

3. EDITION

CARDPRODUCTS & -SERVICES



EDITORIAL

With this catalogue you hold the third edition of our complete catalogue in your hands. For the new edition we quickly realized that simply printing an updated version would not be sufficient. Too many innovations in our products and services, too many changes for example in the range of available chip types had occurred.

Which novelties are to be expected?

With this edition we try, once again, to improve comprehensibility and readability. Therefore, the divide between mainstream-products and „specialties“ is made even clearer by a spatial division. A rushed user will find the main products compacted into one section.

Special solutions and products are also compiled in one block. Naturally, they are an integral part of this catalogue. I recommend these pages to everyone looking for an extraordinary solution or a unique selling point. They make the difference and characterise Plasticard-ZFT as a manufacturer that offers the exceptional and, together with you, tries to develop things yet unseen.

What are the applications of the upcoming years?

Sector-independent, there are driving forces that reliably operate in the same fashion: Everyone has a desire for security, comfort, individuality, and simplicity. Chip cards are, besides the smartphone, a predestined instrument for the fulfilment of those desires. This is true for the most important applications, e.g.:

- education (kindergarten, schools, colleges)
- customer retention/marketing (retail, service)
- ID cards (companies, administrative bodies, public institutions)
- sports and events (stadiums, promoters, caterers)
- transport and logistics (public transport, charging infrastructure, parking)
- membership cards (associations, clubs, corporate bodies)
- health (insurance companies, medical technology, administration)
- eGovernment (signature cards, ID cards, drivers licences)
- tourism (region marketing, hotels, restaurants)

All applications share basic functions: It is about access, payment, accreditation, and the maintenance of data. The cards are always just a medium transporting the identity of its owner.

This catalogue is first and foremost aimed at providers and developers requiring the identification of persons and things for the realisation of their projects.

Services are the new drivers!

Besides the ID-product itself (card, token, label, smartphone), the services surrounding the ID-medium have grown in their importance. The range of services constantly broadens with the increasing complexity of the medium:

- Acquisition and verification of personal data (photo capture and editing, identity verification)
- visual and electronic personalisation (individual printing and encoding)
- management of card stocks as a service (re-issuance, stock management, replacements, withdrawal, disposal)
- person and department related mailing (post or interoffice mail)
- global distribution to companies, organisations, or individuals
- lettershop-services (commission with cover letter, instructions, proof of receipt and loss report)
- project development together with customer

We have tried to take this shift of emphasis into account whilst designing this catalogue. We are looking forward to your feedback.

Enjoy your browse through our product lines!

Sincerely



Jürgen Werner

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PLASTIC AND CHIP CARDS





Plastic cards – directly from the manufacturer!

The demands put on plastic cards are as versatile as their potential applications. As customer card, ID-card, payment method, voucher, access card, name tag, business card, key finder, entrance card, bonus card, hotel key, travel card, or ski pass, we encounter cards in almost every area of our daily life. The worldwide standardised format of 85.6 mm x 54 mm also offers a first-class and cost-effective advertising space since almost everyone carries around one or more plastic cards in their pocket. As manufacturers, we offer a wide range of optional features (see features on the right). Furthermore, we are constantly working for, and with our customers, developing new features to increase the attractiveness or security of a plastic card. Not only do we offer simple standard qualities, both with and without printing (see page 39), but also plastic cards made from alternative materials. For very high demands, we offer particularly temperature resistant or break proof composite materials. Special HT cards or polycarbonate cards enable a lifetime of up to ten years.

FEATURES

- ISO-7810 conforming credit card quality
- White PVC material with printing and features
- lamination in matte or glossy possible
- Also available as a blank card delivered from the warehouse
- Suitable for all card printers

OPTIONS

■ Printing & inks	<i>e.g. offset, silk-screen printing</i>
■ Materials & thicknesses	<i>e.g. HT card</i>
■ Surface refinement	<i>e.g. hot stamping, relief varnish</i>
■ Additional accessories	<i>e.g. signature panel, punch holes</i>
■ Security features	<i>e.g. holograms, guilloche</i>
■ Format	<i>e.g. mini card or freeform</i>
■ Personalisation	<i>e.g. consecutive number, name</i>
■ Data carriers	<i>e.g. RFID or magnetic stripes</i>

Not found what you were looking for? [Contact us!](#)

Attractivity and success go hand in hand

Even with plastic cards, optical attractivity helps success to take off! We are happy to advise you on the design of your card. Depending on the intended purpose of your card, the precise implementation of factors like CI directives, colour fidelity, and protection against forgery may be of great importance. We are happy to carry out the design process on behalf of customers who do not have internal design competences at their disposal. This includes the production of samples, design suggestions right up to release.



In a hurry? Express service!

Our 24 or 48-hour express services enables spontaneous customers get their plastic cards delivered on time, created using OSP printing.

CHIP CARDS (CONTACT CHIPS)

FEATURES

- ISO 7810 and 7816 – credit card quality
- Can be implemented as long-life or high- temperature card for heavy duty applications
- Can be personalised and printed
- Also available as a blank chip card delivered from stock

Contact chip cards for every purpose

Contact chip cards are versatile data carriers which may contain simple memory facilities or complete processors. They act as credit or debit cards, as bonus or loyalty cards, as ID cards to grant physical access, IT access, time logging, and handle payments. Contact chip cards are also used in telecommunications, in Pay-TV applications, in the healthcare sector, and in many other sectors of industry. Plasticard-ZFT produces contact chip cards in accordance with ISO 7810/7816 as a white card or with individual printing and features. Contact chips may also be combined with other data carriers. Combination options can be found under the section "Combination and Hybrid Cards" on page 13.

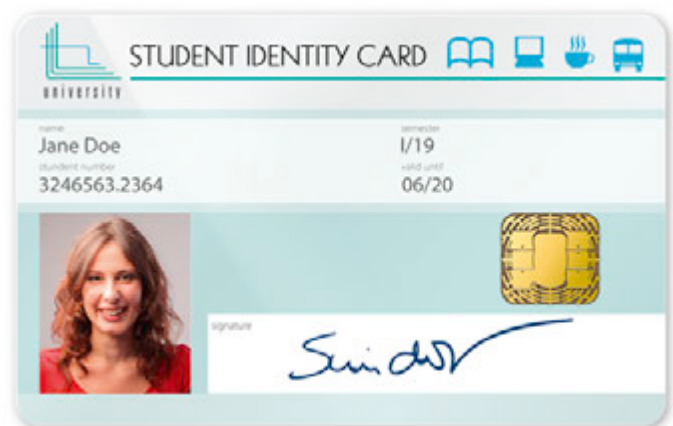
Plain memory or smart processor chip?

Memory chips can accommodate quantities of data ranging from 256 bytes to 128 Kbytes and have low or no read/write protection. They are suitable as data storage for identification and marketing purposes, for example, a customer card for a tanning or fitness studio.

Processor chips, on the other hand, have a very high level of protection and can also process data in applications, store it safely, and make it available for a variety of applications.

OPTIONS

■ Printing & inks	<i>e.g. offset, screen printing</i>
■ Materials	<i>e.g. HT Card 85</i>
■ Surface finishing	<i>e.g. hot stamping, spot varnishing</i>
■ Additional accessories	<i>e.g. signature panel, TRW area</i>
■ Security features	<i>e.g. holograms, guilloche</i>
■ Personalisation	<i>e.g. consecutive number, name</i>
■ Other data carriers	<i>e.g. RFID or magnetic stripes</i>



CONTACT CHIPS*

MEMORY CHIPS

■ FM24C02/Ari24LC02	256 Byte
■ Ari24LC16	2 KByte
■ Ari24LC64	8 KByte
■ Ari24LC256	32 KByte
■ Ari24LC512	64 KByte
■ FM4442 (SLE5542 compatible)	256 Byte
■ FM4428 (SLE5528 compatible)	1 KByte
■ SLE5542 – end-of-life, residual stocks still available	

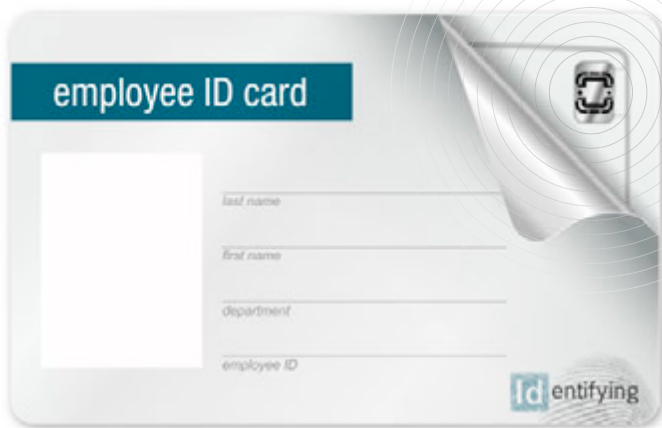
PROCESSOR CHIPS

■ Gemalto Cyberflex Access 64K	<i>remainders</i>
■ Gemalto IDPrime .NET 510 (.NET)	<i>remainders</i>
■ Gemalto IDPrime MD830 / MD840	
■ Atos CardOS 5.0 or 5.3	<i>SLE78CFX3000P</i>
■ NXP SmartMX® Sm@rtCaféExpert 6.0	
■ NXP SmartMX® Sm@rtCaféExpert 7.0	
■ NXP SmartMX® JCOP V2.4.1 / V2.4.2	

* This is a selection of current and available chip types.

The chip you are looking for is not included? Please contact us!





FEATURES

- conforming ISO-7810 – credit card quality
- Reading range between 2 mm and 5 m
- Multiple RFID chips per card possible
- Can be implemented as long-life or high-temperature card for demanding environments
- HF cards (13.56 MHz) – ISO 14443/15693
- Also available as blank RFID cards directly from stock

RFID-cards – Diversity is increasing

RFID technology stands for wear-free data transfer by radio. Appropriate transfer protocols have been standardised around the world for various levels of security and convenience. The transmission range of RFID cards varies between two millimetres and five metres. RFID cards are used for access control and time logging systems as well as in loyalty and payment systems. You can find the range of our offers in the table on the right. Plasticard-ZFT realised migration projects by offering special technology combinations and hybrid-solutions. Our specialists are happy to advise you when it comes to the realisation of certain scenarios. When necessary, you can order a test card. We are happy that we were able to add the HID-chip family to our product line.

OPTIONS

■ Printing & inks	<i>e.g. offset, screen printing</i>
■ Materials	<i>e.g. RFID or wooden cards</i>
■ Surface finishing	<i>e.g. hot stamping, relief varnish</i>
■ Additional accessories	<i>e.g. signature panel, TRW area</i>
■ Security features	<i>e.g. holograms, guilloche</i>
■ Format	<i>e.g. mini card, label, tag</i>
■ Personalisation	<i>e.g. consecutive number, name</i>
■ Other data carriers	<i>e.g. RFID or magnetic stripes</i>

Which chip to choose?

Project managers have, regarding the overwhelming variety of products, the agony of the choice. Unfortunately, there is no proper "recipe" to determine the right chip for a certain application. Depending of the importance of each of the criterias of costs, security, functionality, and availability we, together with you, will find the right product for your project – regardless of brands.

RFID-CHIPTYPEN*

HF – 13,56 MHZ

■ MIFARE Ultralight® Nano, EV1, C	40 – 144 Byte
■ MIFARE Classic® EV1 - 4 Byte NUID	1K or 4K
■ MIFARE Classic® EV1 - 7 Byte UID	1K or 4K
■ MIFARE Plus® S, SE, X, EV1	1K to 4K
■ MIFARE DESFire® EV1 / EV2	2K, 4K or 8K
■ LEGIC prime®	256 or 1024 Byte
■ LEGIC advant®	1024 or 4096 Byte
■ LEGIC advant® 213	4K advant, 4K DESFire
■ LEGIC CTC® MP, MM	1K prime+3K advant
■ HID 200x iClass	256 – 4 kByte
■ ICODE® SLI, SLIX, ILT, DNA	256 – 2016 bit

CRYPTO-PROCESSORS

■ P5Cxxx MIFARE® Emulation	72 – 144 Kbit
■ P60Dxxx MIFARE® Select Emul.	72 – 144 Kbit

NFC

■ NXP® NTAG® 210, 212, 213, 215, 216	80 – 924 Byte
■ NXP® NTAG® 413 DNA	320 Byte

LF/NF – 125 KHZ

■ HID Prox	
■ EM 4102, 4200, 4450	128 – 1024 Bit
■ HITAG 1, 2, S	256 – 2048 Bit
■ Temic 5577	363 Bit

UHF – 968 MHZ

■ NXP® UCODE® G2iL, G2iM, 7, 8	0 – 512 Bit
■ NXP® UCODE® DNA, Track, City	265 – 3072 Bit
■ Alien Higgs® 3	512 Bit
■ Impinj Monza® 4D, 4E, 4QT, R6	0 – 512 Bit

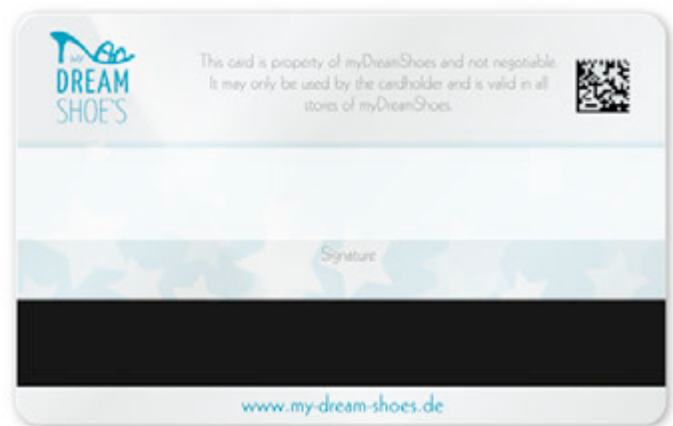
* This is a selection of current and available chip types.

The chip you are looking for is not included? Please contact us!

MAGNETIC STRIPE CARDS

FEATURES

- conforming ISO-7811 – credit card quality
- Roll-on or flush-on magnetic stripes
- Can be personalised and printed
- Also available as a blank card from stock



The multi-talented magnetic stripe card

Plastic cards with magnetic stripes are the cost-effective solution for all-purpose data carriers that are easy to use. Fitness centres, hotels, petrol stations, and retailers use magnetic stripe cards as customer or bonus cards. The individually printed plastic cards can be supplied with LoCo or HiCo magnetic stripes in accordance with ISO 7811. They can be also combined with any other data carrier.

LoCo or HiCo?

Generally speaking, the magnetic stripe cards are differentiated by the magnetic force required to encode and delete the data. LoCo magnetic stripes with 300 Oe (Oersted) are used for credit and bank cards and can easily be deleted by accident. HiCo magnetic stripes with 2750 Oe or 4000 Oe are considerably more robust and are used, in preference, for ID cards.

MAGNETIC STRIPE TYPES

MAGNETSTREIFEN

- | | |
|----------------|------------------------|
| ■ LoCo 300 Oe | <i>black or brown</i> |
| ■ HiCo 2750 Oe | <i>black or silver</i> |
| ■ HiCo 4000 Oe | <i>black</i> |

OPTIONS

- | | |
|---------------------------|---|
| ■ Printing & inks | <i>e.g. offset, screen printing</i> |
| ■ Materials & thicknesses | <i>e.g. HT or wooden cards</i> |
| ■ Surface finishing | <i>e.g. hot stamping, spot varnishing</i> |
| ■ Additional accessories | <i>e.g. signature panel, punch holes</i> |
| ■ Security features | <i>e.g. holograms, guilloche</i> |
| ■ Format | <i>e.g. Visa mini card</i> |
| ■ Personalisation | <i>e.g. consecutive number, name</i> |
| ■ Other data carriers | <i>e.g. RFID or contact chip</i> |

Stripes with more liveliness

Magnetic stripes are available in coloured format or with holographic effects. It is also possible to print on magnetic stripes. Speak to us, we are happy to advise you.





Code 39, EAN, QR and others

Barcodes are still the most cost-effective method of assigning a variable and machine-readable information to customer cards, membership cards, or voucher cards. Plasticard-ZFT will help you to choose the right codes for your project.

Printed, laser engraved, protected

Barcodes are commonly printed, or laser engraved onto the finished blank card (see page 49, "Personalisation"). Highly exposed cards can be protected with an overlay or laminate to prevent wear-off. For industrial applications, Plasticard-ZFT also offers a barcode inside the card. As copy protection, IR-readable black covers for the barcode can be supplied, the so-called barcode blockers.

Interacting with barcodes

Use barcodes as an additional marketing instrument! Every smartphone acts as a scanner and takes the user directly to your website or transfers contact data for the address book. Test this QR code!



FEATURES

- conforming ISO-7810 – credit card quality
- Available with additional wear protection or laser engraving
- Infrared barcode covers available
- Can be personalised and printed

BARCODE TYPES*

1D BARCODES

- Code 39
- Code 128
- 2/5 interleaved
- EAN 13
- EAN 8

2D BARCODES

- QR-Code
- DataMatrix
- PDF 417
- Aztec

* This is only a selection of barcodes types.
Please contact us for further types!

OPTIONS

■ Printing & inks	<i>e.g. offset, screen printing</i>
■ Materials & thicknesses	<i>e.g. HT or wooden cards</i>
■ Surface finishing	<i>e.g. hot stamping, spot varnishing</i>
■ Additional accessories	<i>e.g. signature panel, punch holes</i>
■ Security features	<i>e.g. holograms, guilloche</i>
■ Format	<i>e.g. mini card or freeform</i>
■ Personalisation	<i>e.g. consecutive number, name</i>
■ Data carriers	<i>e.g. RFID or magnetic stripes</i>

DUAL-INTERFACE TECHNOLOGY



Processor chip
(Dual-Interface)
PKI
Single-Sign-On

RFID chip (Dual-Interface)
time tracking
access control
canteens payment system
parking
ticketing



One chip, two ways of communication

Dual-interface cards enable users to employ the smart chip application of the card using both contact and contact-free ways. This comes into play when infrastructures with both card readers and RFID readers are to be served.

Dual-interface cards are primarily used as bank debit and credit cards.

Thanks to the use of the proven PLC technology with inductive coupling of the chip, Plasticard-ZFT has been able to improve the durability of the card considerably when employed under tough conditions. This makes it a realistic option for company/student IDs or for tickets.

Dual-interface cards with crypto-processors and the ability to emulate other chip types or functions (see features), can be used in an extremely flexible manner and can thus meet almost all the security requirements necessary for IT infrastructures and access systems, at the highest possible security level. Furthermore, based on certain SmartMX® processors, heterogeneous security infrastructures can also be implemented using MIFARE® and LEGIC® applications.

FEATURES

- ISO/IEC 14443 A/B, ISO 7816
- Communication is possible via contact interface and air interface (RFID 13.56 MHz)
- Wide range of various processor chips available with differing operating systems
- Additional functions, e. g. LEGIC® card-in-card, VDV-KA, MIFARE Classic®, MIFARE DESFire® are available as emulation or applet
- Suitability for Logical Access (e.g. SSO), certificate-based authentication, PKI solutions

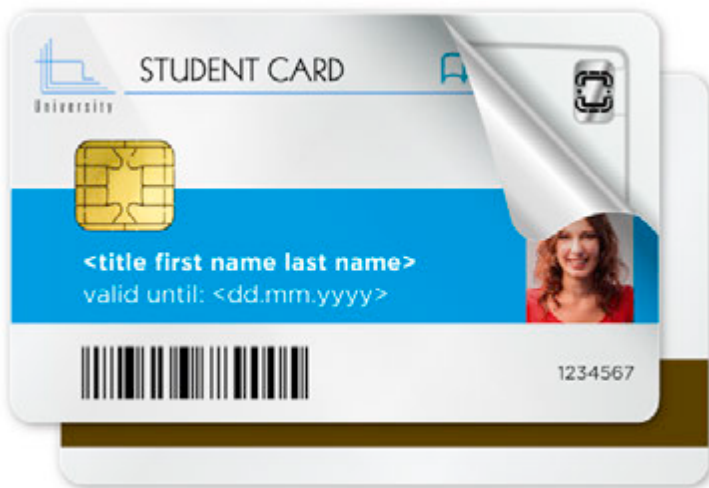
OPTIONS

■ Printing & inks	<i>e.g. offset, screen printing</i>
■ Surface finishing	<i>e.g. security structures</i>
■ Additional accessories	<i>e.g. signature panel, TRW</i>
■ Security features	<i>e.g. holograms, guilloche</i>
■ Personalisation	<i>e.g. number, name</i>
■ Other data carriers	<i>e.g. magnetic stripe, barcode</i>

Dual-interface or RFID?

Did you know that crypto-cards with the benefits described are also available as pure RFID cards? The PKI function can also be used via the air interface, as long as the appropriate reading devices are available. The advantages are further increased robustness and lower card costs.

COMBINATION AND HYBRID CARDS



MERKMALE

- conforming ISO-7810 – credit card quality
- Magnetic stripe
- Barcode 1D and 2D
- RFID HF (13.56 MHz), LF (125 kHz), UHF (968 MHz)
- Contact chip

Combination Cards connect Generations and Locations

Combination cards contain at least two technologies of the same type, typically multiple RFID chips with identical or differing resonance frequencies. This makes the ID-card suitable for several reading technologies and/or system provider.

Many organisations have access and time logging infrastructures that have been established over the course of many years and which frequently use various data carriers. Technical advances, increasing security requirements, or company acquisition have resulted in the necessity to unite various chips and data carriers in a single card.

This protects existing investments and infrastructure because existing systems and reader generations can be operated in parallel. When implementing migrations, the transition to selected future technology is eased by using combination cards and is thus a more economically viable approach.

Hybrid Cards connect Infrastructures

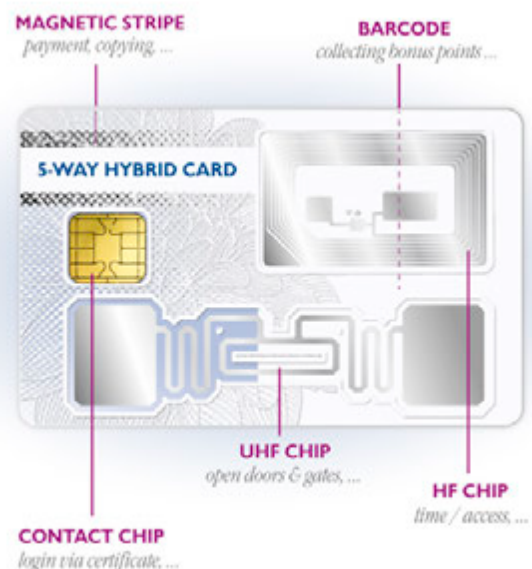
Hybrid cards unite various data carrier types on the same medium. Generally speaking, almost all known technologies, magnetic stripes right up to infrared codes, contact antennas, can be combined with one another (see Features). An identifying feature of the hybrid card is that all these technologies can be operated on the card independently of one another.

Combination and hybrid cards should be tested in advance!

All of the variations of this card type contain in their core several elements like chips or antennas. Therefore, interactions may occur that influence the performance when reading and writing. Plasticard-ZFT supports its customers with the appropriate engineering, and the development and manufacturing of necessary samples for field testing.

LEGIC® and MIFARE® on one Chip?

Certain technologies like LEGIC advant® ISO 14443 and MIFARE® can only be realised as a combination card under great difficulties. For those applications, Plasticard-ZFT offers the unity of both worlds with the LEGIC® card-in-card on a DESFire-platform.



NEW!

Ask us for the new LEGIC® ATC4096 – MP312 which also offers a single chip solution to combine LEGIC advant® and DESFire EV2 needs!

XXL AND XTENDED CARDS



FEATURES

- Laminated multiple layer card made from PVC
- Printing under laminate: durable and noble
- Available with different RFID chips
- Can subsequently be personalised and printed*
- Formats: freely selectable (available tools see table on the following page)

Large card - great effect

Large format cards stand out. Names and photos are easier to recognize. Sponsor advertising is easier to see. There are many good reasons for oversized cards. They are already the first choice for sporting and cultural events. Plasticard-ZFT produces oversized cards both with and without personalisation. Corresponding accessories can be found as of page 69.

Personalisable XXL- and Xtended-cards:

XXL-cards and Xtended-cards can be personalised with special card printers. Thus, a quick printing as an accreditation right at the venue is possible. Suitable printers can be found on page 64.

OPTIONS

■ Printing & inks	z. B. Offset, Siebdruck
■ Materials & thicknesses	z. B. HT Card 85, HT Card 100
■ Surface finishing	z. B. Reliefack, Spotlack
■ Additional accessories	z. B. Lochung
■ Security features	z. B. Guillochen, UV-Merkmal
■ Format	z. B. Freiform, Anhänger
■ Personalisation	e.g. consecutive number
■ Data carriers	e.g. RFID or barcode

Reading from Distance – visual and electronic

Special-format cards with integrated RFID-chip are an important addition to events in sports, politics, and economy, or in logistical applications. The cards which can be electronically read from greater distances are also very easy to perceive visually. Thus, they qualify for the usage in vehicles and in advertising. Special-format cards in high-temperature design are also available on demand.

* Free form and size?

Plasticard-ZFT produces cards in any format up to A3! Please note: Free formats cannot be personalised or only at great cost. We offer suitable printers for the personalisation of XXL- and Xtenden-formats. We are happy to advise you when it comes to the choice of a fitting format.

XXL AND XTENDED CARDS

RFID-CHIP TYPES*

HF – 13,56 MHz

■ MIFARE Classic® EV1 - 4 Byte NUID	1K or 4K
■ MIFARE Ultralight® EV1, C	40 – 144 Byte
■ ICODE® SLIX	256 Bit
■ LEGIC prime®	256 or 1024 Byte
■ LEGIC advant®	1024 or 4096 Byte
■ LEGIC CTC®	1K prime+3K advant

UHF – 968 MHz

■ Alien Higgs®	512 Bit
■ Impinj Monza® 4D, 4E, 4QT, R6	0 – 512 Bit
■ NXP® UCODE® G2iL, G2iM	0 – 512 Bit

*This is a selection of current and available chip types.

The chip you are looking for is not included? Please contact us!

AVAILABLE FORMATS**

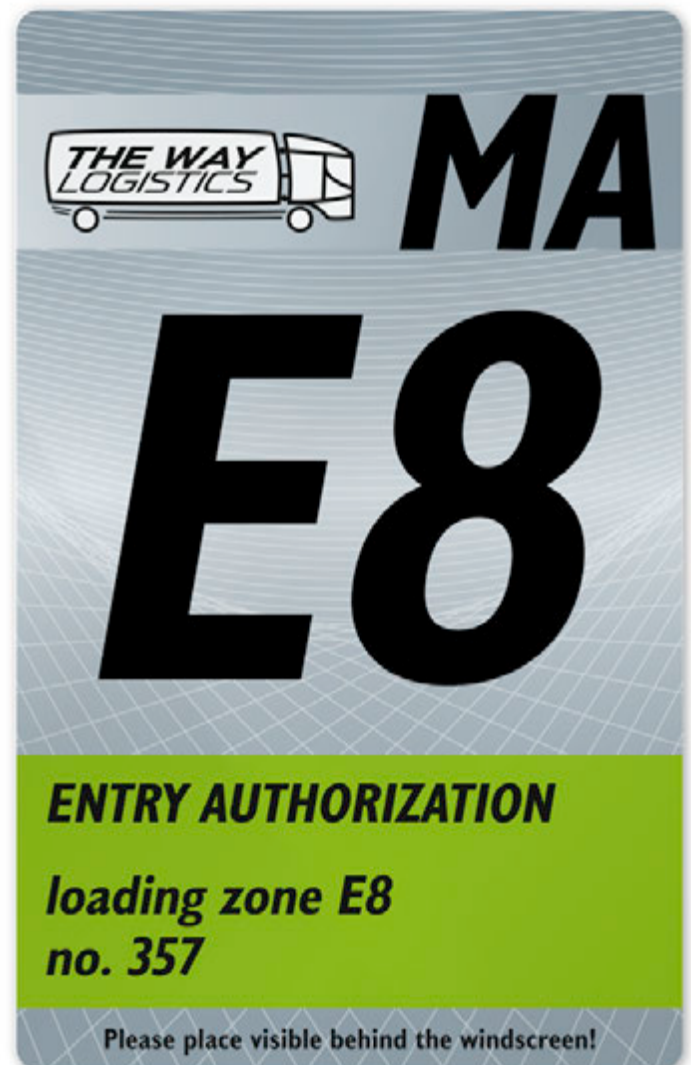
CARD FORMATS

■ 144 x 92 mm	■ 140 x 54 mm
■ 140 x 88 mm	■ 128,5 x 54 mm
■ 134 x 85 mm	■ 120 x 54 mm
■ 110 x 65 mm	■ 108 x 35 mm
■ 105 x 72 mm	■ 85 x 35 mm
■ 101 x 77 mm	■ 85,6 x 54 mm
■ 98,5 x 66,7 mm	■ 61 x 54 mm

FREE FORMS

■ Puckered lips	■ Circle 50 mm
■ Honeycomb	■ Bag

**tools present at Plasticard-ZFT



THIN PLASTIC CARDS

FEATURES

- Laminated multiple layer or mono card made from PVC material
- Thicknesses range from 0.3 to 0.65 mm
- Optional matte laminated surface



But could it be thinner?

A key application field for thin plastic cards is the use as business or advertising cards. Plastic business cards tend to leave a more lasting impression on the recipient than their paperboard cousins. This effect is brought about by the palpable durability as well as the variety of optional features that can be employed to lend your business card an impressive look. An NFC-capable chip inside the business card which can be used to store all your contact data and/or a link to the company website really does the trick.

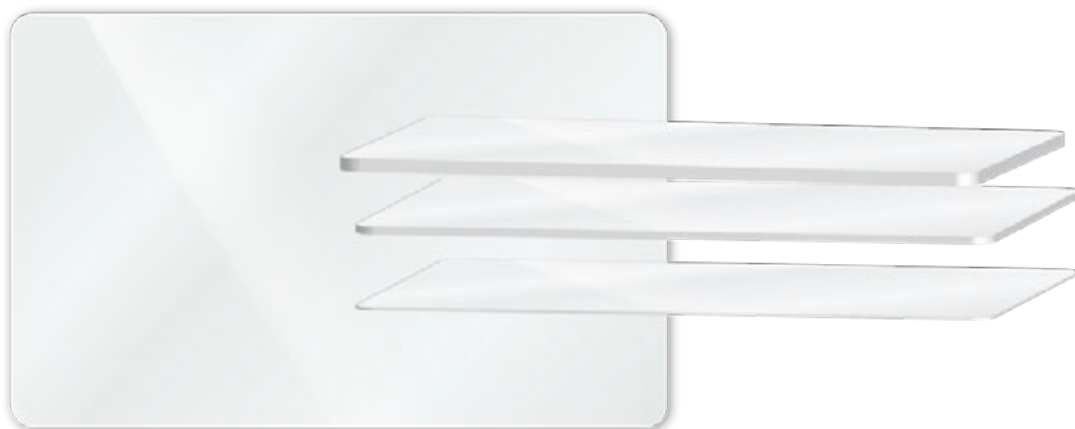
You can cost-effectively order cards printed on both sides in quantities starting from 100 pieces. This product is ideal for one-time use, bonus cards or advertisement.

OPTIONS

■ Printing & inks	<i>e.g. offset, screen printing</i>
■ Surface finishing	<i>e.g. hot stamping, spot varnishing</i>
■ Additional accessories	<i>e.g. signature panel, punch holes</i>
■ Security features	<i>e.g. holograms, guilloche</i>
■ Personalisation	<i>e.g. consecutive number, name</i>
■ Data carriers	<i>e.g. RFID chip, barcode</i>

OVERVIEW OF CURRENT CARD THICKNESSES

DESCRIPTION	THICKNESS	SPECIAL FEATURE/APPLICATION
■ Thin plastic card	0.3 to 0.65 mm \pm 0.03 mm	<i>Particularly well suited to business card use</i>
■ Standard ISO plastic card	0.76 mm \pm 0.08 mm	<i>Plastic cards in accordance with ISO 7810, magnetic stripe cards</i>
■ Standard ISO chip card	0.81 mm \pm 0.03 mm	<i>Plastic card with contact chip or RFID in accordance with ISO 7810 and 7816</i>
■ Special thicknesses	\geq 0.84 mm	<i>RFID cards; including thicknesses in excess of 1 mm can be implemented</i>



NFC-TAGS

SIM CARDS



FEATURES

- Credit card quality
- ISO card format with predetermined breaking points
- Laminated multiple layer card made from PVC
- printable in card printer
- No minimum order quantity

PLASTIC CARD WITH INTEGRATED NFC LABEL

Find out more about standard ISO cards with NFC-capable chip on page 9. At Plasticard-ZFT, we offer alternative pre-cut cards with a self-adhesive tag in the format 54 x 30 mm. Thanks to the integration in an ISO card, the product can be printed and encoded using ordinary card printers (as of page 61). NFC tags with a shielded ferrite film for use with mobile phones or on metal surfaces are optionally available. More information regarding "On-Metal-Tags" on page 34.



OPTIONS

- | | |
|---------------------------|--|
| ■ Printing & inks | <i>e.g. offset, screen printing</i> |
| ■ Materials & thicknesses | <i>e.g. HT Card 85</i> |
| ■ Surface finishing | <i>e.g. hot stamping, relief varnish</i> |
| ■ Additional accessories | <i>e.g. signature or scratch-off panel</i> |
| ■ Security features | <i>e.g. holograms, guilloche</i> |
| ■ Personalisation | <i>e.g. consecutive number, name</i> |
| ■ Data carriers | <i>e.g. barcode</i> |

SIM PUNCHING

The card within a card

SIM cards are something every mobile phone owner is familiar with. They are broken out of a standard plastic card and inserted into the chip reader of the mobile phone. This space-saving solution has been adopted for other electronic devices, e.g. as a security module in mobile devices of terminals, as data carrier on controls, or medical devices. Plasticard-ZFT produces SIM cards made from PVC or ABS. In accordance with ISO 7810, ID-000 (2FF), the cards with the final dimensions of 25 x 15 mm with are produced with 3-post mini SIM punch. Micro-SIM (3FF) and Nano-SIM (4FF) cards are also possible. All typical chip modules available on the market may be implanted (see page 8).



PRICE AND NAME TAGS



PRICE TAGS

Hygienical, professional, time efficient labelling of goods

In many areas of trade, plastic cards prove themselves as price tags. We supply colourful or pre-printed blanks. You print the prices and additional information (e.g. mandatory tables of content) with the card printer – quick, easy, and cheap. Price tags can be shipped in white, black, or individually printed.

OPTIONS

■ Printing & inks	<i>e.g. white, black, printed</i>
■ Format	<i>120x54mm, ISO, free format</i>
■ surface refinement	<i>e.g. matte finish or high-gloss</i>
■ Additional accessories	<i>e.g. punch hole</i>
■ Personalisation	<i>e.g. monochrome or photo print</i>



FEATURES

- Laminated multiple layer card made from PVC material
- Credit card quality
- ISO card format or smaller with predetermined breaking points
- Additional personalisation and orientation possible
- No minimum order quantity

NAME TAGS

Name tags – self-printed

Plasticard-ZFT supplies pre-printed and/or pre-punched name tags which can be personalised with all common card printers. Please notice our range of paperboard cards, the ecological alternative to PVC cards. Especially when looking for disposable cards with a short operating life, paperboard cards are the right choice. Our paperboard cards also qualify for personalisation in a common card printer.

Under "Card Accessories" (see page 67 onwards) you can find numerous attachment and wearing options.

OPTIONS

■ Printing & inks	<i>e.g. offset, screen printing</i>
■ Materials & thicknesses	<i>e.g. HT Card 85</i>
■ Surface finishing	<i>e.g. hot stamping, relief varnishing</i>
■ Additional accessories	<i>e.g. signature panel</i>
■ Security features	<i>e.g. holograms, guilloche</i>
■ Personalisation	<i>e.g. consecutive number</i>
■ Data carriers	<i>e.g. magnetic stripe, RFID</i>

MINI-, VISA MINI-, AND KEY-TAG-CARDS



FEATURES

- Credit card quality
- Optional hole punching
- Mini card 50 x 25 mm
- VISA-Mini card 65,5 x 40 mm
- Key tag cards with predetermined breaking points in ISO format for automated processing

MINI CARDS

Always on hand

The optional punched hole enables mini cards to be affixed to any key ring or lanyard. This means that the "mini" customer card or key finder is always on hand. For a long life on your key ring, Plasticard-ZFT offers a special case that protects the cards from breaks, scratches and wear, see the item 16.06.0028 on page 67.

The alternative that can (also) do everything

Mini cards from Plasticard-ZFT are supplied in a ready-punched format sized 50 x 25 mm. Individual printing, personalisation, holes, or RFID chip can be implemented in this format as well. With a passport photo, barcode or numbering, these minis are ideal as an ID-card, key finder, customer card, voucher, or loyalty card.

OPTIONS

■ Printing & inks	<i>e.g. offset, screen printing</i>
■ Materials & thicknesses	<i>e.g. HT Card 85</i>
■ Surface finishing	<i>e.g. hot stamping, relief varnish</i>
■ Additional accessories	<i>e.g. signature o. scratch-off panel</i>
■ Security features	<i>e.g. holograms, guilloche</i>
■ Personalisation	<i>e.g. number, name</i>
■ Data carriers	<i>e.g. RFID chip</i>

KEY TAG CARDS

Turn one into three

Key tag cards in the ISO card format ID-1 have standardised round wholes (optional) and two perforations that enable the card to be split into three parts, each sized 54 x 28.5 mm. The key tag cards can be printed and/or personalised just like a standard plastic card with an ordinary card printer. The applications are the same as for mini cards.

VISA MINI CARDS

Not too big, not too small

The VISA mini format (65.6 x 40.0 mm) was originally developed as an alternative credit card format. It is well suited for loyalty card or customer card applications. The VISA mini card is broken out manually from a standard card. With the default punched hole, it is suitable for the use as a key ring tag. The supplied format (see diagram) is fully compatible with all current printers or other card mailing machines. Magnetic stripes and barcodes can still be used in swipe card readers despite the miniature format.

LONG LIFE AND HIGH TEMPERATURE CARDS

FEATURES

- A lifetime of up to 10 years is possible
- Temperature resistant up to 100 °C
- Stable under bending and break-resistant
- UV resistant
- For use in vehicles, among other applications



HT card – Stability is its strength

PVC cards are ideally suited for the use as customer or credit cards. Typically, they are tucked into a wallet or purse and used, on average, once a day. ID cards, car park card, or PKI cards are exposed to tougher loads. They are used more than 50 times a day as door openers, or for bookings, are inserted into a PC and exposed to serious thermal loads or must handle UV radiation on a daily base whilst sat behind the windshield of a vehicle. Exposure to chemicals or aerosols may also shorten the lifetime of traditional cards. Plasticard-ZFT offers cards out of its own development department. These cards are made using composite materials that have been optimised for specific demands. Our bestseller, the HT85 Card, has been certified by FOGRA Forschungsgesellschaft Druck e. V. for a threshold temperature of 85 °C and for a lifetime of 10 years.

OPTIONS

■ Printing & inks	<i>e.g. offset, screen printing</i>
■ Surface finishing	<i>e.g. hot stamping, relief varnish</i>
■ Additional accessories	<i>e.g. signature or scratch-off panel</i>
■ Security features	<i>e.g. holograms, guilloche</i>
■ Format	<i>e.g. mini card, SIM</i>
■ Personalisation	<i>e.g. consecutive number, name</i>
■ Data carriers	<i>e.g. RFID, contact chip</i>

PROPERTIES	STANDARD PVC	HT CARD 70	HT CARD 85	HT CARD 100
Lifetime	2 years	3-5 years	10 years	10 years
Temperature durability	-30 to +50 °C	-30 to +70 °C	-30 to +85 °C	-30 to +100°C
Compound strength	> 8 N/cm	> 8 N/cm	> 10 N/cm	> 10 N/cm
UV resistance	No	No	Yes	No
Dynamic flexural resistance	min. 1,000 bends	min. 3,000 bends	min. 6,000 bends	min. 8,000 bends
PERSONALISATION OPTIONS				
Laser	①	①	✓	✓
Thermal transfer printing	✓	✓	✓	✓
Dye sublimation printing	✓	✓	✓	✓
Retransfer printing	✓	✓	✓	✓
Embossing	✓	✓	✓	✓
Digital printing under laminate	✓	✓	✓	①

✓ yes/possible

① available, must be ordered in advance



PAPERBOARD CARDS



FEATURES

- Printable with offset and silkscreen
- Can be personalised by thermal transfer print
- Environmentally friendly, sustainable, and recyclable
- High-end optics and haptics
- Thickness: $0,7 \pm 0,03\text{mm}$
- Starting from quantities of 100 pieces

The ecological Alternative

Whenever durability is not important, and a visually pleasing card is needed, paperboard cards by Plasticard-ZFT are an environmentally friendly alternative. These cards are distinguished by a thickness of 0,7mm and a high-class anting with lint-free edges and flat surface.

The special feature of those cards is that numerous refinement-technologies from the world of cards are applicable. Very important: Paperboard cards by Plasticard-ZFT can be personalised with ordinary card printers. Thus, they are suitable for the following applications:

- Visitor passes
- Vouchers
- Advertisement and business cards
- Loyalty and bonus cards
- Stamp cards

OPTIONS

- | | |
|--------------------------|---|
| ■ Printing & inks | <i>e.g. offset or silkscreen printing</i> |
| ■ Material | <i>premium-cardboard, semi-matte</i> |
| ■ Additional accessories | <i>e.g. punch holes, signature panel</i> |
| ■ Security features | <i>e.g. hologram, guilloche</i> |
| ■ Personalisation | <i>e.g. consecutive number, name</i> |
| ■ Data carriers | <i>barcode</i> |





FEATURES

- 6 standard wood varieties available
- Can be printed using offset printing
- Personalisation possible using laser, thermal transfer printing, inkjet or DoD options
- Can be equipped with RFID chip or magnetic stripe
- Starting from quantities of 100 pieces

Another ecological alternative

Cards made from wood are more popular than ever before! They have an image-generating effect and convey ecological responsibility. Depending on the necessary functionality, Plasti-card-ZFT offers three versions with different footprints:

1. Pure wooden cards made from 100% natural raw materials
2. Wooden cards with surface protection
3. Wooden cards with surface protection and integrated data carriers (RFID or magnetic stripe)

Versions 2 and 3 are also optionally offered in a format suitable for personalisation using common card printers. Personalisation using laser engraving or thermal transfer printing is also possible. All wooden cards are produced without the use of PVC*! The woods that can be used are maple, white oak, oak, teak and wenge veneers. All woods come from FSC-certified forestry. The cards can be produced both with and without individual printing.

OPTIONS

■ Printing & inks	<i>e.g. offset printing</i>
■ Surface finishing	<i>e.g. laser engraving (branding)</i>
■ Additional accessories	<i>e.g. punch holes</i>
■ Format	<i>e.g. mini card</i>
■ Personalisation	<i>e.g. consecutive number, name</i>
■ Data carriers	<i>e.g. RFID, magnetic stripes</i>

*When producing wooden cards with RFID-chip or magnet stripe, a certain amount of PVC cannot be avoided for technical reasons.

BIRCH

MAPLE

WHITE OAK

OAK

TEAK

WENGE

MAGNETIC STICKERS



FEATURES

- Laminated card surface made from PVC
- Magnetically adhesive back
- Also available in special format or freeform
- Optional matte laminated surface
- Starting from quantities of 25 pieces

Cards with attractive power

High-quality magnetic stickers for whiteboards or fridges bring a long-term presence to your customer. With a fun message or a real "eyecatcher", the telephone number, the appointment, or web address remain permanently in view. Magnetic stickers are an ideal advertising method for any company that wants to be kept in mind: Taxi companies, delivery services, restaurants, tradespeople, cleaning services...

Magnetic stickers from Plasticard-ZFT are characterised by a glossy or matte laminated smooth surface, high-quality offset printing and the popular credit card format. The magnetic layer is completely integrated in the card. Additional optical highlights are possible, e.g. metallic gold or silver embossing. Magnetic stickers can also be implemented in any other format. Magnetic stickers are available in quantities starting from 25 pieces.

Applications

- Advertising
- "Save the Date" for events
- Business cards for taxis, restaurants or similar
- As give-away or souvenir
- Gifts

Options

- Matte laminated surface
- Various surface finishings available
- Any formats

Did you know?

Magnetic stickers can be ordered from our re-seller shop. Find out more about the shop on page 74.





FEATURES

- Individually printable on both sides
- White card for self-printing with common card printers available
- Supplementary equipment for personalisation and refinement just like with "ordinary" plastic cards
- Possible also as thin plastic card ($0,56 \pm 0,03\text{mm}$)
- Optional matte laminated surface
- Starting from quantities of 100 pieces

Why RFID-SHIELD-CARDS?

RFID-Shield-cards protect NFC-money cards against unwanted debiting.

Credit or money cards with NFC-technology (check out the NFC-symbol on your card) make the payment process quick and comfortable. Money transfers can be made contactless within a couple of centimetres distance to the terminal. Thus, micro-payments, i.e. payments up to an amount of EUR 25 (with VISA even EUR 50) are possible without PIN or signature.

This convenience leads to growing risks. Especially the micro-payments are not sufficiently protected against attacks from the outside. Safety is offered by the so-called RFID-Shield-cards which have a special foil embedded in their core that absorbs the reading field.

The growing circulation of credit cards and other monetary transaction cards with NFC-function results in nearly every customer having a card like this in their wallet/purse.

Many people are worried about identity theft and loss of valuable personal data. The felt danger (also with the new government issued ID-card!) is a repeated subject for discussions in the media and online. The RFID-Shield-card manages to lift this worry off its users.

Handling

To ensure the effectivity of the RFID-Shield-cards one needs to follow certain directions. It is recommended to print those directions (see graphic) on the back of the card.

One card within the card stack, card is fully covered



More than two cards within the card stack, card is fully covered



Cards not fully covered (offset should not exceed 5mm)



More than one card, card not fully covered



TRANSPARENT CARDS



FEATURES

- ISO-7810 conforming credit card quality
- Fully transparent, translucent or partially opaque
- Frozen effect is possible

TRANSPARENT CARDS

A card with perspective

Transparencies within the card are primarily a security element! But transparent areas in a card can also be a real eye-catcher when used as a design element. Transparent plastic cards may be as clear as glass, frosted, or milky. Special effects can be achieved using partially transparent areas. Furthermore, the same design variations are available as for printed plastic cards.

OPTIONS

■ Printing & inks	<i>e.g. offset, screen printing</i>
■ Materials & thicknesses	<i>e.g. thin plastic card</i>
■ Surface finishing	<i>e.g. hot stamping, spot varnishing</i>
■ Additional accessories	<i>e.g. signature panel, punch holes</i>
■ Security features	<i>e.g. holograms, guilloche</i>
■ Format	<i>e.g. mini card or freeform</i>
■ Personalisation	<i>e.g. consecutive number, name</i>
■ Data carriers	<i>e.g. magnetic stripe, chip</i>

COLOR-CORE CARDS



FEATURES

- ISO-7810 conforming credit card quality
- Different core colours are possible
- Standard colours for small editions: Black, red, yellow, blue, lime green
- Coloured core also acts as a security feature

COLORCORE CARDS

Cards with coloured core

Check for yourself: most of the cards in your wallet/purse have white cut-out edges. It doesn't have to be that way. A gold card should also be gold on the inside, a black card should have a black edge. Matching or contrasting edges are definitely one of the more exclusive design elements. Plasticard-ZFT will help you with the design of your completely unique card. ColorCore cards are currently available as plastic and chip cards.

OPTIONS

■ Printing & inks	<i>e.g. offset, screen printing</i>
■ Surface finishing	<i>e.g. hot stamping, spot varnishing</i>
■ Additional accessories	<i>e.g. signature panel, punch holes</i>
■ Security features	<i>e.g. holograms, guilloche</i>
■ Format	<i>e.g. mini card or freeform</i>
■ Personalisation	<i>e.g. consecutive number, name</i>
■ Data carriers	<i>e.g. magnetic stripe contact chip</i>

MIRROR EFFECT CARDS



FEATURES

- ISO-7810 conforming credit card quality
- Special design effects thanks to offset printing with opaque white
- surface either reflective or holographic
- This can also be used as a security feature

Chrome-like appearance or holographic surface

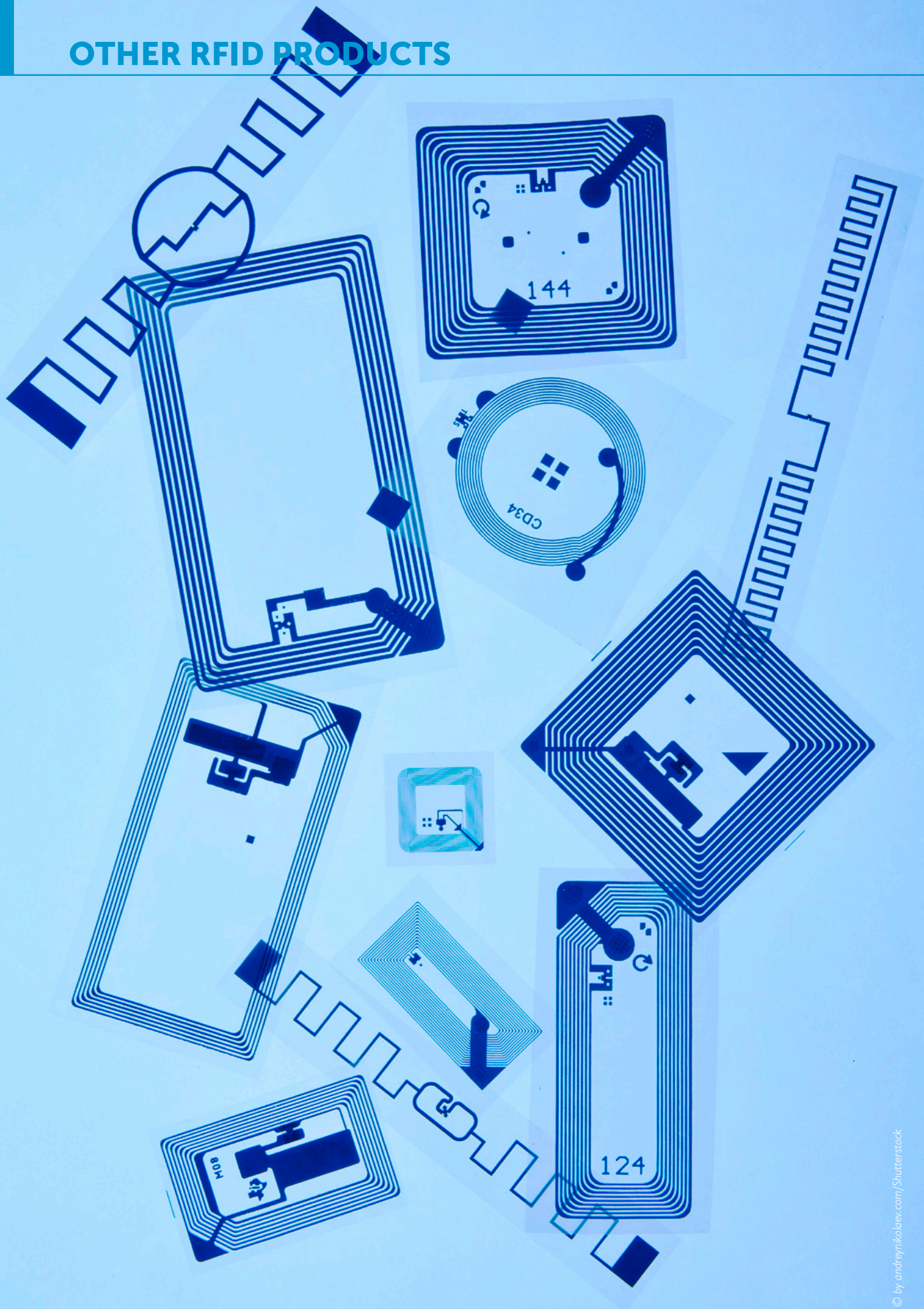
A particular visual highlight offer full-surface mirrors or holographic foils that are integrated into the card background. The foils can be printed using offset printing technology and enable previously impossible optical effects. The surface of such cards is made up of PVC, thus personalisation and finishing are available with all the common options as with conventional plastic cards.

OPTIONS

■ Printing & inks	<i>e.g. offset, screen printing</i>
■ Surface finishing	<i>e.g. hot stamping, spot varnishing</i>
■ Additional accessories	<i>e.g. signature panel, punch holes</i>
■ Security features	<i>e.g. holograms, guilloche</i>
■ Format	<i>e.g. mini card or freeform</i>
■ Personalisation	<i>e.g. consecutive number, name</i>
■ Data carriers	<i>e.g. magnetic stripe, chip</i>



OTHER RFID PRODUCTS



TEARDROP

The universal keyfob tag in teardrop format is both, cost-effective and stable. This construction can be fitted with up to two RFID technologies. The lid is snug fit to the injection moulded case made off fibreglass reinforced polyimide. The product is durable and break-resistant. Numbers and logos can be applied using laser engraving technology.



FEATURES

- 32 x 57,7 mm x 4,3 mm
- Fibreglass reinforced polyimide
- Waterproof transponder
- Personalisation using laser technology
- 6 standard case colours available

	RAL 9003	Signal white
	RAL 1021	Rape yellow

	RAL 3000	Flame red
	RAL 6029	Mint green

	RAL 5003	Sapphire blue
	RAL 9011	Graphite black

ROUND

The "Round" keyfob tag is ultrasonically welded and thus, absolutely waterproof. The case is made of shatterproof Novodur plastic. The lid can be fully colour-printed. An overlay protects the printing from wear off.



FEATURES

- 34,5 x 43,5 mm x 5 mm
- Novodur plastic
- Waterproof case
- Safe from manipulation*
- 18 standard case colours available (see below)

EVOLUTION, EVOLUTION NEON & EVOLUTION PLUS

The "Evolution" family represents a series of high-quality keyfobs made from stainless steel and ABS plastics. The case is dust, dirt and splash-water protected. The model is available in three versions. Evolution Standard (matte) and Neon (glossy) have a two-side surface made from ABS and can be laser engraved. Thanks to the integrated PVC lid, Evolution Plus can be individually printed with a logo.



FEATURES

- 36,5 x 45,3 mm x 5,2 mm
- Stainless steel frame with ABS
- Waterproof case
- Safe from manipulation*
- 18 standard case colours available (see below) + NeonEdition
- with Bluetooth (BLE) available

	RAL 9016	Traffic white
	RAL 1016	Sulfur yellow
	RAL 2008	Bright red orange
	RAL 2002	Vermillion
	RAL 3000	Flame red
	RAL 4006	Traffic purple
	RAL 6018	Yellow green
	RAL 6024	Traffic green
	RAL 5018	Turquoise blue

	RAL 5017	Traffic blue
	RAL 5003	Sapphire blue
	RAL 5004	Black blue
	RAL 1036	Pearl gold
	RAL 8007	Fawn brown
	RAL 7035	Light grey
	RAL 7001	Silver grey
	RAL 7024	Graphite grey
	RAL 9017	Traffic black

Farben für Evolution NeonEdition

	Pantone 801 C	Neon blue
	Pantone 802 C	Neon green
	Pantone 803 C	Neon yellow
	Pantone 804 C	Neon orange
	Pantone 805 C	Neon red
	Pantone 806 C	Neon pink
	Pantone 807 C	Neon purple

*The RFID chip is installed in the case in such a way that it cannot be removed/replaced without damaging the chip or case.

KEYFOBS



	TEARDROP	ROUND	EVOLUTION	EVOLUTION BLE	MYKEY	EXIS
PRINTING & INKS						
Offset under laminate	✗	✓	✓*	✓*	✓	✓
Digital printing under laminate	✗	✓	✓*	✓*	✓	✓
Screen printing under laminate	✗	✓	✓*	✓*	✓	✓
Designable surface, front side	ø 27 mm	ø 28 mm	ø 28 mm*	ø 28 mm*	25 x 50 mm	ø 23 mm
Designable surface, rear side	✗	✗	ø 28 mm*	✗	25 x 50 mm	ø 23 mm
MATERIAL & VERSION						
Materials	Fibreglass reinforced Polyimide	Novodur	ABS/ Stainless steel	ABS/ Stainless steel	PVC/plastic clear	PVC/stainless steel
Housing colours <i>(see Table under the relevant product description, page 25)</i>					✗	✗
Lid colours						
Ultrasound welding	✗	✓	✓	✓	✗	✓
Watertight housing	✗	✓	✓	✓	✗	✓
Watertight transponder	✓	✓	✓	✓	✓	✓
Housing is safe from manipulation	✗	✓	✓	✓	✗	✓
PERSONALISATION						
Coloured personalisation	✗	✓	✓*	✓*	✓	✓
Laser engraving (logo, graphic)	✓	✓	✓	✓	✓	✓
Numbering	✓	✓	✓	✓	✓	✓
Text (e.g. name)	✓	✓	✓	✓	✓	✓
Barcode	✓	✓	✓	✓	✓	✓
Coding	✓	✓	✓	✓	✓	✓

✓ yes/available ✗ no/not available

* only Evolution Plus version

RFID CHIP TYPES**

HF-SPEICHERCHIPS – 13,56 MHZ

■ MIFARE Classic® EV1 - 4 Byte NUID	1K or 4K
■ MIFARE Classic® EV1 - 7 Byte UID	1K or 4K
■ MIFARE Plus® S / X	2K or 4K
■ MIFARE Plus® SE	1K
■ MIFARE DESFire® EV1	2K, 4K or 8K
■ MIFARE DESFire® EV2	2K, 4K or 8K
■ MIFARE Ultralight®	Ultralight / C
■ LEGIC prime®	256 o. 1024 Byte
■ LEGIC advant®	1024 o. 4096 Byte
■ LEGIC CTC®	1K prime+3K advan
■ ICODE®	SLI or SLIX

LF/NF – 125 KHZ

■ EM 4200, 4450	128 – 1024 Bit
■ HITAG 1, 2, S	256 – 2048 Bit
■ Temic 5577	363 Bit

WEITERE TECHNOLOGIEN

The Evolution BLE is also available with Bluetooth technology.

Do you need two RFID chips in one key ring tag, or is your desired chip not included? Our chip type range is constantly being expanded. Contact us!

WATCHES/WRIST BAND TRANSPONDERS

FEATURES










- Transponder ultrasonically welded into the plastic case
- Absolutely waterproof case
- Safe from manipulation
- Perlon or plastic wrist band

Waterproof identification







RFID watch-type transponders are particularly well suited for the use as access control device or for cashless transactions in leisure centres. The watch-type transponder is made up of a Perlon or plastic wrist band with closure and a transponder case. The case is made from shatterproof ABS and is available in a variety of colours. The individually printable lid is welded to the case making it waterproof and safe from manipulation. The watch-type transponder is particularly well suited to use in saunas, swimming pools or leisure centres.

HOUSING COLOURS**

CLASSIC TRANSPONDER







	RAL 9016	White		RAL 6024	Green
	RAL 1016	Yellow		RAL 5017	Blue
	RAL 2008	Orange		RAL 7035	Grey
	RAL 3000	Red		RAL 9017	Black
	RAL 4006	Purple			

COMFORT TRANSPONDER







	Pantone 101 C	Yellow		Pantone 341 C	Green
	Pantone 1655 C	Orange		Pantone 2945 C	Blue
	Pantone 200 C	Red		Pantone Black C	Black

WRIST BAND COLOURS**

PLASTIC (CLASSIC & COMFORT)

	Pantone 101 C	Yellow		Pantone 341 C	Green
	Pantone 1655 C	Orange		Pantone 2945 C	Blue
	Pantone 200 C	Red		Pantone Black C	Black

PERLON (CLASSIC ONLY)

	Pantone 123 C	Yellow		Pantone 375 C	Green
	Pantone 151 C	Orange		Pantone 287 C	Blue
	Pantone 207 C	Red		Pantone Black C	Black

** Colour specifications are approximations, original may differ.



RFID-CHIPTYPEN*

HF – 13,56 MHZ

■ MIFARE Classic® EV1 - 4 Byte NUID	1K or 4K
■ MIFARE Classic® EV1 - 7 Byte UID	1K or 4K
■ MIFARE Plus® S / X	2K or 4K
■ MIFARE Plus® SE	1K
■ MIFARE DESFire® EV1	2K, 4K or 8K
■ MIFARE DESFire® EV2	2K, 4K or 8K
■ MIFARE Ultralight®	Ultralight / C
■ LEGIC prime®	256 o. 1024 Byte
■ LEGIC advant®	1024 o. 4096 Byte
■ LEGIC CTC®	1K prime+3K advant
■ ICODE®	SLI or SLIX

LF/NF – 125 KHZ

■ EM 4200, 4450	128 – 1024 Bit
■ HITAG 1, 2, S	256 – 2048 Bit
■ Temic 5577	363 Bit

OPTIONEN

■ Printing & inks	e.g. offset, screen printing
■ Personalisation	e.g. number, name
■ Other data carriers	e.g. barcode, RFID chip

* Do you need two RFID chips in one key ring tag, or is your desired chip not included? Our chip type range is constantly being expanded. Contact us!

RFID STICKERS/RFID LABELS



Individual printable stickers –
also available in small editions

RFID labels enable the identification of products or objects. Plasticard-ZFT produces stickers in your desired formats and thicknesses. A special roll-to-sheet technology enables the implementation even of small editions. A special feature is the electronic tamper-proofing for security-sensitive applications (see page 35). The following standard formats are available: 85.6 x 54 mm and 43 x 31 mm.

RFID CHIP TYPES*

HF – 13,56 MHz

■ MIFARE Classic® EV1 - 4 Byte NUID	1K or 4K
■ MIFARE Classic® EV1 - 7 Byte UID	1K or 4K
■ MIFARE Plus® S, SE, X, EV1	1K to 4K
■ MIFARE DESFire® EV1 / EV2	2K, 4K or 8K
■ MIFARE Ultralight® Nano, EV1, C	40 – 144 Byte
■ LEGIC prime®	256 o. 1024 Byte
■ LEGIC advant®	1024 o. 4096 Byte
■ LEGIC advant® 213	4K advant, 4K DESFire
■ LEGIC CTC® MP, MM	1K prime+3K advant
■ HID 200x iClass	256 – 4 kByte
■ ICODE® SLI, SLIX, ILT, DNA	256 – 2016 bit

*This is a selection of current and available chip types. The chip you are looking for is not included? Please contact us!

FEATURES

- Self-adhesive back suitable for various surfaces
- Standard or individual formats are available
- For indoor and outdoor uses
- Tamperproof option available
- Material thickness of 0.2 mm

OPTIONS

■ Printing & inks	<i>e.g. offset, screen printing</i>
■ Materials & thicknesses	<i>e.g. for outdoor use</i>
■ Surface finishing	<i>e.g. hotstamping, spot vanish</i>
■ Additional accessories	<i>e.g. write-on field</i>
■ Security features	<i>e.g. guilloché, tamper-proofing</i>
■ Personalisation	<i>e.g. consecutive number, name</i>
■ Other data carriers	<i>e.g. barcode</i>

NFC

■ NXP® NTAG® 210, 212, 213, 215, 216	80 – 924 Byte
■ NXP® NTAG® 413 DNA	160 Byte

LF/NF – 125 KHZ

■ HID Prox	
■ EM 4102, 4200, 4450	128 – 1024 Bit
■ HITAG 1, 2, S	256 – 2048 Bit
■ Temic 5577	363 Bit

UHF – 968 MHz

■ NXP® UCODE® G2iL, G2iM, 7, 8	0 – 512 Bit
■ NXP® UCODE® DNA, Track, City	265 – 3072 Bit
■ Alien Higgs® 3	512 Bit
■ Impinj Monza® 4D, 4E, 4QT, R6	0 – 512 Bit

WINDSHIELD LABELS



OPTIONS

■ Printing & inks	<i>e.g. offset, screen printing</i>
■ Additional accessories	<i>e.g. tamperproof</i>
■ Security features	<i>e.g. holograms, guilloche</i>
■ Format	<i>e.g. freeform</i>
■ Personalisation	<i>e.g. number, name</i>
■ Other data carriers	<i>e.g. barcode</i>

FEATURES

- Self-adhesive, optimised for use on glass
- Temperature resistant from -20 °C to +85 °C
- High UV resistance
- Up to 5 m read range
- Tamperproof option available
- Viable even for small editions

RFID CHIP TYPES*

UHF – 968 MHz

■ NXP® UCODE® G2iL, G2iM	<i>0 – 512 Bit</i>
■ Alien Higgs® 3	<i>512 Bit</i>
■ Impinj Monza® 4D, 4E, 4QT, R6	<i>0 – 512 Bit</i>

* Das ist eine Auswahl gängiger und lieferbarer Chiptypen. Ihr Wunschchip ist nicht dabei? Bitte kontaktieren Sie uns!

Tamperproof

Tamper-proofing refers to the protection of an identification media against unauthorised manipulation. Find out more about tamper-proofing on page 35.

UHF technology for vehicle identification

Plasticard-ZFT produces individually printable windshield labels in both small and medium-sized editions and in a wide range of types. To meet the highest possible security requirements, the labels can be equipped with special coding procedures and tamper-proofing.

Equipment

Windshield labels can be individually printed and may be personalised under laminate. Printed security features offer protection against falsifications as well as the tamper-proofing features to prevent manipulation. Additional security features can be found as of page 43.

NFC TAGS



OPTIONS

■ Printing & inks	<i>e.g. offset, screen printing</i>
■ Materials & thicknesses	<i>e.g. for outdoor use</i>
■ Format	<i>e.g. break-off label see page 17</i>
■ Personalisation	<i>e.g. consecutive number, name</i>
■ Other data carriers	<i>e.g. barcode</i>

NFC TAGS

NFC gets things in motion

NFC tags can be used anywhere. The vast majority of current smartphones already have the appropriate reader installed. If the NFC function is activated on the smartphone, a multitude of things suddenly becomes very simple: One "tap" transfers contact data from the tag to the mobile phone, accesses websites, or initiates phone calls. This works in a way that is much faster and simpler than scanning a QR code with the camera.

Further, an appropriately programmed NFC tag can also be used to activate numerous other functions.

- In the car: Switch on Bluetooth, activate a speed camera app, switch off Wi-Fi
- Before the meeting: Switch off the ringtone
- At home: Connect to Wi-Fi, switch on the music
- In the car or at home: Send an emergency call
- At the hotel: Connect to the guest Wi-Fi
- In the office: Activate privacy, switch on Wi-Fi

The appropriate tags can be supplied by Plasticard-ZFT along with the appropriate printed message. The NFC mobile phone sticker is available alternatively in a plastic card format with a break-off label (see page 17).

ON-METAL TAGS



FEATURES

■ Self-adhesive
■ Standard format ID-1
■ Free formats can be delivered on request
■ Can be supplied with HF or UHF technology, chip types, see page 32

ON-METAL TAGS

Smart type plates

Self-adhesive RFID type plates open up completely new perspectives. Alongside the visually readable information, all the data can also be read with a hand-held computer or an NFC mobile phone. Executed procedures or maintenance work can be written directly to the type plate of machines, systems or equipment. The special on-metal features also enable the use of RFID labels on metallic surfaces. On-metal labels in chip card format (ID-1) can be directly personalised and printed using card printers (as of page 61).

DRIVING LICENCE LABELS

FEATURES

- Self-adhesive
- Available in white or transparent
- Available with tamper-proofing
- Ultrathin ($\leq 220 \mu\text{m}$)



Automatic check of driving licenses

Providing evidence of a regular driving license check by the vehicle owner is prescribed by legislators in § 21 of the German Road Traffic Act (Straßenverkehrsgesetz). This is of particular significance for companies with a large fleet. For car rental companies, the electronic option for checking the driving license offers a considerable opportunity for simple and quick processes. Plasticard-ZFT offers a wide range of RFID chips which enable an incorporation of control algorithms into existing infrastructures for access control or time logging. Protection against manipulation can be achieved by mechanical and/or electronic tamper-proofing.

SPECIFICATIONS

- Dimensions $\varnothing 14 \text{ mm}$, 0.22 mm thin
- Material PVC, laminated, self-adhesive
- Colour white or transparent, can be printed

Tamperproof

With driving license labels, protection against manipulation is particularly important (in particular protection against the removal from the license). Plasticard-ZFT works with various methods of protection that are currently being tested.

OPTIONS

■ Printing & inks	<i>e.g. offset, screen printing</i>
■ Material colour	<i>white or transparent</i>
■ Security features	<i>e.g. guilloche, tamper-proofing</i>
■ Personalisation	<i>e.g. consecutive number</i>
■ Other data carriers	<i>e.g. 2D barcode</i>

RFID CHIP TYPES*

HF – 13,56 MHz

■ MIFARE Classic® EV1 - 4 Byte NUID	<i>1K or 4K</i>
■ MIFARE DESFire® EV2	<i>2K, 4K or 8K</i>
■ FUDAN	<i>1K</i>
■ NXP® NTAG® 213	<i>184 Byte</i>

UHF – 968 MHz

- Impinj Monza® 4E

* This is a selection of current and available chip types. The chip you are looking for is not included? Please contact us!

TEMPERATURE LOGGERS



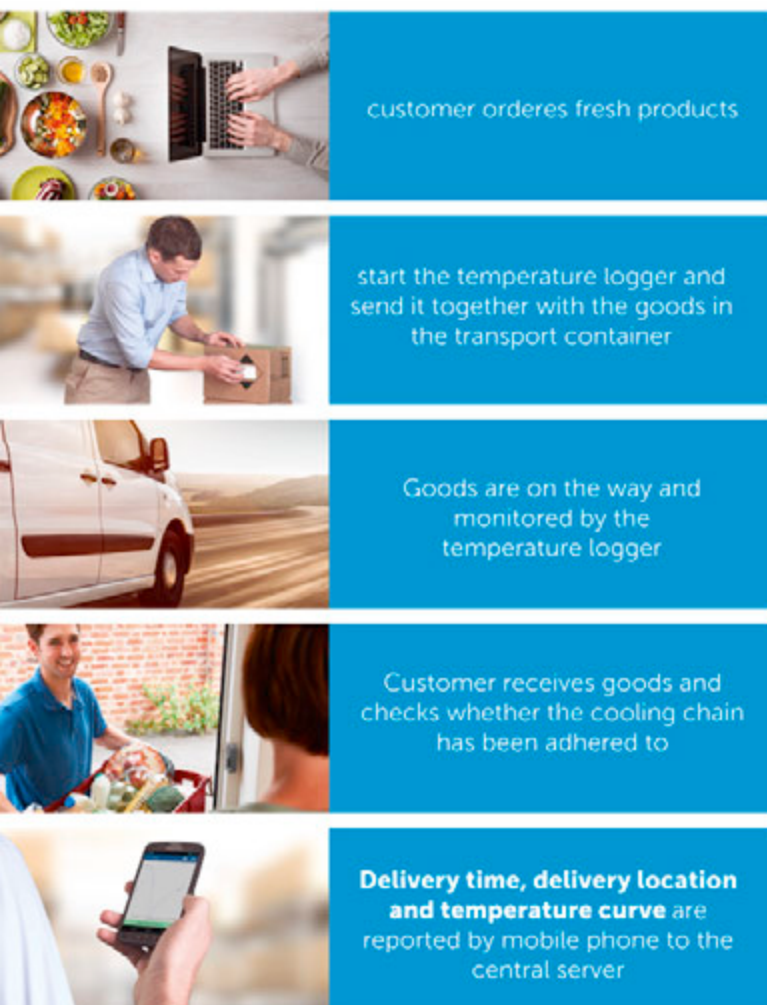
FEATURES

- Measuring range from -20 °C to +50 °C
- Measuring interval: 2 second to 8 hours
- Storage capacity up to 1020 values
- ISO 15693 and NFC-V (T5T) conform
- Accuracy 1 Kelvin
- Battery lifetime, up to 2 years
- Multiple Use
- App for Android available

OPTIONS

■ Printing & inks	<i>e.g. offset, screen printing</i>
■ Additional features	<i>Available as self-adhesive items, card or keyfob</i>
■ Format	<i>e.g. XXL card or freeform</i>
■ Personalisation	<i>e.g. consecutive number</i>
■ Other data carriers	<i>e.g. barcode</i>

AN APPLICATION EXAMPLE: FOOD DELIVERY SERVICE



Track temperatures and convey them via NFC

Our Temperature logger is a CPU-controlled memory unit that records temperature data within a configurable time period and interval. Based on NFC-technology this product aims - by means of a cost-effective solution - to discreetly provide a continuous temperature record throughout the entire journey of the accompanied goods.

Activation of the Temperature logger, all settings and configurations of intervals can be managed through a smartphone app. At the same time this smartphone app is your cockpit where you visualize the collected data or manage interactions with the backend system. You can set the system to assign a timestamp and location data to your record set.

Potential use cases for the active temperature logger:

- Food industry – Transportation and storage of wares
- Delivery services
- Medicine – Transportation of medication, blood stocks
- Trade – Transportation of floristry items

Batterielaufzeit

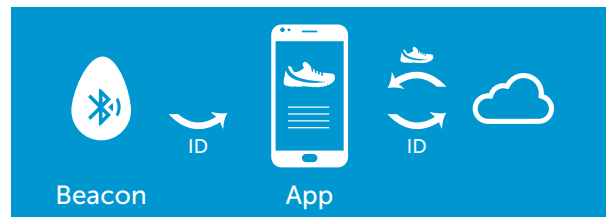
Der Temperaturlogger ist mit einer modernen, ultradünnen Batterie ausgestattet. Abhängig von der Nutzungsfrequenz ist die Karte über einen Zeitraum von bis zu zwei Jahren verwendbar. Die integrierte Batterie ist nicht wiederaufladbar!

BLE-TOKEN / BEACONS



FEATURES

- Bluetooth Low Energy technology (BLE)
- Transmission range of up to 100 m
- Configurable interval and transmission performance
- Available as keyfob or tag



Bluetooth as the universal interface of convenience and security

Whether marketing, tourism, security, or simple easing every-day life (e.g. in nursing) – applications with Bluetooth interfaces are present in nearly every area.

Because with smartphones Bluetooth is the available cross-platform interface all identification applications with this technology have established themselves as alternatives to NFC. The advantage of Bluetooth-technology (transmission range is configurable and ranges between 1 and 100 metres) numerous other functions, e.g. indoor-navigation, man-trailing, comfort-access, and theft protection can be realised.

BLE-tokens as an ID-medium

The signal of BLE-tokens can be received and interpreted by smartphones, modern RFID-readers with Bluetooth interface, and, fairly soon, also by electronic door locks.

In association with modern encryption technologies high-security transmission channels can be realised.

Thus, the BLE-tokens are an alternative in the field of ID-media and stand equally besides ID-card, keyfob and smartphone.

BLE-tokens have three main areas of application:

1. Convenience solution

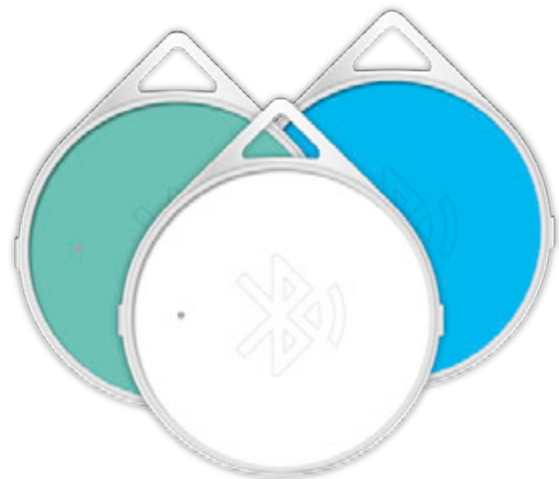
With a range of about 1 metre the "hands-free" usage of door and gate facilities is possible. The owner identified by the access terminal and the door is unlocked and opened without further actions. The advantage of this solution, especially towards smartphones, is constituted in the omissions of additional actions (open apps and operating).

2. Security applications

The finger print sensor to grant access to the application turns the BLE-token into an integrated two-factor-element. Thus, abuse by third parties is successfully prevented. The most important advantage with this form of application is the improved administrability and maintenance of personal eligibility within a company-issued medium. Thus, the typical problems of administrating a number of smartphones (perhaps even in private possession) are omitted.

3. Wide range applications

Another option is the use of the BLE-token as a remote control for barriers and gates. The advantage towards common remote controls lies with the unambiguous identification of the user and in lower costs.



OPTIONS & ADDITIONAL ACCESSORIES



PRINTING METHODS & INKS



ADVANTAGES OF OFFSET PRINTING

- Very high print resolution up to 2400 dpi
- Delivery time as of 5 working days
- Special inks also available for printing (HKS or Pantone)
- Printing of security features, such as UV inks, guilloché, micro-text and iris-print

OFFSET PRINTING

The offset printing procedure offers the highest possible printing quality and is therefore not only suitable for printing the colour layout, but also for printing security features. Designs in Euroscale (CMYK) or by using special inks in accordance with Pantone or HKS can be reproduced with colour-accuracy and can be adapted to colour samples or shade cards. The printing procedure is usually suitable only for medium and large card editions. Thanks to our special pool printing procedure, we are able to offer offset printed cards in Euroscale with editions consisting of 100 cards or more. For maximum accuracy of detail, we print using a 70-grid.

UV-varnished plastic cards

To manufacture cost-effective cards, a mono layer is printed, varnished, and punched. The cards are suitable for use as business or advertising cards and can only be personalised to a limited effect.

ADVANTAGES OF SCREEN PRINTING

- High ink thickness and coverage inks
- Maximum colour brightness
- Metallic, glitter and other effect inks
- Security inks such as OVI, UV inks
- Special inks in accordance with RAL, Pantone or HKS

SCREEN PRINTING

Anyone who wants rich, two-dimensional colours and a particularly comprehensive colour coat should rely on screen printing technologies. Special inks in accordance with Pantone, HKS or RAL can be implemented in the same way as colours mixed according to customer requirement or template. Effect and security inks such as neon, metallic and glitter inks as well as OVI (see page 41) or UV inks can be used with this printing procedure. Screen printing can easily be combined with translucent offset or OSP printing and, when used together, enables a wide variety of design options.

Printing in several layers

If multiple printing levels are "stacked" within a card constructed from a transparent material, the interaction between the individual layers results in a very interesting 3D effect.

PRINTING METHODS & INKS

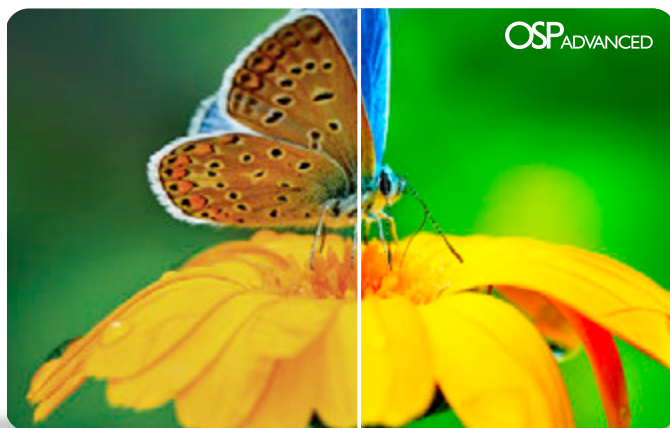
DIGITAL PRINTING OSP

OSP (Offset-Similar-Printing) is a digital printing process that was developed by Plasticard-ZFT. Cards printed using OSP hardly differ qualitatively from traditional offset printed cards but can be produced much more quickly and cost-effectively in smaller quantities. Print approval is implemented by way of an original sample that you can receive 24 hours after the receipt of data. The additional Express Service also enables the run of plastic cards to be printed within 24 or 48 hours. More information can be found at

www.plasticard.de/osp

ADVANTAGES

- High print resolution up to 1440 dpi
- Original sample card in advance
- Small editions starting from quantities of only 20 cards possible
- Printing and express delivery possible from 24 hours
- Special inks HKS or Pantone



DIGITAL PRINT OSP ADVANCED

OSP Advanced is a further development of the OSP printing process. Eight as opposed to four inks expand the printable colour range compared to OSP-CMYK printing and/or offset printing by 33 % and make the printed image even brighter and more luminescent. The correct reproduction of almost all special inks of the Pantone and HKS palette is thus possible. For small editions between 20 and 2000 cards, OSP Advanced in high-quality and special colour printing are a real alternative to offset printing.

COMPARISON OF PRINTING PROCEDURES

	OFFSET	DIGITAL PRINTING OSP	DIGITAL PRINTING OSP ADVANCED	SCREEN PRINTING
GENERAL				
Print resolution	Up to 2440 dpi	Up to 1440 dpi	Up to 1440 dpi	–
Suitable quantities	Medium to large	Small to medium	Small to medium	Small to large
Standard delivery times	10–15 days	5-10 days	5-10 days	10–15 days
Express delivery times	As of 5 days	24h/48h	24h/48h	As of 5 days
PRINT COLOURS				
Euroscale (CMYK)	✓	✓	✓	✗
HKS, Pantone	✓	✗	✓	✓
Metallic and neon colours	①	✗	✗	✓
UV colours/IR colours	①	✗	✗	✓
OVI security inks	✗	✗	✗	✓
Guilloché, micro-text, iris-print	✓	✗	✗	✗
Effect inks (fluorescent, glitter, ...)	✗	✗	✗	✓
COMBINATION OF PRINTING PROCEDURES				
Offset	–	✓	✓	✓
OSP	✓	–	✗	✓
OSP Advanced	✓	✗	–	✓
Screen printing	✓	✓	✓	–

✓ available

✗ not available

① conditionally available, must be checked in accordance with the desired version

METALLIC, EFFECT, AND SECURITY INKS



METALLIC, GLITTER AND MORE

Plasticard-ZFT offers three standard metallic tones for screen printing; fine and coarse silver as well as pearl silver. The overprinting of these metallic base tones with translucent inks in offset or OSP printing can be used to achieve colours ranging from gold to bronze and through to platinum and almost any other metallic tone. On request, we are happy to provide shade cards showing the various degrees of colour possible. Transparent varnish with a glitter effect can also be implemented. All metallics can be printed either across the entire surface or in part in accordance with the layout.



NEON AND NOCTILUCENT INKS

Neon inks have a very high luminescence and draw considerable attention, even from a distance. For this reason, they are used on rescue vehicles or in advertising. On plastic cards, they can also act as security features.

Fluorescent inks, on the other hand, cannot be differentiated from a traditional full-colour ink under daylight. But they contain special pigments that save the light and slowly release it - the printed areas continue to glow in the dark.



UV-FLUORESCENT OR IR-SENSITIVE INKS

UV inks appear transparent and cannot be seen under ordinary daylight or artificial light. However, if the printed area is examined under ultraviolet light (UV-A), the printed image will light in blue, red or green. The luminescence depends on the strength and frequency of the UV light sources as well as the ink application. IR-sensitive inks can be made visible using a camera with IR light or a night-vision device. Both ink types are primarily used as security features and can be implemented using screen and offset printing techniques.



OVI® INKS (OPTICAL VARIABLE INK)

OVI inks contain pigments that differ according to the angle of observation. Under an ordinary angle, the ink will look orange, but will change to green at a flatter angle. OVI inks are particularly familiar thanks to the current €50 and the new €5 notes and cannot be copied nor reproduced using traditional printers. OVI inks are security features that can easily be checked visually without the use of aids.

SIGNATURE PANELS AND STAMP FIELDS

STANDARD SIGNATURE PANEL: TRACKS AND SEGMENTS

The writeable field on a plastic card is made up of a special, paper-like layer that you can write on using a ballpoint pen. Standard signature panels use existing tools and are preferable, especially for smaller editions. Tracks stretch from the left edge of card (landscape) whereas segments only cover rectangular partial sections.

■ Colour	White or semi-transparent		
■ Format of track (height)	8 mm	10 mm	11.5 mm
■ Format of segments	50 x 10 mm	75 x 10 mm	60 x 10 mm
■ Note	Only possible parallel to the long edge Segments may not bleed off the edge		

FREEFORM SIGNATURE PANELS

Signature panels in free formats can be freely designed both in terms of format and position.

■ Colour	White, semi-transparent or completely transparent
■ Formats	Can be freely selected
■ Note	Position can be freely selected

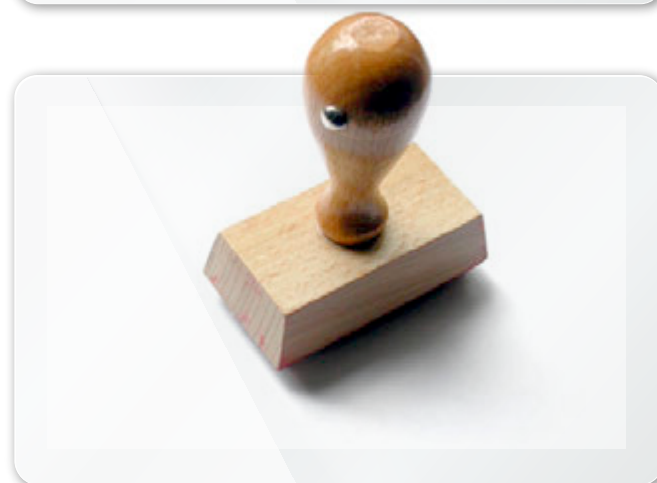
STAMP FIELD

Normal write-on field coatings can be written on using a ballpoint pen, but ordinary stamp ink will not adhere to this surface. For this purpose, Plasticard-ZFT offers a special stamp field coating. Stamp fields may be applied to the card in any format.

SECURITY SIGNATURE PANELS WITH VOID EFFECT

A security write-on field makes attempts to manipulate signatures visible. The write-on coat has an additional print that will disappear when wiped forcefully or when chemicals are applied. If the coat is removed completely, the card basis is visible exposing, for example, the word 'invalid'.

■ Colour	White, individually printed
■ Formats	Segment, track or free format
■ Note	Underpressure and printing ink freely selectable



HOT STAMPING

THE HOT STAMP IMPRINT MAKES THE DIFFERENCE.

If you are looking for something special, you can be inspired by surfaces in gold, silver, or other decorative colours. A hot stamp is applied to the surface of the card and draws additional attention. A hot stamp can be used to raise the perceived value of a card, specifically for VIP or loyalty cards. Plasticard-ZFT is happy to advise you in the design of a hot stamp and will provide the appropriate sample cards on request.

We offer hot stamping in a variety of film colours and types. For every embossed motif, a tool (printing plate) is required which is made from steel or magnesium. We will produce this tool according to task.

For the motif to have the optimum effect, a number of things must be considered. Our specialists will be happy to help you.



PSEUDO HOLOGRAMS & BLIND EMBOSING

Pseudo holograms are created by combining hot stamping with blind embossing or dual hot stamping on holographic patterned film. Pseudo holograms are used as protection to prevent copying or forgery of IDs using a card printer, but they cannot replace the use of original holograms in the event of high security requirements (see page 44).

Blind embossing refers to embossing without a coloured film. The effect is similar to that of a watermark (see page 45) and appears as a minor change in the surface of the card. Blind embossing can be combined with hot stamping and increases the uniqueness of the card.



HOLOGRAPHS

A holograph is a special form of hot stamping which comes very close to a "real" hologram. A holograph is implemented using very fine structures in a standard hot stamping film. The security level is higher than that of the pseudo-hologram. As a decorative element, the holograph attracts considerable attention and offers an exclusive recognition value.

AVAILABLE HOTSTAMPING FILMS

■ High-gloss gold	<i>SH220</i>
■ High-gloss silver	<i>Alufin Special</i>
■ Glossy white	<i>Colorit 811</i>
■ Glossy black	<i>Colorit 812</i>
■ Holographic film with patterning	<i>Konfetti</i>
■ Holographic film with patterning	<i>Laser select</i>



HOLOGRAMS & HOLO-PATCHES

CUSTOMIZED HOLOGRAMS

Holograms are commonly applied to the surface of the card. Two or three-dimensional logos, texts, graphics or photographs can be used as motifs. The production of a holo-master is a complex process and can only be implemented by a few, specially equipped companies. This results in the comparatively high level of protection against forgery. German hologram producers guarantee the exclusivity of the produced master. We would be happy to assist you in the development and production of your own hologram. Plasticard-ZFT has the machinery necessary to apply individual image holograms to cards in high quality. Holograms are stored in a vault (resistance class 3).

Alongside the individual image holograms generally created in dimensions ranging from 5 x 5 mm to 25 x 25 mm, customer-specific holograms may also be stamped as continuous motifs in a strip with a width of 3 to 10 mm. A special case scenario for a customer-specific hologram is the application under laminate. This solution offers additional protection and increased wear resistance. The main disadvantages are the incremental production costs and a more difficult application process. This form of hologram application is used primarily for sovereign documents (ID, driving license, passport).

The advantage of the use of holograms on cards is the high level of protection against forgery and the ease of verification without technical aids.

STANDARD HOLOGRAMS

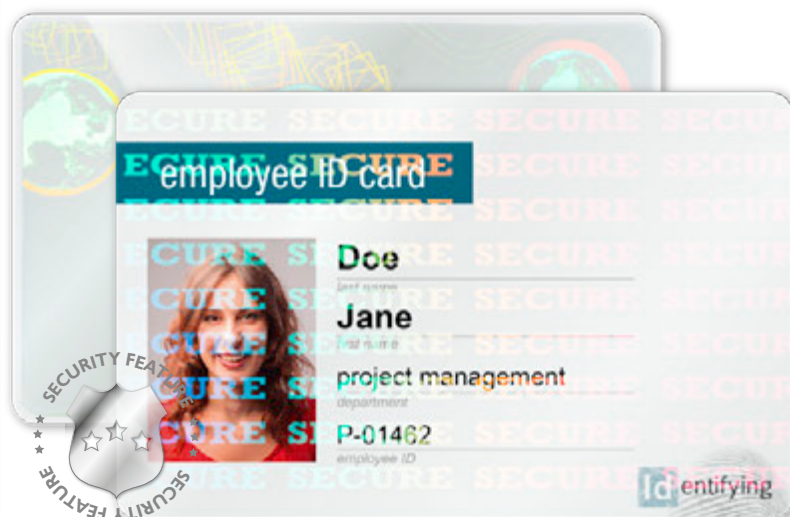
Holograms with individual customer motifs require relatively high initial costs and are thus only economically viable for large card quantities. Plasticard-ZFT offers two standard holograms with the motifs "Globe" or "VIP" for small card editions. These have all the features of a modern security hologram but are not exclusive in use.



HOLO-PATCH & HOLOGRAPHIC OVERLAY

Holographic patches or overlay films are applied to the finished personalised card. These films are transparent and contain holographic elements that are similar in nature to customer-specific holograms (see above). The holo-patch is made up of a PET film and provides the card with additional mechanical protection. Holographic films protect the printed personalisation data on the card. If an attempt is made to remove the personalisation (photo or name) and reprint, the holographic motif will be damaged. Holo-patches or overlays can also be applied by the customer. For patches, a special printer add-on ("laminator") is required, overlays can be processed using common card printers (see as of page 61). Standard motifs are available from Plasticard-ZFT for holographic patches and overlays.

STREIFEN · SICHERHEITSTREIFEN · SICHERHEITSTREIFEN · SICHERHEITSTREIFEN



GUILLOCHÉ, MICRO-TEXT, IRIS-PRINT

GUILLOCHÉ, MICRO-TEXT & IRIS-PRINT

Offset printing with a resolution of 2400 dpi is the only suitable printing method for the representation of guilloché and micro-texts. The extremely fine lines of mathematically calculated geometric forms cannot be reproduced or copied using ordinary printers, neither can the very tiny letters of a micro-text which appears to the naked eye as a line. If these detailed lines or texts also have a colour gradient, they are referred to as iris-prints. These features may also be referred to using the name rainbow printing. These printing techniques can also be employed as additional security features.



WATERMARKS

The watermark is a feature on the surface of the card. Like blind embossing, it is only visible when the card surface reflects the light. The form of the watermark can be chosen freely and is printed on the finished personalised cards.

MATTE SURFACE & PARTIAL INK

relief varnishing

MATTE LAMINATED SURFACE

Plastic cards do not need to be extremely glossy. Like automotive paint jobs, the matte surface is the special one. A matte laminated card not only appears to be of higher quality, it maintains its higher quality for longer. The value of the matte surface is emphasised by the contrast between the matte and the glossy elements. A matte finish is the basis for additional finishing options. Hot stamping (see page 43) and partial relief varnish or spot varnish (see right) are particularly well suited to this.



PARTIAL RELIEF VARNISHING

A relief varnish is a highly glossy finish with a very high layer thickness that can be adapted and applied to the layout. The varnished areas are raised considerably and, thanks to the high gloss, easy to see especially on matte laminated cards. The varnish is completely transparent and thus emphasises the layout elements printed below it. The line thickness for a relief varnish should not be lower than 1.5 mm.

PARTIAL SPOT VARNISH

Spot varnishing is the flat alternative to relief varnishing. The fully transparent high-gloss varnish is applied with a layer thickness of just a few micrometres. On laminated cards, spot varnishing is a high-quality and elegant method of surface finishing.



PARTIAL MATTE VARNISH

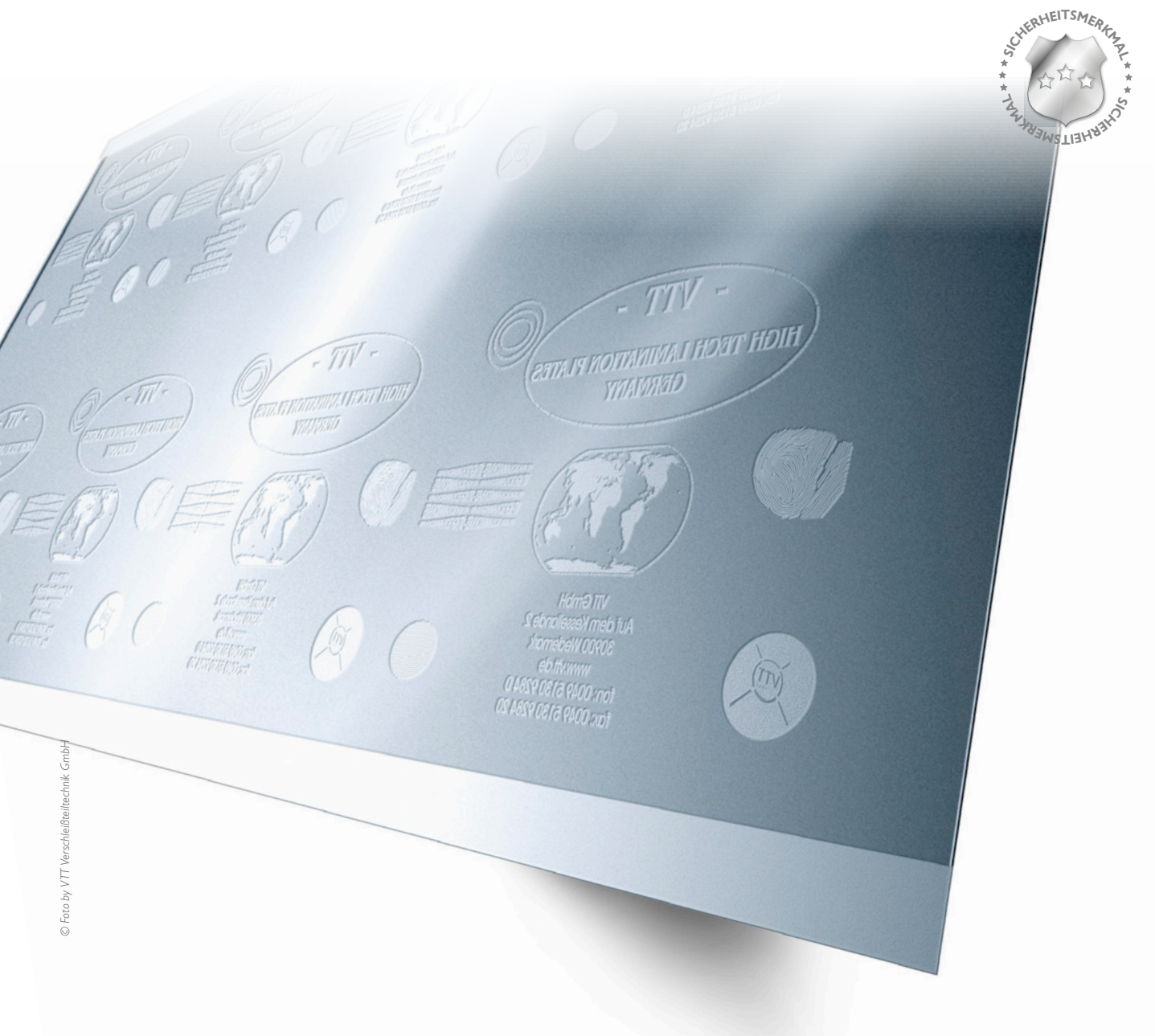
The matte effect is the counterpart to spot varnishing. A fully transparent, matte surface layer which can also be executed partially in accordance with customer requirement and layout. On glossy cards, the matte varnish is an unusual and elegant surface finishing effect.

Surface structures in laminate

The specially pre-treated lamination plates can be used to create raised and lowered structures on the surface of the card. This provides interesting optical effects and constitutes a highly effective security feature. Alongside the high-low effect, it is possible to include a switch from matte to high gloss areas. This technology is also the basis to produce MLI and CLI security elements. Since this procedure requires special lamination plates, these security elements are generally only used with very large card quantities.

POTENTIAL SECURITY FEATURES/EFFECTS

■ CLI / MLI	<i>For polycarbonate cards</i>
■ move ID	<i>For PVC cards</i>
■ Holo PHOTIC	<i>Hologram effect</i>
■ Micro-engraving	<i>Fine surface structures</i>
■ Relief	<i>High and low surfaces</i>
■ Surface structure	<i>Matte and glossy surfaces</i>



TRW ZONES, SCRATCH FIELDS, LABELS

THERMO REWRITE FOIL

TRW stripes and fields

TRW foils applied to the card surface enable a repeatable optical personalisation, deletion, and rewriting of cards. This technology makes sense specifically for products like student IDs (e.g. semester validity), visitor passes (e.g. date validity, name) or for limited or date-related authorisations (e.g. date of last training session). A special TRW card printer is required for printing and rewriting. The colour of the personalisation may be blue or black. Appropriate TRW printers can be found starting on page 61.

How often may TRW fields be rewritten?

In official information, a lifetime of 500 write-delete cycles is cited. However, this figure is rarely achieved in practice. Faulty printer settings, contamination, or too strong a UV exposure may reduce the theoretical value. Proper maintenance of the printer and the observation of usage hints are key!

Light sensitivity

Cards with TRW coatings should be protected from sunlight. The sensitive layer will go yellow under the effects of sunlight and thus quickly becomes unsightly.

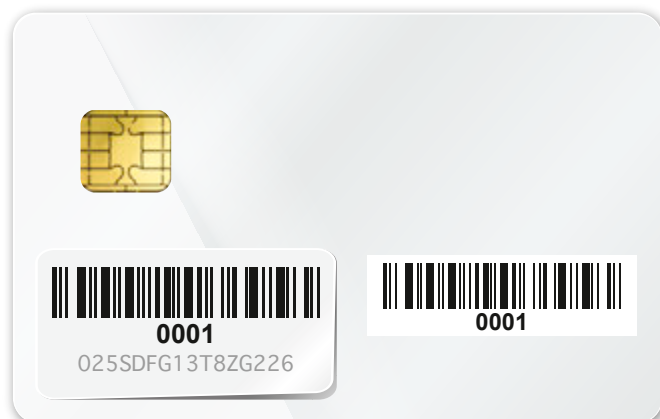
POTENTIAL TRW COATINGS

■ 10-mm stripe horizontal	Blue or black coloured
■ 20-mm stripe horizontal	Blue or black coloured
■ TRW field in free format	min. 8 x 40 mm
■ Full coverage	blue or black coloured



CARDS WITH STICKERS, LABELS OR ADHESIVE TABS

Removable stickers applied to a plastic card are a practical method of assigning card data to registration forms or other documents. Plasticard-ZFT takes on the production of plastic or chip cards with printed labels, stickers or RFID labels. On request, we will number and code these products for you (see as of page 51).



SCRATCH-OFF PANEL

Scratch-off panel cover PIN codes, license numbers, or other access data on a plastic card. This means that information can be protected, for the most part, until it reaches the final user. Scratch-off panels can be applied to cards in freely selected forms and sizes. Generally speaking, scratch-off panel are an element of personalisation services (see starting on page 51).



HOLES AND BRAILLE EMBOSSING

HOLES AND PUNCHING

A hole punched in the card is a usual method of attaching cards to holders or to clothing. The automated machine processing enables slots or holes to be punched cleanly and accurately into the card, even for large card editions.

The potential arrangements of slots or holes can be seen in the diagram. Holes in RFID cards are subject to special regulations. To attach cards to clothing, lanyards or other objects, there is a wide range of card accessories available as of page 67. Here you will also find solutions that avoid making holes in RFID cards.

Making holes in RFID cards?

The antenna running through the card represents a high failure risk when making a hole in an RFID card. If the card needs to have a hole in it, we recommend you pass this risk on to the manufacturer. We will suggest the appropriate location for the hole whilst considering the positional tolerances of the chip and the antenna and will then supply the card with the holes already made.



POTENTIAL PUNCH HOLES & PRESS CUTTING

■ 4 mm round hole	<i>Position can be freely selected</i>
■ 5 mm round hole	<i>Position can be freely selected</i>
■ Slotted hole 16 x 3mm	<i>Position can be shifted horizontally</i>

BRAILLE EMBOSSING

Barrier-free for plastic cards

Plasticard-ZFT is also able to equip your cards with Braille characters. In doing so, fixed texts as well as variable data such as a name or card number can be implemented in Braille.



SERVICES



VISUAL PERSONALISATION

From number through to photo

Only personalisation can make a card work as an ID-medium and let it become a loyalty-, customer-, or ID-card. The term "visual personalisation" covers all visually perceivable imprints of numbers, names, PIN-codes or passport photos. On this page you can find an overview of all common personalisation tasks and the suitable procedures and the used print-technologies.

Maximum individualism

You have a signature colour or font and want both to be used in visual personalisation as well? OSP-digital print makes all wished possible and provides an acceding appearance quality and durability. Ask our experts!

On the following pages those procedures will be presented in detail with regards to material applicability, durability, resolution, and safety.



PERSONALISIERUNGSAUFGABEN UND GEEIGNETE VERFAHREN

	RECOMMENDED PRINTING PROCEDURE	OPTIONS	SPECIAL FEATURES	MATERIAL REQUIREMENT
NUMBERING	Thermal transfer	Coverage with additional overlay or scratch field		Standard PVC cards HT cards
	Laser engraving		Not possible on standard cards, laser-capable overlay is required	PVC cards, HT cards with laser-capable overlay
	Inkjet	Coverage with additional scratch field option	Also available for large quantities, particularly cost-effective	PVC, varnished cards, PET-G
BARCODE	Thermal transfer	Coverage with overlay		Standard PVC cards HT cards
	Laser engraving		Not possible on standard cards, laser-capable overlay is required	PVC cards, HT cards with laser-capable overlay
	DoD		Also available for large quantities, high resolution possible	All surfaces
NAME AND NUMBER	Thermal transfer	Coverage with overlay or holographic film		Standard PVC cards HT cards
	Embossing	With colouring in different colours	Considerably more raised, tactile letters, also available in Braille embossing, capitals only	Standard PVC cards HT cards
PASSPORT PHOTO, NAME AND NUMBER	Dye sublimation	Coverage with holographic film or patch	No bleed-off possible	Standard PVC cards HT Card 70
	Retransfer	Coverage with holographic film or patch	Can also be implemented with logo and background motif, bleed-off edge possible	Standard PVC cards HT cards
	Laser engraving	Greyscale photo possible	Not possible on standard cards, laser-capable overlay is required	PVC cards, HT cards with laser-capable overlay
LOGO, PHOTO, NAME AND NUMBER	OSP (digital printing, see page 38)	Lettering can be implemented in special inks	Layer of personalisation under the overlay	Standard PVC cards, HT cards

PERSONALISATION PROCEDURES

Printing, embossing, laser engraving – Procedures for visual personalisation

Plasticard-ZFT offers almost all the common personalisation options:

- Thermal transfer printing
- Dye sublimation printing
- Retransfer printing
- Embossing
- Laser
- Inkjet and DoD
- Sub-surface digital printing (under laminate)

Each procedure has specific properties that match up with particular requirements. You have the option of implementing the personalisation yourself, on site (for printers, see starting on page 61) or making use of the service provided by Plasticard-ZFT (see page 54).



OVERVIEW OF ALL PRINTING PROCEDURES

	PRINT ART CHROMATICITY	AVAILABLE (FILM) COLOURS	SPECIAL FEATURES	PRINT RESO- LUTION	DURABILITY/ RESILIENCE
THERMAL TRANSFER PRINTING (TTP)	Printing on laminate, monochrome	<ul style="list-style-type: none"> • Black, white • Red, blue, green • Gold, silver • Transparent overlay • Holographic overlay • Scratch field film 	<ul style="list-style-type: none"> • Good print quality • No bleed-off possible • Scratch-off panel may also be applied 	300 dpi	<ul style="list-style-type: none"> • Black – good durability • Other colours – medium • For heavy loads, additional overlay print is recommended
DYE SUBLIMATION PRINTING (DSP)	Print on laminate, Coloured Black	<ul style="list-style-type: none"> • Fully coloured, including transparent overlay 	<ul style="list-style-type: none"> • Good print quality, • No bleed-off possible 	300 dpi	<ul style="list-style-type: none"> • With printed overlay – good • With patch – very good
RETRANSFER PRINTING (RTP)	Print on laminate, Coloured, black	<ul style="list-style-type: none"> • Fully coloured • Including transparent overlay 	<ul style="list-style-type: none"> • Good print quality • Bleed-off edge printing possible • Tolerates small undulations in the card, e.g. the rear of chip modules 	300 dpi	<ul style="list-style-type: none"> • Good durability • With patch – very good
LASER ENGRAVING	Engraving into laminate, monochrome	<ul style="list-style-type: none"> • Grey/black 	<ul style="list-style-type: none"> • Special overlay required • Forgery-proof • Greyscale images also possible 	2400 dpi	<ul style="list-style-type: none"> • Very good durability, suitable for heavy loads
EMBOSSING	Embossing through laminate, monochrome or without colouring	<ul style="list-style-type: none"> • Black, white • Red, blue, green • Gold, silver 	<ul style="list-style-type: none"> • Considerably more raised letters possible in one font only • Only capitals and numbers • Limited number of characters • Braille option available 	Fixed character set	<ul style="list-style-type: none"> • Colouring may wear off due to heavy use • Embossing cannot be reversed, thus very good durability
SUB-SURFACE DIGITAL PRINTING	Print under laminate, Coloured	<ul style="list-style-type: none"> • Fully coloured, special inks, Pantone or HKS possible 	<ul style="list-style-type: none"> • Very good print quality • Maximum quantity of 1000 cards, suitable for all special formats 	1440 dpi	<ul style="list-style-type: none"> • Very good durability • Suitable for heavy use
INKJET PRINTING	Print on laminate, monochrome	<ul style="list-style-type: none"> • Print with liquid ink, black 	<ul style="list-style-type: none"> • Solvent ink • Very productive, cost-effective • Print quality medium to good 	120 dpi	<ul style="list-style-type: none"> • Ink penetrates the card surface • Good adhesion • Medium resilience
DOD	Print on laminate, monochrome	<ul style="list-style-type: none"> • Print with liquid ink, black 	<ul style="list-style-type: none"> • UV drying • Tactile • Very productive • Print quality good to very good 	Up to 600 dpi	<ul style="list-style-type: none"> • Good adhesion, can only be removed using tools

Reading and writing bits and bytes to data carriers

Corresponding to optical personalisation, coding must be applied to all writable ID-media. For every data carrier and for every application there are usually specific encoding requirements which are necessary prerequisites for successful encoding and proper operation in your system. Modern multi-functional cards require, for example, access data, IT access, payment, ticketing, time management facilities and many more. These are accompanied, depending on the security requirements, by various encryption technologies. Plasticard- ZFT has the secure IT environment and the experts to help you solve any coding task.

Installing and writing virtual data carriers

Processor chips often have the option of installing/activating additional functions via the ISO 14443 interface by way of emulation or an applet. In this way, the various MIFARE® and/or LEGIC advant® functionalities can be programmed and utilised. When selecting the appropriate chips, we will be happy to advise you (see Combi and Hybrid-cards). Under certain circumstances, the smartphone can be a carrier of an encoding and transmit this code to a ready by the help of an NFC-interface. For this you can also receive support and the matching services at Plasticard-ZFT.

Test samples prior to each job

You will always receive a sample before your order is encoded for the first time. We only start encoding when we have your approval.

OVERVIEW

	MEMORY CAPACITY	SPECIAL FEATURES	APPLICATIONS
BARCODE	1-D code up to approximately 20 characters 2-D code several thousand, depending on barcode type (numeric and/or alphanumeric)	Fix code Various code types in use (e.g. EAN 8, EAN 13, 2/5i, Code 39, QR code)	Customer cards ID cards Business cards Voucher cards
MAGNETIC STRIPE	3 tracks can be used Track 1: 76 (alphanumeric) Track 2: 37 (numeric) Track 3: 104 (numeric)	Write-read memory Norm in accordance with ISO 7810 ff.	Customer cards ID cards
CONTACT CHIP (MEMORY)	256–65536 characters Depending on chip type	Write-read memory (EEPROM)	Insurance cards Telephone or customer cards (without debit function)
CONTACT CHIP (MEMORY WITH SECURITY LOGIC)	256 – 1024 characters Depending on chip type	Write-read memory (EEPROM)	Debit cards Insurance cards
PROCESSOR CHIP (CONTACTLESS OR CONTACT)	Up to 800 kbytes Depending on chip type	Write-read memory (EEPROM), Security logic, processor architecture, data areas for multiple application can be separated out, access protection by way of symmetric/asymmetric encryption procedures	Stored value cards High-security ID cards GSM modules PKI, SSO
RFID-CHIP	bis 8 KByte je nach Chiptyp	Schreib-Lese-Speicher (EEPROM), Sicherheitslogik, Prozessorarchitektur, Datenbereiche für mehrere Anwendungen abgrenzbar, Zugriffsschutz mittels symmetrischer / asymmetrischer Kryptoverfahren	Werksausweise Mitgliedskarten Kundenkarten, Geld- und Wertkarten Hochsicherheitsausweise

MAILING & DISPATCH



FEATURES

- Attaching the cards to the letter sheet
- Folding, insert into DIN long to C4 envelopes
- data reconciliation
- Addition of attachments and enclosures
- Franking and posting
- Generation of PIN correspondence



Card mailings are available even for small quantities

As an issuer, how do you get your cards/IDs to the card-holder? The dispatch of a customer card to the end user or the transfer of a company ID to an employee in a sealed envelope is the professional method. At the same time, this gives you the opportunity to include a variety of additional information for the recipient in a letter or in enclosed documents. Plasticard-ZFT offers a full service for the dispatch of your cards. On request, dispatch in boxes for subsequent distribution in-house is also possible. The compliance with the EU-GDPR with regards to data protection and job processing as well as the use of a secure IT environment are something we consider to be a matter of course. On request, we will make all the necessary information available to your data protection officer. Our mail processing systems are capable of handling automated mailing jobs as of 50 letters and up to more than 50,000 items/week.

Our letter shop and dispatch services

- Printing and personalisation of letters in DIN A4 format with 80 to 105 g/m² (other weights available on request)
- Comparison and labelling the cards, putting into DIN-long-sized window envelopes
- Franking and dispatch directly to the card owner
- Dispatch to the ordering party, subsidiaries or other distributors
- Creation and dispatch of associated PIN correspondence
- Production and dispatch of additional objects, e.g. token, product samples or gift items
- Production of additional enclosures
- Wrapping into gift packaging (e.g. boxes)
- Optimisation of mail costs
- Handling Post-Ident procedures
- Processing according to agreed SLA's (e.g. according to date, daily, weekly, or according to volume thresholds, as of 50, 100 etc.)

CARD-MANAGEMENT-SYSTEMS

What are card-management-solutions needed for?

Companies with more than 50 employees commonly issue ID-cards and key tags for access control and/or time logging. Thereby, the question of how these media can be administrated and produced in accordance with the EU-GDPR arises immediately.

What does Card-Management-System mean?

Modern ID-card-Management solutions can contain the following solutions:

- ID-card application
- Passport photo creating, collection and management
- ID-card approval
- History management
- Assignment and withdrawal of permissions
- Secure ID-card distribution
- Secure retraction of ID-cards and their disposal



WHICH SOLUTIONS ARE AVAILABLE?

	SOLUTION PRINCIPLE	ADVANTAGES	DISADVANTAGES
1	ID-card printer with card printing software (see page 61)	Easy, quick, inexpensive	Just basic functions possible e.g. data collection, card printing, possibly data import and export
2	Standard-CMS*	Easy, quick, relatively affordable	Wanted functions are potentially unavailable
3	Customized CMS	All customer wishes, including interconnections with existing solutions, are possible	Wanted functions are potentially unavailable
4	CMS integrated in HR-system**	Direct management of all ID-card data in HR-module, easy to handle	Very expensive, especially with special demands
5	Portal oriented, rentable solution online, e.g. Karten-depot 2.0	Small investment, quick access, easily scales for spread structures	Limited functions

*CMS: Card-Management-System

**HR-system: human resource management, part of modern ERP-systems, e.g. SAP, Oracle

How do I find the right solution for me?

That depends on the size of your company/project. To gain a first impression, Plasticard-ZFT is happy to advise you.

For options 1 and 5, you can find further information in this catalogue.

For options 2 and 4, we advise to consult specialist providers of such systems or other advisors. We are happy to facilitate contact with a suitable provider.

Who prints my ID-cards?

If using a CMS, the choice is yours: The ID-cards can be personalised visually and electronically with a card printer right on site. Is this technically and organisationally too difficult, you transmit the data to an external contractor. Plasticard-ZFT, for example, already has connection to many available systems on the market.

WEB-BASED ID CARD ISSUANCE



ADVANTAGES

- ID cards and ID card accessories can be ordered
- Delivery possible within 24 hours
- Processing of order data in accordance with EU-GDPR
- Europe-wide distribution, e.g. to subsidiaries
- SAP interface

Card personalisation without a printer

Do you want to save money when it comes to the issuing and logistics of ID production? Why not use Plasticard-ZFT as your external service provider! We offer either a browser-supported ID order and management system or an interface to your existing card management system, as required. A direct import from the SAP HR module is also possible. If you have any questions regarding the security of your data, you can find out more about the topic of order data processing and data protection on page 75. If you wish so, we provide you with the contract for Order-Data Processing and our technical-organisational measures. Ask for our references and a customised solution for your task.

Kartendepot 2.0 (card depot)

Kartendepot 2.0 is an online ordering system that allows customers to order a wide range of personalised ID media (ID cards, tokens, labels, letter shop etc.) and accessories with a little effort. The products we have stored in our warehouse can be created, managed and ordered online. This system can also be used to map specially adapted reseller or central depots for direct use by final customers or individual branches. Ask us, we would be happy to advise you.

(More regarding our online-shops on page 74)

(More regarding Card-Management-Systems on page 55)

What is a card depot?

At Plasticard-ZFT, pre-produced ID card blanks are stored in a secure warehouse. To call off personalised ID cards, you will be supplied with one or more exclusive accesses to the online order system. You may order as many blank versions (employee, visitor, external staff, replacement IDs etc.) and as many versions of the personalisation as you require. As a user, you can manage your accesses, authorise new ordering offices and people and set transfer prices. The history of ID-cards and orders will be displayed transparently. We would be happy to show you further details in a live demonstration.

Kartendepot 1.0 (card depot)

The portal www.kartendepot.de has been online for more than 10 years and has proven successful with a smooth and secure ordering process. Since 2013, the second stage Kartendepot 2.0 is online for customers with more complex needs.

Card depot = card shop = Card-Management-System?

The solution Kartendepot is not a shop system and not a Card-Management-System! The online-portal Kartendepot is designed to fit the complex needs of order-data processing and is accessible for the person ordering the ID cards 24/7. An order access is exclusive and requires the closing of a personalisation contract.

Compared to the Card-Management-System, this solution depicts only a part of the possible functions (see page 55). We are happy to advise you which solution fits your demands.



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From order to disposal – securing the whole life-cycle of an ID card

Application for an ID card, approval, data collection, ID card print and programming, handover to the employee, notice of loss and breakage, withdrawal, and disposal are processes which can be summed up under the term "ID card logistics".

All parts of this process require a lot of control with regard to the size and structure of the company, the required security level, and the complexity of the used ID cards (or key tags, tokens, smartphones).

Ideally, those tasks are depicted in a Card-Management-System (CMS, see page 55).

For the practical realisation of those tasks, questions regarding suitable contractors providing the packaging, customs clearing, and shipping to all branches, corporation plants, or even single employees.

The same thought strikes when thinking about decentralised structures with ID card stations all over the world which have to be provided with fitting ID card blanks. However, with the necessity of processing person related data.

Plasticard-ZFT offers its own experience and suitable solutions which can be tailored for the customers' purpose for both challenges. Yet it is unimportant which systems are used by the user.

When working with CMC and personalised ID cards, a suitable bidirectional interface is a prerequisite for a functional solution. Card data are sent, and receipt data for the successfully created ID cards and sent packages are received.

Plasticard-ZFT keeps a solely browser-based ordering system for person related media available if the world-wide installation of CMS-software is not possible or wished for. Shipping to certain locations can also be carried out with pre-confectioned letters. In Germany and other selected countries, it is possible to ship single letters to individual employees.

Plasticard-ZFT offers a tested shop-solution for whit-cards, numbered and pre-encoded cards, or pre-printed card blanks – if wanted even with number range management.

Ask for our references!

LAYOUT & PRINTING



LAYOUT, DATA AND DESIGN

Our services at a glance

Creating your design

Plasticard-ZFT employs its own designers and will be happy to take on the task of designing your card or other print products.

Processing your print data

Our pre-printing facilities can process your layout data, regardless of the data format you send us. All the data is checked prior to production and adapted as required in agreement with you.

Saving of data for subsequent orders

Plasticard-ZFT stores your layout data safely so that you can re-order, even years later.

Restoration of print data on the basis of sample cards

You want to reorder, but you no longer have the print documentation? Plasticard-ZFT takes on the task of re-digitalisation of plastic cards on the basis of existing samples. We will reproduce your template and match the appearance with the original card.

Determination and adaptation of printing colours

Plasticard-ZFT prints according to your colour specifications. Supplied templates or objects can be determined colorimetrically and implemented on a plastic card.

Colour management

We use a fully standardised ISO colour profile. If your data has its own profile, it will be maintained and implemented accordingly.

PRINT APPROVAL

Flexible processes for every customer desire

Approval on the basis of galley proofing

Prior to production a galley proof ("good for printing") will be created and provided in ODF format. Only when the document has been approved will we begin producing your order.

Online approval

You can upload your print data via our web shop and will immediately receive an evaluation regarding the print-capabilities along with a PDF view of the product. The approval is carried out online in the order process.

Approval with sample card

For digital printing jobs (OSP), you will receive a printed sample within 24 hours for approval (a functional sample is also available, on request). The layout and processing correspond 100% to the subsequent run.

Proof for checking colours

For offset printing in CMYK, we will provide you, on request, with a digital proof that can be used to check the accuracy of the colours. This colour-binding proof is a cheaper alternative to a test print.

Approval by test print

In the event of cost-intensive orders, we recommend ordering a test print.

Print approval at the printer

Particularly difficult colour mixtures must, under certain circumstances, be evaluated and corrected directly at the machine. If necessary, you can arrange an appointment for on-site viewing with subsequent approval.

Order without approval

For repeated orders, we will create a technical drawing in our item directory. You will be able to order on the basis of an item number and we will be able to produce on the basis of the stored drawing without needing to obtain renewed approval.

Galley proofs for resellers

Plasticard-ZFT provides resellers with galley proofs in a neutral design. For regular customers, we are happy to provide you with galley proofs in your company design so that you are able to quickly and simply send these on to your customers.

RESEARCH & DEVELOPMENT

Research & Development as a service

For years, Plasticard-ZFT has been investing in establishing its own competences for research and development. We concentrate our energy on developments in the RFID product and card materials sectors. When it comes to technology, our focuses are production technology and IT processes. We consider the wishes and requirements of our customers to be a challenge. And research and development are our passion. On this page we show you some of our current projects.

Student ID-cards with display working without battery!

With the innovative student ID-card "Multipass", we – in cooperation with a university, a Fraunhofer-institute, and other partners from the industry – took on a big challenge. We are looking for a card meeting ISO standards and containing a display that can show a programmed validity (e.g. student ticket). The card should also qualify for granting access to, student services, library, and coffee machines. A battery is not supposed to be used. Let yourself be shown a proto-type and be amazed by the opportunities of this technology.



The new key tag turns smart!

More and more readers and door locks can understand Bluetooth signals (BLE). Thus, every smartphone can become a key. The new BLE-tokens will be available and can emulate ISO14443-technologies like MIFARE DESFire® or LEGIC®. With the BLE-signal transmission, convenience solutions (Hands Free) are possible just like wide area functions within the whelm of the BLE-range.

Material research practical: sustainable solutions are en vogue

Sustainability has many aspects. The developments, which Plasticard-ZFT conducts together with institutes and economic partners, either aim for a direct ecological improvement or an indirect effect by prolonging the life-cycle of a card. Some outcomes of this research are for example:

- **HT-Card 100**
ID cards made from this composite material have a lifetime of 10 years and can withstand temperatures of up to 100°C. Besides this broadening of the range of usage the longer lifetime compared to PVC-cards is the vital advantage
- **Chipcards made from wood and cardboard**
The ecological advantage compared to plastics is obvious. The challenge was to equip those cards with the advantages that are commonly just offered by the plastic card. This includes the applicability of common card printers and the use of magnet stripes or chips.

New IT-processes

In recent years, nearly all projects were realised with an intensive engagement from our IT-department. Data exchange, data creation and provision are a foundation of the realisation of effective services.

Web-based shop and ordering systems like www.kartendepot2.de or www.ausweiskarte24.de offer services reaching from simple card purchases to personalisation according to EU-GDPR. The development or adaption of ordering-interfaces to fit customers' needs is another field of action. This includes the inclusion of Trust-Centres in personalisation processes.

We are looking forward to your enquiries!

CARD PRINTERS



DYE SUBLIMATION & THERMAL TRANSFER PRINTERS

MAGICARD RIO PRO 360

- Direct printer for monochrome thermal transfer & 4-colour dye sublimation printing
- Erases & re-writes TRW-fields (double-sided possible)
- Printing of Holokote security water signs possible
- Suitable for small, medium & large quantities
- Print driver Windows XP, VISTA, 2003 Server, Windows 8, 10 32 Bit/64 Bit, Mac OS X 10.9 upwards, Linux

Options:



Standard:



MAGICARD ENDURO 3e

- Direct printer for monochrome thermal transfer & 4-colour dye sublimation printing
- Erases & re-writes TRW-fields (double-sided possible)
- Printing of Holokote security water signs possible
- Suitable for small & medium quantities
- Print driver Windows XP, VISTA, 2003 Server, Windows 8, 10 32 Bit/64 Bit, Mac OS X 10.9 upwards, Linux

Options:



Standard:



SMART 30

- Direct printer for monochrome thermal transfer & 4-colour dye sublimation printing
- Suitable for small quantities
- Print driver Windows 7, 8, and 10 (32/64 Bit), Mac OS X 10.6 upwards, Linux

Options:



SMART 51

- Direct printer for monochrome thermal transfer & 4-colour dye sublimation printing
- Suitable for medium quantities
- Print driver Windows 7, 8, and 10 (32/64 Bit), Mac OS X 10.6 upwards, Linux

Options:



DYE SUBLIMATION & THERMAL TRANSFER PRINTERS

ZEBRA ZXP SERIES 3

- Direct printer for monochrome thermal transfer & 4-colour dye sublimation printing
- Suitable for small quantities
- Print driver Windows Server 2003, 2008, XP, Vista, 7, 10
- Options:



DATACARD SD 260 (SINGLE) / 360 (DUAL)

- Direct printer for monochrome thermal transfer & 4-colour dye sublimation printing
- Suitable for small quantities
- Print driver Windows Server 2003, 2008, XP, Vista, 7, 8, 10
- Options:



Standard:



ZEBRA ZXP SERIES 7

- Direct printer for monochrome thermal transfer & 4-colour dye sublimation printing
- Suitable for small and medium quantities
- Print driver Windows Server 2003, 2008, 2012, Windows XP, Vista, 7, 8, 10
- Options:



Standard:



DATACARD SD 460

- Direct printer for monochrome thermal transfer & 4-colour dye sublimation printing
- Suitable for medium and large quantities
- Additionally, one-sided and two-sided lamination possible
- UV-fluorescence print
- Print driver Windows Server 2003, 2008 XP, Vista, 7, 8, 10
- Options:



Standard:



RETRANSFER PRINTERS



XID 8300 / IDP 8400I

- Retransfer printer for frameless colour print
- One-sided print
- Suitable for medium and large quantities
- Encoding Framework, Admin-Centre
- Print driver Windows 2000, XP, Vista, 7, 8

Options:

Standard:



XID 8600

- Retransfer printer for frameless colour print
- One-sided print
- Suitable for medium and large quantities
- Encoding Framework, Admin-Centre
- Print driver Windows 2000, XP, Vista, 7, 8

Options:

Standard:



HID FARGO HDP8500

- Retransfer printer for frameless colour print
- One-sided print
- Suitable for medium and large quantities
- Print driver Windows 2000, XP, Vista, 7, 8, 10 (32/64bit)

Options:



TRW & XXL PRINTERS

SMART RE-WRITE

- Erases and re-writes TRW-fields
- One-sided print
- Suitable for small and medium quantities
- Print driver Windows 7, 8, 10 (32/64bits), MacOS X from version 10.6, Linux

Options:



EVOLIS TATTOO RW

- Erases and re-writes TRW-fields
- One-sided print
- Suitable for small and medium quantities
- Print driver Windows XP, Vista, 7

Options:



Standard:



XL8300

- Cards in 124 x 85,6mm format
- Retransfer print and 4-colour thermotransfer print
- One-sided print
- Suitable medium and large quantities
- Print driver Windows 7, 8, 10 (32/64bits)

Options:



Standard:



MAGICARD RIO PRO XTENDED

- For ISO cards and cards in 140 x 54mm format
- Direct printer for monochrome thermal transfer & 4-colour dye sublimation printing and TRW
- Printing of Holokote security water signs possible
- Suitable for small, medium & large quantities
- Print driver Windows XP, VISTA, 2003 Server, Windows 8, 10 32 Bit/64 Bit, Mac OS X 10.9 upwards, Linux

Options:



Standard:



PRINTING ACCESSORIES

		DATA CARD SD 260 / SD 360	DATA CARD SD 460	EVOLIS TATTOO RW	HID FARGO HDP8500	MAGICARD ENDURO 3E	MAGICARD RIO PRO 360	MAGICARD RIO PRO XTENDED	SMART 30	SMART 51	SMART RE-WRITE	XID 8300 / IDP 8400I	XID 8600	XL8300	ZEBRA ZXP SERIES 3	ZEBRA ZXP SERIES 7
INK RIBBONS																
Black	■	✓	✓	–	✓	✓	✓	✓	✓	✓	–	–	–	–	✓	✓
YMCKO	■ ■ ■ ■ ■	✓	✓	–	✓	✓	✓	✓	✓	✓	–	✓	✓	✓	✓	✓
White	□	✓	✓	–	–	✓	✓	✓	✓	✓	–	–	–	–	✓	✓
Gold	■	✓	✓	–	–	✓	✓	✓	✓	✓	–	–	–	–	✓	✓
Silver	■	✓	✓	–	–	✓	✓	✓	✓	✓	–	–	–	–	✓	✓
Scratch field	■	✓	✓	–	–	✓	✓	✓	✓	✓	–	–	–	–	–	✓
Red, green, blue	■ ■ ■	✓	✓	–	–	✓	✓	✓	✓	✓	–	–	–	–	✓	✓
Holographic overlay		–	✓	–	–	–	–	–	–	–	–	–	–	–	–	–
Clear Patch laminating film		–	✓	–	✓	–	–	–	–	–	–	✓	✓	✓	–	✓
Holographic laminating film		–	✓	–	–	–	–	–	–	–	–	–	–	–	–	–
MAINTENANCE																
Cleaning cards		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cleaning set		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Printhead		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ID CREATION SYSTEM																
Overall package		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

✓ yes/available – not available



CARD ACCESSORIES



BADGE HOLDERS

Article 16.06.0019

Holder for 1 card, without fastening bar

- With thumb sliding slot
- Very space-saving
- Polycarbonate, matte/rough
- Milky-transparent
- Landscape format 63 x 90mm



Article 16.06.0021

Holder for 1 card without fastening bar

- Thumb sliding and recessed grip
- Very space-saving
- Integrated card brake
- Polycarbonate, matte/rough
- Milky-transparent
- Landscape format 58 x 90mm



Article 16.06.0001

Holder for 1 card, with fastening bar

- Thumb sliding and recessed grip
- Fastening bar with slotted hole
- Integrated card brake
- Polycarbonate, matte/rough
- Milky-transparent
- Landscape format 63 x 90mm



Article 16.06.0022

Holder for max. 2 card glass-clear, with fastening bar

- Thumb sliding and recessed grip
- Fastening bar with Euro punching
- Polycarbonate, matte/rough
- Clear-transparent
- Landscape format 63 x 90mm
- Also available in portrait format, 16.06.0023



Article 16.06.0012

Holder for 1 card in portrait format

- With thumb sliding thumb
- Fastening bar with slotted hole
- Polycarbonate, matte/rough
- Milky-transparent
- Portrait format 58 x 90mm
- Also available for two cards



Article 16.06.0024

Holder for 1 card with card extractor

- With recessed grip
- Card extractor
- Fastening bar with slotted hole
- Integrated card brake
- Polycarbonate matte/rough
- Milky-transparent
- Landscape format 63 x 90mm
- Also available for 2 cards, 16.06.0025



Article 16.06.0020

Holder for 1 card

- With thumb slot
- Fastening bar with slotted hole
- Integrated card brake
- Polycarbonate, matte/rough
- Milky-transparent
- Landscape format 63 x 90mm



Article 16.06.0026

Rigid card holder for max. 2 cards

- Horizontal and vertical fastening bar with slotted hole
- Polycarbonate matte/rough
- Milky-transparent
- Landscape format 63 x 100mm
- Can only be opened by the key (Art-Nr. 16.06.0027)



Article 16.06.0028

Card box for 1 mini-card

- Resealable
- For card format 50 x 25mm
- Fastening bar with slotted hole
- ABS smooth/high-gloss
- Clear transparent
- Portrait format 64 x 34mm



Article 16.06.0027

Key for Rigid card holder

- For opening rigid card holder (Art-Nr. 16.06.0026)
- Red, matte/rough



CARD CASE

Artikel 16.06.0029
Card case for 1 card

- Thumb sliding and recessed grip
- Very space-saving
- PVC hard-foil, glossy
- Clear-transparent
- Landscape format 58 x 90mm



	Design	Art.-Nr.
<input type="checkbox"/>	matte, white	16.06.0030
<input type="checkbox"/>	matte, transparent	16.06.0031
<input type="checkbox"/>	glossy transparent	16.06.0032

Artikel 16.06.0003
Vinyl card holder landscape format

- Foil holder made from soft-PVC
- High-gloss
- Landscape format 63 x 90mm
- PLEASE NOTE: The holders are not suitable for long term use due to the contained plasticisers


Artikel 16.06.0002
Vinyl card holder portrait format

- Foil holder made from soft-PVC
- High-gloss
- Portrait format 110 x 66mm
- PLEASE NOTE: The holders are not suitable for long term use due to the contained plasticisers


INDIVIDUAL CARD HOLDERS MADE FROM CARDBOARD OR PVC

Imprinted card holders made from cardboard or PVC are an additional advertising and information surface. The cardboard version is an environmentally friendly alternative to plastic holder consists of high-quality illustration printing cardboard and is available in three standard versions as slipcase or swing-up. Both materials are an attractive packing for customer cards, voucher cards, or as a protective cover for check cards. The paper case is the ideal companion for key cards in hotels.

Customised PVC card holders

- Individual printing according to customer
- Optional thumb sliding and recess grip
- Further version on request
- PVC-hard foil, matte or glossy
- Landscape format 58 x 90mm






Customised cardboard card holders

- Individual printing according to customer
- Slipcase and swing-up
- Environmentally friendly made from cardboard



Yoyo with belt clip










- Belt clip
- With metal plate
- Textile reinforced press stud flap
- For cards/holders with slotted holes
- Round, ø3cm, different colours
- Nylon string

Colour	Art.-Nr..
 White	16.06.0007
 Blue	16.06.0008
 Black	16.06.0006
 Red	16.06.0036



Yoyo with Clip

- Metal case and integrated clip
- Textile reinforced press stud flap
- For cards/holders with slotted hole
- Oval, 3,5 x 5,5cm, different colours
- Nylon string

Colour	Art.-Nr..
 Yellow transparent	16.06.0040
 Orange transparent	16.06.0041
 Red transparent	16.06.0011
 Pink transparent	16.06.0042
 Violet transparent	16.06.0043
 Blue transparent	16.06.0010
 Green transparent	16.06.0013
 Black transparent	16.06.0044
 White transparent	16.06.0009



Artikel 16.06.0037 Metal-yoyo with belt clip

- High-quality metal-yoyo
- With belt clip
- Textile reinforced press stud flap
- For cards/holders with slotted holes
- Round, ø3cm, silver shining
- Nylon string






Artikel 16.06.0015 Metal-yoyo with steel string

- High-quality metal-yoyo
- With belt clip
- For cards/holders with slotted holes
- Round, ø 4cm, silver high-gloss
- Steel string with long lifetime



Yoyo with clip and additional belt clip

- Metal case and integrated clip
- Textile reinforced press stud flap
- For cards/holder with slotted hole
- Additional belt clip
- Oval, 3,5 x 5,5cm, different colours
- Nylon string

Colour	Art.-Nr..
 White transparent	16.06.0016
 Blue transparent	16.06.0017
 Black transparent	16.06.0018



CLIPS AND LANYARDS

Article 16.06.0033

Self-adhesive crocodile clip

- For gluing onto card surface
- Additional safety pin



Article 16.06.0005

Metal clip

- Milky-transparent flap
- Plastic press stud
- For cards/holder with slotted hole



Article 16.06.0004

Metal clip textile reinforced

- Textile reinforces flap
- Metal press stud
- For cards/holders with slotted hole



Article 16.06.0014

Power-magnet for security ID-cards

- Self-adhesive back side
- Strong magnetic effect
- Material-protecting
- PLEASE NOTE: Do not use on cards with a magnetic stripe!



Card gripper made from plastic

- Grip profile made from silicone
- High traction forces up to 2,25kg
- For card without holes
- 17 x 55mm, black and white



Colour	Art.-Nr.
<input type="checkbox"/> White	16.06.0035
<input checked="" type="checkbox"/> Black	16.06.0034



LANYARD AS AN ID CARD HOLDER

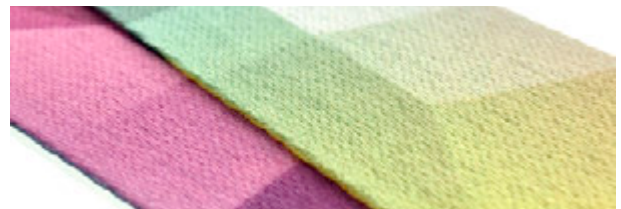
Name tags and ID cards are more and more often carried on lanyards. The advantage is obvious: The cards can easily be seen and due to the simple hanging around the neck very gentle on the clothing. Besides the easy handling, the lanyard can also be an advertising surface. Plasticard-ZFT offers both colourful versions and customised lanyards.

Solid and Secure

The simple hanging of the card on the lanyard results often in the card being subjected to strong mechanical strains, e.g. because of buttons, or zips on the clothing, or objects in the work environment. To protect your card and the potentially included data carriers we advise you use card holders. Plasticard-ZFT supplies those on demand with holes so that punching the cards will be unnecessary. All versions of card holders can be found as of page 67.

Photo print lanyards

- Full bleed prints possible
- Long lifetime of print image
- Print in 4-colour CMYK or special colours
- Double-sides print possible
- Extra soft haptic for higher wearing comfort
- Material: polyester, breadth 15mm, 20mm, or 25mm



Silkscreen print lanyards

- Very clear and sharp print image
- Up to 4-colours silkscreen printing in special inks
- Lanyard colour can be chosen (according to Patron C)
- Breadth 15mm, 20mm, or 25mm



Optional features

- Carabiner
- Safety clip in the neck area
- Plastic clip to take off the front part

FLYERS, CARRIERS & PACKAGING

PACKAGING FOR POS SYSTEMS

Plastic cards at the Point of Sale

Packaging for check-out areas and POS displays have a Euro slotted hole so that they can easily be mounted to an advertising display. POS card carriers, best suited to POS systems, are simple holders made from cardboard or strong film material onto which the card is attached, or into which it is integrated. The shape and size of the carrier is completely individual to the customer, ensuring that they fit into the intended POS display and plenty of space is left to accommodate the Euro slot. There are numerous finishing options, e.g. hot stamping, partial spot varnishing, or metallic inks available to draw the attention of the customer to your cards. Folded edges, cut-outs, perforations, and fold-out sides can be implemented as well. A card carrier offers you the opportunity to include numerous pieces of information and advertising with the card and to position this directly in the field of vision of the customer.

FLYERS AND CARD CARRIERS

Present, don't hide!

Particularly in the loyalty, bonus card, or gift/voucher card sectors, it is a good idea to present the card on a flyer or carrier. Depending on the desired format, information regarding how to use the card, or the bonus system, or the well-wishers of the sender may be included. Flyers or carriers can be individually printed and decorated with optional finishing, they also draw attention to themselves and help give business a boost. The card itself can be secured by an adhesive dot or by insertion into a slot.

GIFT CASES AND BOXES MADE FROM METAL, PLASTIC OR WOOD

Alongside the numerous finishing variations, the packaging of the plastic card itself can also add value. Often an attractive packaging is the deciding factor when it comes to the purchase of a gift card or voucher. For this reason, we offer a number of gift packaging variations for plastic cards. Alongside various printed sleeve versions, individual metal, plastic or wooden gift boxes can also be implemented. We strive to fulfil your ideas and wishes.

SPECIAL CARD PACKAGING OPTIONS

You have a specific idea in mind when it comes to the presentation of your card? Or have you already got packaging lined up and are looking for a design. Plasticard-ZFT works in conjunction with numerous partners in the printing and packaging sector. Contact us, we would be happy to help you implement your ideas and wishes.



100% individual

Are you looking for an extremely extraordinary card packaging option or do you need a special version? Contact us, we are sure to find a solution.

IMPORTANT INFORMATION & PRICES



ORDER PROCESSING AND DELIVERY LOGISTICS

How to get your cards

Plasticard-ZFT offers a high level of flexibility in terms of product versions, delivery and speeds. At the same time, we are constantly optimising our products to make them quick, trouble-free and customer-friendly. A standard order (for online orders, please read page 74) passes the following five stages:

1. Contact

You send us an inquiry by email, fax, telephone, or online form. We will discuss your requirements send a binding offer within 24 hours. If you are already familiar with the pricing, you can order directly by specifying the previous order or item number.

2. Order

We need a formal order from you. This can be submitted by email, fax, or telephone. You will receive – if necessary after clearing the proof copy – an order confirmation with the binding delivery date. If things need to be quick: For most of our products we offer express delivery (see box).

3. Proof copy & clearance

With individually printed cards we will send you a proof copy for clearance. Check it carefully as your order is produced based on this proof.

The proof copy contains the depiction of your layout with the front and back of the card, detailed information on the features, personalisation, and technical realisation. If you do not have printable data on hand, our layout-team will be glad to help you with the design of your card. On request, we can create a neutral proof or send it to your contract partners in their individual design, so you can immediately use this document for the clearance by your customer.

4. Sample & clearance

If needed and agreed, we are happy to send you a sample card to evaluate colours and execution. If your order contains data carriers with coding or barcodes, during the time in which production of your card is being carried out, you will receive a blank card with the coding you have ordered. Please check this sample carefully using activated readers. Only when you confirm that this sample card is fully functional, we will put the according code onto your cards.

5. Completion & dispatch

Once your cards are produced, they will be send on the same say to the delivery address you specified or confirmed or stored in your depot. An unmarked delivery or dispatch with delivery note is possible. You will receive a confirmation of dispatch by email. This will include the tracking number of your parcel.

Done!

Your cards are on their way or are waiting in your card depot for personalisation. (see also Services, page 56). You will receive your invoice by post or e-mail.

DELIVERY TIMES (STANDARD PRODUCTS)

PRODUCT	STANDARD	EXPRESS
■ Cards (Offset/silkscreen printing)	8–15 days	5–10 days
■ Cards in OSP	5–10 days	24 h/48 h
■ Warehouse (e.g. accessories)	1–2 days	–

Is there another way?

In some instances, there may be reasons to deviate from this procedure. This is when, for example, a personal print acceptance at the machine is required, if no renewed proof copy examination is required, or if the order and/or invoice must be transmitted electronically. Please speak to us.

All of this in 5 minutes?

The online shop is open 24/7 and you can check your print data for suitability at any time. For selected products, it is possible to automatically generate the proof copy once you have entered your order data. This can be forwarded to your customers as a PDF and then approved online, if necessary. The order confirmation with a firm delivery date will also be sent automatically by email. For more information, read the section on "Ordering online and calculating" on page 74.



ONLINE ORDERING – OUR SHOPS

THE PLASTICARD-ZFT ONLINE SHOPS

Selling and rendering services via online platforms is an important facet of the distribution offers of Plasticard-ZFT. At Plasticard-ZFT, online shops with relevant price information are only accessible after registration and cannot be seen by third parties. It is part of our company policy that we open our online shop only for resellers.

On this page you can find signposts to our shops. Each is oriented on the demands of a certain customer group.

Do you need cards for advertisement, customer loyalty, events, or other marketing applications? Use our:

RESELLER SHOP WEB.SHOP.PLASTICARD.DE

This shop is for advertising and production agencies and resellers working in the field of customer loyalty and marketing. Here you can find advertisement cards, customer cards, invitation cards, tickets, name tags, price tags, business cards, and other special products like e.g. magnetic cards or special format cards such as XXL-formats.

Computer retailer, key services, security companies, and advisors for security solutions will find their product lines in our:

ID-CARD SHOP WWW.AUSWEISKARTE24.DE

Ausweiskarte24.de offers the common range of products for access, time recording, and catering: printed or white ID-cards, key tags and card accessories.

You can access both shops directly via our homepage:

www.plasticard.de

All our customers can order sample cards in small quantities (even only 1) without registration in our:

SAMPLE CARD SHOP WWW.MUSTERKARTE24.DE



Plasticard-ZFT shops are unique!

The Plasticard-ZFT shops offer – besides attractive prices and short deliver times – some comfort-features that you can get with us:

- A special AI-algorithm checks your layout for applicability and if necessary corrects small errors.
- The online print-data check (Pre-flight-Check) issues a PDF-proof which can immediately forwarded. Just enter the e-mail address of your customer – done!
- Easy re-ordering of already concluded commissions – the shop remembers all previous commissions and displays them only to you. Just click – enter a quantity – done! No new proof necessary.
- Staggered pricing from 10 or 25 up to 20,000 priced available for most articles.
- All order documents (including invoices) can be found directly in the order history.
- Bargains even in B2B-business! Profit from our de-acquisition-products with special prices.

PERSONALISATION PLATFORMS

For orders of personalised customer or ID-cards you can keep using our portals Kartendepot1 or Kartendepot2. Those provide services for the GDPR-adherent handling of personal data during order processing.

ORDER DATA PROCESSING & DATA PROTECTION

The highest possible security for your data

We take the protection of your personal data very serious and strictly maintain the regulations of the EU-GDPR. In order to ensure the highest possible security for customer and personal data, our IT processes are constantly monitored and kept updated. Every member of staff at Plasticard-ZFT is regularly trained and is obliged to maintain the data secrecy.

How is your data protected?

Your personal or company data is treated in accordance with our general data protection regulations. Data you provide to us for the purpose of the personalisation of ID media or for mailing is secured by way of comprehensive technical and organisation measures in accordance with article 32 of the EU-GDPR. The order data processing is carried out on a contractual basis which individually regulates the precise security levels and regulations. The law requires Plasticard to offer sufficient warranty for a proper processing. Plasticard-ZFT will be happy to assist you with the installation of an individual, law-abiding process and will supply the required information on request. Sample contracts regarding order data processing can be provided before an order is placed.

Contractual regulations

In accordance with legal requirements, Plasticard-ZFT establishes the necessary security, by way of modern virus protection, access control methods, security zones in the network, and operational buildings, required to protect hardware, software, and data from third-party access. Alongside this basic protection, within the framework of order data processing, the following technical and organisational measures are implemented. The arrangement of these measures is implemented in accordance with the requirements of the BSI and ISO 27001. Additional, individual regulations can be coordinated with us at any time.

Technical and organisational measures for data protection (TOM)

Plasticard-ZFT adopted, amongst others, the following technical and organisational measures:

Organisational controls – Definition of competences and the responsibility for the maintenance of regulations and measures.

Physical, system, and data access control – Prevent unauthorised access to data processing systems which are used to edit or utilise data. Prevent data processing systems from being used by unauthorised persons. Ensure that only those who are authorised to access the data are able to do so and that it cannot be read, copied, modified or deleted without authorisation.

Transfer controls – Ensure that data is not read, copied, modified or deleted without authorisation during transmission/ transport/saving.

Entry control / User controls – Ensure that subsequent checks and determinations may be used to see whether and by whom data has been entered into, changed, or removed from data processing systems.

Order controls / Separation controls – Ensure that data is only collected, processed or used in accordance with the instructions of the client. Ensure that data acquired for different purposes are processed separately.

Availability controls / Recoverability / Reliability – Ensure that data is protected against accidental damage or loss. Ensure that, if necessary, a recovery of data is possible within a deadline.

Production controls – Ensure that production is executed within the framework of the applicable work instructions and testing instructions of the management handbook (MH).

Data integrity / data saving / data erasing – Ensure that electronically saved data can neither willingly or by accident be changed. Ensure that data is only saved within the agreed extent and is only saved for the agreed period.

Encryption – Ensure that electronically saved data cannot be read by unauthorised third parties.



LIFE-CYCLE MANAGEMENT

Responsible conduct

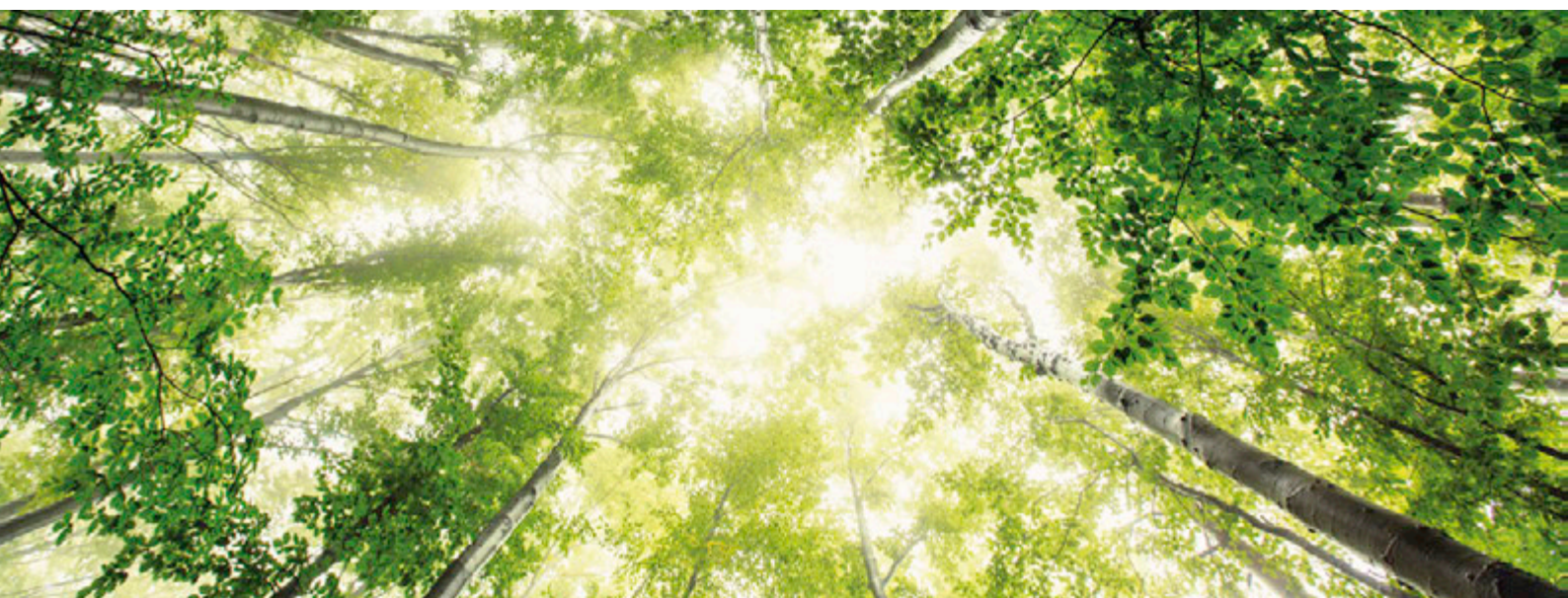
For ID cards, stored value cards, tickets and other ID media, the planning should take the entire lifecycle of the card into consideration. Alongside the handling of damaged or lost cards, this included secure production of replacements and the disposal of cards that are no longer required. Alongside environmental aspects, the maintenance of the EU-GDPR should be given particular attention. ID cards, in particular, will frequently contain personal data and security codes.

Correct data protection and environmentally friendly disposal of cards

Plasticard-ZFT is available to correctly dispose of your cards. We have the necessary procedures and systems in place to correctly destroy old cards and to consign them to recycling with a certified processor.

This service is provided free of charge for cards originally supplied by Plasticard-ZFT, for other cards, please request an offer.

For personalised cards, the destruction of the cards is carried out by a certified document destruction company. We are happy to assist you with determining the necessary security level for your cards.



CORRECT HANDLING OF CARDS

Standard multiple layer cards made from PVC with contact chips or RFID transponders may have a lifetime of up to 10 years if treated carefully and protected. Further, they can also be used in temperature ranges between -10 °C and +50 °C without any difficulties. Higher temperature resistances and durability can be achieved by using alternative materials. On request, we

are happy to provide you with relevant information. The lifetime of every card can be extended considerably, and the printed image protected over the course of years, if a number of tips are followed. ID and access cards specifically are exposed to heavy use due to the daily frequency of operation. The following tips will help you to protect your plastic card from early failure:



Only use a card for the intended purpose.



Use a hard PVC or polycarbonate sleeve to protect your card. Choose a sleeve suitable for the way in which the card is used.



Do not bend, fold or twist your card.



Do not make holes in your card yourself.



Do not carry your card in your wallet/purse, briefcase or pocket without protection.



Do not use your ID card to scrape ice or open bottles.



Do not attempt to mechanically open doors using the card.



Keep the card away from sleeves or wallets/purses that contain softeners (e.g. many leather items, sleeves from soft PVC etc.).



Do not leave your card exposed in the car, particularly not behind the windshield. With the exception of cards that have been designed specifically for this purpose.



Protect your card against direct sunlight and temperatures exceeding +50 °C (value applies only to PVC cards)



Keep magnetic strips away from magnetics and magnetic radiation (e.g. caused by mobile phones or medical devices).



Do not attempt to read or manipulate the data saved on your card.

PLASTICARD-ZFT



Who are we and what makes us special?

Plasticard-ZFT is a company active throughout Europe with a focus on plastic cards in all variations. The wide range of offerings across all ID media and the ability to produce small and medium-sized quantities of 25 to more than 1,000,000 items in an economic manner is what makes our company so special. At the same time, Plasticard-ZFT also offers customers a comprehensive range of services, from simple numbering on cards, through to highly sophisticated letter shop services with PIN correspondence, passport photograph digitalisation and coding for high security requirements. We consider the wishes of our customers to be both encouragements and challenges, pushing us to look for new solutions to implement their needs. For this reason, we look forwards to inquiries that force us to develop new products or solutions. Constant innovations and the readiness to taken on "difficult" topics are our trade mark.

With the expansion of the company which was completed in 2015, Plasticard-ZFT now has some 4000 square metres of production and office space at its disposal. This has enabled us to further increase our capacities and options considerably.

Customer protection

From a business point of view, Plasticard-ZFT concentrates on working in conjunction with system houses and other resellers. For this reason, customer protection and discretion are important to us. Plasticard-ZFT provides resellers with special conditions and information.

Core competences

- The manufacturing of plastic and chip cards as well as ID media in small and medium-sized quantities
- Personalisation services for cards
- Cards and application-specific software solutions

Company ideas

- Small and large quantities in high end-quality
- Implementation of complex card structures
- Implementation of customer-specific personalisation and mailing tasks
- Pioneer in web-supported service solutions for customers
- User of special materials for highly durable ID cards
- High automation despite small quantities
- Comprehensive use of IT in all processes

Performance spectrum

- Production of individually printed and white plastic cards as well as contact and contactless chip cards and ID media
- Personalisation and mailing service
- Development of IT solutions for card projects
- Product and technology development for cards
- Design for card projects
- Layout and design consultation and service for cards

Certificates, licenses and tips

- Plasticard-ZFT operates a quality management system and is certified in accordance with ISO 9001:2008.
- Our environmental management is tested and certified in accordance with DIN EN ISO 14001:2009.
- All materials we use meet the EU directive 2002/95/EC, "Restriction of Hazardous Substances" (RoHS) and are REACH-conform.
- Plasticard-ZFT is a licensed partner of LEGIC® and has received the security certification for LEGIC® card-in-card solutions.
- Plasticard-ZFT is a member of the Open Security Standards- Association and is working on the implementation of card- typical standards with, for example, the SOAA specification
- VDV certification for the production of tickets with e-ticket function

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This brochure has been compiled with great care. Nevertheless, a guarantee for the correctness, completeness and timeliness can not be assumed.

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