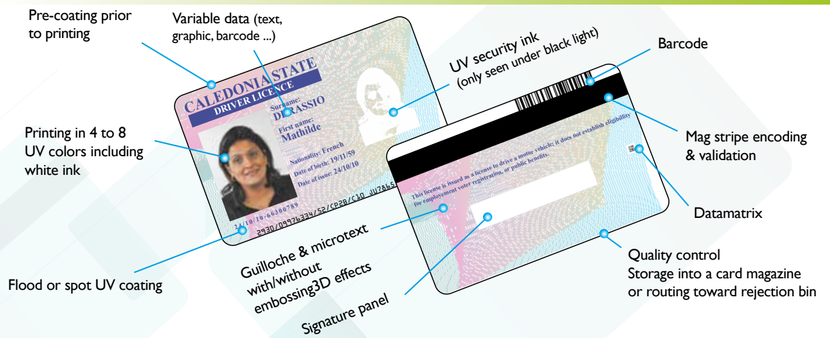
From an individual blank ISO CR-80 card, the ***JETcard 3D*** performs the following processes in just one pass:

-Pre-print coating to ensure a full compatibility with the substrates available on the market (PVC, ABS, etc.)
-Inkjet printing in 4 to 8 UV colors, including micro text and guilloché patterns
-Full variable data printing including text, barcodes & images
-Spot UV coating or flood UV coating for card protection
-Security inks revealed only under a black light
-Signature panel printing
-Read & write on the embedded magnetic stripes
-Choice between flat or textured background
-Automated quality controls and ejection into a rejection bin of the defective cards

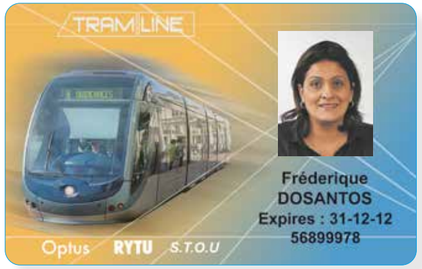
The ***JETcard 3D*** is a true Card Factory, producing high quality paper or plastic cards, in just 1/10th of the usual space required but with higher productivity and higher margins than traditional processes.

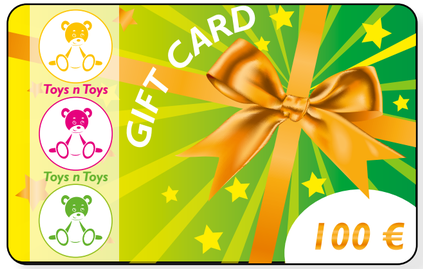
Plastic & Paper Card Production Solution Featuring High Quality Digital Printing & Complete Personalization

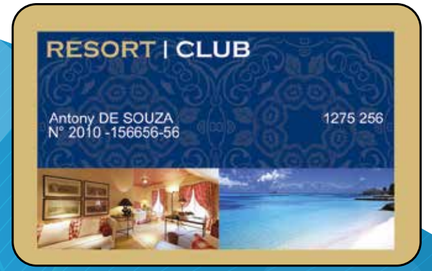
Overview of JETcard 3D features

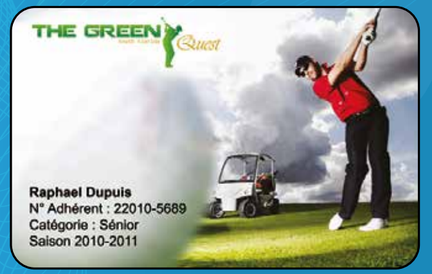


Sample cards









JETcard Manager

Though the Command WorkStation, the operator has access to several functions for controlling & managing card production (queue management, reprint, color control, etc.). Two screens are utilized to supervise production parameters & equipment operation. A powerful calculator to predict production costs is also included.

Encoding

If your application requires magnetic stripes, the JETcard 3D can encode and verify embedded data (HiCo & LoCo compliant). Any defective cards are automatically routed toward the rejection bin and removed from the production process.

UV Printing & Coating

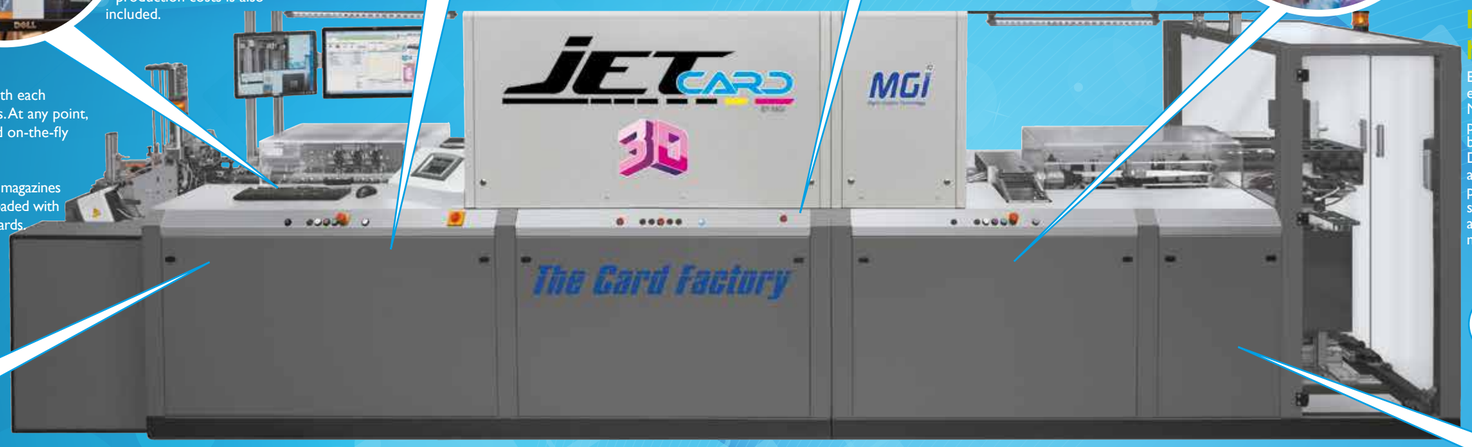
Using MGI's award-winning inkjet technology, the JETcard 3D prints in 4 to 8 vivid colors. Cards are printed full-bleed in flat print or textured mode and a specialized ink can be added, such as security inks (only seen under black light) or a white opaque ink. Variable data printing can be utilized with each ink for text, graphics, bar codes or datamatrix.

Print Speed & High Quality

Prints up to 8,000 simplex cards per hour.
One of the highest print resolutions available (720 x 2,160 dpi) Flat or textured printing
4 to 8 UV inks & coatings
PANTONE® simulation
Special inks developed upon request.

Feeder/Stacker

JETcard 3D uses key-coded magazines, with each magazine containing 500 ISO-CR 80 cards. At any point, a magazine (empty of full) can be replaced on-the-fly without interrupting production.
The feeder uses one magazine at a time.
The stacker uses a rotating carousel with 5 magazines automatically loaded with finished cards.



Respecting the Environment

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No plates (offset) or screens (screen printing) No messy cleanup or preparation between jobs.
Drastic reduction in amount of consumables and use of bulk.
packaging. Ozone free. Varnish/ink without solvent, Can print on 760 µ cards that are 100% recyclable and made of natural materials, a sustainable alternative to PVC.

JETcard 3D the ideal solution for producing the following applications

- Gift cards
- Loyalty cards
- Transit cards
- Identification cards
- Membership cards
- Phone cards, etc.