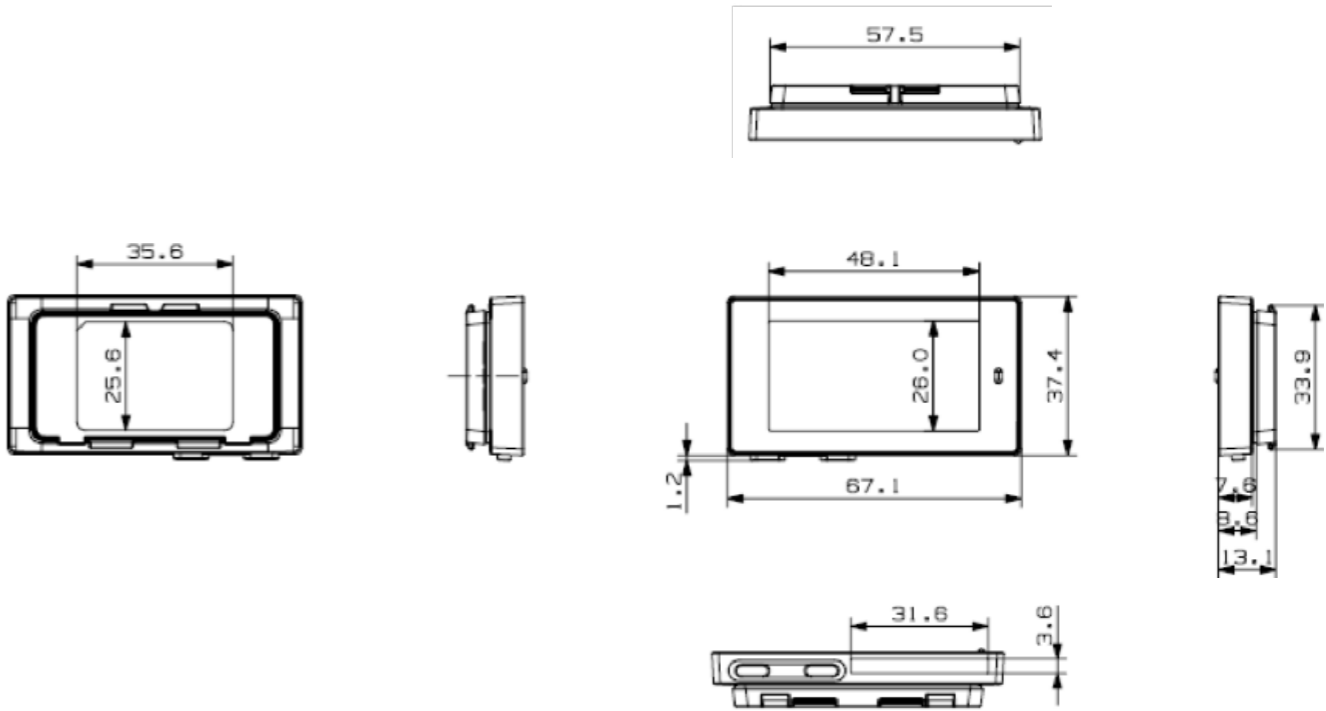


TECHNICAL SPECIFICATIONS

Model W:EL016H3WRA/WWW B:EL016H3BRA/WWW	Pixels color BW / BWR / BWY	Compliance CE, RoHS, FCC
Dimension (mm) 36.7 × 45.0 × 13.1	Viewing angle Nearly 180°	NFC FeliCa NFC Forum Type 3
Active display area (mm) 27.0 × 27.0	Usable pages Up to 7 pages	Waterproof IP67
Resolution (pixel) 200 x 200	Operating temperature 0 - 40°C	Button 2 Buttons
Pixel density 184 dpi	Battery CR2450 × 1ea	LED 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)
Display technology Full Graphic E-ink Display	Battery lifetime Up To 5 years (2 Update/day) + 3 years in 0°~10°	ESL operating frequency 2.4 Ghz
Bezel color White or Black, Customizable Color(Optional)	Encryption 128-Bit AES	Wireless firmware update Yes

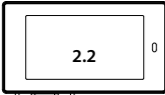


1.6 inch

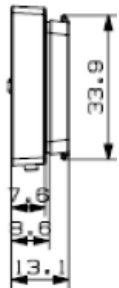
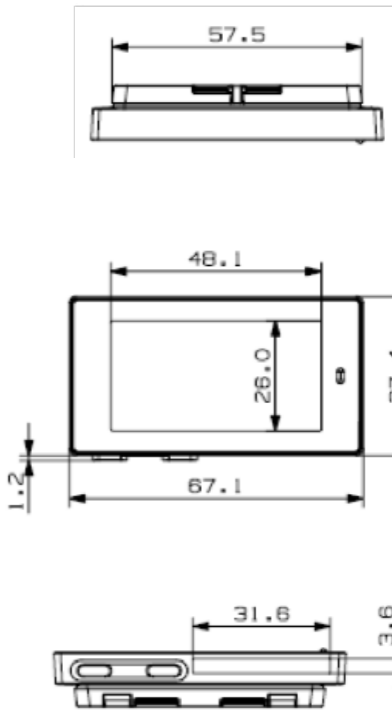
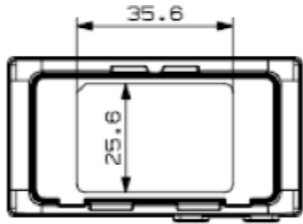


TECHNICAL SPECIFICATIONS

Model W:EL022H3WRA/WWW B:EL022H3BRA/WWW	Pixels color BW / BWR / BWY	Compliance CE, RoHS, FCC
Dimension (mm) 67.1 × 37.4 × 13.1	Viewing angle Nearly 180°	NFC FeliCa NFC Forum Type 3
Active display area (mm) 48.1 × 26.0	Usable pages Up to 7 pages	Waterproof IP67
Resolution (pixel) 296 × 160	Operating temperature 0 - 40°C	Button 2 Buttons
Pixel density 156 dpi	Battery CR2450 × 2ea	LED 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)
Display technology Full Graphic E-ink Display	Battery lifetime Up To 10 years (2 Update/day) + 5 years in 0°~10°	ESL operating frequency 2.4 Ghz
Bezel color White or Black, Customizable Color(Optional)	Encryption 128-Bit AES	Wireless firmware update Yes

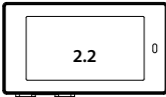


2.2 inch

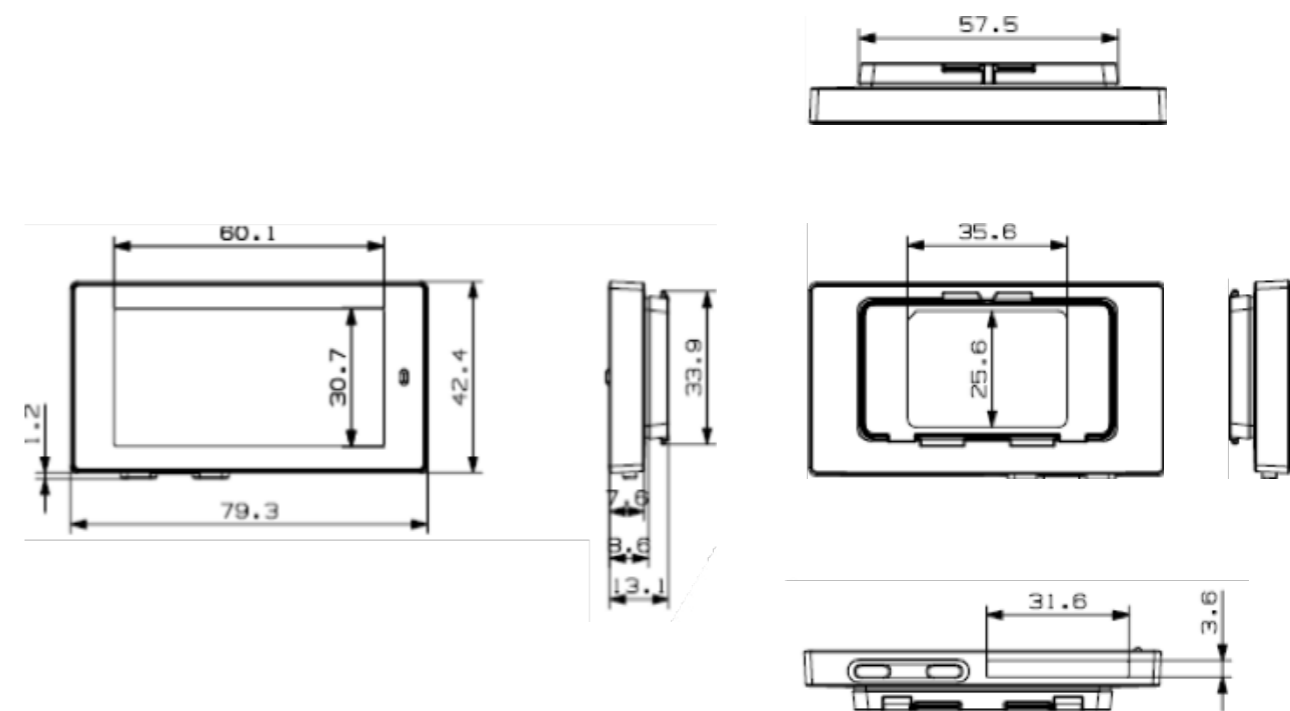


TECHNICAL SPECIFICATIONS

Model W:ELF22H3WMA/WWW B:ELF22H3BMA/WWW	Pixels color BW	Compliance CE, RoHS, FCC
Dimension (mm) 67.1 × 37.4 × 13.1	Viewing angle Nearly 180°	NFC FeliCa NFC Forum Type 3
Active display area (mm) 48.1 × 26.0	Usable pages Up to 7 pages	Waterproof IP67
Resolution (pixel) 296 × 160	Operating temperature -25 ~ 0°C	Button 2 Buttons
Pixel density 156 dpi	Battery CR2450 × 2ea	LED 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)
Display technology Full Graphic E-ink Display	Battery lifetime Up To 3 years (1 Update/day)	ESL operating frequency 2.4 Ghz
Bezel color White or Black, Customizable Color(Optional)	Encryption 128-Bit AES	Wireless firmware update Yes

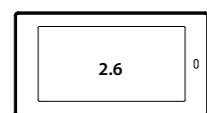


2.2 inch
freezer

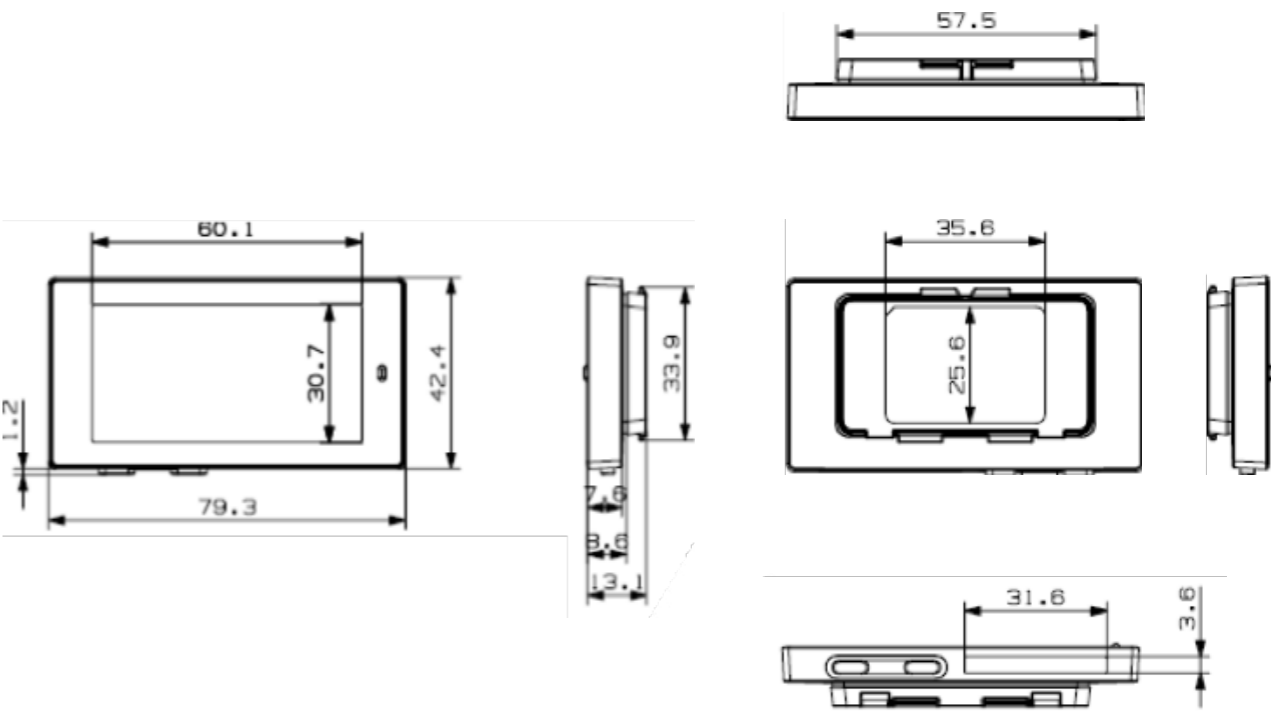


TECHNICAL SPECIFICATIONS

Model W:EL026H3WRA/WWW B:EL026H3BRA/WWW	Pixels color BW / BWR / BWY	Compliance CE, RoHS, FCC
Dimension (mm) 79.3 × 42.4 × 13.1	Viewing angle Nearly 180°	NFC FeliCa NFC Forum Type 3
Active display area (mm) 60.1 × 30.7	Usable pages Up to 7 pages	Waterproof IP67
Resolution (pixel) 360 × 184	Operating temperature 0 - 40°C	Button 2 Buttons
Pixel density 152 dpi	Battery CR2450 × 2ea	LED 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)
Display technology Full Graphic E-ink Display	Battery lifetime Up To 10 years (2 Update/day) + 5 years in 0°~10°	ESL operating frequency 2.4 Ghz
Bezel color White or Black, Customizable Color(Optional)	Encryption 128-Bit AES	Wireless firmware update Yes

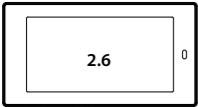


2.6 inch

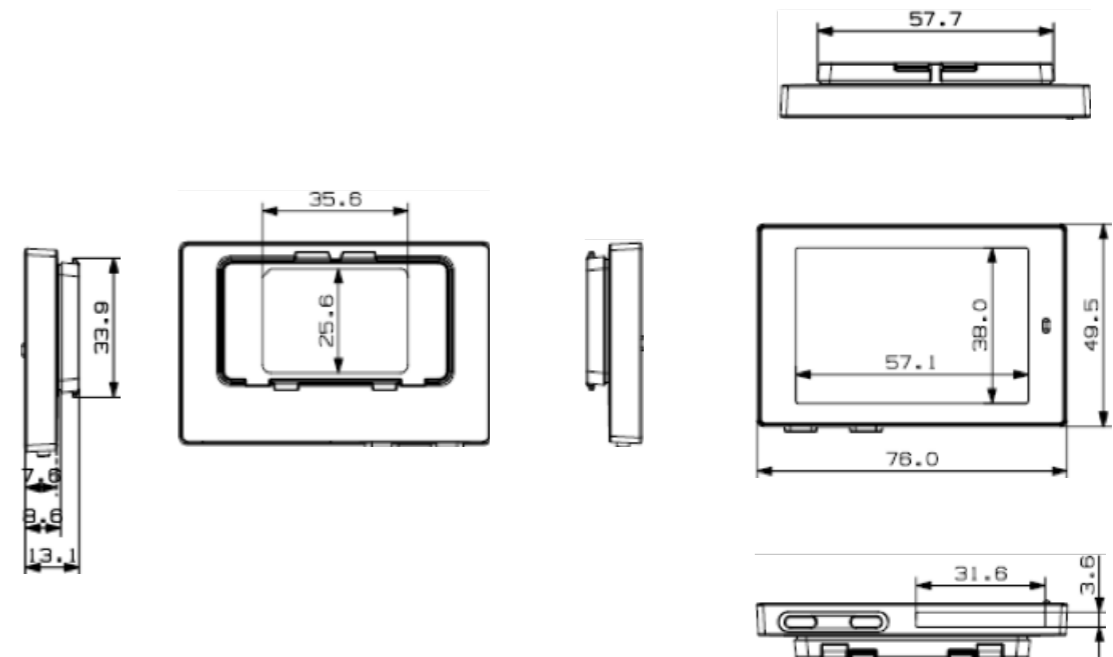
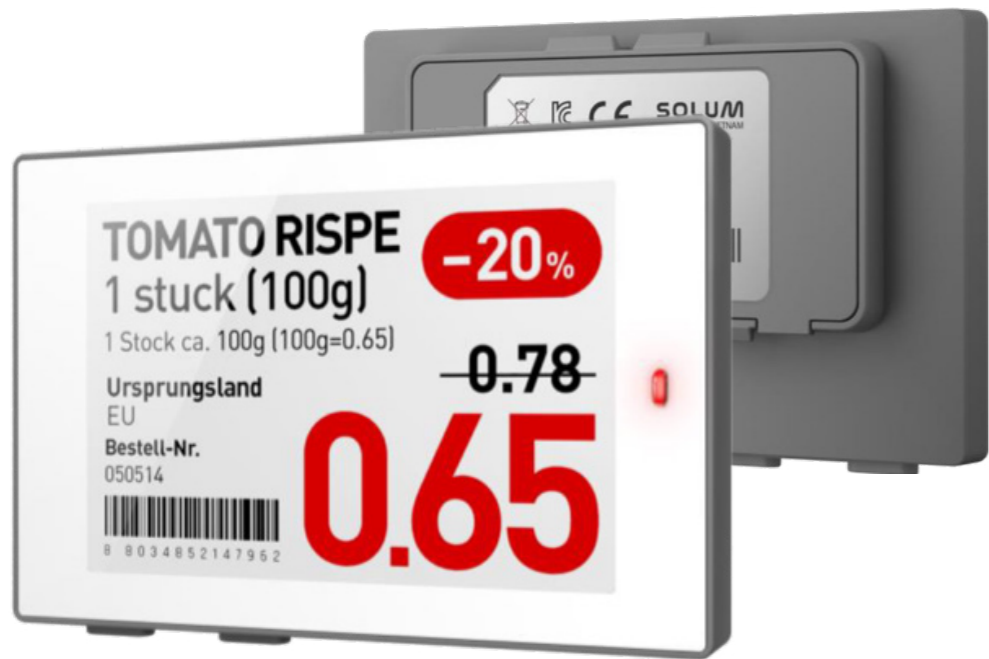


TECHNICAL SPECIFICATIONS

Model W:ELF26H3WMA/WWW B:ELF26H3BMA/WWW	Pixels color BW	Compliance CE, RoHS, FCC
Dimension (mm) 79.3 × 42.4 × 13.1	Viewing angle Nearly 180°	NFC FeliCa NFC Forum Type 3
Active display area (mm) 60.1 × 30.7	Usable pages Up to 7 pages	Waterproof IP67
Resolution (pixel) 360 × 184	Operating temperature -25 ~ 0°C	Button 2 Buttons
Pixel density 152 dpi	Battery CR2450 × 2ea	LED 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)
Display technology Full Graphic E-ink Display	Battery lifetime Up To 3 years (1 Update/day)	ESL operating frequency 2.4 Ghz
Bezel color White or Black, Customizable Color(Optional)	Encryption 128-Bit AES	Wireless firmware update Yes

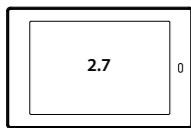


2.6 inch
freezer

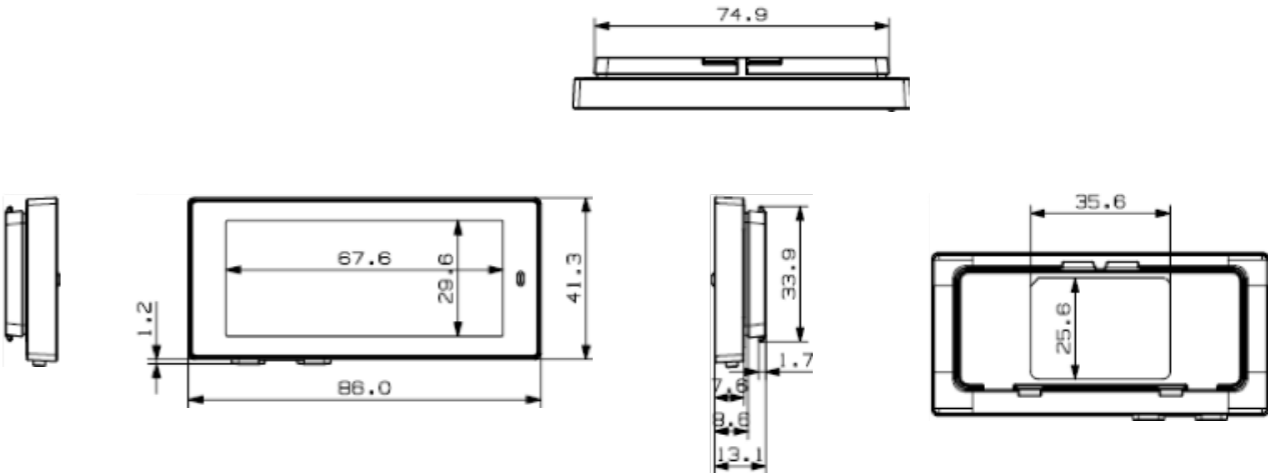


TECHNICAL SPECIFICATIONS

Model W:EL027H3WRA/WWW B:EL027H3BRA/WWW	Pixels color BW / BWR / BWY	Compliance CE, RoHS, FCC
Dimension (mm) 76.0 × 49.5 × 13.1	Viewing angle Nearly 180°	NFC FeliCa NFC Forum Type 3
Active display area (mm) 57.3 × 38.1	Usable pages Up to 7 pages	Waterproof IP67
Resolution (pixel) 300 × 200	Operating temperature 0 - 40°C	Button 2 Buttons
Pixel density 133 dpi	Battery CR2450 × 2ea	LED 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)
Display technology Full Graphic E-ink Display	Battery lifetime Up To 10 years (2 Update/day) + 5 years in 0°~10°	ESL operating frequency 2.4 Ghz
Bezel color White or Black, Customizable Color(Optional)	Encryption 128-Bit AES	Wireless firmware update Yes

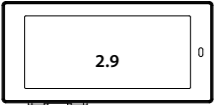


2.7 inch

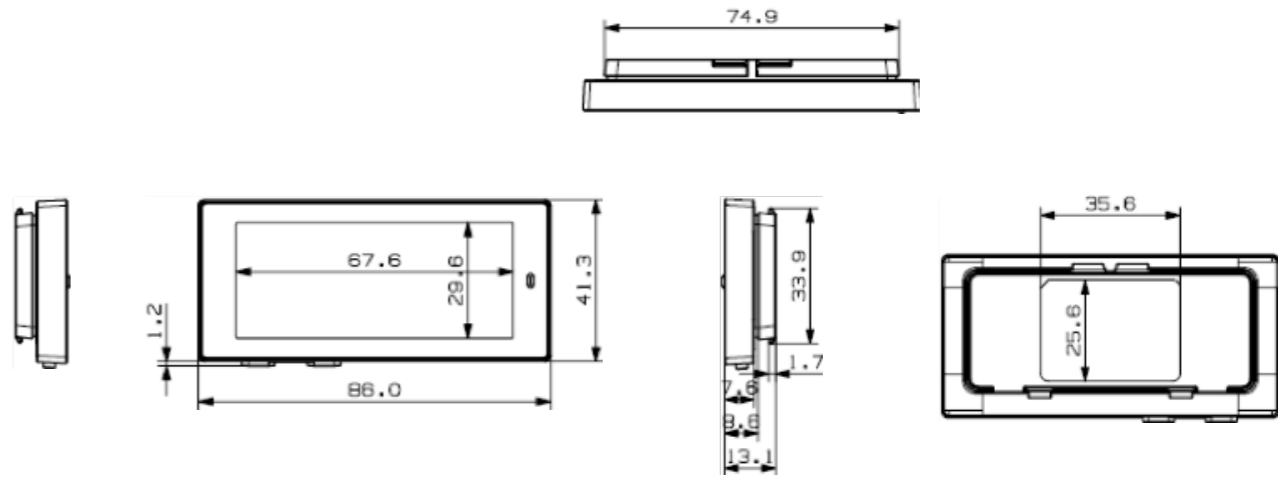


TECHNICAL SPECIFICATIONS

Model W:EL029H3WRA/WWW B:EL029H3BRA/WWW	Pixels color BW / BWR / BWY	Compliance CE, RoHS, FCC
Dimension (mm) 86.0 × 41.3 × 13.1	Viewing angle Nearly 180°	NFC FeliCa NFC Forum Type 3
Active display area (mm) 67.6 × 29.6	Usable pages Up to 7 pages	Waterproof IP67
Resolution (pixel) 384 × 168	Operating temperature 0 - 40°C	Button 2 Buttons
Pixel density 144 dpi	Battery CR2450 × 2ea	LED 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)
Display technology Full Graphic E-ink Display	Battery lifetime Up To 10 years (2 Update/day) + 5 years in 0°~10°	ESL operating frequency 2.4 Ghz
Bezel color White or Black, Customizable Color(Optional)	Encryption 128-Bit AES	Wireless firmware update Yes

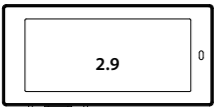


2.9 inch

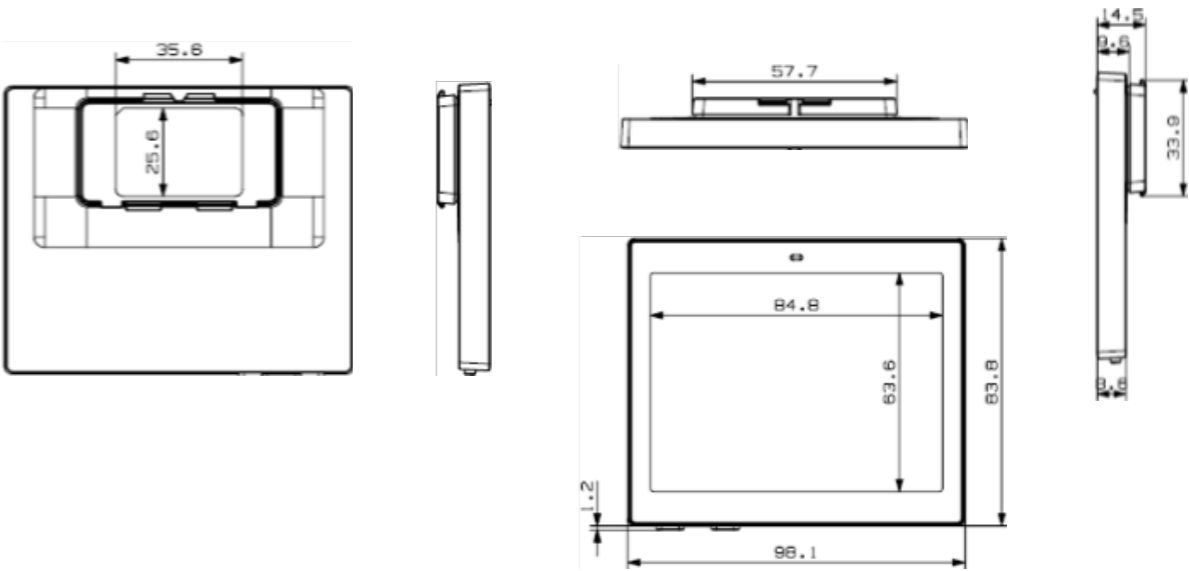


TECHNICAL SPECIFICATIONS

Model W:ELF29H3WMA/WWW B:ELF29H3BMA/WWW	Pixels color BW	Compliance CE, RoHS, FCC
Dimension (mm) 86.0 × 41.3 × 13.1	Viewing angle Nearly 180°	NFC FeliCa NFC Forum Type 3
Active display area (mm) 67.6 × 29.6	Usable pages Up to 7 pages	Waterproof IP67
Resolution (pixel) 384 × 168	Operating temperature -25 ~ 0°C	Button 2 Buttons
Pixel density 144 dpi	Battery CR2450 × 2ea	LED 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)
Display technology Full Graphic E-ink Display	Battery lifetime Up To 3 years (1 Update/day)	ESL operating frequency 2.4 Ghz
Bezel color White or Black, Customizable Color(Optional)	Encryption 128-Bit AES	Wireless firmware update Yes

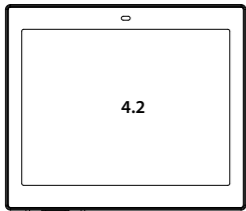


2.9 inch
freezer

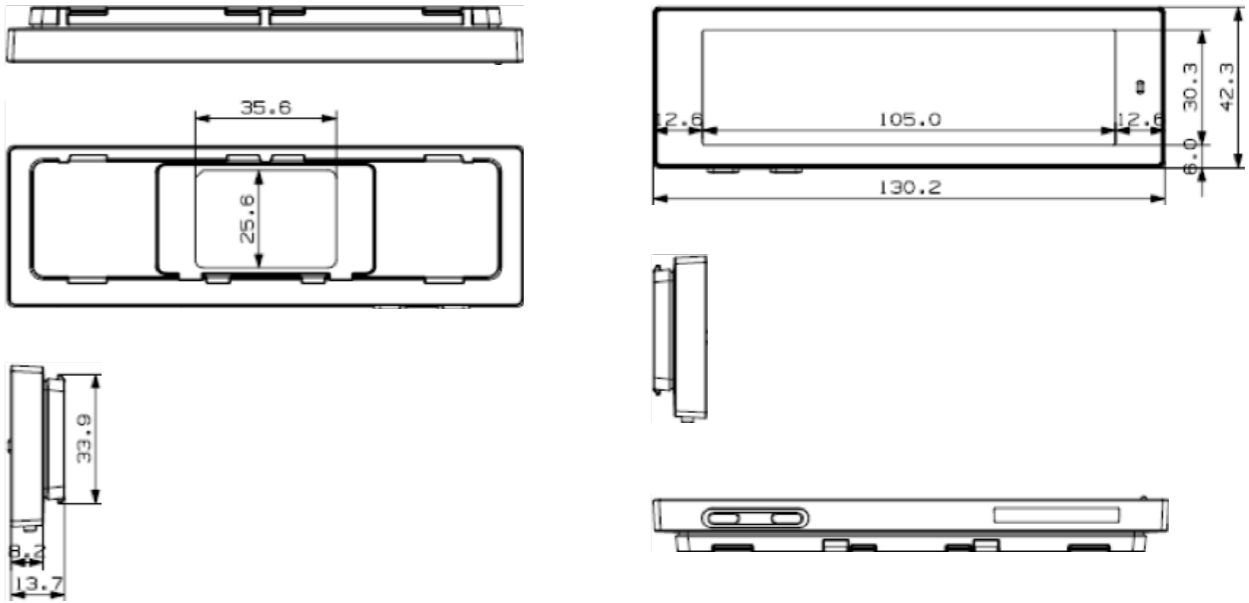


TECHNICAL SPECIFICATIONS

Model W:EL042H3WRA/WWW B:EL042H3BRA/WWW	Pixels color BW / BWR / BWY	Compliance CE, RoHS, FCC
Dimension (mm) 98.1 × 83.8 × 14.5	Viewing angle Nearly 180°	NFC FeliCa NFC Forum Type 3
Active display area (mm) 84.8 × 63.6	Usable pages Up to 7 pages	Waterproof IP67
Resolution (pixel) 400 × 300	Operating temperature 0 - 40°C	Button 2 Buttons
Pixel density 120 dpi	Battery CR2450 × 2ea	LED 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)
Display technology Full Graphic E-ink Display	Battery lifetime Up To 10 years (2 Update/day) + 5 years in 0°~10°	ESL operating frequency 2.4 Ghz
Bezel color White or Black, Customizable Color(Optional)	Encryption 128-Bit AES	Wireless firmware update Yes

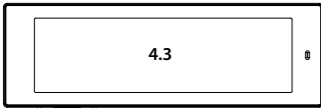


4.2 inch

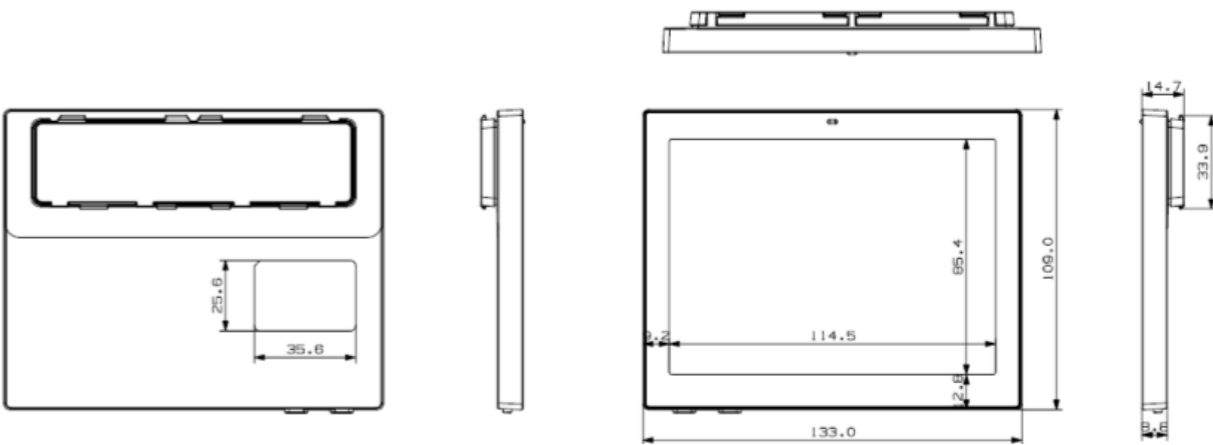


TECHNICAL SPECIFICATIONS

Model W:EL043H3WRA/WWW B:EL043H3BRA/WWW	Pixels color BW / BWR / BWY	Compliance CE, RoHS, FCC
Dimension (mm) 130.3 × 42.4 × 13.9	Viewing angle Nearly 180°	NFC FeliCa NFC Forum Type 3
Active display area (mm) 105.4 × 30.7	Usable pages Up to 7 pages	Waterproof IP67
Resolution (pixel) 522 × 152	Operating temperature 0 - 40°C	Button 2 Buttons
Pixel density 125 dpi	Battery CR2450 × 2ea	LED 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)
Display technology Full Graphic E-ink Display	Battery lifetime Up To 10 years (2 Update/day) + 5 years in 0°~10°	ESL operating frequency 2.4 Ghz
Bezel color White or Black, Customizable Color(Optional)	Encryption 128-Bit AES	Wireless firmware update Yes

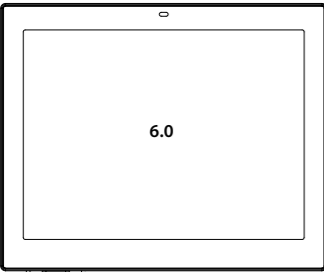


4.3 inch

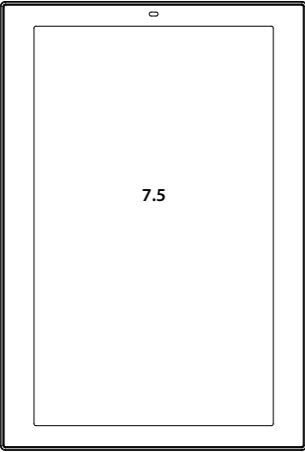


TECHNICAL SPECIFICATIONS

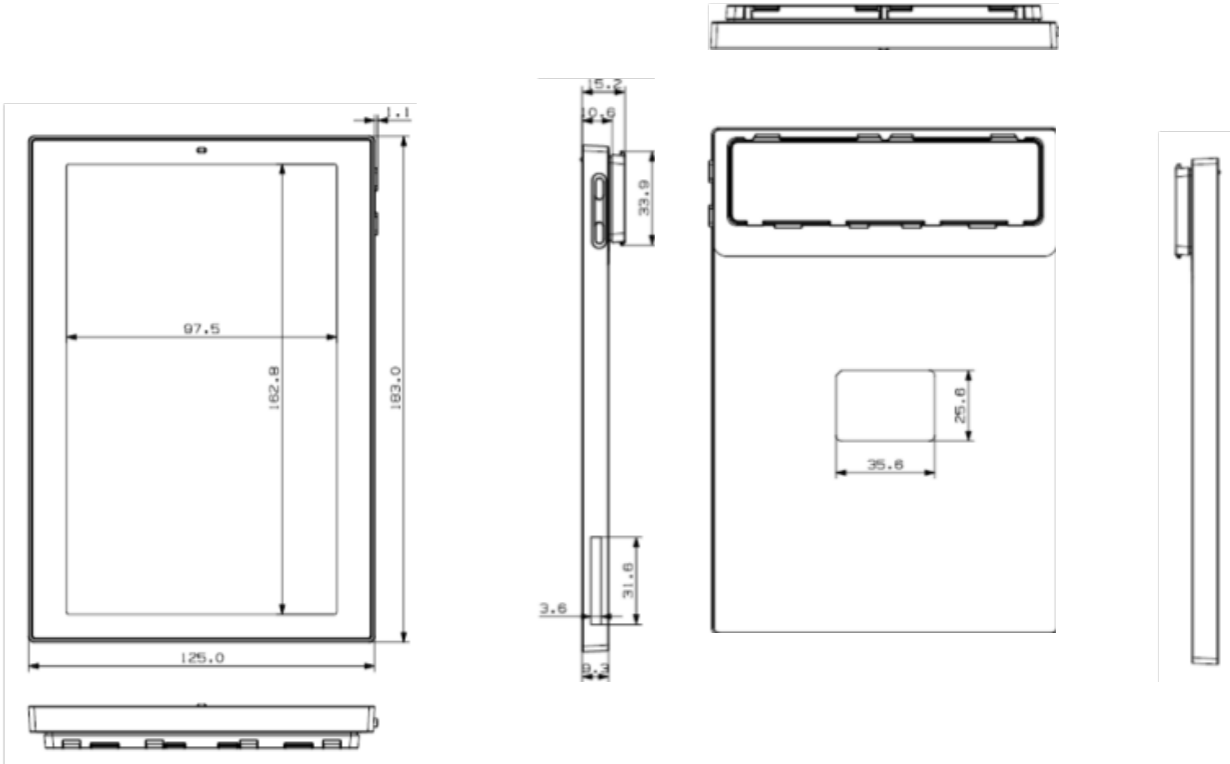
Model W:EL060H3WRA/WWW B:EL060H3BRA/WWW	Pixels color BW / BWR / BWY	Compliance CE, RoHS, FCC
Dimension (mm) 133.0 × 109.0 × 14.7	Viewing angle Nearly 180°	NFC FeliCa NFC Forum Type 3
Active display area (mm) 114.9 × 85.8	Usable pages Up to 3 pages	Waterproof IP67
Resolution (pixel) 600 × 448	Operating temperature 0 - 40°C	Button 2 Buttons
Pixel density 132 dpi	Battery CR2450 × 4ea	LED 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)
Display technology Full Graphic E-ink Display	Battery lifetime Up To 10 years (1 Update/day) + 5 years in 0°~10°	ESL operating frequency 2.4 Ghz
Bezel color White or Black, Customizable Color(Optional)	Encryption 128-Bit AES	Wireless firmware update Yes



6.0 inch

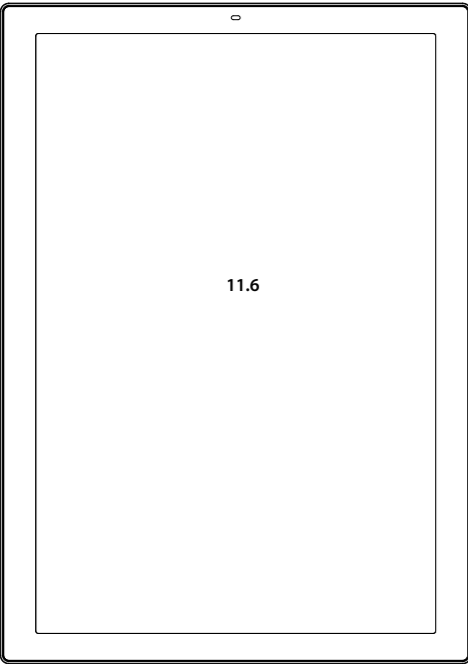
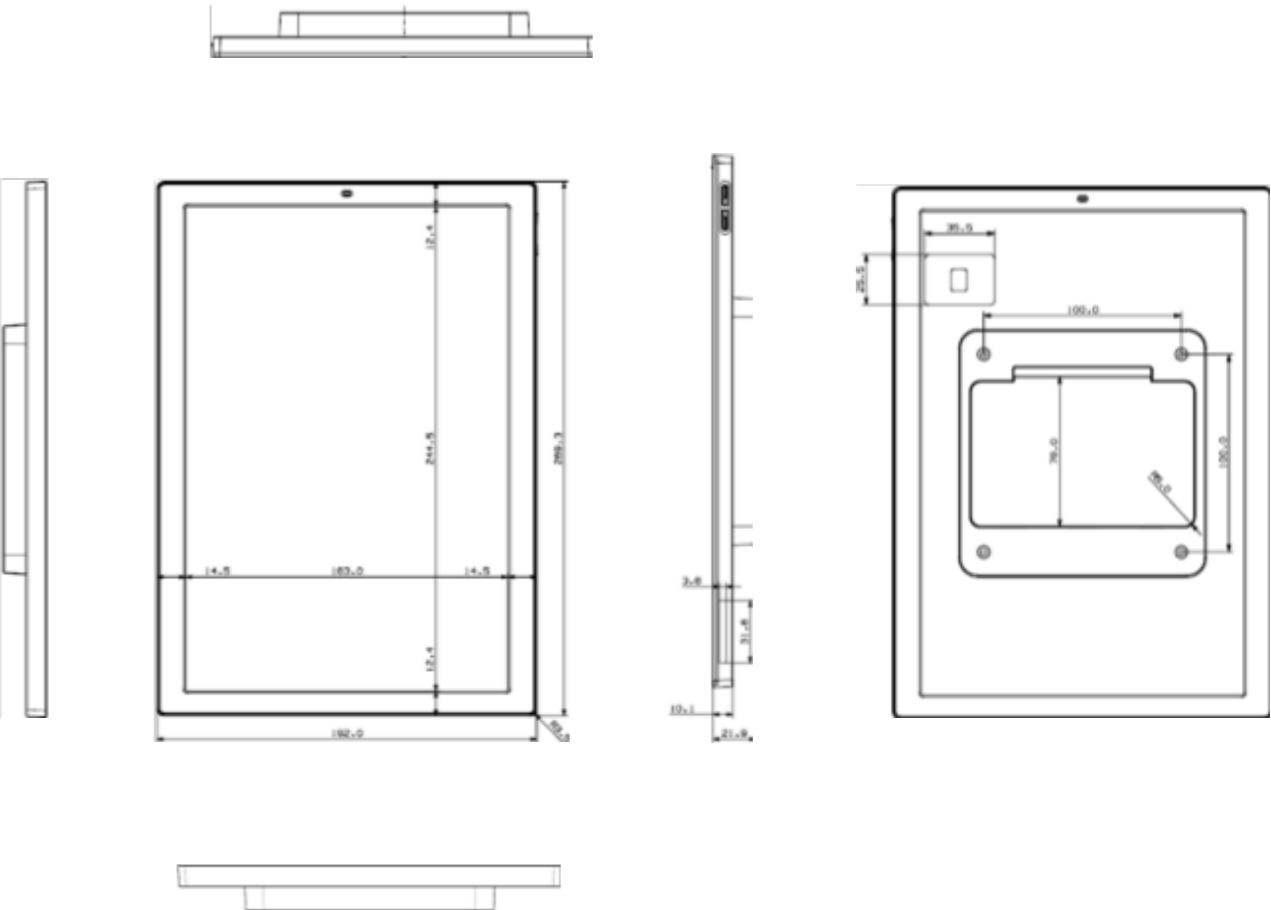


7.5 inch



TECHNICAL SPECIFICATIONS

Model W:EL075H3WRA/WWW B:EL075H3BRA/WWW	Pixels color BW / BWR	Compliance CE, RoHS, FCC
Dimension (mm) 125.0 × 183.0 × 15.2	Viewing angle Nearly 180°	NFC FeliCa NFC Forum Type 3
Active display area (mm) 163.2 × 97.9	Usable pages Up to 3 pages	Waterproof IP67
Resolution (pixel) 800x480	Operating temperature 0 - 40°C	Button 2 Buttons
Pixel density 126 dpi	Battery CR2450 × 4ea	LED 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)
Display technology Full Graphic E-ink Display	Battery lifetime Up To 10 years (1 Update/day) + 5 years in 0°~10°	ESL operating frequency 2.4 Ghz
Bezel color White or Black, Customizable Color(Optional)	Encryption 128-Bit AES	Wireless firmware update Yes



11.6 inch

TECHNICAL SPECIFICATIONS

Model W:EL116H3WRA/WWW B:EL116H3BRA/WWW	Pixels color BW / BWR	Compliance CE, RoHS, FCC
Dimension (mm) 192.0 × 268.0 × 21.9	Viewing angle Nearly 180°	NFC FeliCa NFC Forum Type 3
Active display area (mm) 163.0 × 244.5	Usable pages Up to 3 pages	Waterproof IP67
Resolution (pixel) 640 × 960	Operating temperature 0 - 40°C	Button 2 Buttons
Pixel density 100 dpi	Battery AA × 4ea	LED 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)
Display technology Full Graphic E-ink Display	Battery lifetime Up To 10 years (1 Update/day) + 5 years in 0°~10°	ESL operating frequency 2.4 Ghz
Bezel color White or Black, Customizable Color(Optional)	Encryption 128-Bit AES	Wireless firmware update Yes

III. Gateways

Images from the system are sent to the electronic shelf label units through the Gateways. It is only appropriate that speed and capacity are vital.

SOLUM has come up with a renewed Gateways for our newest Newton line-up. Newton's implementation is now easier to use, more cost-efficient and has a wider radius.



NEWTON GATEWAY

Newton Gateway digital numbering system gives it a modern and digitized look. But more importantly, this makes it easier for managers to identify the Gateway's ID for internal device management purposes.

Another improvement with Newton Gateway is that it has a tag and load-balancing system which means that the number of connected labels will always be evenly distributed. No overloading or underloading between Gateways and no need to manually track the Gateways' load.

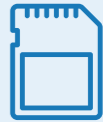
It has more than 60 RF channels which means that there's almost no interference issue. And its auto-channel selection system allows it to avoid channel collisions.



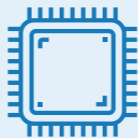
50,000 labels
CAPACITY



**Ranges up to
30 meters or 98 feet**
COMMUNICATION RADIUS



4GB
FLASH MEMORY



1GB
RAM



10W
POWER CONSUMPTION



Ethernet
INTERFACE

USB GATEWAY

The USB Gateway is a stand-alone system. However, it can also be an extension to the Newton Gateway. It can offer additional capacity, memory, range, among others, without the added infrastructure.

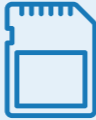
With Newton's Gateways, you can achieve a more seamless and automated data exchange between your electronic shelf labels and your command system.



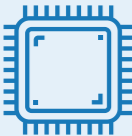
5,000 labels
CAPACITY



**Ranges up to
25 meters or 82 feet**
COMMUNICATION RADIUS



4GB
FLASH MEMORY



512 MB
RAM



2.5W
POWER CONSUMPTION



USB
INTERFACE



IV. AIMS Software

SOLUM's very own Advanced Information Management System (AIMS) is a platform that can be deployed locally, through a central server, and via Cloud. With AIMS, our clients can get the most of their Newton label, resulting in increased business productivity and maximized return on their investment.

AIMS

AIMS
Site server

AIMS
Central server

AIMS
SaaS server

The central command center of our Newton label, AIMS is an adaptable, scalable, and highly-intuitive ESL management software system specially designed to help you get the most out of our electronic shelf labeling solutions.

Our AIMS software server can be deployed in three environments - On-Site, Central Server/Cloud, and as a Service as a Software (SaaS). All these four options can be connected to all existing data sources which are relevant to your intended use of our ESL solutions, all while providing easy-to-use controls for commands such as price updates, stock replenishment, or locating distinct items in the warehouse.

For our retail clients such as hypermarkets, groceries, and fashion stores, AIMS software can

use data such as customer purchase history, stock levels, and product location to initiate timely promotional offers and discounts. In an industrial environment, AIMS software can activate applications such as pick to light, wireless Kanban, and smart ordering system to achieve a more seamless, cost-efficient, and sustainable warehouse and manufacturing operations.

From activating store promos to managing industrial warehouse and manufacturing operations, AIMS software is a holistic platform that powers our ESL solutions. With this software, you can easily manage all the ESLs located across all their premises and location in a centralized manner – resulting in reduced infrastructure costs, improved staff productivity, better data management, and increased revenue.



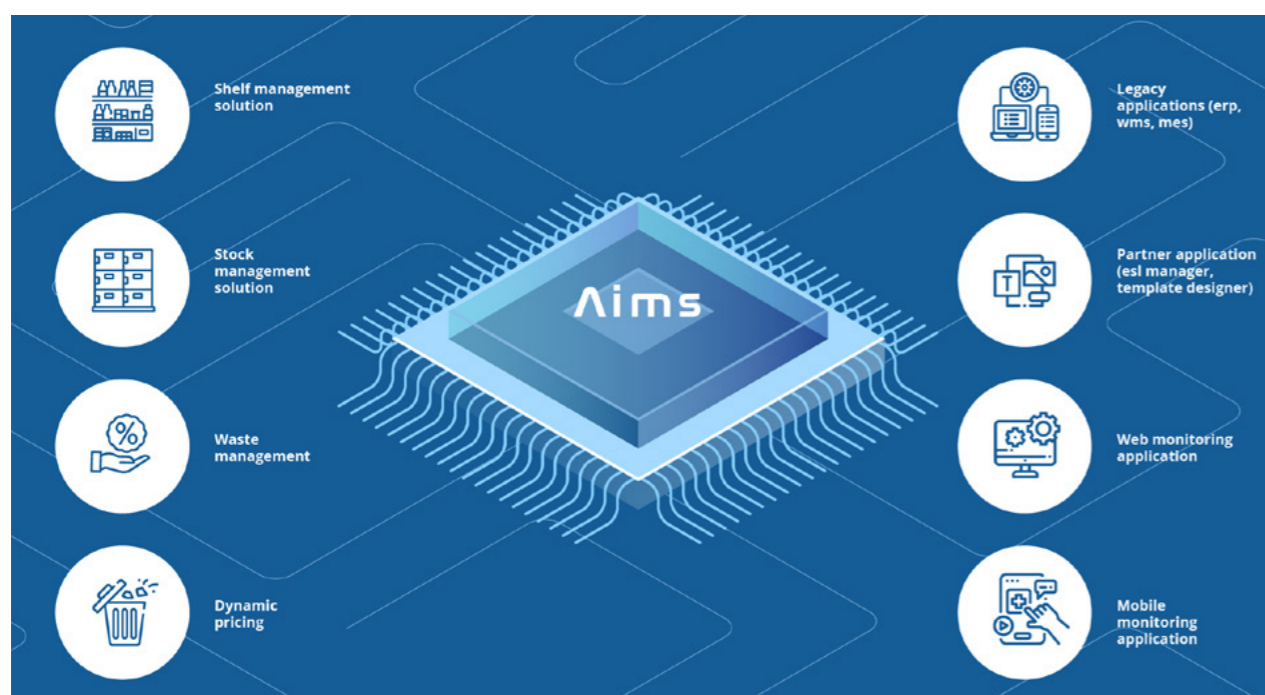
I. AIMS SITE SERVER

With our AIMS solution, you will have a solid, reliable, and fast, ESL management software at your fingertips.

With our AIMS software package, you will not only own and manage the software, but you can also scale and customize it based on your unique preferences and needs. A flexible ESL management system, for flexible scaling, for flexible companies.

AIMS Site Server Features

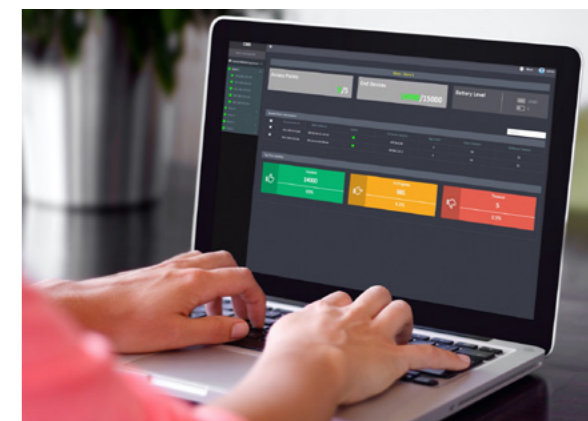
1. Easy Integration with 3rd Party Solution A modular architecture of AIMS makes it have a strong point in the integration with other IT solutions through rest API fast and easy.



2. Intuitive ESL Dashboard

AIMS has a store and central monitoring dashboards that display important information such as:

- The number and online/offline status of gateways.
- The number of active Newton labels.
- IP addresses of all gateways.
- MAC addresses of all access points.
- Status of access points.
- The firmware version of access points.
- The number of labels associated with the access point.
- Data channel used for the access point.
- Wakeup channel used for the access point.



3. Layout Designer

AIMS provides an easy and user-friendly Layout Designer tool that allows you to design the ESLs to fit the products you sell or to match your store's branding.

4. Web PDA / Mobile Application

With the web-based ESL management software for store PDA and mobile devices (Android or iOS), your staff can manage the ESLs remotely across your business premises.

