CONVEGO®

Platforms and Applications

Giesecke & Devrient

Creating Confidence.

Team up with the leader in secure payment products

G&D has specialized in the provision of secure payment products for decades and is a reliable partner for banking institutions worldwide. Our comprehensive range of payment products and solutions comprises high-end products based on the latest EMV, contactless, and dual interface technologies. Our smart debit and credit products are available on a wide range of platforms and based on secure and highly flexible operating systems.

- Convego Element, G&D's multi-application product line for native payment cards, is optimized and tailored for EMV-based transactions

- The G&D Java™-based multi-application product line Convego Join offers clients the flexibility to implement and combine value-added applications onto chip cards

- Contactless cards and devices are available within the G&D product line Convego Air

- G&D offers payment products tailored to different market requirements and country-specific needs

The full service

Alongside the comprehensive portfolio of flexible configurable card products and card solutions, we also offer all services related to electronic payments – such as personalization, system integration, project management, and technical consulting – from a single source.

With many years of market experience and a strong international alignment, G&D is able to provide optimum support to banks to adapt to the constantly changing landscape of cashless payment transactions.

G&D invests continuously in new features and innovations in order to meet the needs of the international financial services markets today and in the future.

Convego Element – G&D's product line for native payment products

Features

Product line	Supported authentication method	EEPROM size in kByte	Payment applications	Further applications	Type approvals
Convego Element	SDA	4–8	• VIS 1.4.x • M/Chip 2.1/2.2 • M/Chip 4.0 • ABI	• EMV Authentication (DPA, CAP) • Loyalty • Data storage	VISA MasterCard Worldwide and further payment schemes
Convego Element	DDA	8	• VIS 1.4.x • M/Chip 4.0 • ABI	• EMV Authentication (DPA, CAP) • Loyalty • Data storage	VISA MasterCard Worldwide and further payment schemes
Convego Element DI	DDA	8–12	• VIS 1.4.x • M/Chip 4.0 • M/Chip Flex • M/Chip PayPass • VCPS	• EMV Authentication (DPA, CAP) • Loyalty • Data storage	VISA MasterCard Worldwide and further payment schemes

Many of the world's largest banks use native payment products based on G&D's market-proven product line, Convego Element, for cost-effective and highly secure EMV migration.

With this modular product line, G&D enables banks to offer sophisticated card programs to their customers. Cards based on Convego Element conform to the latest Visa and MasterCard specifications and can be configured for credit, debit, and pre-paid products. Convego Element products meet a wide range of market requirements, whether for local or specific markets.

The added value of Convego Element

- Provides a platform for highly secure EMV card products, fully configurable to issuer requirements
- Supports the implementation of a wide range of value-added applications including data storage features for loyalty, e-ticketing, secure storage, offline e-purse, and access control
- To enhance the benefits of multiple applications, there is also PIN and data sharing
- Enables the implementation of country-specific applications, defined by national payment schemes
- Convego Element products are available on most advanced chip platforms

G&D product and service offerings

- Standard products and customer-specific smart card development
- Card and chip personalization project management for EMV migration
- Technical consulting

Convego Join – G&D's highly flexible product line built on the full power of Java™

Features

Product line	Supported authentication method	EEPROM size in kByte	Java Card/GlobalPlatform standards	Payment application	Further applications	Type approvals
Convego Join	SDA	16–32	• JC2.1.1/GP2.0.1 • JC2.2.1/GP2.1.1	• VIS 1.4x • M/Chip 2.1 • M/Chip 4.0 • JCB • PSE	• EMV Authentication (DPA, CAP) • Loyalty • Data storage	VISA MasterCard Worldwide and further payment schemes
Convego Join	DDA	8–68	• JC2.1.1/GP2.0.1 • JC2.2.1/GP2.1.1	• VIS 1.4.x • M/Chip 2.1 • M/Chip 4.0 • JCB • PSE • PBOC	• EMV Authentication (DPA, CAP) • Loyalty • Data storage • PKI	VISA MasterCard Worldwide and further payment schemes
Convego Join DI	DDA	8–80	• JC2.2.1/GP2.1.1	• VIS 1.4.x • M/Chip 2.1 • M/Chip 4.0 • PSE • PBOC	• EMV Authentication (DPA, CAP) • Loyalty • Data storage • PKI	VISA MasterCard Worldwide and further payment schemes

Designed for the advanced payment markets, G&D's Convego Join product family is the perfect solution for all multi-application product requirements. It allows banks additional tailoring of card products and devices according to individual needs. Convego Join combines both Java Card™ and Global Platform technologies and conforms to the latest requirements of the global and local payment schemes.

The added value of Convego Join

- Convego Join is a highly flexible platform, designed to fulfill all requirements of a modern Java™-based single- or multi-application smart card solution
- Various applications can be added to Convego Join products, from a cost-critical loyalty scheme and performance-sensitive transport application to high-end multi-applications and Public Key Infrastructures (PKI)
- Convego Join products are made safe with a wealth of security algorithms and functions
- With its optimized and sophisticated memory management and very high communication speed, Convego Join is one of the world's leading Java Card™ implementations

G&D product and service offerings

- Standard products and customer-specific smart card development
- Applet development
- Card manufacturing
- Personalization
- Bureau services
- Technical support
- Consulting

Convego Air – G&D's product line for contactless payment cards

Features

Product line	Available form factors	Features	Applications	Type approvals
	ID-1/CR80 format	Most advanced chip platforms	MC PayPass® Magstripe	
	Mobile phone sticker format	Fast transaction times	Visa payWave MSD	
Convego Air	Mini card format	Excellent antenna performance	Streamlined qVSDC	VISA MasterCard Worldwide Most of the products are VISA and MasterCard type approved
	Key chain attachment (key fob)	4th line embossing	Discover and Amex upon request	
	Full face reflective card	Suitable for hybrid production	Private label and loyalty schemes upon request	
	Customized formats			

Contactless payment cards differ from magnetic stripe and contact-based smart cards as they communicate with payment terminals using radio frequency only. A secure contactless card has an integrated circuit chip (ICC) and an antenna embedded into the plastic card body.

The added value of Convego Air

- Convego Air products are available on a wide range of platforms for EMV and non-EMV payments
- Convego Air platforms feature a built-in multi-application development environment for the implementation of value-added retail, loyalty, transit, and access control applications
- Besides the standard card format, Convego Air products are also available in different and unique form factors

G&D product and service offerings

- Standard products and customer-specific smart card development
- Standard card formats and custom non-card formats
- Card manufacturing
- Personalization
- Bureau services
- Technical support
- Consulting

Customized and regional products

As one of the most experienced market leaders for card-based payment products and services, G&D has developed an in-depth understanding with regard to various market demands and customer requirements. G&D offers payment products based on platforms tailored to local market requirements around the world.

SECCOS®

The operating system SECCOS, specified by the German Central Credit Card Committee, ZKA, provides a multi-application platform for chip-card-based payment applications. Authorization on networks, legally binding electronic signatures, as well as new distribution channels like the Internet can be operated by SECCOS chip cards without the effort of application-based development.

PBOC

G&D has developed specific local solutions for PBOC (People's Bank of China) and has been involved in the development of PBOC compliant products right from the start. In the Chinese core market, G&D offers card products based on the PBOC specifications in different versions for contact, contactless, and dual interface payment transactions.

G&D also supports several licensed products in order to address individual market requirements such as:

Advantis

Advantis (formerly TIBC) is a multi-application operating system for payment cards and is mainly deployed in Spain, Latin America, and the Caribbean.

Proton PRISMA

The Proton PRISMA supports a range of banking applications including e-purse and non-banking applications, including capacity for customized applications, e.g. loyalty and access control.

MULTOS™

MULTOS is a multi-application open standard smart card operating system that enables a smart card to carry a variety of applications. These products are available in different versions such as SDA, DDA, Dual Interface, and others.

For more detailed information please contact G&D.

Glossary	
CAP	Chip Authentication Program
CR80	Format that specifies the size of standard card (US)
DDA	Dynamic Data Authentication
DI	Dual Interface
DPA	Dynamic Passcode Authentication
EMV	Europay MasterCard Visa
GP	GlobalPlatform
ICC	Integrated Circuit Chip
ID-1	Format that specifies the size of standard card
JC	Java Card
JCB	Japan Credit Bureau
MSD	Magnetic Stripe Data
PBOC	People's Bank of China
PKI	Public Key Infrastructure
PSE	Payment System Environment
qVSDC	quick Visa Smart Debit/Credit
SDA	Static Data Authentication
SECCOS	Secure Chip Card Operating System
VCPS	Visa Contactless Payment System