

Positiva<sup>+</sup>



**e-shelf-labels**

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SMART.  
DIGITAL.  
EFFICIENT.

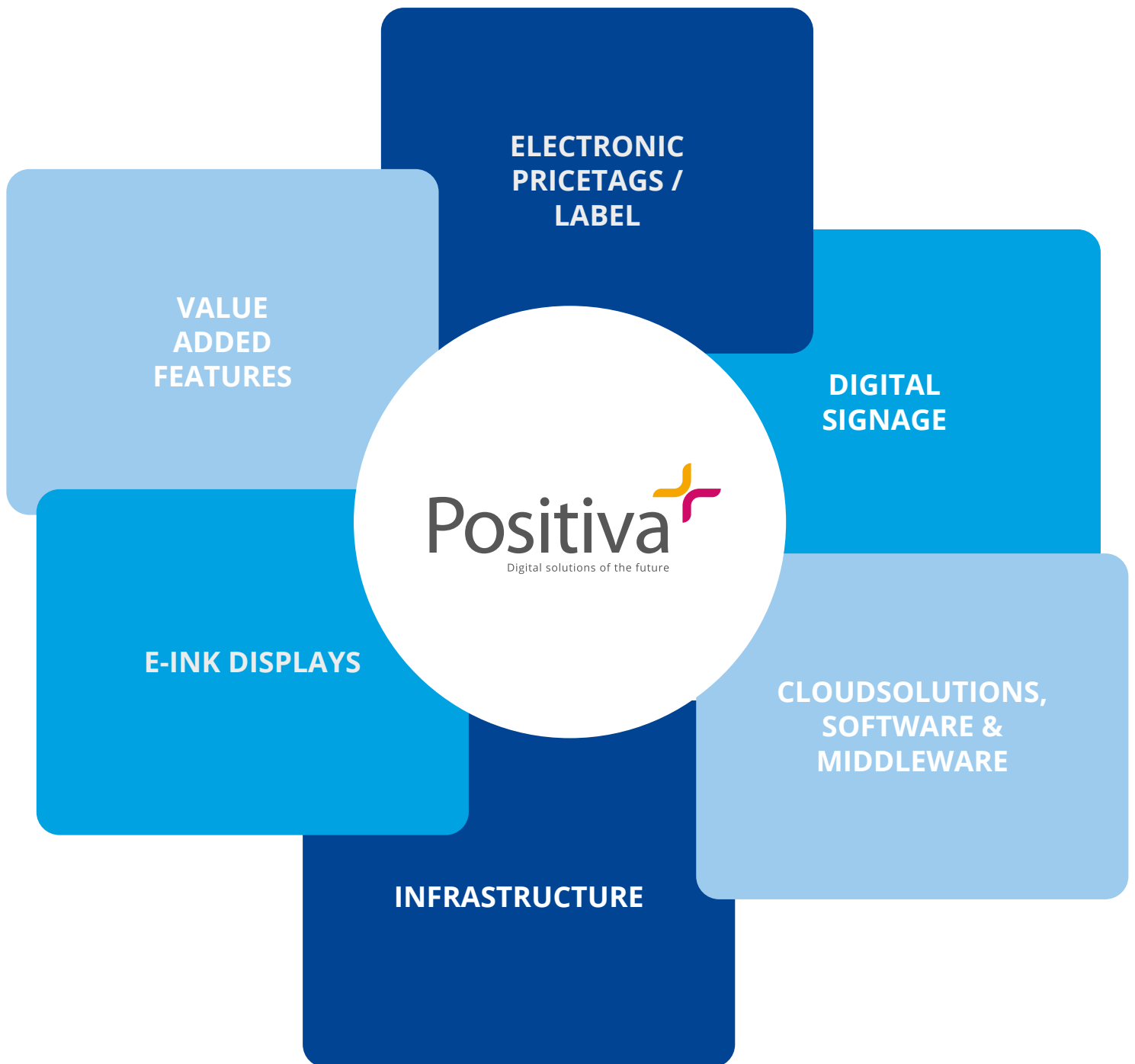
e-shelf-labels

# Solutionsguide



# ESL-Solutions

from a single source



# e-shelf-labels

## Your partner for electronic labelling and identification

e-shelf-labels has made it its mission to support companies on the path to digitalisation with the best possible **signage solutions**. Our portfolio ranges from small electronic labels to large digital billboards.

Each hardware element is only one part of our overall solution and our customer service, which ranges from conception to realisation and implementation throughout Europe and worldwide. Even after the successful introduction of your personalised system, we provide you with long-term support.

Choose e-shelf-labels if you are looking for a **partner** who not only offers the product, but also offers ESL systems as complete solutions with comprehensive advice on technology and process optimisation, as well as support with integration and operation.

You can find an overview of our products and services in the catalogue.

Enjoy discovering!

✓  
TRUST IN OUR  
MANY YEARS OF  
EXPERIENCE!

DISCOVER  
OUR  
RANGE!



# Products

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# Meaning of ESL

Electronic labels are digital, usually **wireless signs** that display information such as prices, barcodes, product codes, descriptions and more. Based on E-Ink technology, they form an important part of **modern and flexible signage** and make processes more productive, efficient and sustainable. In this context, they act as an important component of digitalisation.

## Synonyms

- Electronic Shelf Labels
- Digital Price Tags
- Electronic Labels
- Digital Labels
- Electronic Price Labelling



On their own, they are an **optimal solution** for dynamic pricing and flexible signage, but as components in a **networked system**, they also offer many additional possibilities for picking processes, automated shelf monitoring or mobile payment.



Price labelling in paper form is a thing of the past. ESL solutions **save costs, time and resources** and can do much more than just display prices. They enable dynamic labelling, ensure **error-free pricing** and enhance product appeal, which is indispensable in today's retail environment.

All these qualities also make them particularly attractive for **use in industry**, to optimise or even automate processes in inventory management or in production workflows. Robust, stable, energy-efficient and always easy to read, they are the **future of price and product labelling**.



# Your advantages

## Central administration

Thanks to the **precise synchronisation** of all prices displayed on the labels with the merchandise management system, the error rate is significantly reduced. All changes to the display can be monitored and **managed centrally**, which results in great time savings.



## Dynamic pricing

Thanks to the connection to an existing ERP, the **prices displayed are always up to date** and can be immediately adjusted automatically or manually if necessary. This guarantees the same prices in both stationary and online retailing. **Temporary price changes**, such as happy hour offers or price reductions for perishable goods in the evening, are also possible.

## Optimal readability

Electronic labels guarantee good legibility thanks to **E-Ink technology**, which is always clearly recognisable even in suboptimal conditions. Battery power is only used when updates are installed or new information is added, which means that an extremely **long battery life** is possible. Compared to LED or LCD, E-Ink is also easier on the eyes.



## Resource savings

In the area of signage, ESL offers a long-term and resource-saving solution. Due to the **lower power consumption** compared to conventional signage systems, the environmental impact is minimised. In addition, the **reduction of consumables** contributes to long-term waste avoidance.

# Your application

## ... IN INDUSTRY

In industry, electronic labels enable simple labelling and thus more efficient work processes. At the same time, they can be expanded to include additional locating technologies to enable faster picking. Digital IoT platforms in the cloud serve as basis for all networked ESL processes in industry. For certain areas of application, it is also possible to connect to handhelds and existing ERP structures (SAP, MS Dynamics Navision, etc.) to ensure smooth workflows. These can be easily implemented with ESL.

### Possible areas of application

- Shelf labelling/markings
- Digital consignment notes
- Warehouse management
- Electronic order papers
- Automated inventory management
- Pick-by-light



## ... IN RETAIL

Electronic price tags offer the flexibility, productivity and precision needed to meet all retail challenges. Price tags do not have to be individually replaced, but can be centrally controlled or automated to **always display the current prices**. This saves time and money, reduces the error rate and at the same time increases customer satisfaction.



### Advantages

- Dynamic price labelling to keep pace with e-commerce
- Centralised management of all price tags saves administrative time
- Consistent prices across all stores for higher customer satisfaction
- Differentiated pricing of perishable goods for less waste
- Display of additional information via QR codes and NFC



# Tips for the layout

Every ESL operating system comes with a **label designer** that makes it easy to create templates for industry and retail. Whether it's a price tag, a stock label or a warning notice, **a few design points** should always be considered to ensure a **consistent look** and **good readability**.

- **Basic layout:** This can serve as a template and be adapted for eye-catching offers in shops
- **Consistent layout:** The design of all signs should be similar
- **Not too much text:** The sign must still be clearly legible
- **QR codes:** If a product requires more information, it can be provided via a QR code
- **Use colours sparingly:** It's best to use them only for the most relevant information
- **Use common abbreviations:** This saves space and is still understandable
- **Clearly legible prices in retail:** The most important information, which must be immediately recognisable



# Label in retail

## VUSION

The modular VUSION series, based on E-Ink technology, is particularly easy to install, offers excellent readability and up to 10 years of battery life. If required, special freezer labels are also available and suitable for cold warehouses or refrigerated counters in retail stores. All data is transmitted via the 2.4 GHz frequency, i.e. WiFi with a proprietary protocol. The Vusion Cloud features an **infraless feature**, i.e. it is **compatible** with over **100 access points** from leading third-party manufacturers (see page 38 for more information).

### Specifications

- Energy-efficient: 7,000 to 10,000 update processes per battery charge
- 2.4 GHz (cloud)
- Can be used from +10°C to +40°C
- 180° viewing angle
- Housing available in white and anthracite
- 7-colour LED
- NFC

Label available in BWR and BWRY depending on the variant

- BWR: black-white-red
- BWRY: black-white-red-yellow



### Vusion 1.6 Inch

- Size: 48.0 x 36.6 x 11.4 mm
- Display: 27.5 x 27.5 mm
- Resolution: 152 x 152 pixel



### Vusion 2.2 Inch

- Size: 67.9 x 36.7 x 11.4 mm
- Display: 48.6 x 23.8 mm
- Resolution: 212 x 104 pixel
- Freezer variant available



### Vusion 2.6 Inch

- Size: 80.0 x 41.1 x 11.4 mm
- Display: 60.1 x 30.7 mm
- Resolution: 296 x 152 pixel
- Freezer version available



### Vusion 4.2 Inch

- Size: 104.5 x 82.5 x 12.2 mm
- Display: 84.8 x 63.6 mm
- Resolution: 400 x 300 pixel



#### Vusion 4.5 Inch

- Size: 128.5 x 51.8 x 11.8 mm
- Display: 104.2 x 38.2 mm
- Resolution: 480 x 176 pixel



#### Vusion 7.4 Inch

- Size: 175.3 x 123.4 x 13.2 mm
- Display: 161.6 x 97.0 mm
- Resolution: 800 x 480 pixel



#### Vusion 9.7 Inch

- Size: 227.6 x 169.5 x 13.5 mm
- Display: 201.6 x 141.1 mm
- Resolution: 672 x 960 pixel



#### Vusion 12.2 Inch

- Size: 218.3 x 265.8 x 15.9 mm
- Display: 190.08 x 237.60 mm
- Resolution: 768 x 960 pixel

# Label in retail

## NEWTON CORE FAST TRACK

The labels in the Newton Core Fast Track series have barcodes engraved on the casing by laser. This makes them permanently durable and more resistant to friction and heat. In addition, the labels look more high-quality than code labels that are stuck on, and they remain scannable for a long time without any problems. Except for the black and white freezer version, these labels all come in the display colours black, white, red and yellow.

### Specifications

- Energy-efficient: 7,000 to 10,000 update processes per battery charge
- High update speed
- Specifically designed for the retail sector
- Can be used from +10°C to +40°C
- 180° viewing angle
- Housing in grey-anthracite
- 7-colour LED
- NFC



### Newton Core Fast Track 1.6 Inch

- Size: 36.95 x 46.63 x 11.62 mm
- Display: 27.0 x 27.0 mm
- Resolution: 200 x 200 pixel



### Newton Core Fast Track 4.3 Inch

- Size: 128.73 x 41.9 x 12.80 mm
- Display: 105.4 x 30.7 mm
- Resolution: 522 x 152 pixel



### Newton Core Fast Track 4.2 Inch

- Size: 97.13 x 82.18 x 13.55 mm
- Display: 84.8 x 63.6 mm
- Resolution: 400 x 300 pixel



### Newton Core Fast Track 2.9 Inch

- Size: 85.67 x 42.79 x 11.62 mm
- Display: 67.6 x 29.6 mm
- Resolution: 384 x 168 pixel
- Freezer version available



### Newton Core Fast Track 7.5 Inch

- Size: 124.1 x 185.50 x 14.85 mm
- Display: 97.9 x 163.2 mm
- Resolution: 480 x 800 pixel

### Newton Core Fast Track 9.7 Inch

- Size: 168.05 x 224.07 x 14.81 mm
- Display: 141.12 x 201.6 mm
- Resolution: 672 x 960 pixel



### Newton Core Fast Track 11.6 Inch

- Size: 190.31 x 267.7 x 14.85 mm
- Display: 163.0 x 244.5 mm
- Resolution: 640 x 960 pixel



# Label in retail

## NEWTON CORE

The robust Newton Core range of signage has been specifically designed for use in retail environments. Both, the three-colour and four-colour displays, impress with their exceptional speed and long battery life.

### Specifications

- Energy-efficient: 7,000 to 10,000 update processes per battery charge
- High update speed
- Specifically designed for the retail sector
- Can be used from +10°C to +40°C
- 180° viewing angle
- Housing in white, black, grey-anthracite
- 7-colour LED
- NFC

Label available in BWR and BWRY depending on the variant

- BWR: black-white-red
- BWRY: black-white-red-yellow



### Newton Core 1.6 Inch

- Size: 36.95 x 46.63 x 11.62 mm
- Display: 27.0 x 27.0 mm
- Resolution: 200 x 200 pixel



### Newton Core 2.2 Inch

- Size: 66.95 x 36.95 x 11.62 mm
- Display: 48.1 x 26.0 mm
- Resolution: 296 x 160 pixel
- Freezer version available



### Newton Core 2.6 Inch

- Size: 78.12 x 42.79 x 11.62 mm
- Display: 60.1 x 30.7 mm
- Resolution: 360 x 184 pixel
- Freezer version available



### Newton Core 2.9 Inch

- Size: 85.67 x 42.79 x 11.62 mm
- Display: 67.6 x 29.6 mm
- Resolution: 384 x 168 pixel
- Freezer version available





### Newton Core 3.5 Inch

- Size: 99.73 x 49.35 x 12.80 mm
- Display: 81.0 x 37.9 mm
- Resolution: 384 x 180 pixel



### Newton Core 4.2 Inch

- Size: 97.13 x 82.18 x 13.55 mm
- Display: 84.8 x 63.6 mm
- Resolution: 400 x 300 pixel



### Newton Core 4.3 Inch

- Size: 128.73 x 41.90 x 12.80 mm
- Display: 105.4 x 30.7 mm
- Resolution: 522 x 152 pixel

### Newton Core 5.8 Inch

- Size: 166.16 x 65.67 x 13.26 mm
- Display: 139.00 x 47.74 mm
- Resolution: 792 x 272 pixel



### Newton Core 6.1 Inch

- Size: 133.20 x 109.96 x 14.90 mm
- Display: 118.78 x 88.22 mm
- Resolution: 648 x 480 pixel

# Label in retail

## NEWTON CORE



**Newton Core 7.5 Inch**

- Size: 124.10 x 185.50 x 14.85 mm
- Display: 97.9 x 163.2 mm
- Resolution: 528 x 880 pixel



**Newton Core 9.7 Inch**

- Size: 168.05 x 224.07 x 14.81 mm
- Display: 141.12 x 201.6 mm
- Resolution: 672 x 960 pixel



**Newton Core 11.6 Inch**

- Size: 190.31 x 267.70 x 14.85 mm
- Display: 163.0 x 244.5 mm
- Resolution: 640 x 960 pixel



**Newton Core 12.2 Inch**

- Size: 215.95 x 259.82 x 14.85 mm
- Display: 190.08 x 237.6 mm
- Resolution: 768 x 960 pixel

## NEWTON PRO

The displays in the Newton Pro range present your content on a four-colour e-paper display, which allows for a wide range of design options. With IP68 certification, they are waterproof and can be used in more demanding environments.

### Specifications

- Energy-efficient: 7,000 to 10,000 update processes per battery charge
- Interactive button
- Waterproof with IP68
- 4-colour e-paper display
- Housing in white, black, grey-anthracite
- 7-colour LED
- NFC



### Newton Pro 1.6 Inch (horizontal)

- Size: 44.9 x 36.7 x 10.45 mm
- Display: 27.0 x 27.0 mm
- Resolution: 200 x 200 pixel



### Newton Pro 1.6 Inch (vertical)

- Size: 36.7 x 44.9 x 10.45 mm
- Display: 27.0 x 27.0 mm
- Resolution: 200 x 200 pixel



### Newton Pro 2.2 Inch

- Size: 67.0 x 37.4 x 10.45 mm
- Display: 48.1 x 26.0 mm
- Resolution: 296 x 160 pixel



### Newton Pro 2.6 Inch

- Size: 79.2 x 42.5 x 10.45 mm
- Display: 60.0 x 30.7 mm
- Resolution: 360 x 184 pixel



### Newton Pro 2.7 Inch

- Size: 76.0 x 49.5 x 10.5 mm
- Display: 57.3 x 38.2 mm
- Resolution: 300 x 200 pixel



### Newton Pro 2.9 Inch

- Size: 85.9 x 41.3 x 10.45 mm
- Display: 67.6 x 29.6 mm
- Resolution: 384 x 168 pixel



### Newton Pro 3.5 Inch

- Size: 100.20 x 49.6 x 10.45 mm
- Display: 81.0 x 38.0 mm
- Resolution: 384 x 180 pixel

# Label in retail

## NEWTON PRO

### Newton Pro 4.2 Inch

- Size: 98.1 x 83.7 x 12.45 mm
- Display: 84.8 x 63.6 mm
- Resolution: 400 x 300 pixel



### Newton Pro 4.3 Inch

- Size: 130.2 x 42.3 x 13.0 mm
- Display: 105.4 x 30.7 mm
- Resolution: 522 x 152 pixel

### Newton Pro 5.8 Inch

- Size: 164.0 x 66.8 x 14.3 mm
- Display: 139.0 x 47.7 mm
- Resolution: 792 x 272 pixel



### Newton Pro 6.0 Inch

- Size: 133.0 x 109.0 x 14.30 mm
- Display: 114.9 x 85.8 mm
- Resolution: 600 x 448 pixel



### Newton Pro 7.5 Inch

- Size: 125.0 x 182.9 x 14.85 mm
- Display: 97.9 x 163.2 mm
- Resolution: 480 x 800 pixel



### Newton Pro 9.7 Inch

- Size: 170.2 x 223.6 x 14.85 mm
- Display: 141.1 x 201.6 mm
- Resolution: 672 x 960 pixel



### Newton Pro 11.6 Inch

- Size: 192.0 x 269.1 x 15.35 mm
- Display: 163.0 x 244.5 mm
- Resolution: 640 x 960 pixel



### Newton Pro 12.2 Inch

- Size: 216.2 x 260.0 x 15.35 mm
- Display: 190.1 x 237.6 mm
- Resolution: 768 x 960 pixel



# Label in retail

## NEWTON PRO FULL COLOR

The Newton Pro Full Color offers a vivid colour spectrum that outperforms conventional displays and enables maximum flexibility in the design of ESL content. With improved display fineness, the fastest update speed and IP68 protection, it is ideal for use in demanding environments.



### Newton Pro Full Color 4.0 Inch

- Size: 110.4 x 72.26 x 14.5 mm
- Display: 84.6 x 56.4 mm
- Resolution: 600 x 400 pixel

### Specifications

- Full-colour E-Ink display
- Energy-efficient: 7,000 to 10,000 updates per battery charge
- Interactive button
- Waterproof to IP68
- Housing in white, black
- 7-colour LED
- NFC

### Newton Pro Full Color 7.3 Inch

- Size: 125.0 x 182.9 x 15.95 mm
- Display: 96 x 160 mm
- Resolution: 480 x 800 pixel







### Newton Pro Full Color 8.2 Inch

- Size: 139.5 x 208.3 x 15.95 mm
- Display: 114.9 x 85.8 mm
- Resolution: 576 x 1024 pixel

### Newton Pro Full Color 13.3 Inch

- Size: 223.2 x 300.8 x 16.5 mm
- Display: 202.8 x 270.4 mm
- Resolution: 1200 x 1600 pixel



# Label in retail

## NEWTON DUAL

The Newton **dual display** signage system optimises retail processes through its versatility and ease of use. The fully graphical E-Ink display is particularly suitable for price displays, advertising or product presentations directly at the shelf or checkout. However, it is also **splash and dust proof** and therefore suitable for a range of environments. The Newton Dual is characterised by a long battery life and a guaranteed **lifespan of 5 or 6 years** with one update per day. A rhythmically flashing **LED light in 7 different colours** attracts the attention of all customers to the display. The Newton signage system improves business communication and ensures an effective presentation of information.

### Advantages

- **Maximum flexibility:** two displays that can be used in different ways
- **Real-time updates**
- **Can be used in different locations**
- **Interaction with customers** using programmable buttons





### Newton Dual 8.2 Inch

- Size: 207.8 x 139.1 x 13.5 mm
- Resolution 1024 x 576 pixel
- Colours: BWRY
- Frequency range: 2.4 GHz

### Newton Dual 11.6 Inch

- Size: 268.5 x 191.2 x 13.5 mm
- Resolution: 640 x 960 pixel
- Colours: BWRY
- Frequency range: 2.4 GHz



# Label

## for fashion, DIY or special applications

Traditional paper labels that have to be changed manually are now a thing of the past. Digital price tags, which are perfectly designed for use in retail, are a groundbreaking innovation in this area. These displays can even be attached directly to the product using **special holders** to prevent theft. This enables **flexible product labelling** and efficient process automation.

### Advantages in the fashion industry

- Customer approach by adding QR codes
- Display of brand logos and symbols
- Use of uniform designs possible
- Promotes brand recognition
- Real-time update of product information
- First-class readability thanks to displays with high resolution
- Flexible price adjustments adapted to the season, sales promotion or synchronisation with online shop



Electronic tags in the fashion industry help to **optimise administrative processes**. They enable precise tracking of inventory, resulting in improved stock control and a reduction in out-of-stocks. The content of the tags can be **updated in seconds**, allowing them to be customised for individual items and sales promotions.

### VUSION SWAY

Developed specially for the fashion and textile industry, fashiontags are attached directly to the goods, for example, **in connection with electronic article surveillance**. Thanks to real-time pricing and an integrated NFC chip, they always show **up-to-date information** such as prices or available sizes.

#### Advantages

- Display of currently available goods
- Time savings for customer service
- NFC access / smartphone connection
- Real-time pricing
- Consistent prices online and offline for competitiveness and flexibility

### Vusion Sway 2.6 Inch

- Size: 41.1 x 80.0 x 11.4 mm
- Display: 152 x 296 pixel
- Available colours: white, anthracite





## NEWTON X

The Newton X series is ideal for labelling small, fragile and delicate goods such as fashion items, glasses and accessories because of the **low weight**. The integrated displays use the **latest E-Ink technology**, which allows content and special branding to be displayed in a particularly appealing and detailed way.

### Advantages

- Slim design
- Centralised software management
- 10x faster real-time updates
- Customisable
- NFC-enabled

### Newton X 1.3 Inch

- Size: 28.8 x 64.45 x 5.95 mm
- Display: 19.44 x 27.0 mm
- Resolution: 144 x 200 pixel
- Pixel density: 188 dpi

### Newton X 1.0 Inch

- Size: 47.79 x 18.0 x 8.8 mm
- Display: 22.26 x 10.65 mm
- Resolution: 184 x 88 pixel
- Pixel density: 210 dpi



### Newton X 2.2 Inch

- Size: 37.3 x 67.6 x 6.95 mm
- Display: 26.0 x 48.1 mm
- Resolution: 296 x 160 pixel
- Pixel density: 156 dpi



### Optional: mounting for pegboard hook

The Newton X in 1.3 inch can be equipped with a special fixture that allows it to be hung directly on a perforated wall hook, such as those found in DIY stores or other retail formats where space is at a premium.



# Label in the industry

## NEWTON LABEL

The multifunctional NEWTON labels with E-Ink displays in three colours offer ideal digital signage for industry. Thanks to their two configurable buttons and the integrated LED, which can display 7 different colours, they perfectly meet the requirements for use in industrial environments.

### Specifications

- Energy-efficient: 7,000 to 10,000 update operations per battery charge
- 2 configurable multifunction buttons
- 2.4 GHz / 868 MHz (cloud or on premise)
- IP67 and highly impact-resistant
- Can be used from +10°C to +40°C
- 180° viewing angle
- Available in white and black housing
- 7-colour LED
- NFC

All labels available in BWR

- BWR: black-white-red



### Newton 1.6 Inch

- Size: 36.7 x 45.0 x 13.1 mm
- Display: 27.0 x 27.0 mm
- Resolution: 200 x 200 pixel



### Newton 2.2 Inch

- Size: 67.1 x 37.4 x 13.1 mm
- Display: 48.1 x 26.0 mm
- Resolution: 296 x 160 pixel
- Also available as Freezer version



### Newton 2.6 Inch

- Size: 79.3 x 42.4 x 13.1 mm
- Display: 60.1 x 30.7 mm
- Resolution: 360 x 184 pixel
- Also available as Freezer version



### Newton 2.7 Inch

- Size: 76.0 x 49.5 x 13.1 mm
- Display: 57.3 x 38.1 mm
- Resolution: 300 x 200 pixel
- Also available as Freezer version



### Newton 2.9 Inch

- Size: 86.0 x 41.3 x 13.1 mm
- Display: 67.6 x 29.6 mm
- Resolution: 384 x 168 pixel
- Also available as Freezer version





#### Newton 4.2 Inch

- Size: 98.1 x 83.8 x 14.5 mm
- Display: 84.8 x 63.6 mm
- Resolution: 400 x 300 pixel

#### Newton 4.3 Inch

- Size: 130.3 x 42.4 x 13.9 mm
- Display: 105.4 x 30.7 mm
- Resolution: 522 x 152 pixel



#### Newton 11.6 Inch

- Size: 192.0 x 268.0 x 21.9 mm
- Display: 163.0 x 244.5 mm
- Resolution: 640 x 960 pixel



#### Newton 7.5 Inch

- Size: 125.0 x 183.0 x 15.2 mm
- Display: 163.2 x 97.9 mm
- Resolution: 800 x 480 pixel



# Label in the industry



## Newton M3 Subgiga

- Available in 2.9", 4.2", 7.5", 11.6"

## NEWTON M3 SUBGIGA LABEL

This Newton series is a modern industrial solution that enables companies to make their internal logistics or supply chain processes more efficient and productive. They operate at an **868 MHz frequency**, which can be used as a technological preference or if the 2.4 GHz band is occupied by other applications. Real-time control of stock levels guarantees optimised planning of workflows and improved inventory tracking.



## NEWTON M3 PICK-BY-LIGHT LABEL

Also optimised for industrial applications are Pick-By-Light labels that have an **enlarged front button with an integrated seven-colour LED**. This can be activated to indicate the position of the products on the shelf, making it easier for employees to find parts. In addition, the label has **side buttons** that can be **flexibly programmed**.

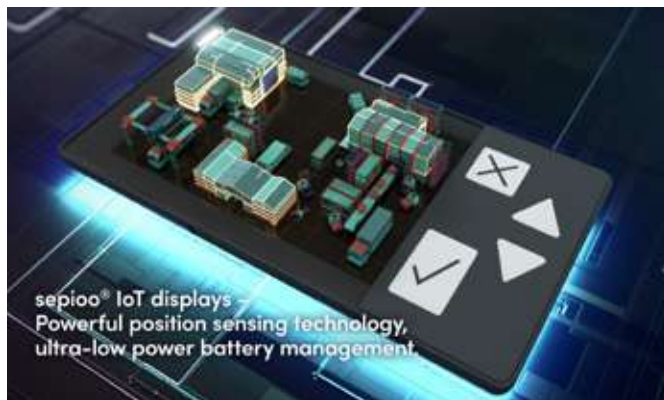


## Newton M3 Pick-By-Light

- 4.3 inch
- Size: 130.3 x 42.4 x 13.9 mm
- Resolution: 522 x 152 pixel
- NFC

## QUUPPA-PDI-SOLUTIONS

The Quuppa PDi solution, which enables accurate indoor positioning, can be used to collect data on real-time location information. By combining **positioning technology with real-time localisation** and E-Ink labels, new processes in the context of Industry 4.0 can be mapped better and more efficiently.



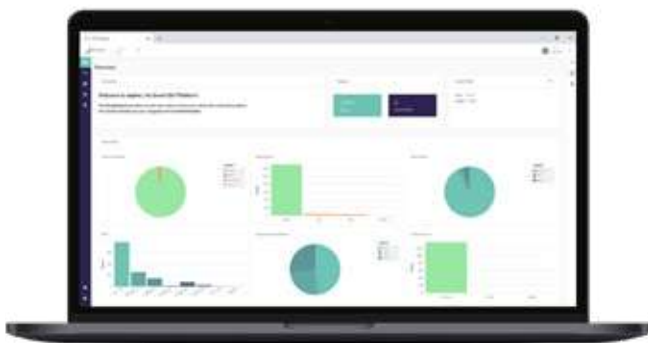
Meanwhile, the sep100® SaaS platform collects data to create a **digital map** with real-time location and display information. This can be used to trigger automated actions when objects travel a defined distance or when they enter or leave geofenced areas.



## SEPIOO® IIOT PLATFORM

The sep100® software platform is designed for integration into a wide range of use cases and enables the **collection of data** from an unlimited number of labels and sensors, as well as fast updates and real-time communication with other elements of the system.

Thanks to its modular design, the software can be **integrated into practically any industrial environment** and works seamlessly with a wide range of hardware products and technologies such as NB-IoT or NFC.



# Label in the industry

## SEPIOO® LABEL

sepioo® labels from PDi Digital have been specifically developed for the sepioo® IIoT platform and guarantee real-time data transmission. Their areas of application include picking processes in Industry 4.0, inventory management and material management.

### Specifications

- Quuppa location technology
- Real-time information transfer
- NFC & very low power consumption
- Accelerometer & temperature sensor
- Optimal compatibility with the sepioo® IIoT platform
- Individual label sizes also available in BWR



#### Smart Industrial 2.6 Inch

- Size: 80.0 x 41.1 x 11.4 mm
- Display: 60.1 x 30.7 mm
- Resolution: 296 x 152 pixel



#### Smart Industrial 4.2 Inch

- Size: 104.5 x 82.5 x 12.2 mm
- Display: 84.8 x 63.6 mm
- Resolution: 400 x 300 pixel



#### Smart Industrial 7.4 Inch

- Size: 175.3 x 123.4 x 13.2 mm
- Display: 161.6 x 97 mm
- Resolution: 800 x 480 pixel



#### Smart Industrial 9.7 Inch

- Size: 227.6 x 169.5 x 13.5 mm
- Display: 201.6 x 141.1 mm
- Resolution: 672 x 960 pixel

## SEPIOO® NB-IoT LABEL

### Spezifikationen

- Indoor and outdoor variants
- Rechargeable battery with up to 12 months of battery life
- Location via GPS + BLE
- Can be used without an access point infrastructure and across multiple locations
- NB-IoT / LTE-M (via SIM),
- Accelerometer & temperature sensor
- Wide range of temperature insensitivity



**sepioo® 4.2 NB-IoT**

- Size: 109.0 x 85.0 x 30.6 mm
- Display: 84.4 x 63.6 mm
- Resolution: 400 x 300 pixel



**sepioo® 12.2 NB-IoT**

- Size: 219.9 x 264.8 x 15.0 mm
- Display: 189.4 x 236.9 mm
- Resolution: 768 x 960 pixel

## SEPIOO® NFC & BUTTON LABEL

The sepioo® D2.6 B and D2.7 B labels are equipped with 2 or 4 buttons, respectively, which can be **individually programmed**. The sepioo® NFC labels without buttons and LEDs are equipped **with NFC technology** for writing to the labels without an access point infrastructure. With their low power consumption, they are perfectly suited for industrial environments.



**sepioo® D2.6 B**

- Size: 80.1 x 40.4 x 13.1 mm
- Display: 60.1 x 30.7 mm
- Resolution: 296 x 152 pixel



**sepioo® D2.7 B**

- Size: 92.6 x 50.2 x 13.2 mm
- Display: 57.3 x 38.2 mm
- Resolution: 264 x 176 pixel



**sepioo® D2.6 NFC**

- Size: 79.2 x 41.0 x 6.5 mm
- Display: 60.1 x 30.7 mm
- Resolution: 296 x 152 pixel



**sepioo® D4.2 B**

- Size: 103.5 x 84.5 x 15.1 mm
- Display: 84.8 x 63.6 mm
- Resolution: 400 x 300 pixel

### Advantages

- Real-time information transfer
- Accelerometer & temperature sensor
- Optimal compatibility with the sepioo® IIoT platform

# Digital Signage

## WHAT IS DIGITAL SIGNAGE?

Digital signage refers to a modern, flexible signage system that uses digital media or screen technologies such as LCD, E-Ink or others to display information in digital form. Compared to conventional signage, this electronic solution offers **more flexibility and dynamism**, because the content can be updated quickly and easily through centralised control of the system. This means that the advertising or information message is always up to date and adapts to current events. The option of using **multimedia content** makes it a powerful tool for reaching target groups.

### Advantages

- Updateable content
- Targeted communication
- Time-controlled content
- Increased flexibility & dynamism
- Adaptation to different target groups and times of day
- Display of individual marketing measures

## ELO TOUCH & WALLABY

The touchscreen monitors, including cloud-based management software, offer a wide range of possible applications. For example, they can be used as a digital customer advisor in retail, as a check-in service in hotels or as a menu board and reservation platform in hospitality. By combining them with the Wallaby self-service stand, a 15- or 22-inch touchscreen solution can be easily set up as a self-service area –including payment and printing functions.

### Advantages

- High storage capacity
- Multitouch display
- NFC
- Compatibility with hardware components for self-service/self-checkout
- Connection to merchandise management system

### Wallaby Self-service floor stand

- Size: 562.43 x 370 x 1192.8 mm
- Weight with base: 68.12 lbs / 30.9 kg

### Wallaby Self-service point-of-sale stand

- Size: 295 x 230 x 432 mm
- Weight: 24.69 lbs / 11.2 kg





### Indoor customer stopper

- Size: 1021.80 x 576.57 x 120.00 mm
- Resolution: 1920 x 1080 pixel
- Wi-Fi / USB / AV / SD



### DIGITAL BILLBOARD

The **43-inch full-HD displays** enable service and good visibility at all times. With touch functionality for interactive search functions, the advertising billboards also serve as **digital product advisors, signposts** or, in the case of hotels or restaurants, as menu boards or information boards.

### Outdoor customer stopper

- Size: 1105 x 615 x 420 mm
- Display: 1920 x 1080 pixel
- Wi-Fi / LAN / USB / 4G optional
- Robust outdoor housing with IP 65
- Transport rollers, lockable
- Battery life of around 10 hours

## VIDEO RAILS & STRETCH DISPLAYS

Video rails enable both animated and full-colour advertising and information options **directly at the point of sale** in the form of images in colour, videos, GIFs, QR codes, advertising messages or detailed product information. This makes every shelf or shop window an eye-catcher.

### Vusion Engage 12001

- Size: 1215.4 x 72.0 x 29.5 mm
- Resolution: 3840 x 160 pixel
- Wi-Fi & Bluetooth



### Vusion Engage 09001

- Size: 898.0 x 67.5 x 24.1 mm
- Resolution: 2880 x 158 pixel
- Wi-Fi & Bluetooth

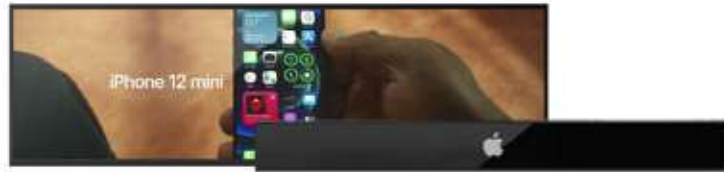
### Vusion Engage 06001

- Size: 603.2 x 67.5 x 34.6 mm
- Resolution: 1920 x 158 pixel
- Wi-Fi & Bluetooth

### Advantages

- Dynamic product presentation
- Modern, full-colour LCD display
- Attractive product presentation with videos, images and GIFs
- Possible touch function (depending on manufacturer)

# Digital Signage



## Newton Touch 29 Inch

- Size: 712.2 x 214.2 x 10.1 mm
- Display: 1920 x 540 pixel
- Wi-Fi / Micro HDMI

## Newton Touch 23 Inch

- Size: 593.8 x 60.4 x 19.6 mm
- Display: 1920 x 158 pixel
- Wi-Fi / Micro HDMI



## B-Series 25 Inch

- Particularly suitable for smaller rooms
- QHD
- Size: 285.0 x 624.0 x 30.0 mm
- Resolution: 2560 x 1080 pixels
- Ethernet 1 Gbps (RJ45) , Wi-Fi option

## Possible applications

- In-store product promotion
- Interactive signposting
- Lift advertising campaign
- Product presentation

## B-Series 47.1 Inch

- UHD
- Size: 1209.0 x 62,9 x TBD mm
- Resolution: 3840 x 160 pixel
- Wi-Fi



## PROFESSIONAL DISPLAYS

SoluM's UHD high-resolution displays provide impressive clarity and detail. With dynamic bulletin board solutions and high-performance advertising screens, multiple messages can be delivered simultaneously, leaving a lasting impression.

### Advantages

- **Strategic placement:** optimal visibility and impact in the target area
- **Dynamic content control:** content can be quickly updated
- **Seamless connectivity for more flexibility**



### S-Series 65 Inch

- 4K UHD
- Size: 1459.2 x 837.1 x 38.9 mm
- Resolution: 3840 x 2160 pixel
- Ethernet & Wi-Fi



### S-Series 75 Inch

- 4K UHD
- Size: 1681.7 x 959.9 x 55.0 mm
- Resolution: 3840 x 2160 pixel
- Ethernet & Wi-Fi



### S-Series 86 Inch

- 4K UHD
- Size: 1928.0 x 1099.0 x 57.0 mm
- Resolution: 3840 x 2160 pixel
- Ethernet & Wi-Fi

Also available in **32, 43 & 55 inch**

# E-Ink Displays

## E-INK TECHNOLOGY

Displays based on E-Paper technology are becoming increasingly popular for pricing, rooms or public information. The displays always promise the **best readability**, even in bright light and at poor reading angles, which is an advantage particularly in brightly lit rooms, on high shelves or outdoors. Furthermore, they impress with their **low power consumption**. Since E-Ink is 'bistable', power is only consumed when the display changes. This means that the displays can be used for many months and can be easily be operated using solar energy. In addition, depending on the application, there are different sizes with **display in greyscale or up to 60.000 colours**.

On request, we also offer special solutions for public transport or special indoor and outdoor applications with optional photovoltaic power.

The Philips Tableaux impresses with **60.000 colours for an indefinite period** – and with zero power consumption during display. It is the perfect choice for any industry and makes digital signage even more flexible. Whether in retail, hospitality or in industries with limited access to power, Philips offers sustainable digital signage.



### Philips Signage Solutions Tableaux

- Size: 25.3 inch
- Resolution: 1800 x 3200 pixel
- 60.000 Colours
- Wi-Fi 2.4 GHz und 5 GHz



### Visionect Joan 6 Pro

- Size: 104.2 x 142.9 x 11.1 mm
- Resolution: 1024 x 758 pixel
- 16.000 greyscales
- Wi-Fi



### Visionect Place & Play 32 Inch

- Size: 707.2 x 413.8 x 13.4 mm
- Resolution: 2560 x 1440 pixel
- 16.000 greyscales
- Wi-Fi
- Also available in 13 inch



### Visionect Sign 6 Inch

- Size: 158.8 x 123.8 x 13.1 mm
- Resolution: 1024 x 758 pixel
- 16.000 greyscales
- Wi-Fi

# Digital door signs

## ROOMZ

Many people are familiar with digital door signs from modern office spaces, but they are also used in hotels, exhibition centres, conference buildings or in healthcare. Occupancy, **appointments and changes to them can be taken** over and displayed within a very short time, so that employees and guests are always up to date. The advantages of digital signs lie not only in their centralised management, but also in the E-Paper technology. This ensures that graphics and text are always **displayed in high quality** and are highly legible, while power consumption is very low. This makes digital door signs a time-, cost- and resource-saving alternative to traditional paper signs.

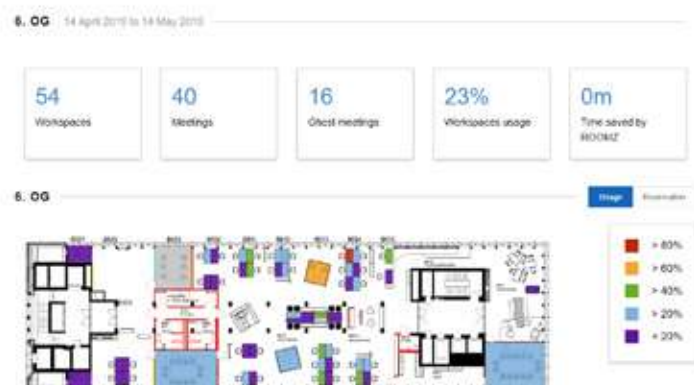


### Roomz

- Size: 196 x 165 x 7 mm
- Resolution: 1024 x 768 pixel
- Wi-Fi

A modern look, simple administration and integration into internal calendar systems are among the main advantages of ROOMZ. A special feature is the possible **use of sensors**. These check whether meetings are actually taking place and automatically adjust the display.

The ROOMZ Solar Kit is optionally available as an accessory that allows the ROOMZ display to be operated only with daylight (300 lux light).

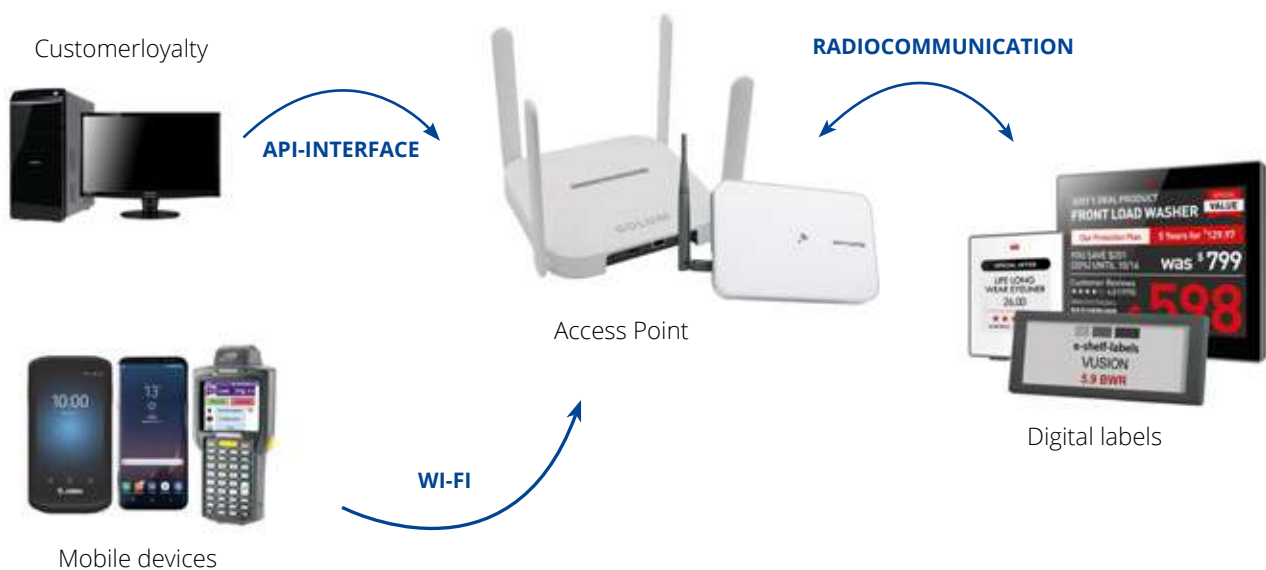




# Infrastructure

To function optimally, every ESL and digital signage solution requires a corresponding infrastructure. This includes both **software and hardware components** that enable the exchange between the various units.

Our portfolio includes the appropriate **access points**, which serve as a communication link between the individual elements. For example, data is exchanged with the digital labels via a radio connection, while the communication with mobile devices works via Wi-Fi or an API interface on the PC.



## ACCESS POINTS

Most access points operate in the **2.4 GHz range**, as do the associated labels. For the **868 MHz** frequency range commonly used in **industry**, we offer so-called Subgiga Access Points.

In addition, there is the option of using **dongles to set up** solutions on existing access point infrastructures from Cisco, Arruba, Lancom, etc. It is even possible to use current access points from the aforementioned manufacturers in a compatible way via firmware updates, without the need for any further infrastructure (infraless). We would be happy to advise you personally on compatible models.



### VusionGroup

For Vusion Label

### SOLUM Gateways

For Newton label



# Implementation

A cloud solution is the best choice for a cost-efficient and scalable infrastructure in trade or industry. All data can be recorded **independently of location** and displayed on any device. In addition, other IoT devices or sensors can be integrated into the cloud solution via API.

## Advantages at a glance

- Independence of location
- Low infrastructure costs
- Rapid scalability
- Security
- Future-proof for further digitisation processes



## RETAIL

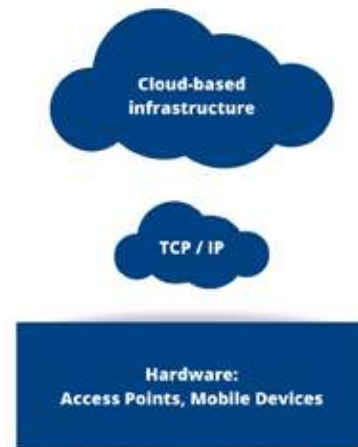
The use of cloud-based retail **IoT platforms** guarantees a flexible and powerful data integration solution for digital labels, with management of different sources such as ERPs, E-Commerce platforms or POS systems, as well as an overview of store activities in real time.

## INDUSTRY

Work processes in industry 4.0 require flexible and agile structures as well as real-time monitoring of all interfaces in order to detect problems in good time. Cloud-based IoT platforms enable **real-time reports** on the status of the infrastructure and location-independent management of the labels.



The implementation of ESL is an **individual process**, as it is highly dependent on existing structures. For this reason, there is no precise implementation guide that applies equally to every company. The specific steps that need to be taken are discussed and carried out in **close cooperation with e-shelf-labels**.



# Basicsoftware

A **central component** of the ESL infrastructure is the software. Our basic software solutions guarantee access to a **central administration** and **updating** of the labels. They provide a real-time status of current battery levels and displayed information, as well as the option of manual administration.

## BASICSOFTWARE VUSION

In addition to on-premise systems, the central administration of electronic price tags in the 2.4 GHz system can also be carried out via the **Vusion Cloud**. It can be used to generate templates, create interfaces or manage Vusion labels and check their functionality. Thanks to an Infraless feature, the cloud is compatible with over 100 access points from leading third-party manufacturers.



### Advantages of Infraless

Optimisation of the total cost of ownership (TCO) & improving ROI

- No additional network infrastructure required
- No additional cabling required

Improved IT visibility

- The host access point manages the integrated solution
- Troubleshooting of configuration problems

'Smart-Coex' data transmission coexistence function

Simplified control of firmware changes in the radio area

- Radio firmware updated by host access point
- Ensures system compatibility

Natively

- Zero-touch activation of 2.4 GHz V:IoT radio protocol
- No USB device required
- Enables remote activation and modification
- Can be used on existing installations
- Energy consumption not affected by dongle

## BASICSOFTWARE SOLUM

AIMS is the basic software for Newton Labels in the 2.4 GHz as well as in the 868 MHz frequency range. The Advanced Information Management System enables the management of labels, products, stocks, users and data in one application. This also includes an integrated label designer. **AIMS** is available both on-site and in the cloud or as a SaaS server. In addition, there is a mobile application for on the go.



### Other software

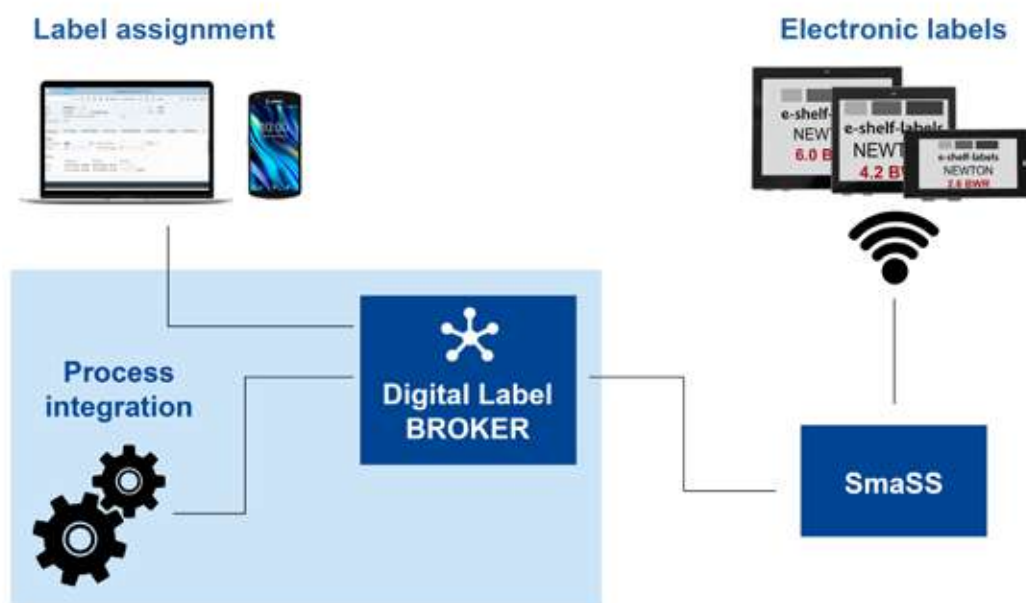
**Special software solutions** are available for other networked processes such as mobile payment, automated shelf monitoring or interactive product advice systems. These ensure, for example, that additional hardware such as handhelds or printers can be integrated.

[Read on for more information](#)

# Middleware Solution

## SAP ERP – E-Ink Label Add-on

For automatic and flexible production, data must be available electronically in real time and assembly instructions must be precisely mapped within short cycle times. Through process integration into the customer's operational information system, the SAP ERP - E-Ink Label Add-on can be used to control internal goods flows in warehouse and logistics processes **more efficiently and with greater resource conservation**. This means that the data stored in the SAP system can be linked to the SmaSS middleware and played out to the electronic shelf labels (ESL), and, for example, current stock levels in the company can be shown on the displays.



### Advantages of the SAP ERP Connector

- Paperless industry and real-time data
- Automation of process steps thanks to dynamic integration of digital labels
- Fast installation in standard processes (out-of-the-box integration)
- Flexible integration in complex processes
- Securing of processes through feedback of the label update to your ERP system
- Future-proof for SAP S/4HANA on-premise and cloud

### Further ERP-integrations

- Microsoft Dynamics
- Navision

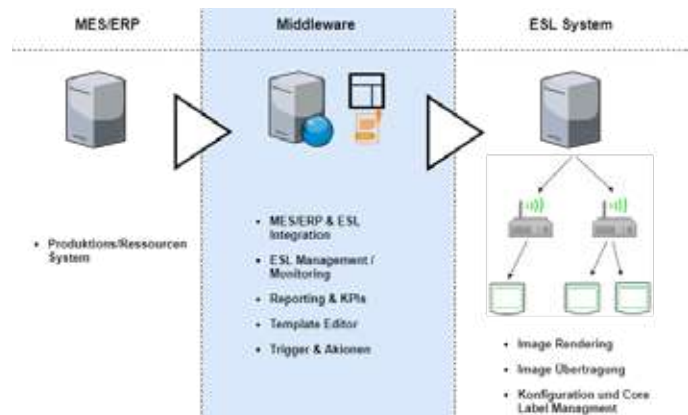


# Middleware Lösung

## SMASS MIDDLEWARE

A middleware solution serves as a **medium for communication** between the digital signage and existing ERP or leading background systems. Our SmaSS middleware is divided into **three areas of application**: SmaSS Logistics, SmaSS Hospitality and SmaSS Office.

The SmaSS middleware provides the basis for **connecting the E-Ink labels** to the system and the database. Depending on the application, SmaSS has various tools and frameworks available. The middleware also makes it easy to connect IoT devices in the form of displays. The SmaSS middleware makes the data available for further evaluation as a report or for further processing in a machine format.



### SmaSS Logistics

- System monitoring
- Visualisation
- Reporting & KPIs



### SmaSS Office

- Appointment booking
- Automatic updates
- Managed via a web interface



### SmaSS Hospitality

- Central administration
- Menu planning
- Table reservations
- Display of ingredients, allergens and colourings





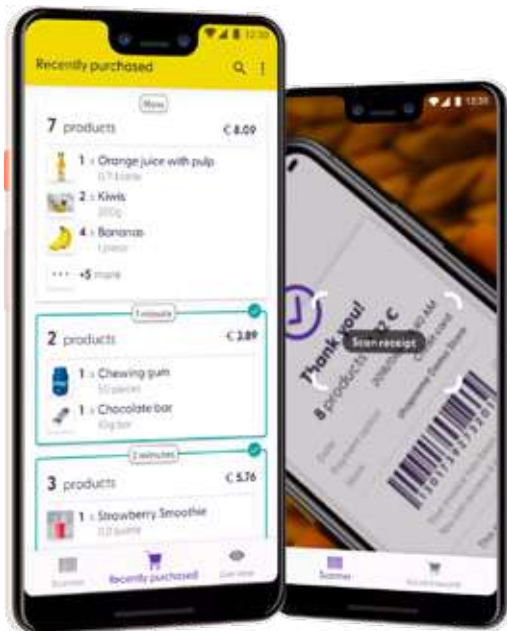
# Software as a service

## in the Retail sector

### SCAN & GO WITH MOBILE PAYMENT

With Scan & Go, customers can not only conveniently **scan their own** goods, but also easily **pay them directly** using mobile pay solutions, no matter where they are in the store. For Scan & Go, both hardware components in the form of scanners are used, as well as the appropriate mobile pay applications and connections to the merchandise management system.

The solution works via Near Field Communication (NFC) or QR code on the electronic labels. After scanning, customers can add the items to the **digital shopping cart** and pay for them by mobile phone at the end, from anywhere in the store. Customers can choose from a range of **common payment** methods, such as credit card, SEPA direct debit, PayPal, Apple Pay or Google Pay.



#### Customer benefits of Scan & Go

- Innovative shopping experience
- Convenient payment at the shelf
- No waiting at the checkout
- Product information at a glance
- Product recommendations based on shopping basket
- Available for iOS and Android

#### Retailer benefits of Scan & Go

- Minimisation of abandoned purchases
- Increase in sales
- More time for employees
- Simple integration of discounts
- Intelligent control system
- Analysis of purchasing habits



# Software as a service

## in the retail sector

### LINISTRY

Linistry is an enterprise-ready and **easy-to-integrate** customer journey tool designed for large retailers with a store network. The **customised queue management** optimises your operations and takes the customer experience to a new level.



#### Smart booking

##### Intelligent appointment booking

Order pickup or other in-store services may require scheduling to ensure the smoothest customer experience.



When an **appointment is booked in advance**, store personnel can prepare for the customer's visit

- Configurable questionnaires that the customer can complete before the appointment
- System integration: Office365 Calendar, CRM, Azure AD, customer app, customer chatbot and much more.
- Provision of individual, user-defined functions
- No maintenance required due to SaaS cloud solution
- Reach customers via their preferred channels: SMS, e-mail, WhatsApp, Messenger

#### Virtual queueing

##### Virtual queue

In retail, waiting in line can be frustrating for customers, whether it's during peak season, during promotions or at sales.

With Linistry, customers can turn this idle waiting time into valuable shopping time in your store. Customers no longer have to stand in long queues and can use their time as they please to browse and shop in your store.



- With digital tickets, customers can queue from home, on the go or while browsing in the store (also works without internet access, via SMS)
- Waiting time is utilised by displaying recommendations for cross-sales and upselling
- Relevant data from customer visits is already being delivered: waiting times, service times, target deviations, etc.



## Non-buyer conversion



### Non-buyer conversion

Many customers get stuck in the middle of the shopping process and need help. If no one is around to assist them, many customers in this situation simply leave the store and buy the product elsewhere. To prevent this, Linistry comes into play. Customers can signal their need for assistance in any department of the store.

Depending on the need, they are either redirected to an online webpage (questions and answers, web shop, etc.) or the in-store salespeople are immediately notified of such requests on their phone. The sales staff can then ask the customers **on the spot** what they need, what they are thinking or how they can be turned into buyers. Matching prices of other retailers, offering alternative products, answering technical questions – these are all ways to convince the customer and increase sales.

## SCREEENR Digital Signage Plattform

The SCREEENR interaction platform **manages all content** in the cloud, whether images, videos or interactive elements. All content for the various digital signage displays can be created independently. Working with a single solution saves time and familiarisation.

With its Content Designer & Manager and Player Element, the software covers all content areas, from creation and playout to analysis.



### Content Designer

- Design tool with drag and drop
- Create digital content
- Easy data integration
- Numerous design options

### Content Manager

- Centralised content management in the cloud
- Remote management
- Intuitive pairing with any display
- Scheduling

### Player Element

- Stable and reliable playback
- Sharing content with smart delivery technology

# Software as a service

## in the retail sector

### CAPTANA: AUTOMATED SHELF MONITORING - OUT OF STOCK PREVENTION

There is hardly anything more annoying in retail than empty shelves. With the help of the automated shelf monitoring solution Captana by the VUSION Group, out-of-stock situations can be considerably minimised, which in turn leads to satisfied and returning customers.



If the quantity of a product falls below a predefined minimum level after it has been removed from the shelf, a **message is sent to the employee's smartphone or personal digital assistant (PDA)**. The employee can then see on a digital map exactly which item needs to be refilled or reordered at which location in the store. With additional networking, Captana can even automatically trigger reorders, thus guaranteeing full shelves at all times.

#### Captana Shelfeye: The Hardware for Automated Shelf Monitoring

The camera is mounted opposite the shelf to be monitored, with **autofocus** and **a wide-angle lens** guaranteeing consistently good readability. Images of people are automatically blurred to comply with the EU GDPR. The camera scans the electronic shelf labels on the shelf at regular intervals and marks any discrepancies as soon as they are detected.



- Autofocus lens
- Energy-saving communication protocol
- Correct position detection on the shelf
- Rechargeable batteries
- Robust housing
- Configurable status LED
- Motion sensor for energy saving

### NEWTON PLAY: INTERACTIVE SHOPPING EXPERIENCE

With configurable buttons, vivid displays, real-time updates and seamless integration with the back-office system, Newton Play is a complete interactive solution. This makes it easy to excite and communicate with customers, and thus optimise operational processes.

#### Advantages:

- **Interactive buttons:** fully customisable
- **Dynamic display:** always up-to-date and relevant content
- **Real-time updates:** so even lightning-fast promotions can be quickly implemented
- **Seamless integration into the back-office system**



# Software as a service

## in the industry sector

### INDUTRAX

A lot of time is wasted in production and logistics companies because the locations of components, products, orders, transport containers, containers, tools and equipment are not clearly recorded. The software for the **agile creation of location-aware solutions** helps to remedy this situation. It can be used to combine various location and identification technologies or to use them independently – both indoors and outdoors, plant-specific or across plants.



### eLABELMANAGER

The eLabelManager **automatically synchronises** and updates all displayed data on electronic labels. It also enables the seamless integration of eLabels and location technologies. The software allows the creation of virtual packages consisting of RTLS tags and eLabels. This merger results in the creation of the **Location Aware eLabel**, which provides the ability to supply tagged objects with location-dependent updates and information.

- **Order data** – Display of all relevant order information directly at the point of use in the production hall
- **Machine information** – Dynamic display of the status of the machines and the current production orders in the production hall
- **Put-to-Light system** – Detection of transport containers in the supply chain
- **Pick-to-Light system** – Detection of load carriers on the racks, including confirmation of removals
- **Pick-to-location system** – localisation of transport containers in the area using a map display.





# Software as a service

## in the industry sector

### EKKO

The ekko software enables the efficient digitalisation of production plants using electronic labels for Industry 4.0 applications. From the smallest storage location without a system connection to complex, internationally networked production. Based on the **ekko coordinate** system, information about orders, processes, machines and people is collected. This is used to generate relevant information for process improvements in real time. This reduces the error rate while **increasing efficiency**. In addition, using electronic shelf labels instead of paper not only saves costs, but also CO2 for a sustainable future.

#### Pick-By/Put-to-light E-Paper

During the picking process, the LED on the label lights up at the corresponding material storage location, indicating to the picker which material needs to be picked. The pick is confirmed by a scan and the LED switches off. Picking errors are displayed immediately and can be corrected straight away.

#### Advantages

- Reduced error rate
- Cost reduction through increased process speed (reduced search times)
- Paper order slips are no longer needed
- Easy to fully integrate into existing systems
- No complex cabling required
- Conspicuous LED directly on the e-paper label



#### Self labelling

In Intralogistics 4.0, processes are digitised and thus also paperless. The areas of application are diverse – on small load carriers in flow racks, on large load carriers on the storage area or on mobile transport trolleys. The contents of the storage location, additional information and QR and barcodes are **displayed on the ESL in a layout of your choice**, depending on the location.

#### Advantages

- Eliminates manual work (writing, printing and applying paper labels)
- Clear legibility of e-paper labels thanks to
- E-Ink technology
- Ultra low-power design
- Centralised management of label content
- Can be fully automated by connecting to the ERP system



### e-Kanban

When you confirm the removal of material **directly on the e-paper label**, ekko adjusts the stock quantity accordingly and transmits it. Defined threshold values trigger the replenishment process. At the same time, a re-order can also be triggered by **pressing a button** or even **by the scale**.

#### Advantages

- Cost and time savings through automated (ordering) processes
- Controlled material call-offs
- Higher quality of manufactured products
- For small and large load carriers

### Digital consignment note

E-Paper labels with E-Ink displays are battery operated and wireless, and can therefore also be used in mobile applications. The digital waybill accompanies a transport trolley through the various stations in the production chain. **Information about the contents** of the transport trolley can be updated in real time from anywhere within the factory.

#### Advantages

- Flexibility and mobility in the process mapping
- Information processing in real time
- Ultra low-power design
- Higher sustainability through paperless processes
- Error reduction in the process



### Datahub/ekko Analytics

Many machines and systems generate data and have their own screens. With the ekko software, **all machines and systems can be connected** to provide the relevant data in aggregated form at the right time and in the right place. Processes can be evaluated and optimised to save time and money in the long term.

### Warehouse Management

ekko can be integrated as a subsystem into existing WMS/ERP solutions such as SAP, but it can also be used as a stand-alone solution.

# References

## RETAIL

### SportScheck

#### SportScheck

'The advantages of being able to change labels in-store not only save a huge amount of time for employees, but also create a modern and forward-looking environment in the store. This ensures that nothing stands in the way of providing the customer with an optimal shopping experience.'



### Fahrrad XXL FRANZ

#### Fahrrad XXL

'In e-shelf-labels, we have found a competent partner for digitisation in our company. The dedicated team offers good concepts for the requirements we have set, which contributes significantly to successful implementation. We appreciate the excellent support for our projects.'



INTERSPORT

Frankana Freiko

T Mobile

MISTER SPEX

coop

INTER  
CARAVANING

SanLucar

Puma Tools

NOTINO

STIHL

Ostsee  
ampingpartner

Dr.Max+

## INDUSTRY

### KENDRION

#### Kendrion

'One of our suppliers showed us the updateable e-label system he was using in his company. We were fascinated by it and wondered what it could do for us.'



#### Stempel-Fabrik

'Implementing SOLUM Labels in our warehouse will enable us to take our internal stock management to a higher level. The ESLs significantly simplify our processes, and the collaboration went extremely smoothly.'

