Sealys Secure Documents

IIIII Providing security and privacy
Opening the door to eServices

SPECIMEN ID CARD

Surname
SAMPLE

Given names
JOHN

Sex
M

Nationality
UTO

Date of birth
1971-10-07

Doc No
1234567

Date of issue
2001-11-06

Date of expiry
2012-11-06

Holder's signature

Signature

FINANCIAL SERVICES & RETAIL

ENTERPRISE

INTERNET CONTENT PROVIDERS

PUBLIC SECTOR > PRODUCT

TELECOMMUNICATIONS

TRANSPORT

gemalto
security to be free

Sealys Secure Documents

|||||| Providing security and privacy - Opening the door to eServices

The Context

The digital revolution is transforming the way we go about our daily lives. Governments around the world are seeking to boost efficiency and security in many essential functions such as travel, health and identity. At the same time, they are looking to serve their citizens more effectively with eGovernment services, and citizens in turn, want secure, convenient and faster access to information, easier travel and simplicity in all digital interactions.

Knowing that a document holder is who they say they are is a must and drives the necessity for portable, durable, innovative and secure documents that can be trusted.

Key Figures

Gemalto Secure Documents are deployed in more than 50 national programs worldwide, with total issuance of over:

> 20 million Sealys™ eTravel documents
> 20 million Sealys travel documents
> 20 million Sealys eID cards
> 20 million Sealys driver and eDriver licenses
> 100 million Sealys eHealth cards

Travel Documents – giving citizens the security to travel freely

Increased numbers of travelers and the continuing globalization of our lives necessitate convenient border crossing with fast, interoperable, easy to verify and secure travel documents.

Gemalto's complete end-to-end ePassport solutions and secure documents provide a means to shorten immigration time and reduce queues at border controls whilst protecting travelers' personal data from unauthorized reading or manipulation.

eID & eDriver Licenses – peace of mind for governments and citizens alike

Improving national security, slashing ID fraud and theft and creating an infrastructure for secure Internet access to eGovernment services are high on every government's agenda.

Gemalto's smart card-based ID documents increase citizen protection, contribute to better immigration control and offer an effective means of ID checking, using security

that is always one step ahead. From national ID cards to driver licenses and registration certificates, Gemalto offers a range of high-quality, secure and durable products that can be tailor-made to fit any national requirements and can help governments improve security and deploy electronic applications to offer better public services and cut administration costs.

Health – secure identification for efficient healthcare

Reliable, secure, efficient and connected healthcare IT systems are essential for reducing cost by cutting heavy administration bills normally associated with public healthcare programs. They are also key to preventing fraud – one of the biggest problems in balancing social security budgets – and offer convenience for citizens through immediate reimbursement.

Gemalto eHealthcare cards offer a secure means of identification and authentication, as well as being able to carry prescription, emergency medical data and medical file information that can be shared amongst verified parties.

1. Sealys Secure Documents

To ensure a winning position in the relentless race between security and fraud, whilst opening the door to electronic services, Gemalto has created the Sealys range of secure, durable, innovative and tamperproof documents and operating systems, that ensure you will always be one step ahead. Gemalto's product portfolio starts from entry level to security-evaluated multi-application and multi-interface documents for travel, ID, and healthcare.

■ Sealys family – durable, highly secure and innovative

Sealys documents offer durable and strong physical, visual and electronic security as well as innovative technology. Sealys secure documents are:

> Durable

Our entire product portfolio uses consistent durable technology with:
- Top-of-the-range materials through Gemalto's unrivalled return of experience with a 100% homogeneous polycarbonate that is impossible to delaminate, combined with irreversible personalization
- Traditional and electronic documents warranty of up to 10 years
- Durability tests radically exceeding the latest ICAO & ISO specifications (in addition to industry standards more than 50 internal tests have been developed)

> Highly secure

Sealys secure documents have the highest physical, visual and electronic level of security with:
- Sealys operating systems (EAC & ECC compliant) meeting the most stringent international security certifications for highly secure applications (+ 50 Common Criteria and 10 FIPS certifications, implementation of all major security algorithms)
- Deployment of materials enabling secure personalization with the latest technologies, providing maximum resistance to counterfeiting
- The most comprehensive set of advanced security features for tamperproof products
- The largest team of security experts in the industry and over 120 years of experience in secure printing

> Innovative

Gemalto's unrivalled experience has ensured the following world premiers:
- First ICAO & EU compliant ePassport (Oct 2005)
- First multi-application national eID (2003)
- First national eID (1999)
- First eDriver license (1998)
- First polycarbonate passport (1997)
- First eHealthcard (1995)
- First polycarbonate driver license (1989)

2. Sealys Electronic Travel Documents

Gemalto offers a wide range of Sealys travel documents from entire ePassport booklets to the supply of eDatapages, eCovers, inlays and visas products. ePassports provide the strongest security based on highly secure visual elements and microprocessors whilst enabling privacy by protecting information from unauthorized access.

Sealys ePassport Booklets

The Sealys ePassport Booklet offers a convenient way to obtain a complete one-stop-shop passport document and is available in three models:

> Sealys Laser-Secured eDatapage Booklet with secure laser-engravable polycarbonate datapage containing a microprocessor

> Sealys Laser-Secured eCover Booklet with a laser-engravable polycarbonate datapage and embedded microprocessor inside the passport's cover

> Sealys Secure Color eCover Booklet with a protected paper-based datapage and incorporated microprocessor in the cover

Sealys Laser-Secured eDatapage

The Sealys Laser-Secured eDatapage consists of a highly-secure and durable polycarbonate datapage with a microprocessor and a unique hinge attachment feature.

The 100% polycarbonate datapage ensures that the structure cannot be delaminated after manufacturing, thus making it extremely secure and durable. Various polycarbonate-specific security features further enhance security. Gemalto's patented method of securely attaching the datapage to the booklet makes it impossible to remove the datapage from the passport without leaving clear and visible marks.

Gemalto also offers a Sealys Laser-Secured Datapage without a microprocessor.

Sealys eCover and eTravel Inlay

The Sealys eCover is a passport cover with an embedded microprocessor in the rear cover sheet. The form factor and dimensions of Sealys eCover packaging are flexible and can be adapted to any passport manufacturers' needs. Traditional passports can be easily upgraded to an electronic version with the addition of a Sealys eCover, thus keeping the passport manufacturing process unaltered.

The Sealys eTravel Inlay provides a convenient way to attach a microprocessor and antenna into the passport cover, enabling passport manufacturers to use their own specific cover sheets.

Sealys eVisa and Visa Sticker

Gemalto offers a wide range of visa products in several formats. The highest levels of security printing technologies are used to ensure their authenticity. Sealys Visa Stickers can be upgraded to electronic eVisas with a contactless microprocessor.

Sealys eTravel Operating System

The Sealys eTravel Operating System (OS) for electronic passports is the key to a secure, durable and interoperable passport. Building on a long-term view, Gemalto has developed an ICAO-compliant operating system with a high number of security certifications and mechanisms including Basic Access Control (BAC) and Extended Access Control (EAC).

The Sealys eTravel OS is proven to have the highest performance in the industry, not only shortening immigration time at border controls and reducing queues, but also ensuring a smooth passage for travelers. In addition, traveler information remains secured and private.
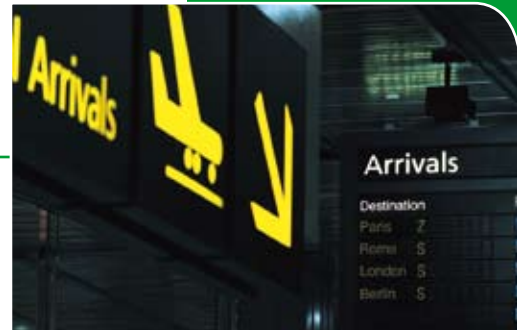
Sealys Secure Operating Systems for eID, eHealthcare and eDriver documents

Gemalto offers a large selection of secure, high performance and industry-compliant Sealys operating systems available in a complete range of interfaces for eID, eDriver license and eHealthcare documents from entry-level secure storage to multi-application platforms.

Not only does the OS provide guaranteed security and privacy – since information stored in the microprocessor cannot be modified and secret information can be kept private from any unauthorized access – but also provides improved verification making electronic signatures possible and reliable. The Sealys OS serves as a platform for additional services, such as payment functions, eTravel applications, and driver license points counters.

ID / Driving License / Healthcare operating systems offer

Multiple Applications

- MultiApp ID
- Secure Storage
- eTravel

Dedicated Applications
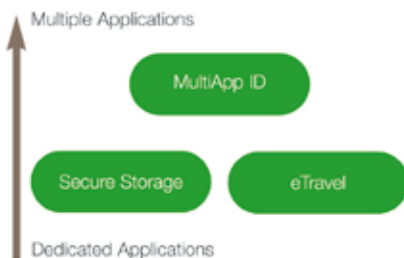
IIIII 3. Sealys ID, Healthcare cards and eDriver Licenses

Gemalto also offers durable and secure ID, healthcare and driving license documents available in various card body options. A microprocessor in the card means it can be used electronically, providing more security and privacy as the visual data can also be electronically verified and only authorized personnel can access sensitive information.

eID, eDriver and eHealthcare applications are available in contact, contactless and dual interfaces. Contact cards offer convenient and secure access to eGovernment services from home or the office, whereas contactless cards are the perfect solution for incorporating travel applications. Dual interface cards combine both eID and eTravel functions and are setting the trend for the future of ID documents.

Sealys Laser-Secured Cards

Sealys Laser-Secured Cards are made from durable polycarbonate material which provides the strongest set of security features. The laser-engravable material offers a highly-durable personalized product, whilst maintaining a low total cost of ownership and providing the ultimate support for secure identity solutions. A wide range of unique security elements can be embedded inside the 100% polycarbonate card body, which forms a solid card after lamination. Secure personalization engraved by laser inside the card body ensures that data cannot be scratched away or altered. Thus, in practice, the ready-made card is impossible to forge, delaminate or be otherwise unlawfully manipulated.

Sealys Secure Color Cards

Sealys Secure Color Cards are made from combinations of plastics, creating a secure and durable card with strong security features. Security printing and security devices are embedded within the card, which has strong anti-delaminating characteristics. Cards can be personalized with a color picture and a secure holographic overlay protecting personalization against forgery and wear.

Gemalto also offers polycarbonate cards with a color photo that include all of the unique durable characteristics associated with polycarbonate.

Sealys MultiApp ID operating systems for eID, eDriver and health insurance schemes

The Sealys MultiApp ID operating system is based on the latest open platform (Global Platform/Java) specifications and provides modern smart card applications and implementations for eID, eDriver and eHealthcare solutions. The OS has the highest number of security evaluations and certifications, thus providing the strongest security. The modular and flexible platform serves various needs, enabling identification, authentication and digital signatures (IAS), ePassport functionality with biometric data and can also be used as a European Resident Permit. The field-proven OS has the largest number of references in national ID programs, thus ensuring a secure investment.

Gemalto can tailor the OS from country-specific systems to European Citizen Card (ECC) standard compliant products. In addition, all operating systems are available as a complete tool with middleware, pre-perso solutions, readers and documentation.

Sealys Secure Storage Operating System

Sealys Secure Storage is a MPCOS operating system range for data storage and applications that is best adapted for easy entry, with already over 100 million cards already issued worldwide. It provides a fast, flexible and cost-effective smart card application environment. The platform implements the most advanced security countermeasures enforcing protection of all sensitive data and function in the card. The interoperability and stability of Sealys Secure Storage allows for quick card rollout. As needs evolve, it can easily be upgraded to a Sealys MultiApp ID operating system, ensuring compatibility with cards already in circulation.
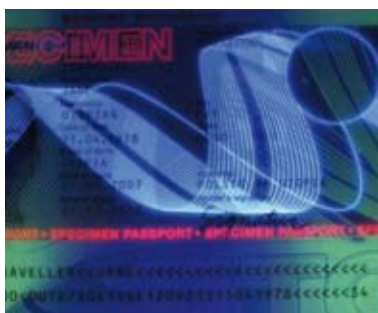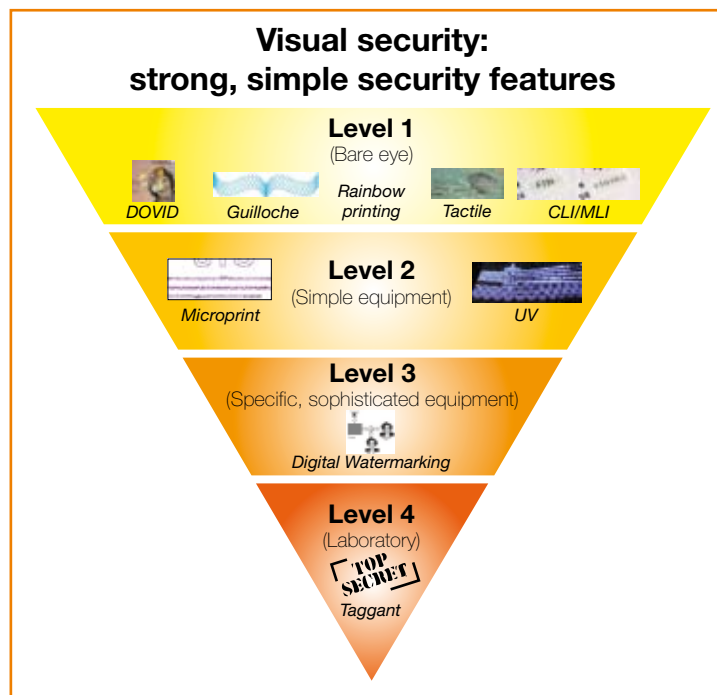
> All Sealys products for travel, ID and health are available as part of a turn-key solution, as part of a managed issuance service or as a standalone product.

4. Sealys security features

Features with different levels of security are used in travel, ID and healthcare documents.

Overt security features offer fast and reliable checks whereas more covert features require equipment such as magnifying lamps, scanners, UV lamps, and/or specific manipulation. There are four important levels of security, with level-one features recognizable by the human senses being the most important. Best results are achieved by using a range of different level security features from with a maximum of strong level-one features.

High-security features include guilloche background printing, rainbow printing, intaglio printing, invisible fluorescent printing or mixed into visible ink, micro-printing, UV rainbow printing, Optical Variable Ink (OVI) and modified fonts.

Visual security: strong, simple security features

Level 1
(Bare eye)

DOVID · Guilloche · *Rainbow printing* · Tactile · CLI/MLI

Level 2
(Simple equipment)

Microprint · UV

Level 3
(Specific, sophisticated equipment)

Digital Watermarking

Level 4
(Laboratory)

Taggant

For Sealys ePassports, eID, eDriver licenses and eHealth cards, using a 100% polycarbonate Laser-Secured datapage/ card body opens up the option for further security features:

> Positive and negative embossing

> Laser engravable CLI/MLI (changeable/multiple laser image)

> Diffractive optically variable image device (DOVID), a holographic element

> Sealys Laser Sealer

> Sealys Window

> Sealys Tagging

> Sealys Clear Edge

Sealys Laser Sealer technology

The laser-engraved image is digitally manipulated to include an additional visible security pattern in the personalized document. It is impossible to modify the photo without leaving visible marks in it. It offers a cost-effective enhanced secure personalization, with fully customizable pattern design.
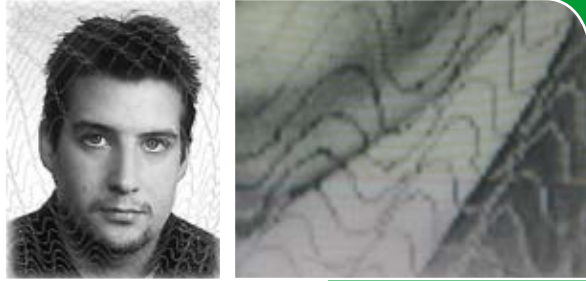
Sealys Window

A strong visible feature for enhanced physical and personalized security, the Sealys Window is a transparent window created inside the card, which renders it impossible to copy.
Laser engraving and several optical elements can also be combined within the window, thus creating a special personalized watermark-style effect on the document.

Sealys Tagging

A flexible feature that allows clients to create custom security features for high-security polycarbonate cards and passports. It works by inserting secret tracer materials inside the polycarbonate card body or datapage, which can only be detected in a laboratory with specific equipment.

Customer Implementations

The Estonian ePassport solution

Gemalto is supplying the Citizenship and Migration Board of the Estonian Republic with an advanced Sealys ePassport document – the Sealys Secure Color eCover Booklet with state-of-the art visual security features, a Secure Color Datapage and eCover with embedded microprocessor and antenna. The Sealys ePassport document is fully compliant with ICAO and EU specifications and is upgradeable to EAC-protected fingerprint biometry. Gemalto is also supplying Coesys Enrolment and Coesys Issuance solutions, thus providing the client with a complete turnkey solution.

Sweden – synchronizing eID and ePassport solutions

In October 2005, Sweden became the first country to simultaneously implement nationwide deployment of ePassports and National eID cards, both of which are embedded with an ICAO and EU-compliant contactless electronic travel application.

Gemalto was selected to provide the Sealys Laser-Secured eDatapage with a Sealys eTravel operating system and the Sealys Laser-Secured eID cards. The Sealys eID Card has the particularity of two microprocessor chips (contact and contactless), one dedicated to the travel application with biometric data, and the other dedicated to identification for access to eGovernment services.

Furthermore, Gemalto provided the Coesys Issuance solution, and supplies, through a joint venture, the Allynis Issuance personalization service of the Swedish ePassports and national eID cards.

United States ePassport

With over 13 million passports issued every year – the US ePassport program is one of the world's largest passport schemes. In August 2006, the US Government Printing Office selected Gemalto to provide Sealys eCovers with a Sealys eTravel operating system as well as Coesys Issuance Pre-Personalization solution. Gemalto's secure documents and solution fully satisfies the agency's requirements for privacy protection, security, durability, manufacturing yield, transaction speed and communications performance.

From national security to eGovernment: Belpic project

Gemalto is contributing to one of the world's most dynamic eGovernment initiatives: Belgium Personal Identity Card project or Belpic.

The Belpic card is now the official eID card for more than seven million Belgian citizens, allowing access to more than 140 round-the-clock private and public services. The main advantages for citizens are simplification and ease-of-use of administrative processes, time & cost savings given that ID operations are now carried out much faster, increased Internet security and better protection for minors with the possibility of restricting children's access to certain sites. In addition, it is an environmentally friendly solution offering significant reductions in paper usage.

Gemalto is supplying system integrator Zetes, with Sealys MultiApp ID, the java-based software system for Identification, authentication and digital signature and Sealys Laser-Secured Card; Gemalto's secure polycarbonate card body.

Swedish driver license – a window on security

When the Swedish Road Administration decided to upgrade the national driving license to incorporate the world's first Sealys Window, Gemalto was selected to provide 600,000 Sealys Driver Licenses per year over a period of three years.

The Sealys Window is a transparent window in a pure polycarbonate card body for enhanced physical security that matches stringent expectations of the Swedish criminal laboratory and national road authority. Rollout of the new driver licenses to the public began in December 2007.

Germany – 35 million Sealys eHealth cards

In July 2007, the German health insurance organization AOK Allgemeine Ortskrankenkasse awarded Gemalto a contract to supply and personalize second-generation eHealth cards for their insured in Germany, representing 35 million cards. Gemalto will deliver Sealys Secure Color Cards with the Sealys MultiApp ID GeGKOS software system. The cards will be personalized with the Allynis Issuance services.

Gemalto's new advanced digital healthcare solution will avoid duplicate examinations, and the cards will carry electronic prescriptions and patients' electronic medical files. The cards will also be updatable in the field and will act as a security device to perform strong patient authentication, thus contributing to reducing fraud costs and increasing privacy.

Why Gemalto?

Gemalto is a reliable and trusted partner for all your public sector ID initiatives including ePassports, eVisas and other international and national identification schemes as well as healthcare and social security programs.

We offer a complete range of secure solutions that are tailored to local markets, and we deliver what you want where you want it with the support of a strong network of local partners.

Gemalto relies on 100 years of innovation in secure documents, and our unique expertise in digital security means we provide innovative, trusted solutions that you can count on.

Sealys™ secure documents offer physical, visual and electronic security for travel documents, ID and Health cards. In the hands of millions around the world for years, Sealys secure documents have proven their durability. With over 50 Common Criteria and 10 FIPS certificates awarded, security is at the heart of their design. Sealys innovations – including the world's first laser-secured polycarbonate ID card, the first electronic national ID card, the first ICAO and EU compliant ePassports and the first IAS eID cards – benefit governments and citizens alike.

Coesys™ secure dedicated solutions for issuance, enrolment, border control and eGovernment applications offer performance and security. Coesys secure solutions are built from robust off-the-shelf modules. They are designed and delivered by local professional services teams who are experts in the identity business.

Because we understand that the success of your project does not rely on products and solutions alone, we offer Allynis™ secure services, a complete and future-proof range of operated services, including outsourced personalization and delivery. Our operational excellence is supported by strong industrial and financial engineering capabilities.

Gemalto in brief

Gemalto is a world leader in digital security. We provide end-to-end digital security solutions, from the development of software applications through design and production of secure personal devices such as smart cards, SIMs, ePassports and tokens to the deployment of managed services for our customers.

More than a billion people worldwide use our products and services for telecommunications, financial services, eGovernment, identity management, multimedia content, digital rights management, IT security, mass transit and many other applications.

Key Figures

> €1.68 billion in combined pro-forma 2008 revenue

> 10,000 employees, 85 nationalities at your service

> 1,300 R&D engineers.

gemalto
security to be free