

Credential Solutions

Gallagher offer a range of credential provisioning solutions:

- Encoding services are available to manage the issue of credentials
- A range of credential types are supplied directly for immediate use
- Full support for on-site encoding
- Credentials for mobile devices with Gallagher Mobile Connect
- Compatibility with the latest smart card technologies

Credential Services

Gallagher offers the following credential services:

ISO Card Printing

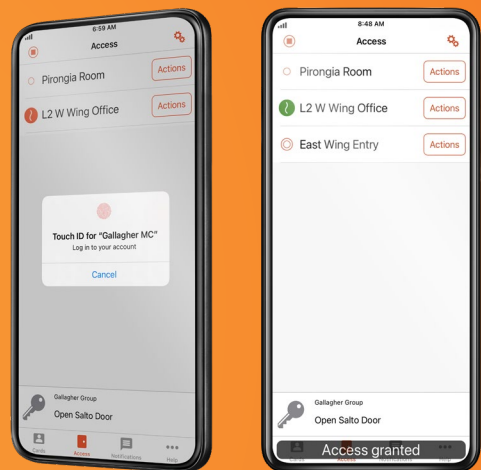
Customize your swipe cards with site specific logos and messages. Gallagher provides black and white printing of images and/or text of both sides of the ISO cards. A one-off origination charge applies and the cost of printing is included in the encoding fee.

Card Number Management

Gallagher manages card number uniqueness in conjunction with Channel Partners.

Card Identification

Card numbers are printed on each credential encoded by Gallagher including clamshell and ISO cards, and keyfobs.



MIFARE® chip technology is widely used in contactless smart cards and proximity cards, it provides:

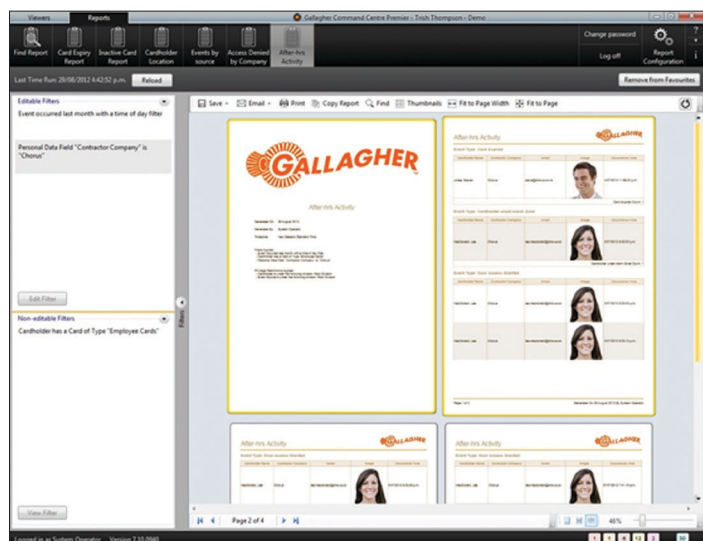
- The highest standard of security and feature levels.
- Reliability with more than 150 million reader and 10 billion smart card chips sold worldwide.
- Numerous manufacturers worldwide.
- Compliance with international ISO/IEC 14443 – used in more than 80 per cent of all contactless smart cards today.



Encoding Software

Gallagher Photo ID Card & Encoding

Photo ID & Encoding is an optional licensed feature available in Gallagher Command Centre, providing the ability to design and produce encoded and/or photo identification cards.



Custom-designed card layouts

The information retrieved from the Gallagher cardholder database would typically include the cardholder's photograph and access credentials. However, there is an extensive range of options available with this optional feature for formatting card layouts, including:

- Creating backgrounds
- Importing logos and images
- Adding and formatting text
- Incorporating barcodes
- Personalized cardholder data.

Key benefits include:

- **Design lead** – options such as “Snap-to-grid” allow users to position objects exactly where required on the card
- **Time efficient** - once the first layout has been completed, it can be copied to create subsequent layouts within the same system
- **Compatible** – integrates with most photo ID card printers - (please refer to security.gallagher.com for the latest information on tested compatible printers).

Automatic Card Serial Number Capture

Gallagher Command Centre Premier client supports the automatic capture of card serial numbers (CSN) for MIFARE Classic, MIFARE Plus and MIFARE DESFire EV1/EV2/EV3 cards. When an encoded card is presented to a Gallagher MIFARE USB encoder the unique CSN is stored to the database and associated permanently with the card identifier encoded to that card.

Gallagher Encoder III

Encoder III is a user friendly Microsoft® Windows® XP or Windows 7 software package that allows the on-site encoding of 125kHz proximity cards and keyfobs, and MIFARE Classic smart cards.

Using an industry standard system, Encoder III is used in conjunction with the following Encoder hardware: 125kHz, Magstripe, and MIFARE USB.

Integration with Gallagher systems

The integration of Gallagher Photo ID & encoding within the Gallagher system provides significant advantages over standalone photo identification applications including:

- **Detailed audit trail** – for example the reason for printing a card can be identified as all operator activity in the Gallagher system including adding, changing or deleting a card layout, and printing cards, are recorded in the system's audit trail
- **One cardholder database** - making the management of cardholder information much easier for operators and ensuring one centralized source of cardholder information
- **Access to stored photo images** - cardholder photo identification is increasingly becoming a requirement for many sites intent on enhancing site security. This feature allows stored photos to be recalled and printed onto cards
- **Providing an integrated cardholder management tool** within the Gallagher security system
- **Consistent with the core system** - uses industry standard Microsoft Windows layout
- **Centralized data** – integration with the Gallagher system means the site needs to manage only one cardholder database - simplifying information management.

Ensuring the security of your credentials

To assist with mitigating emerging threats, Command Centre v8.30 allows sites to change the secret keys used upon MIFARE DESFire EV1/EV2/EV3 credentials without the need to re-issue or re-encode cards at a workstation. DESFire credentials can be updated with newly defined site-specific keys upon presentation at an HBUS reader as part of day-to-day door access, providing a manageable process to achieve a more secure site.

Configuration allows selection of which (or all) HBUS connected T-Series readers can update the keys upon DESFire credentials, and the amount of time selected readers are enabled to do so (known as the migration window). Sites can use these options to choose how they would like to balance their needs for operational continuity against security concerns.

Optional Licensed Feature

Photo ID & Encoding is an optional licensed feature available in Gallagher Command Centre.

Encoding Hardware

MIFARE Encoding

MIFARE Classic, MIFARE Plus and, MIFARE DESFire EV1/EV2/EV3 cards can be encoded using the Gallagher MIFARE USB Encoder, which supports the encoding of:

- MIFARE Classic 1K and 4k cards and key fobs
- MIFARE Plus 2K and 4K cards in both standard security 'S' and extra security 'X' variants
- MIFARE DESFire 2K, 4K, and 8K cards
- Site specific MIFARE keys.

Keyfobs



Encoder Unit (MIFARE)



Cards & Clamshells

High Speed ISO Card Printing



DataCard
MX2000 Printer

Gallagher delivers rapid turnaround of ISO card printing and encoding requests with outstanding quality.

Credential Migration

Gallagher continues to support both current and legacy credential technologies with hardware and software available to end users, and via encoding services. A range of professional services are also available to assist in migrating to newer and more secure credential technologies. Please contact your Gallagher Business Development Manager for more information.

Credential Comparison

This table compares* some of the key attributes of credentials technologies supported by Gallagher:

Technology	125	MIFARE Classic	MIFARE Plus / DESFire EV1	MIFARE DESFire EV2 / EV3	Mobile Connect	PIV
Security	Low	Medium	High	Very High	High	Very High
Credential cost	Low	Low	Medium	Medium	Medium	High
Supports multiple applications	No	Yes	Yes	Yes	Yes	Yes
Supports biometric applications	No	Yes	Yes	Yes	Yes	Yes
Integration flexible	Yes	Yes	Yes	Yes	Yes	Yes
Product status	Legacy	Legacy	Current	Current	Current	Current
Recommended for new sites	No	No	No	Yes	Yes	Yes

*Comparisons are indicative only, providing a general guide for the various common technologies. Using multiple authentication factors (e.g. card plus biometric or card plus PIN) will further enhance the security level. Technology choice is often specific to customer requirements, and we recommend consulting your nearest Gallagher representative when selecting.

Recommended Card Technology

Gallagher strongly recommend the use of MIFARE DESFire credentials for non-federated (PIV) sites. DESFire has no known weaknesses. DESFire EV2/EV3 is Common Criteria EAL5+ security certified. This is the same security certification level as demanded by smartcard integrated circuit products used for applications like banking and electronic passports. A rating of EAL5+ indicates strong defense amidst emerging threats and gives confidence that the technology will remain secure for significantly longer than competing alternatives.

Technical Specifications

Product numbers				
MIFARE Classic	C196350	MIFARE Classic ISO Card (1K) - Blank	C196301	MIFARE Classic Overmolded Keyfob (1K, Black)
	C196330	MIFARE Classic ISO Card (4K) - Blank	C196304	MIFARE Classic Overmolded Keyfob (4K, Gray)
125 kHz	C196450	125 Series ISO Card	C196410	125 Series Clamshell Card
	C196400	125 Series Keyfob (Black) - Epoxy Material		
MIFARE Plus	C297174	MIFARE Plus ISO Card, 4K, S Type	C297274	MIFARE Plus ISO Card, 4K, X Type
	C297272	MIFARE Plus ISO Card, 2K, X Type		
Dual technology	C196370	MIFARE Classic and Magstripe dual tech ISO Card (1K) - Blank	C196490	125 Series and MIFARE Classic dual tech ISO Card (4K)
	C196340	MIFARE Classic and Magstripe dual tech ISO Card (4K) - Blank	C297484	125 Series and MIFARE DESfire EV2 dual tech ISO Card (4k)
	C196470	125 Series and Magstripe dual tech ISO Card	C297485	125 Series and MIFARE DESFire EV3 dual tech ISO Card (4k)
	C196430	125 Series and MIFARE Classic dual tech ISO Card (1K)		
MIFARE DESFire EV1	C297372	MIFARE DESFire ISO Card, 2K, EV1	C297378	MIFARE DESFire ISO Card, 8K, EV1
	C297374	MIFARE DESFire ISO Card, 4K, EV1		
MIFARE DESFire EV2	C297472	MIFARE DESFire ISO Card, 2K, EV2	C297478	MIFARE DESFire ISO Card, 8K, EV2
	C297474	MIFARE DESFire ISO Card, 4K, EV2	C297404	MIFARE DESFire Keyfob, 4K, EV2
MIFARE DESFire EV3	C297473	MIFARE DESFire ISO Card, 2K, EV3	C297475	MIFARE DESFire ISO Card, 4K, EV3
	C297479	MIFARE DESFire ISO Card, 8K, EV3	C297405	MIFARE DESFire Keyfob, 4K, EV3
Mobile Connect	2A8570	Mobile Connect Credential (one credential required per user)	2A8571	Mobile Connect Credential - SM Customers
Card accessories	C41007	Encoder Unit (MIFARE)	C196215	Encoder III Software (125, Tiris, MIFARE Classic, & Magstripe)
Card encoding	C197800	Encoder Unit (125kHz)	C196295	Encoder III Software Extension Disk

	Dimensions (Length x Width x Depth)	Temperature (Operating)	Temperature (Storage)
MIFARE ISO card	85.7mm x 54.0mm x 0.76 - 0.84mm	-10° - 50°C (14° - 122°F)	-25° - 50°C (-13° - 122°F)
125 kHz ISO & dual technology ISO card	85.7mm x 54.0mm x 0.76 - 0.84mm	-35° - 50°C (-30° - 122°F)	-25° - 50°C (-13° - 122°F)
MIFARE keyfob	45mm x 30mm x 2.0mm	-25° - 55°C (-13° - 131°F)	-25° - 55°C (-13° - 122°F)
125 kHz keyfob epoxy (Black)	45mm x 30mm x 1.6mm	-40° - 95°C (-40° - 203°F)	-40° - 85°C, (-40° - 185°F)
125 kHz clamshell card	85.7mm x 54.0mm x 1.7mm	-10° - 50°C (14° - 122°F)	-25° - 50°C (-13° - 122°F)
Magstripe card	85.7mm x 54.0mm x 0.76mm		+ 5° - 30°C (41° - 86°F)

*MIFARE Classic, MIFARE Plus, MIFARE DESFire EV1, EV2, and EV3 are registered trademarks of NXP B.V.

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