



MULTOS Product Directory

Section 3

Card Manufacture & Perso

v7.20



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Card Manufacture & Perso

ACG
CPI Group
Dai Nippon Printing Co., Ltd
ELKART Systemy Kart Elektronicznych Sp. z o. o.
Gemalto
Giesecke & Devrient GmbH
ID Data Systems
InfoTel Pakistan (Pvt.) Ltd
Integrated Card Technology (Pty) Ltd
Keycorp Limited
Kyodo Printing Co. Ltd.
Oberthur Card Systems
Security Plastics
Toppan Printing Co. Ltd
XPonCard



ACG



ACG is the worldwide leading high tech broker for smart card IC's and modules, RFID technology and smart card products. ACG is a global company with its headquarters in Wiesbaden, Germany. The company boasts a network of sales offices in 21 countries and 243 employees worldwide. In 1999 ACG AG achieved record sales of 101 million Euros with current predictions for sales in 2000 to exceed 225 million Euros based on its strong business model and recent acquisitions. ACG is currently active in the payment, health, telecom, loyalty, leisure, transportation and access control sectors.

ACG is a strong believer in supplying flexible solutions to the market especially in relation to operating systems. MULTOS is such a platform that provides end-to-end security that customers can rely upon while allowing applications to be dynamically loaded or deleted in field. There are few examples of operating systems that can offer such a flexible and secure approach. It is ACG's intention to assist with the mass deployment of MULTOS by applying its market knowledge and expertise to source MULTOS modules and cards at competitive prices and offering them to the market

ACG is able to provide the following services through its partner network;

- MULTOS module sourcing (H8/3112, H8/3114, SLE66CX160S)
- Milling/embedding of MULTOS modules
- Card Production facilities
- Application loading (incl. Mondex Purse)
- Card Personalisation

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CPI Card Group



Contactless Cards

Functionality and Benefits:

CPI Card Group Colorado, Inc offers the manufacturing of Multos cards based on Keycorp products. We offer the complete range of Multos chips, Multos StepOne, Multos and Multos Dual Interface with PayPass functionality. CPI is an award-winning manufacturer of plastic cards. Twenty years of experience in the industry and commitment to technology enables customers to tap into leading-edge programs of the highest quality. With the capacity to produce over one billion cards a year, capabilities include standard, contactless, foil, textured, scented and translucent card production. CPI offers a full catalog of card services including personalization, fulfillment and distribution. All facilities are outfitted with the latest in card technology and are ISO 9001:2000 certified.

Product details

StepOne 4k and 8k

Multos 16k, 32k, 64k

Multos DI, 32k and 64k.

Contact Details:

Benoit Guez
VP Smart Cards
CPI Card Group Colorado, Inc
Littleton



Dai Nippon Printing Co., Ltd



DNP, as one of the founding members of the MAOSCO Consortium Council, is involved in supporting and developing MULTOS as an Open Platform.

DNP has incorporated its technology into MULTOS cards.

DNP has been fully accredited MULTOS: OS development, card manufacturing, card bureau services, and application development.

We are a MULTOS card pioneer

We have been involved in the development of Operating System of MULTOS cards and supplied millions of MULTOS smart cards since 1999. We have been participating in the MULTOS Scheme around the world since 1997. Since gaining accreditation for card bureau services in 1997, DNP is also playing a key role as a MULTOS card bureau.

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ELKART Systemy Kart Elektronicznych Sp. z o. o.



Card Supply and Personalisation Services

Since 1999 ELKART supplies magnetic stripe and smart cards as well as renders services of card personalisation. Customers relying on our services include banks, financial institutions and Polish universities. With regard to EMV, we offer MULTOS™ solution for banking sector.

Our Personalization Centre is located in Warsaw, Poland and is certified by VISA International, MasterCard International and authorized by Diners Club. We have implemented an Integrated Quality and Information Security Management System according to ISO 9001 and ISO 27001, and we are planning to certify it in Q2/2007.

We offer comprehensive service covering cards sale, assistance in implementation of new card products and migration, secure data processing (including P3 EMV data preparation), cards and marketing materials storage, cards personalisation (also EMV), personalisation of PIN envelopes and letters, full letter-shop services, dispatching of processed products with secure transport and finally detailed reporting.

We are able to personalise a card with many methods, including indent printing, embossing, thermal monochrome and colour printing, magnetic stripe and smart card encoding (including EMV and contactless chips) as well as provide lettershop services including enveloping with marketing inserts. We process embossing data into EMV format with Thales P3 Data Preparation System. We offer consulting services and assistance in a Bank's EMV migration project.

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Gemalto



With sales of over 1 billion of Euro in 2001, Gemalto employs 6,630 people (January 2002) in 16 manufacturing facilities, 7 R&D centers and 44 sales and marketing offices located in more than 37 countries.

A wide range of silicon platforms

Gemalto offers all the existing versions of MULTOS and will make sizeable efforts to be among the early suppliers of the next versions. Gemalto is also the first company that has been officially authorised to supply MULTOS-Twin cards.

MULTOS Contact Cards

- MULTOS version 4 - 16K EEPROM
Infineon SLE66CX160P
- MULTOS version 4 - 32K EEPROM
Infineon SLE66CX320P

MULTOS Twin Cards

- MULTOS version 4 - 16K EEPROM (with contactless chip compliant with MIFARE standard)
Infineon SLE66CX160P contact module

Personalisation Services

MULTOS personalization is generic, valid for any MULTOS version 4 and future platforms. Gemalto has the capability to ask MSM Control Data on behalf of the Issuers, and is also able to submit ALU-Q file on behalf of the Issuers. In the near future, Gemalto will be able to register Issuers and request Application Load / Delete Certificates to the MULTOS CA on behalf of the Issuers.

Other Services

- Consulting for card product definition
- Consulting for MULTOS card implementation
- Consulting for migration to MULTOS of existing smart card applications

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Gemalto

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Card Manufacture & Perso

Giesecke & Devrient GmbH



Giesecke & Devrient



G&D offers complete end-to-end services for MULTOS cards. This starts with planning to define customer requirements and develop specifications, and extends through card manufacturing and processing to fulfillment. Services also include ordering and handling MULTOS data elements using M-SPI and other communication interfaces. Multi-application personalization and customization is supported for card projects that may be large or small. Our detailed information databases provide status, audit and reconciliation reports. In addition, a complete fulfillment service is offered for cards, collateral material and devices through both bulk shipments and individual mailings.

As a manufacturer of MULTOS cards, G&D uses all existing MULTOS implementations and offers the following services:

- Card body production
- Milling
- Chip embedding
- Application loading
- Personalization
- Fulfillment / Bureau Services

G&D places a high emphasis on quality, customer service and security. Mondex-approved equipment and processes are employed within a highly secure environment where manufacturing methods adhere to industry standards set forth by ISO/ANSI. G&D is also a certified supplier of cards for AMEX, MasterCard, Diners Club International and VISA. G&D is a member of the MAOSCO Consortium.

G&D has established competence centers for MULTOS application development: in our headquarters in Munich, Germany as well as in some of our subsidiaries world-wide.

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ID Data Systems



ID Data Systems is the leading independent UK supplier of cards, card products and related solutions. We currently service the UK and many Overseas customers involved in banking/finance, loyalty, telephony and retail. ID Data Systems operates from three EMV accredited sites in the UK to produce high quality secure cards.

ID Data Systems Services for MULTOS Cards:

- Module Manufacture
- Artwork Services
- Card Body Production
- Milling
- Module Embedding
- Card Enablement
- Application Creation
- Application Loading
- Application Deleting
- Database Management
- Carrier Production
- Matching And Mailing

As a MULTOS bureau, ID Data Systems can offer personalisation of MULTOS devices using the latest StepXpress service.

ID Data Systems has a number of partners with in-depth experience of developing MULTOS applications. This gives ID Data Systems access to proven applications and the capability to create customer specific solutions.

When you need a solution involving a MULTOS card – CONTACT ID DATA SYSTEMS.

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InfoTel Pakistan (Pvt.) Ltd.



InfoTel is actively involve in the Smartcard business and provide data preparation and personalization services and also undertake turnkey projects for the issuance of Smartcard which includes integration with CMS, embosser etc.. Our solution based on Thales core P3 product and we provide other value added service such as professional services, consultancy for the EMV Card System design & review. Being a local MasterCard service partner we also provide technical services to the customer for the integration with (MIP) and help the customer during the various certification process.

Product details

Our solution and services includes integration of personalization system with CMS and other non-financial services such as loyalty, we provide our services for the registration in StepNexus Services StepXpress (Multos KMA), generation of keys (TKCK and Hash Modulus), generation of certificate i.e. Application Load Certificate (ALC) and Application Delete Certificate (ADC). In selecting / defining the risk parameters we help and provide guidelines to the customer for the proper use of MasterCard M/Chip and Visa VSDC CU tools.

Our services also includes the generation of test cards, testing of the test card on testing tool and provide detail report to the Card Association. We also help customer in migration from old platform to the new platform such as I4E and provide our consultancy & professional services which enable customer for the approval of their card from the Card Association. At the time of Card Production we help customer to get the enablement data and personalize the card according to the given MCD ID's of the card. Our services also includes for the generation of other co-branded card with different applications.

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Integrated Card Technology (Pty) Ltd.



Integrated Card Technology (ICT), a South African smart card manufacturer, has capabilities that include the manufacture and printing of plastic cards, and the embedding of chip modules in accordance with ISO standards.

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Card Manufacture & Perso

Keycorp Limited

KEYCORP LIMITED

Keycorp has years experience on smartcard manufacturing. Based on this experience, Keycorp, as a trusted third party, focuses on managing all aspects of the MULTOS card delivery, from chip supply to manufacture of the cards, loading of applications and if required, customisation of the cards.

In order to provide not only economic but also quality MULTOS cards to customers, Keycorp lines up with leading card manufacturers from different regions, such as Security Plastic, Gemalto, Oberthur, Orga, ID Data, CPI, G&D and etc., in the global MULTOS projects.

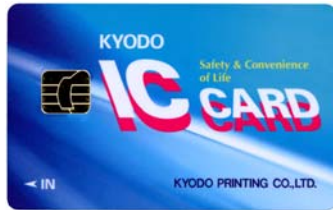
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Kyodo Printing Co Ltd



Kyodo Printing Co Ltd is one of the oldest established printing company with its over 100years of company history in Japan and is advancing to the newest technological field such as smart card.

Kyodo's involvement in the smart card development started in mid 80's, since then we have been gaining newest equipment for whole process of smart card manufacturing, from plastic card printing, embedding of IC chip modules to personalization system to supply the highest quality products to our customers need.

We cater for all the types of smart card manufacturing including contact and non-contact smart card as well as hybrid (2chips on one card) and combi-card (dual interface one chip module on one card) on top of our integrated printing services. We provide also services for card design and application development on MULTOS as well as proprietary OS.

For card issuance side, Kyodo has the status of registered MULTOS bureau, certified MasterCard chip manufacturer and personalizer and accredited MONDEX bureau. Therefore, we are really providing one stop smart card services which should be beneficial to any financial institutions and other card issuers supporting open platform for their card users convenience.

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Oberthur Card Systems



Oberthur Card Systems (Paris Stock Exchange SICOVAM 12413) is a global leader and an innovator in the smart card industry - providing advanced card-based solutions for a wide range of sectors. We are the world's N°1 supplier of MasterCard and Visa cards, N°1 in banking, e-commerce & m-commerce and pay-TV, Oberthur is also a leader in multi-application and GSM technologies.

Firmly committed to open standards, Oberthur backs MULTOS and offers a wide range of MULTOS-based applications and cards, all of which can be managed by its personalisation centres and its advanced Card Management System.

A leader in SAT, WAP, UMTS and e-wallet technologies, Oberthur delivers secure, interoperable and flexible integrated solutions, whichever the market.

With 30 sales offices and 13 manufacturing sites around the world, our 3000 strong team is taking up the same challenge...Yours.

MELodIC (8k, 16k or 32k)

Oberthur offers MELodIC - a unique multi-application smart card solution for running applications written in the MULTOS Executable Language (MEL). The platform uses firewalls between the applications to ensure they retain security and integrity while sitting side by side on a single smart card. With MELodIC, MULTOS applications can be added or removed by the consumer or card issuer via a PC, Internet, telephone or network. Cards can thus be upgraded in the field, without being reissued or withdrawn - the ultimate in user convenience.

Oberthur – StepNexus Service Partner (MULTOS Issuance Partner)

Oberthur is a fully accredited StepNexus Service Partner – formerly known as “MULTOS Issuance Partner”. This new program, launched by StepNexus Services (the MULTOS Key management Authority) reduces the entry cost for smaller issuers and presents them with a one-stop organisation, where the entire co-ordination and issuance process can be handled by Oberthur from start to finish

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Security Plastics



Security Plastics specialises in manufacturing contact and contactless Smart cards and Magnetic stripe cards. The Security Plastics card processing bureau is the first in Australasia to be certified for the personalisation of Mondex on MULTOS. This certification was received in July 2000.

Security Plastics is an International company with 6 offices through out New Zealand, Australia and Hong Kong. We also have four card processing bureaus, some of which are certified by Mastercard and Visa for servicing financial clients. The MULTOS certified bureau has recently been upgraded with the addition of DC9000 high speed processing machines. This gives Security Plastics the capability to provide high speed, high volume smart card personalisation services. Our client base consists of Banks, Retail organisations, Oil companies, Telcos and Government Departments.

Security Plastics has developed the SPECtrum PEC system for the secure loading of a Mondex purse application. The SPECtrum system received a level one pass from Mondex International.

Mondex type approved to embed and personalise the following micromodules:

- Hitachi H8/3109
- Hitachi H8/3112
- Hitachi H8/3114
- Infineon SLE66CX160S

Services provided:

- Card body manufacture
- Milling
- Chip embedding
- Application loading
- Personalisation
- Bureau services

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Card Manufacture & Perso

Toppan Printing Co. Ltd

TOPPAN



Since our manufacture of Japan's first IC cards in 1983, we have taken the lead in providing this country's IC card users with quality products. According to one survey organization, last year (1998) Toppan held the largest share of IC card manufacture in Japan. In every stage of IC card production from planning, design, and development all the way through to manufacture and issuance, Toppan effectively meets a full range of customer needs.

Our program development specifically targets the design of IC card functions that meet customer specifications and the manufacture of cards that perform optimally within the IC card systems constructed by our customers.

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XPonCard



Enhanced services

Description of Functionality and Benefits:

- Multos embedding
- Multos chip storage
- Multos pre-personalisation

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