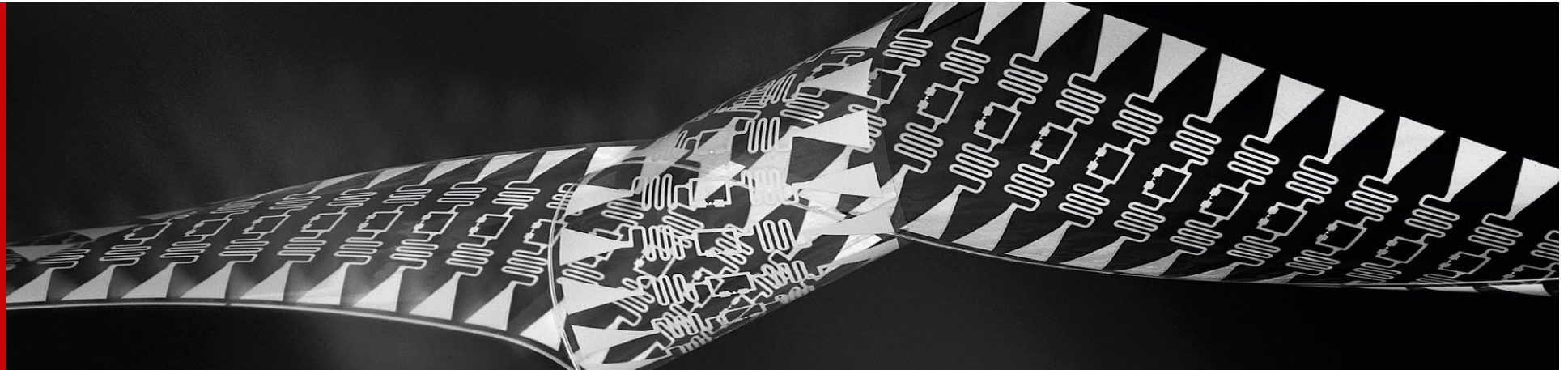




RFID Tickets & RFID Labels

smart products from COMEX



RFID – technology and systems

Primary RFID applications were mostly deployed in access control systems. Nowadays, the field of applications becomes more and more miscellaneous – from library, documents marking and tracing to pharmaceutical industry and logistic systems. RFID tags are the warranty of logistic processes speed-up, unique identification and product protection against counterfeiting and theft.

RFID standards

High Frequency (HF) RFID applications operate in 13,56 MHz. Most popular are - Mifare - used in e-ticketing and transportation systems, and I-Code used for personal identifica-

tion, ski-lift systems and industrial transportation systems.

EPC Gen 2 introduction in UHF bandwidth resulted in essential boost of reading range (up to 8 m) and possibility of simultaneous multiple tag reading.

COMEX possibilities

COMEX's RFID product portfolio contains labels dedicated for both frequency ranges. Cards, tickets and labels of any shape and size may be produced. We offer offset, flexographic or digital printing upon product specification.

Our mission is to lead the project from the stage of its definition to final implementation. Our know-how, engine park and production capacity creates unique synergy

enabling complex RFID projects management. Due to RFID.on technology we are capable of manufacturing short series of shape and size optimized tags.

COMEX RFID technologies

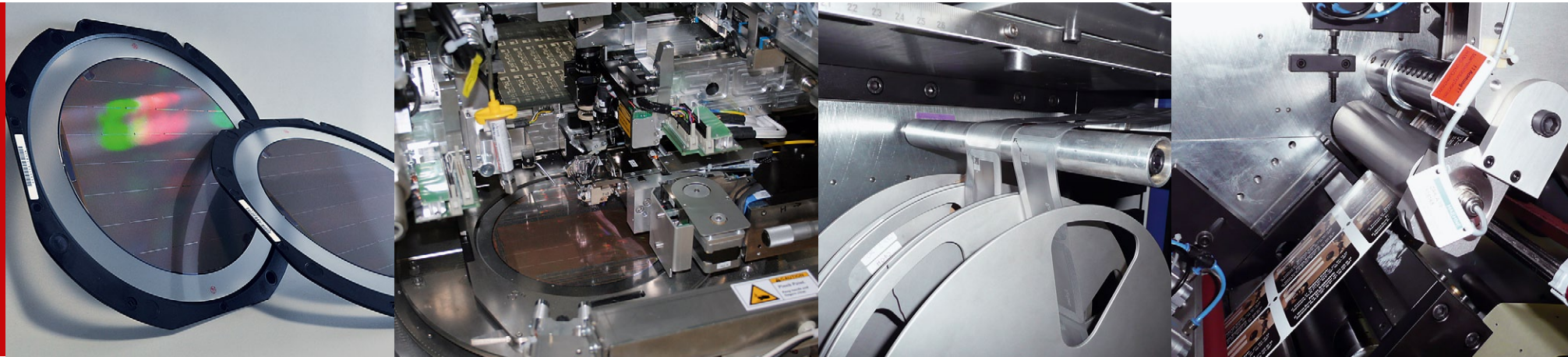
- antenna printing
- manufacturing of HF and UHF inlays
- production of smart labels and tickets

COMEX printing technologies

- offset
- flexo
- silkscreen, embosing, hot-stamping
- digital printing

From specification to implementation

Entire production under one roof – starting from graphical concept study, antenna printing, selected chip embedding and label manufacturing



Concept

Initial project analysis has essential meaning for the project. It specifies client's expectations related to label size, shape, material, tag – reader communication characteristics and verifies technical feasibility. Proper choice of chip forms one of the crucial project stones.

System elements

Due to RFID.on flexibility all the project elements are selected in the optimal way. Contrary to common practice choice of tag is not limited to off-shelf, standard designs. Our RFID laboratory prepares individual, project oriented antenna shape that is consecutively printed using special

conductive ink. Dies are deposited on antennas with the speed reaching 8000 UPH, using special conductive epoxy and flip-chip technology. RFID elements (chip and antenna) may remain invisible on reverse, adhesive side of full color printed product label.

Upon client's request, in cooperation with our partners, we may deliver entire WMS or ERP project profiting of radio frequency information exchange.

Implementation

Each delivery of tags may be graphically arranged in different way. Information carrying part remains the same, while look and shape may be easily modified from order to order. One

may also use for different products with different product labels the same RFID encoded information system thanks to common RFID element.

Comex RFID products

- ski passes
- event and communications tickets
- loyalty cards
- parking labels
- document labels
- logistic labels
- product tags

RFID Tickets & RFID Labels

Standard product line as well as customized, project oriented RFID labels, cards and tickets



Size - 54x86mm

RFID standard - Mifare Ultralight, I-code

Material - paper, PP foil, tyvek, other

Base printing - full colour, lamination, personalization

Personalization - thermal and thermo transfer

Application - ski-lifts, transportation, city-cards, entrance tickets



Size - 54x86mm or other

RFID standard - Mifare Ultralight, I-code, ISO 18000-6C

Material - paper, PP foil, other

Base printing - full colour, lamination, personalization

Personalization - thermal and thermo transfer

Security - hologram, special inks

Application - car identification, parking areas



Size - 54x86mm or other

RFID standard - EPC Gen 2, ISO 18000-6C

Material - paper, PP foil, other

Base printing - full colour

Personalization - thermal and thermo transfer

Delivery - self-adhesive labels on roll, saw-in bages etc.

Application - clothes tagging, price tags, product tags



Size - 54x86mm or other

RFID standard - EPC Gen 2, ISO 18000-6C

Material - paper, PP foil, others

Printing - thermal and thermo transfer

Application - bulk packing, clothes tagging



Size - 30x100mm WxH

RFID standard - EPC Gen 2, ISO 18000-6C

Material - paper, PP foil

Printing - thermal and thermo transfer

Application - library systems, document tagging

COMEX - over 20 years on market

self adhesive labels
auto identification, RFID technology



COMEX story – history of development

History of COMEX is a history of constant development.

We started in 1987 as a printing house specializing in self adhesive label manufacturing with multiple roll printing techniques – flexo, offset and silkscreen.

In 1992 COMEX became one of the first companies in Poland printing certified barcodes. Soon, portfolio was fulfilled by printers, scanners, the entire hardware related to barcode information processing.

In 2004 the first RFID converting appliance in Poland was installed by COMEX. From this time on we deliver smart cards, tickets and labels dedicated to control, tracking and logistic applications.

Since 2010, combining recently purchased web inlay assembly system with dedicated conductive inks antenna printing, we offer our clients full versatility related to shape, size and look of the e-label. Together with our partners we offer a vast portfolio of RFID products in HF and UHF, passive or active systems.



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Product label/antenna
combined printing



Comex is a member of GS1 organization



All products manufactured by COMEX are made in strict accordance with ISO 9001:2008