

Travel Document Solutions





1.

IN Groupe ePassport solutions

IN Groupe's vision for new generation ePassports

In the 21st century, governments face the dual challenge of ensuring border security while facilitating smoother traveler flows. In 2024, more than 140 countries issued electronic passports.

New challenges have been emerging in recent years with the advent of quantum computers. This is not only a threat to global IT security but also a risk to citizens' personal data. When powerful enough, quantum computers will be able to compromise cryptographic protections, leading to identity theft, forgery, and even threats to national security. Sensitive personal data stored in identity documents, such as biometric data or ID numbers, could be decrypted and exposed once quantum technology becomes viable. Transitioning to post-quantum cryptography is essential to safeguard these systems.

ICAO ePassport security

IN Groupe actively sits on ICAO committee, playing a significant role in emerging standards. This involvement gives IN Groupe a comprehensive understanding of ICAO standards, providing governments with the expertise needed to reach ICAO requirements. The development of the IN Groupe ePassport has greatly benefited from this experience.

The answer to the border control challenges

The IN Groupe ePassport is an electronic document designed with unique features to meet the highest standards of security and efficiency. Fully compliant with ICAO guidelines, it integrates data storage and advanced biometric capabilities, making it the ultimate secure, contactless travel document.

IN Groupe's ePassport enables electronic document readers to perform verification in less than three seconds.

By reading the document, three critical questions are answered:

- Is the document authentic?
- Has the document been altered?
- Is the person presenting the document its authorized holder?

The IN Groupe ePassport ensures rapid and secure verification without compromising personal privacy. It provides a modern, high-technology approach to automated document verification and addresses the challenges of modern, high-traffic border crossings. Featuring innovative security solutions, including the ICAO PACE mechanism, the IN Groupe ePassport sets a new standard for electronic travel documents.

2.

Embedded operating system features

The foundation of secure ePassports

At the core of every electronic passport is an embedded operating system that manages secure data storage, communication, and authentication. This specialized software ensures ePassports function reliably across international borders while protecting sensitive personal and biometric data from evolving security threats. IN Groupe's ePassport integrates a highly efficient and secure embedded operating system, enabling fast, compliant, and interoperable document authentication.

Interoperability & speed

Freedom of travel requires passports to be recognized globally. Passports must comply with the latest standards and be compatible with existing infrastructure.

The IN Groupe ePassport meets these requirements, having successfully passed all ICAO and EU interoperability tests conducted between 2005 and June 2014 and, more recently, in 2025 to verify the new method of storing fingerprint images.

Independent laboratories have rigorously tested the IN Groupe ePassport, publishing reports that give governments confidence in its efficiency and compliance. Additionally, IN Groupe's own laboratories have verified compatibility with all leading document readers on the market.

Optimal reading time

The IN Groupe ePassport supports contactless reading time of up to 848 Kbits per second. Combined with its highly efficient operating system, the ePassport can read a typical EAC (Extended Access Control) profile within three seconds. This industry-leading performance significantly contributes to smoother, faster border crossings.

By January 2028, all new electronic passports will exclusively support PACE, as BAC will no longer be supported.



Standards & data management

As new security threats emerge, IN Groupe actively contributes to defining robust standards to prevent fraud. With its ePassport, IN Groupe ensures compliance with:

- Data interoperable organization: LDS v1.7 and v1.8.
- Secure communication: Supplemental access control with comprehensive cryptography, including Integrated Mapping and AES encryption.
- Reinforced authentication: Biometric data access protected by EAC.

The IN Groupe ePassport offers storage capacities ranging from 80KB to 180KB for personal data, enabling the storage of mandatory personal data (biographic information and portrait) as well as optional data or biometrics (fingerprints, iris, etc.).

Preparing for the future, IN Groupe's ePassport now also offers the capability to store, after document issuance, the digitization of a visa, electronic entry stamp during cross-border travel, and additional biometrics. This advancement is known as LDS v2.

Enhanced security

With a validity period of five to ten years, electronic passports must be long-term resistant to data hacking. Governments must ensure the secure storage of personal data and biometrics in ePassports.

The IN Groupe ePassport has earned the highest level of security from independent standards laboratories and has received the Common Criteria security certificate for:

- BAC at EAL4+ level (PP 055)
- EAC with PACE at EAL5+ level (PP 056v2)

In addition, it supports the most advanced cryptographic algorithm key length:

- AES up to 256 bits
- Elliptic curve up to 521 bits

As security standards are continuously evolving, it is critical to maintain the security of electronic passports even after issuance. IN Groupe's ePassports include a mechanism that enables security updates after the document has been issued to the citizen. This mechanism, certified under Common Criteria standards, ensures governments can trust IN Groupe's products to remain secure and up to date throughout their lifecycle.



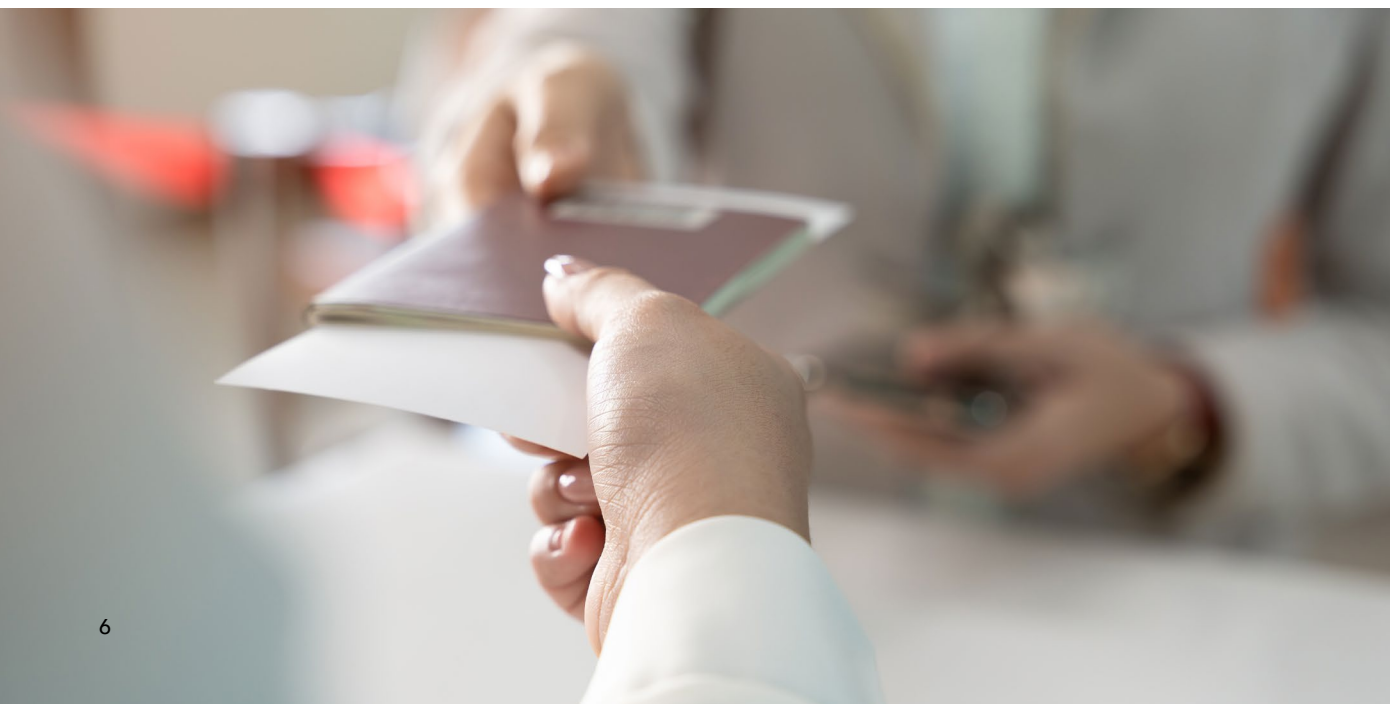
3. Physical security features

A passport reflects a country's identity and also gives its citizens a sense of pride and belonging. Physical and visual appeal play a crucial role, and IN Groupe's designers are acknowledged for the excellence of their design. These tailor-made works of art combine stunning visual effects with market-leading security features.

The IN Groupe ePassports are designed to last for ten years —a claim supported by an independent durability report.

Physical security features for polycarbonate ID cards

A passport requires robust security features that can be easily checked with the naked eye. These are known as first-line security features. Photo substitution is the main threat for passports. To address this challenge, IN Groupe has developed advanced optical security features, including LASINK™ technology, ID Seal, Stereo Laser Image (SLI®), Clear window, ImagePerf/TLI®, Tactile relief, and 3D Photo ID™.



LASINK™ technology

IN Groupe's LASINK™ technology leverages unique personalization techniques to protect color photos against tampering, and enables fast and reliable verification of the document's authenticity. LASINK™ Helios adds an innovative secondary portrait embedded within a DOVID, displaying dynamic diffractive effects, while LASINK™ Origin secures the main portrait.



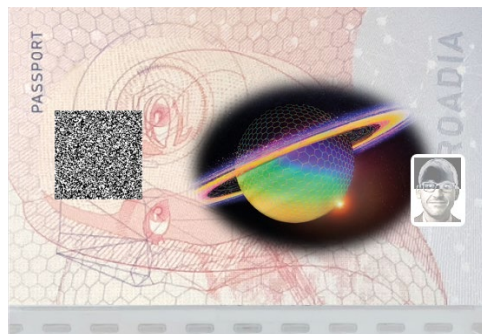
Stereo Laser Image (SLI®)

SLI® is a security feature designed to verify the authenticity of the primary photo. It incorporates a small three-dimensional portrait, clearly visible to the naked eye. It is possible to make a direct comparison between the primary photo and the SLI®. Any attempt to change the primary picture will result in a clear mismatch with the 3D picture. Any attempt to change the SLI® portrait cannot reproduce the 3D effect and tactile characteristics of the lenticular structure of this image.



ID Seal

ID Seal combines advanced physical and digital security by embedding a laser-engraved QR code into polycarbonate identity documents, ensuring data authenticity and tamperproof protection. It enables seamless biometric verification for agents and citizens, offering fast, secure, and reliable identity checks through an intuitive interface. The QR code integrates the document holder's biographical data and full-color photo. The full dataset is digitally signed by the issuing country, ensuring the data's integrity and preventing unauthorized alterations or regeneration of the QR code.



Security binding

IN Groupe's high-security binding technology is highly durable and prevents substitution of the polycarbonate data page. It is achieved through a flexible polymer hinge material, which is inextricably locked to the data page itself and has a polycarbonate strip.





Customer choice: a “modular” approach

IN Groupe offers great flexibility in its products and services. Our goal is to provide the very best answer to the most demanding customer needs.

Customers can opt for a turnkey passport solution with a polycarbonate or eCover passport, with or without full personalization. IN Groupe customers can choose the most appropriate and cost-effective products, options, and services.

We also offer cooperative ventures where we support national printing houses with IN Groupe expertise and technology. The printing houses can choose IN Groupe’s ePassport components such as inlays, eCover, or the binding. Technology advisory options are also available.



IN Groupe’s ePassport features



Form Factors

eDataPage/eCover passport booklet and resident cards or subset (inlay, module)

Durability & Interoperability – ICAO Technical Report:

RF Protocol & Application test standard for ePassport—part 3

Physical test methods for passport books (durability)

Security

BAC EAL4+ (PP 055)

EACv2 with PACE at EAL5+ level (PP 056v2)

Generic and Integrated Mapping

Compliance to Standard

ICAO 9303 8th Edition

TR Supplemental Access Control

LDS v1.7 & 1.8 and optional LDS v2

EAC v2.20 (TR 03110 v2.20 part 1 & 3)

ISO/IEC 14443 & ISO/IEC 10373 part 6

ISO/IEC 18745 part 1 & 2

Chip

80 KB – 180 KB

Double source available

Performance

Electronic data reading in three seconds

Cryptography

3DES

AES up to 256 bits

RSA up to 4096 bits

Elliptic curve up to 521 bits

Additional Compliance

EU 383/12 European driver’s licenses with microchip

ISO/IEC 18013-2 ISO-compliant driver’s license machine-readable technologies

ISO/IEC 18013-3 ISO-compliant driver’s license—access control, authentication, and integrity validation

4. A turnkey solution for your travel documents

From registration to usage

IN Groupe is a trusted partner for government agencies, institutions, national printing houses, and other public entities at every stage of identity management, including:

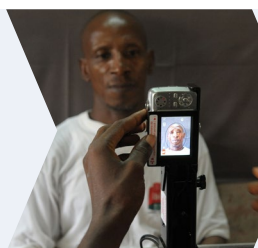
- issuing trusted identities.
- embedding and integrating identities into secure documents and systems.
- enabling the use of their secure ID documents.

IN Groupe is uniquely positioned as the only company with all the necessary in-house technologies to deliver smart documents, multibiometric systems and terminals, and integration services. Our end-to-end solutions are secure, easy to deploy, and based on global best practices to meet the challenges of our customers.

Agile personalization



Personalization applies visual and electronic data to documents in a highly secure environment. Once completed, a blank passport becomes a unique, ready-to-issue document. IN Groupe works with leading machine suppliers to offer flexible personalization solutions for both centralized and decentralized sites. Partnering with certified providers ensures secure data transfer. The machines also support color laser-engraved photos in the LASINK™ product range. At the core of this process, the Document Personalization System (IDPS) ensures the secure personalization of documents for various applications: first document, renewal, and replacement. The personalization system takes care of the operations and processes of the graphical and electronic personalization of the documents, such as cards and passports.



Registration
office



Background
checks



Personalization



Document usage



5.

IN Groupe's expertise: Case studies

The Netherlands

The Netherlands has trusted IN Groupe to produce a new generation of ID documents while maintaining the systems already in place.



In 2024, next generation identity documents were launched, introducing LASINK™ Helios as a world first—an innovative secondary portrait. These documents also feature tactile effects designed to enhance inclusivity for all citizens, resulting from joint innovation efforts. This achievement reflects decades of successful collaboration that started in 1995, with IN Groupe providing a broad range of solutions beyond the issuance of passports and eID cards. In addition to delivering turnkey solutions for biometric enrollment to Dutch municipalities and embassies, IN Groupe also provides and manages the central eID credentials register.

By outsourcing identity management services, the customer benefits from IN Groupe's more than 40 years of market expertise, scalable services to meet demand, and the ability to focus on their core mission of serving citizens—all while retaining control over processes and data.

As part of this partnership, 4 million documents are expected to be produced annually.



Chile

The Chilean government wished to reinforce the security of their existing identity management system and travel documents.



In 2022, building on a decade of successful collaboration, IN Groupe was selected to renew its role as a trusted partner. Initially chosen in 2012 as the sole supplier under a 10-year build-and-operate project, IN Groupe was entrusted with offering a new generation of physical and digital identification solutions based on multi-biometrics and cryptography for national ID cards and ePassports. IN Groupe provides Chile with secure, multi-biometric citizen enrollment, advanced ID document production and personalization, and a mobile ID app for secure access to online services in both the private and public sectors—improving the digital inclusion of millions of Chileans.

Estimated output during the contract is between 1,200 and 1,800 passports per day and between 16,000 and 18,000 IDs per day.

During the initial setup of this program, IN Groupe successfully addressed several challenges within a short timeframe, including:

- Establishing a local subsidiary.
- Recruiting and training staff locally.
- Building the local project infrastructure.
- Setting up registration offices throughout Chile (650 offices deployed to date).





Thank you

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