

Accessories for Opticon

PE Range ESL



Display Solutions



≡ OPTICON

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Introduction

To create a distinctive business environment Opticon offers both e-paper and colored digital signage solutions. Opticon's wireless Electronic Shelf Label (ESL) system is based on a radio architecture and e-paper label that provides advantages in performance, cost and power consumption.

Our ESLs are suitable for industries such as retail, fashion, catering, mobile shops, jewelry, home appliances, pharmacy, industry, warehouse and room signage. The benefits of digital signage are that information can be presented more easily, prices can be adjusted instantly, and the signs can adapt to the context and audience, even interactively. Opticon's solutions aim to dramatically impact how companies operate their businesses providing a superior platform that can improve profitability and enable new customer-facing applications, promotions and loyalty programs.

What diversifies our ESL solutions is the added value of NFC, LED indicators and sound feedback. This enables you to use customer loyalty cards, payment and even pick-to-display solutions. The LED can be used as an indicator for a certain action, to attract attention or to find a product in a warehouse. When you develop a custom-made application, you can add even more functionalities to the Opticon Powered ESL-range (PE-Range) that gives your customer control of their shopping experience.

Opticon took the batteries out of the ESL to create a slimmer fit, making the shelf look neat and the store stands out in the crowd. The dedicated power rail supplies continuous power, which makes the PE-range a carefree solution by not having to swap batteries in due time. This smart design taps into modern society and the customer's wishes. The PE-range creates the 'wow-experience' we are all looking for.

PE Range Overview

The PE Range ESL Solution can be used in a variety of different settings: from retail stores to catering and even warehouse applications. Because the PE Range is such a versatile solution the application possibilities are almost endless. Read more about it in the brochure 'Cashier Less Shopping' or contact our local teams who can help you find the right solution for your application.

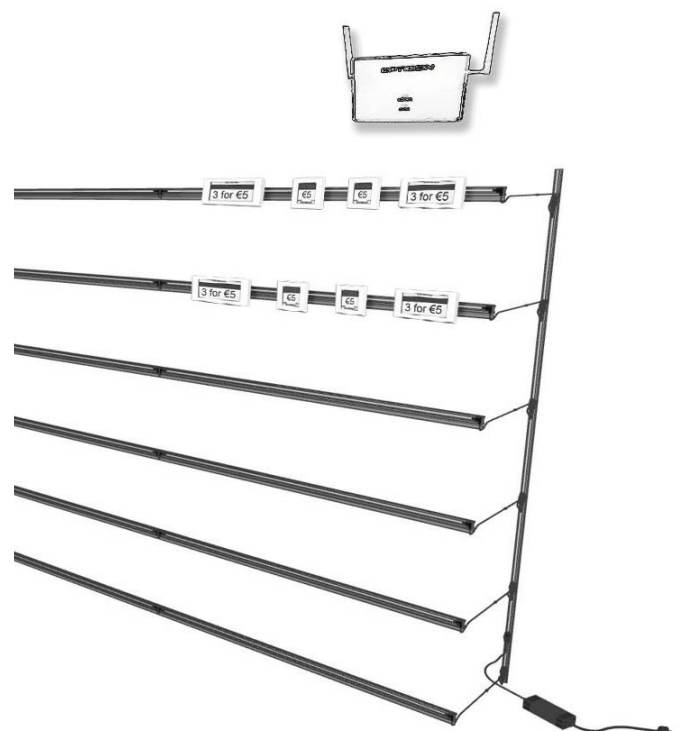
To get a better understanding of the lay-out of the PE solution we look at a retail application. In this installation, common 'Tegometall' retail shelves are used, but it is applicable for many other types of shelves. The complete solution of the PE-range is shown in the following image.



Taking a closer look at the different elements that create the PE range solution, we distinguish five groups. Firstly, we have the rails that deliver continuous power to the ESLs.

Secondly, the cables that are used to connect the power supply and de rails together. The third element in the PE solution are the labels themselves.

To interact with different databases and provide the ESLs with content we need the base station. Lastly, we have a few accessories to complete the PE range solution.

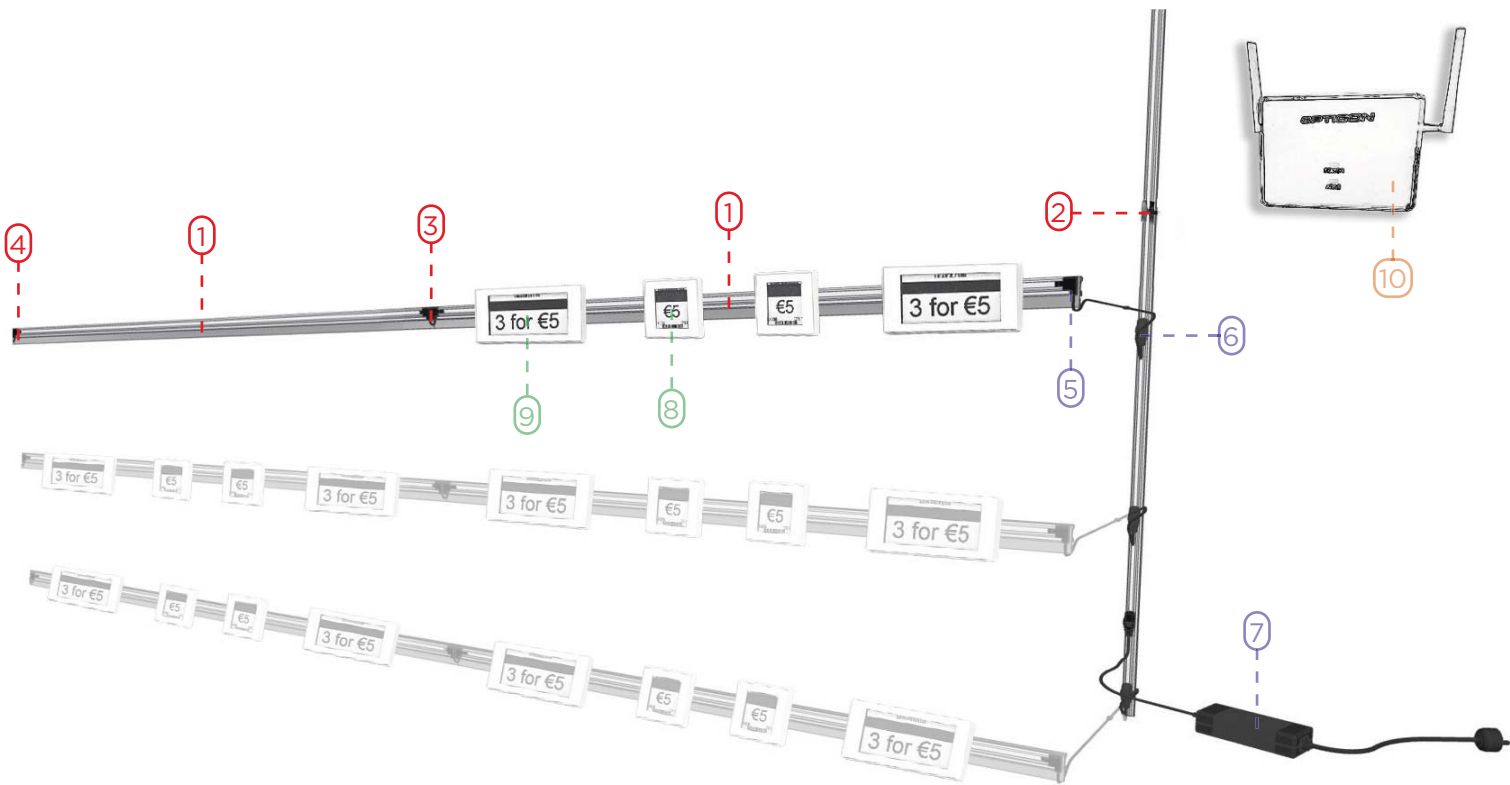


The Rails

The first element in the PE solution are the rails. These elements are indicated with red numbers 1 till 4 in the image below and on the next page. These are used to deliver the power from the power supply (7) to the PowerRail Back Kit (2) and the PowerRails (1) on the front of the shelf. The PowerRail Back Kit (2) is used to distribute the power vertically over the 'Tegometall'. This kit can be magnetically attached to the back of the shelf and consists of two 90cm rails, a bridge unit and two end caps. The power is delivered from the power supply (7) to this PowerRail Back Kit (2).

From the PowerRail Back Kit (2) power is delivered to the front PowerRail (1) via a set of power cables (5 and 6). The ESLs (8 and/or 9) are connected directly onto this front PowerRail. The PowerRail (1) comes in three models: White with self-adhesive tape, grey with self-adhesive tape and grey with a Wanzl clip on the back. Multiple PowerRails can be connected using the Bridge Unit (2). To end a powerrail neatly, you can use an End Cap (4).

The image below shows these PowerRails in the example application. Many other configurations are possible. Contact a local Opticon representative for more information. The next page describes the products with their specifications and article codes.



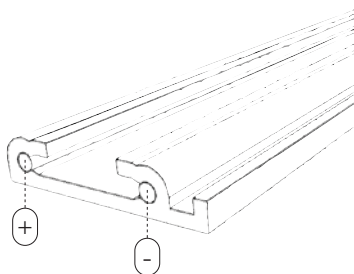


PowerRail Tape White

1

Mounting: Self adhesive
Length: 1000 mm
Width: 25 mm
Color: White

Other rails with different mounting options can be produced depending on request.



PowerRail-1030 tape 1m white 14299

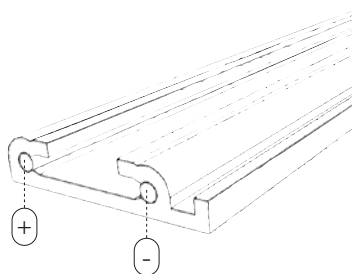


PowerRail Tape Grey (Blk)

1

Mounting: Self adhesive
Length: 1000 mm (3750mm in black)
Width: 25 mm
Color: Grey, Black

Other rails with different mounting options can be produced depending on request.



PowerRail-1010 tape 1m grey 14282
PowerRail-1010 tape 3.75m black 14564

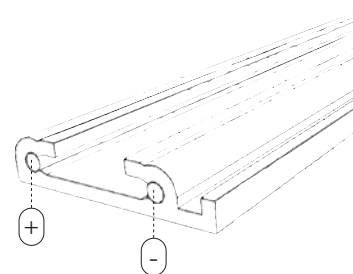


PowerRail Wanzl Grey

1

Mounting: Wanzl Clip
Length: 1000 mm
Width: 25 mm
Color: Grey

Other rails with different mounting options can be produced depending on request.



PowerRail-1020 Wanzl 1m grey 14283

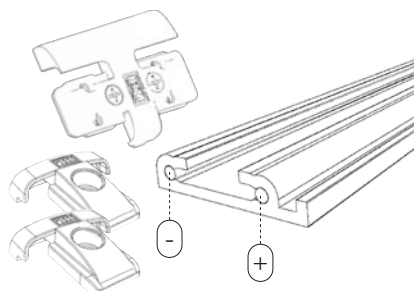


PowerRail Back Kit

2

Delivers power from the power supply to the front PowerRail via 14448 and 14387.

Set consists of:
2x 900 mm magnetic Power Rail Grey
1x Bridge Unit (14390)
2x End Cap (14389)



PowerRail back end - kit 14503

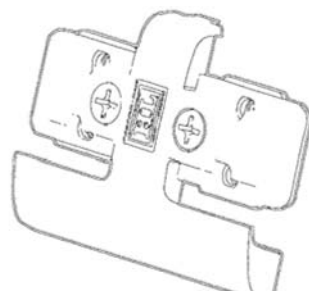


PowerRail Bridge Unit

3

Connects two or more PowerRails together.

Set consists of:
1x Bridge Unit
2x Retaining Screws



PowerRail bridge unit 14390

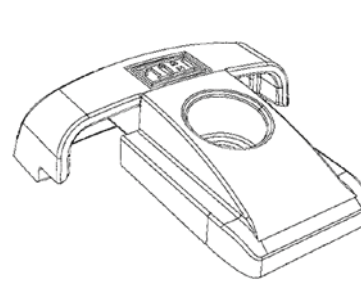


PowerRail End Cap

4

Terminates a PowerRail in a safe a neat manner.

Set consists of:
1x End Unit
1x Retaining Screw



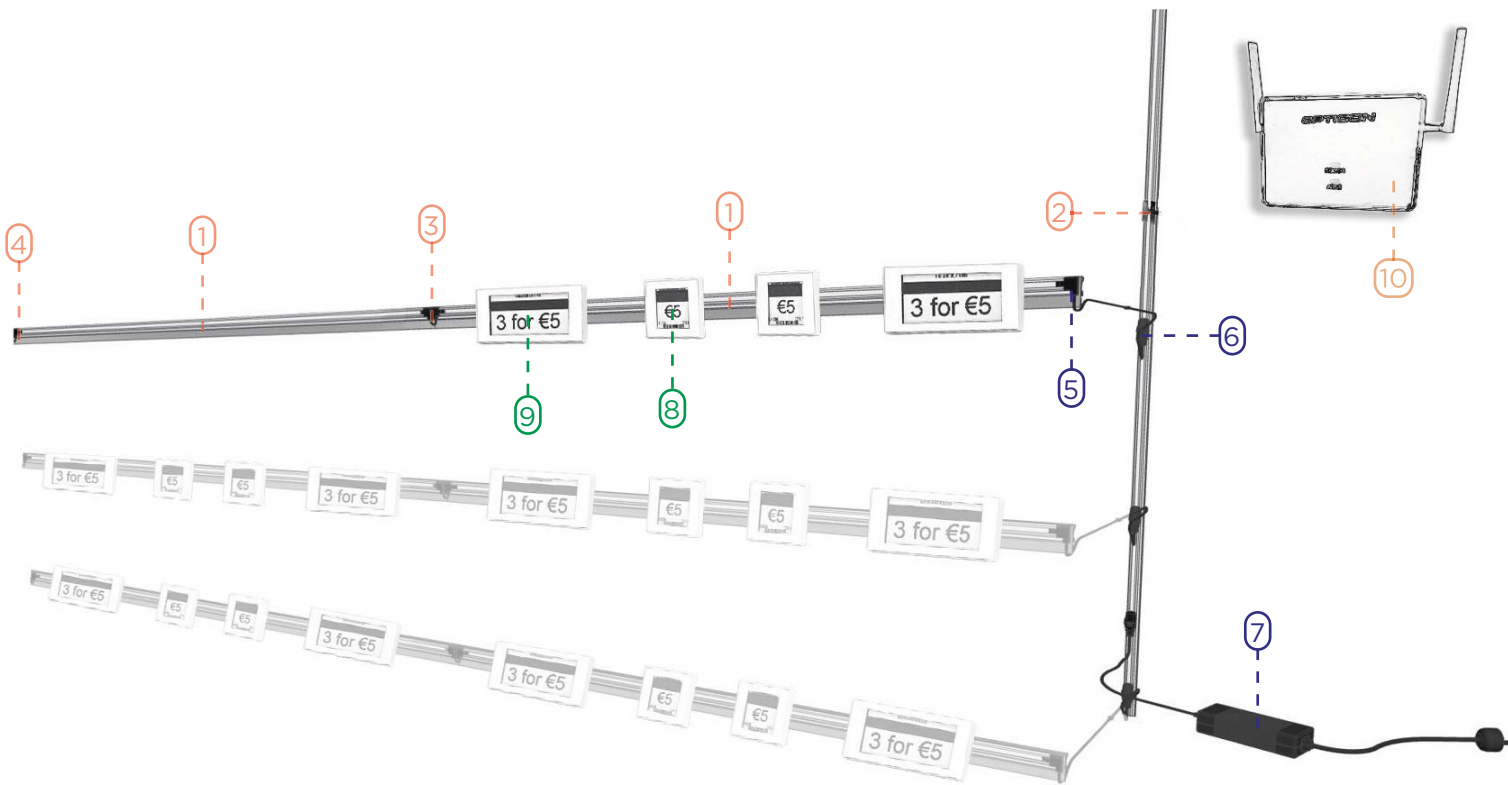
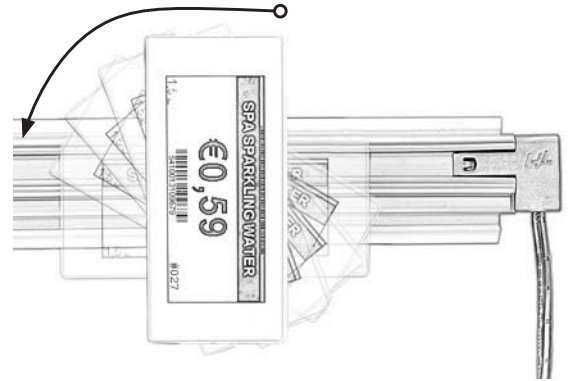
PowerRail end cap 14389

The Cables and Labels

The second element within the PE solution consists of the required cables. These elements are indicated with blue numbers 5 till 7 in the image below and on the next page. The Power supply delivers (7) the power to the PowerRail Back Kit (2). From there the power is transferred to the front PowerRail (1) with the Connector Cable (6) and Plug for PowerRail (5).

The Connector Cable (6) uses a bayonet style of connector to attach to the PowerRail Back Kit (2). The other end connects (++) / (-) to the Plug for PowerRail (5). This Plug for PowerRail connects to the right side of the PowerRail (1).

Now the PE-152 (8) and/or PE-292 (9) ESLs can be connected to the front PowerRail (1). You attach the ESL's to the PowerRail by aligning the ESL at an angle of 90 degrees clockwise. Press the notch at the back of the ESL into the rail and rotate 90 degrees counterclockwise (See image to the right for a representation of this action). Now the ESL is aligned with the PowerRail. The ESL gives a visual confirmation when it receives power for the first time.



The image above shows these Cables and ESLs in the example application. Many other configurations are possible. Contact a local Opticon representative for more information. The next page describes the products with their specifications and article codes.

The Cables



Plug for PowerRail

5

Connection cable for PowerRail (Right).
Use together with Connector Cable (14387)

Length: 150 mm
Color: Black



Plug Right Male 150mm
Plug Left Female 150mm

14448
14449

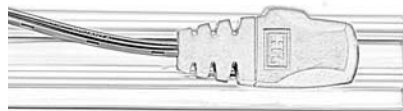


Connector Cable

6

Connector cable for PowerRail.
Use together with Connection Cable (14448) and Back Kit (14503).

Length: 650 mm
Color: Black



Connector cable 650mm

14387

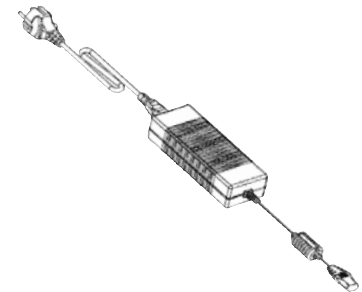


PowerSupply

7

PowerSupply for PowerRail Back Kit (14503). Do not use directly onto front PowerRail (1). Euro cable (10999) not incl.

Output voltage: 12V
Output current: 8A
Supports: up to 100x PE-292
Color: Black



Power sup 12V/8A back end rail

14414

The Labels



PE-152

8

Display: e-paper b/w
Size: 1.5 inch
Number of dots: 152 x 152
Pixel pitch: 140 dpi

Power: Over rail
Operating voltage: 5-12V

Radio protocol: IEEE 802.15.4
LED, NFC and sound feedback

PE-152 14302
PE-152 NFC A, B & F 14692
PE-152 BWR * 14739



PE-292

9

Display: e-paper b/w
Size: 2.9 inch
Number of dots: 296 x 128
Pixel pitch: 111 dpi

Power: Over rail
Operating voltage: 5-12V

Radio protocol: IEEE 802.15.4
LED, NFC and sound feedback

PE-292 14156
PE-292 NFC A, B & F 14690
PE-292 BWR * 14709
PE-292 Low Temp * 14571



RE-294

9

Display: e-paper b/w
Size: 2.9 inch
Number of dots: 296 x 128
Pixel pitch: 111 dpi

Power: Over rail & Battery
Operating voltage: 5-12V

Radio protocol: IEEE 802.15.4
LED, NFC and sound feedback

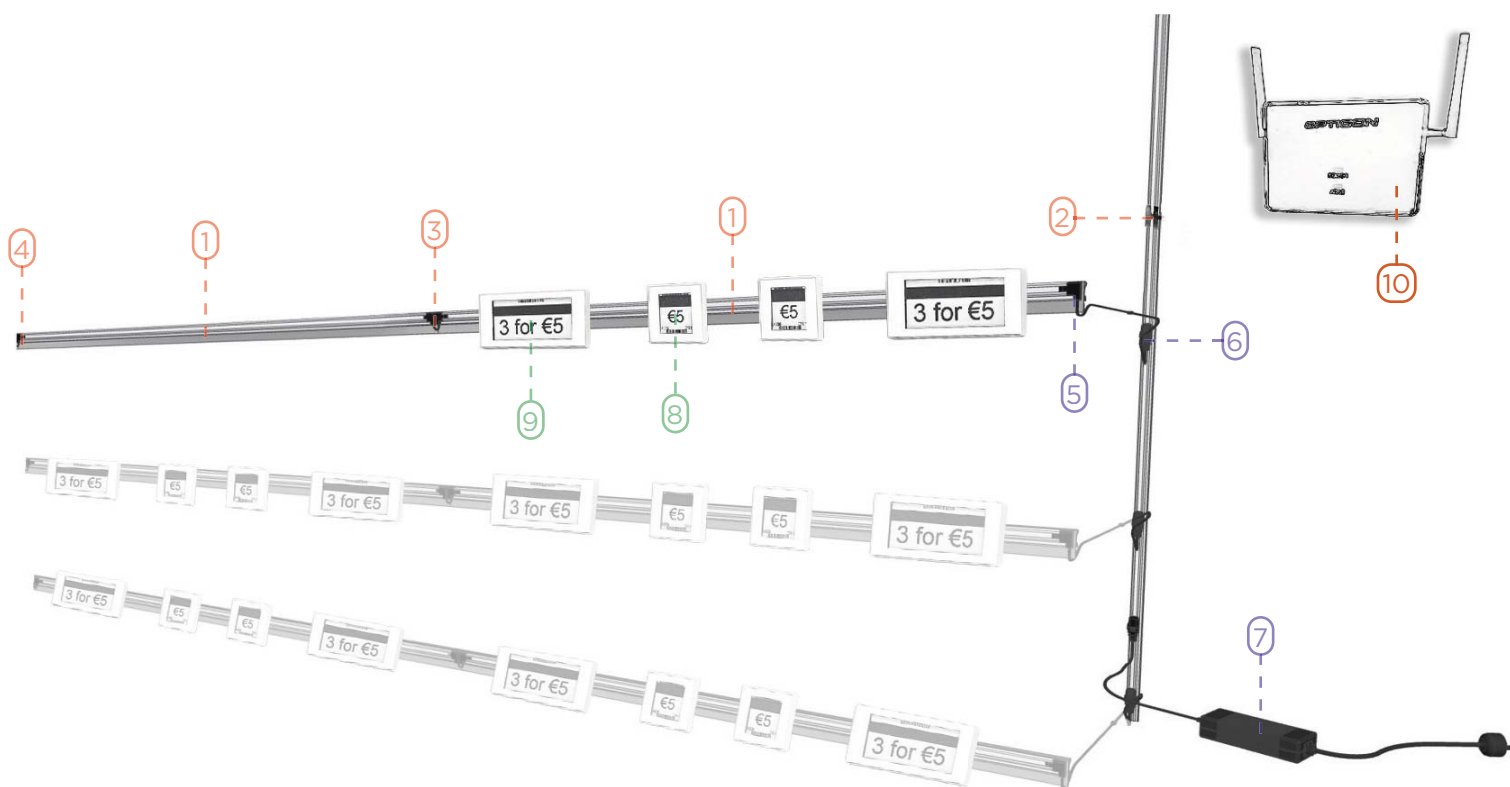
RE-294 14603
RE-294 NFC A, B & F * 14716

The Basestation and Accessories

From small retail to multi-store business, implementation of the Base Station is very simple. All e-paper labels are connected to the same network and content management system, which is connected to the back-office system. One EBS-40 base station can load 2,500 ESLs per station and has a 25-meter indoor radius.

The ESL Server software runs on the Base Station and can be used to provide the ESLs with content. There are different types of solutions that the ESL Server Software will support: CSV-file solution, SQL solution, CSV / SQL hybrid solution, External content management solution and a SQL API. You can download the latest version from www.opticon.com.

Use the EBS Power Supply to provide the Base Station with 6V power. You can use the EBS Ethernet cable to connect the Base Station to your existing network. A demo set of 5 NFC cards with Opticon Print are available. You can program these cards with the NFC Reader.



The Basestation



EBS-40

10

Size: 145.1 x 110.1 x 32.4 mm (wxhxd) without antenna's
 Cpu: Cortex M4 32-bit, 120 MHz
 ROM: 512 kB Internal RAM: 256 kB
 External RAM: 8 MB

Ethernet: 10 Mbit/sec & 100 Mbit/sec, half duplex & full duplex
 Band: 2.4 GHz, 16 channels (2405-2480 MHz)
 Transfer Speed: 250 kbits/sec (>10.000 complete image updates per hour with 2" ESL)
 Max. Load: Up to 2500 ESLs
 Range: Typical 25 meter indoor; 100 meter open-field
 Protocol: IEEE 802.15.4 based Encryption: none (default); 256-bit aes encryption (on request)

Voltage: Min 4.5V, Max 6.6V
 Current Consumption: 200mA

EBS-40

13665



EBS PowerSupply

10

Power Supply
 Output voltage: 6.0V
 Output current: 2.0A

With swappable power plugs:
 EU Plug
 US Plug
 UK Plug

Power Supply 6.0V 2.0A

10991



EBS Ethernet Cable

10

Ethernet cable to connect the Base Station to an existing network.

Length: 1000 mm
 Color: Black

Ethernet Cable 1m Black

12607

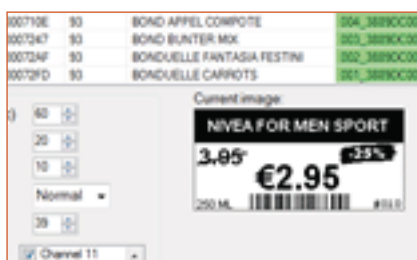


ESL Server Software

10

There are a Several different types of solutions that the ESL Server Software will support:

CSV-file solution
 SQL solution
 CSV / SQL hybrid solution
 External content management solution
 SQL API



NFC cards

5 cards incl. Opticon Print for testing purposes. Can be programmed with NFC Reader (14388).

NFC 5 cards incl. Opticon print

14286

The Accessories



NFC Reader

Size: 98.0 x 65.0 x 12.8 mm (lxwxh)
 USB 2.0 Full Speed Interface
 CCID Compliance
 Read/write speed up to 424 kbps
 Reading distance of up to 50 mm
 Built-in anti-collision feature

Supports ISO 14443 Type A and B cards, MF1, FeliCa, and all 4 types of NFC (ISO/IEC 18092) tags

Application Programming Interface: Supports PC/SC, CT-API (through wrapper on top of PC/SC)

User-controllable LED & Buzzer
 Supports Android OS 3.1 and above

NFC reader

14388



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