



For availability of goods and product quality

RFID



METRO GROUP
Future Store Initiative

powered by



What is RFID?

RFID stands for Radio Frequency Identification. It is a radio technology that allows products to be unambiguously identified without line of sight. At the heart of RFID is the RFID transponder, a tiny computer

chip with an integrated antenna. It can be either affixed to the product packaging or integrated into a label for trouble-free attachment to pallets, cases and individual items.

The chip contains a series of digits, the so-called Electronic Product Code (EPC). Like the familiar barcode, the EPC refers to product- and process-related information – such as the producer, country of origin, type of goods and best-before date. In addition, the EPC contains a unique serial number that makes each RFID transponder, and thus also the item it is attached to, explicitly identifiable. Every Electronic Product Code corresponds precisely with an entry in a special database, e.g. a merchandise management system. This is accessible to authorized users only.

The Electronic Product Code (EPC)

How is the EPC composed?
(example of decimal representation)

	Header	Filter value	Partition value	Company prefix	Item reference	Serial number
Numeric code	48	2	5	4009418	012894	000000123456
Content description	EPC version: SGTIN-96	Retail unit item position: (e.g. packaged meat)	Length of company prefix: seven digits	Manufacturer identification: real,- Master Butcher	Product type: pork cutlet	

Keeping a close eye on freshness

At the real,- Future Store, Radio Frequency Identification is already being used in The Master Butcher shop. The packaged meat produced for the refrigerated self-service counter is equipped with RFID

transponders. The items are displayed on the sales floor in a special refrigerator called Smart Cooler which features integrated RFID readers.

Benefits of the Smart Cooler

- The Smart Cooler monitors the goods in stock and informs The Master Butcher staff whenever products run low. The employees can react immediately by producing fresh goods and sorting them into the cooler.
- The best-before dates are monitored automatically in the RFID database. If the Smart Cooler detects that an item's best-before date is approaching, a corresponding message is generated in the database. Staff can then take targeted action to remove the affected goods from the sales floor.
- The products in the cooler are always of top quality. The retailer can produce goods according to demand and avoid wastage.



Efficient processes

METRO GROUP is already using RFID throughout Germany in its logistics and warehouse management. The technology allows to automatically document the path that goods take from the producer to the store shelf.

- Suppliers fit RFID transponders to pallets and cartons bound for METRO GROUP. For shipment, the goods are automatically compared with the order. The computer system notifies METRO GROUP of the delivery status.
- The receipt of the goods is recorded again via RFID at the retailer's distribution warehouses. The employees compile the requested items for the stores. The order and delivery of outgoing goods are automatically checked against each other.
- On delivery at the store, the pallets or cartons are again scanned by RFID readers. The products are booked into the store's merchandise management system.

The employees have a better overview which products are in the warehouse and when they need to reorder. On the sales floor, the required items are always available and the customers are never faced with empty shelves. RFID also improves electronic article surveillance by reducing false alarms. Items that are fitted with a RFID transponder are automatically removed from the store's stock list when they are paid for and thus, do not trigger an alarm when leaving the checkout area.

Deactivating the RFID transponders

Two De-Activators that permanently disable the RFID transponder and render the electronic product code unreadable are located next to the store exits. Simply place the item on the unit and start the deactivation. The EPC logo tells you which products and cartons are equipped with RFID transponders.



More convenience
and safety for our
customers



Radio Frequency Identification (RFID) is helping real,- and METRO GROUP fulfil customer wishes even better. At the real,- Future Store in Tönisvorst, Germany, the automatic product recognition technology ensures that meat products are always of the highest quality. RFID also helps ensure that products are available in the store at all times.

EPCglobal guidelines at METRO GROUP



Notification

- Comprehensive information on the deployment of RFID technology within METRO GROUP:
 - On the Internet at www.metrogroup.de, www.future-store.org
 - Direct queries by e-mail to rfid@metro.de or via the hotline: +49 (0)211 68 86-2004
 - In brochures, for example 'A journey into the future of retail'
- Open dialogue with politicians, consumer organisations and all further interest groups



Information

- Customer information as to where RFID is deployed, e.g. on posters on the sales floor
- Clear labelling wherever RFID is used via the EPC logo on all shipping units, cartons and products
- Marking of all RFID readers



Freedom of Choice

- Customers can permanently disable and remove RFID transponders on products after payment.
- METRO GROUP is involved in the development of new deactivation technologies, e.g. the De-Activator.



Data protection

- The German Data Protection Act (BDSG) will be upheld at all times in the implementation of EPC within METRO GROUP.
- The EPC refers to product- and process-related information only. No personal data is saved.
- METRO GROUP only uses RFID transponders that comply with EPC standards.
- There is no relationship between EPC and personal data. As a rule this can only take place with the customer's permission. However, anonymity is always guaranteed when paying by cash.

Do you have any further questions?

You can find more information on RFID and the Electronic Product Code on the Internet at:

www.gs1-germany.de

RFID is already used in many areas. More information on the applicability of the technology can be found on the Internet at:

www.discoverrfid.org

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