

Meet the ESL Intelligence

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CONNECT





INNOVATE



REALIZE





CHANEL
Gabrielle chanel
3.4 oz/ 100 mL Eau de Parfum Spray



00045 314 6 00 1

\$146.0

CHANEL
Gabrielle chanel
3.4 oz/ 100 mL Eau de Parfum Spray



\$120.0

TECHNOLOGY

A woman with short brown hair, wearing a patterned halter top and jeans, is smiling and pushing a shopping cart filled with groceries like bananas, milk, and vegetables. The background shows a modern grocery store interior with wooden shelves and a teal wall.

with SOLUM

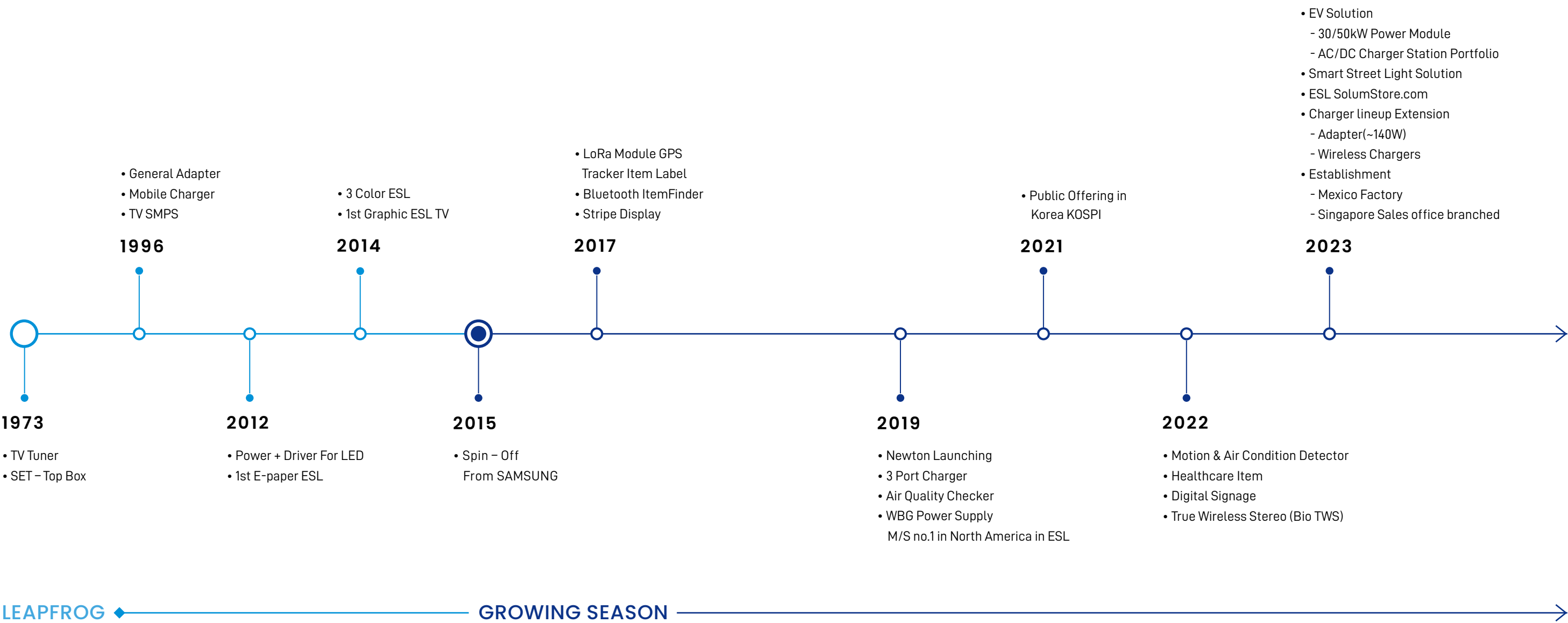
ABOUT SOLUM

ESL

SOLUTION

FEATURES

SOLUM HISTORY



GLOBAL PRESENCE



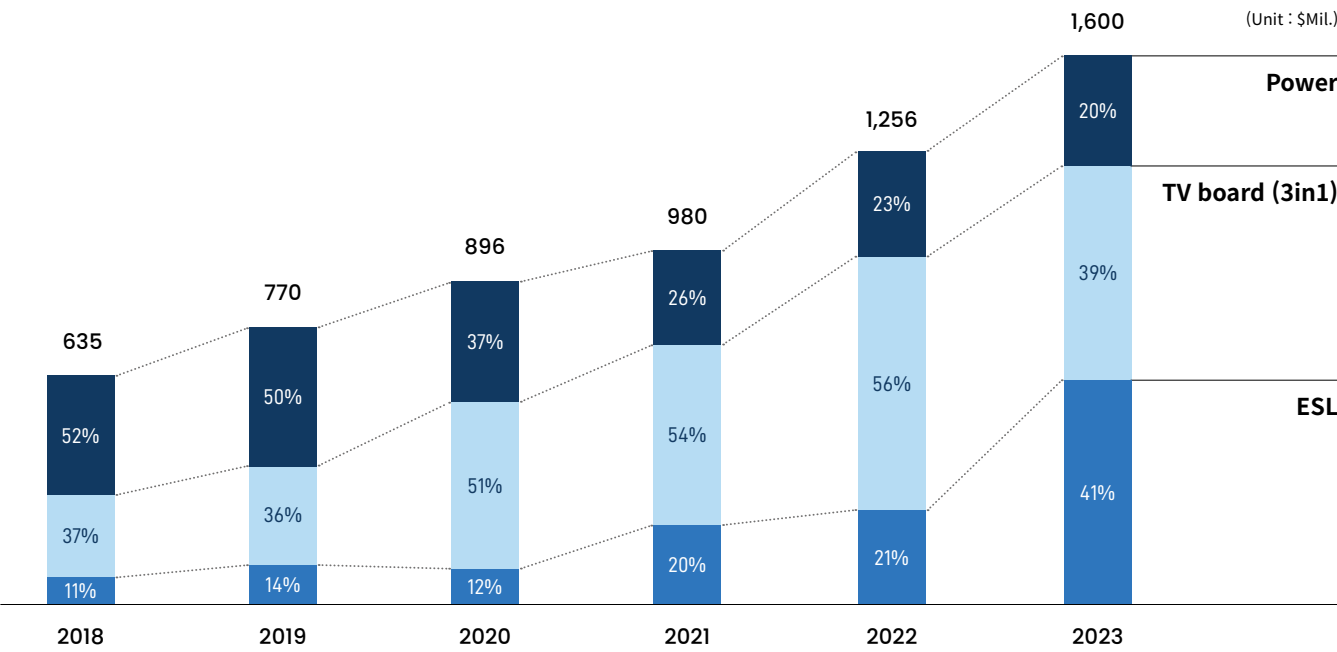
04 SOLUM Production Sites

09 Sales Offices

60% R&D Specialists

525 Global patents

SOLUM SALES REVENUE



SOLUM has a solid business model that is centered around chargers, power modules, IoT devices and Electronic Shelf Labels (ESLs).

We maintain a close, collaborative relationship with major global clients like Samsung, Sony and Intel.

We also work closely with major distributors like REWE, Metro, Loblaw, Lowe's, Macy's and Alibaba for our ESL business.

Based on our stable financial structure, we make substantial amount of investments into research and development every year and we promise you that we will become an innovative leader in the global ESL market.



SOLUM PATENT

525

Largest Patent Holder
in the Industry

MOTIVATION

Foundation for
New Projects

PATENT

Patent Commercialization
in Progress

- The Industry's First to Win World's Top 3 Design Awards (Red Dot, iF, IDEO)
- Outstanding production capabilities from subsidiaries in Vietnam, China, Mexico and India
 - Advanced capabilities to design, develop and manufacture wireless communication modules and RF

	PATENT	UTILITY MODEL	TRADEMARK	DESIGN	TOTAL
POWER	344	-	2	12	358
ESL	28	-	15	33	76
IOT	-	-	21	8	29
COMMON	-	-	62	-	62
TOTAL	372	0	100	53	525



01

ABOUT ESL

ESL

SOLUTION

FEATURES



ABOUT NEWTON

Newton

New definition, unlimited possibilities.



NEWTON
BENEFITS



10-year
Battery Life

10 YEAR BATTERY LIFE



10X Faster
Update Speed

ULTRA FAST
UPDATE SPEED



Enhanced Durability
with IP67 Rating and
Protection Cover

HIGH DURABILITY



Customizable
Design

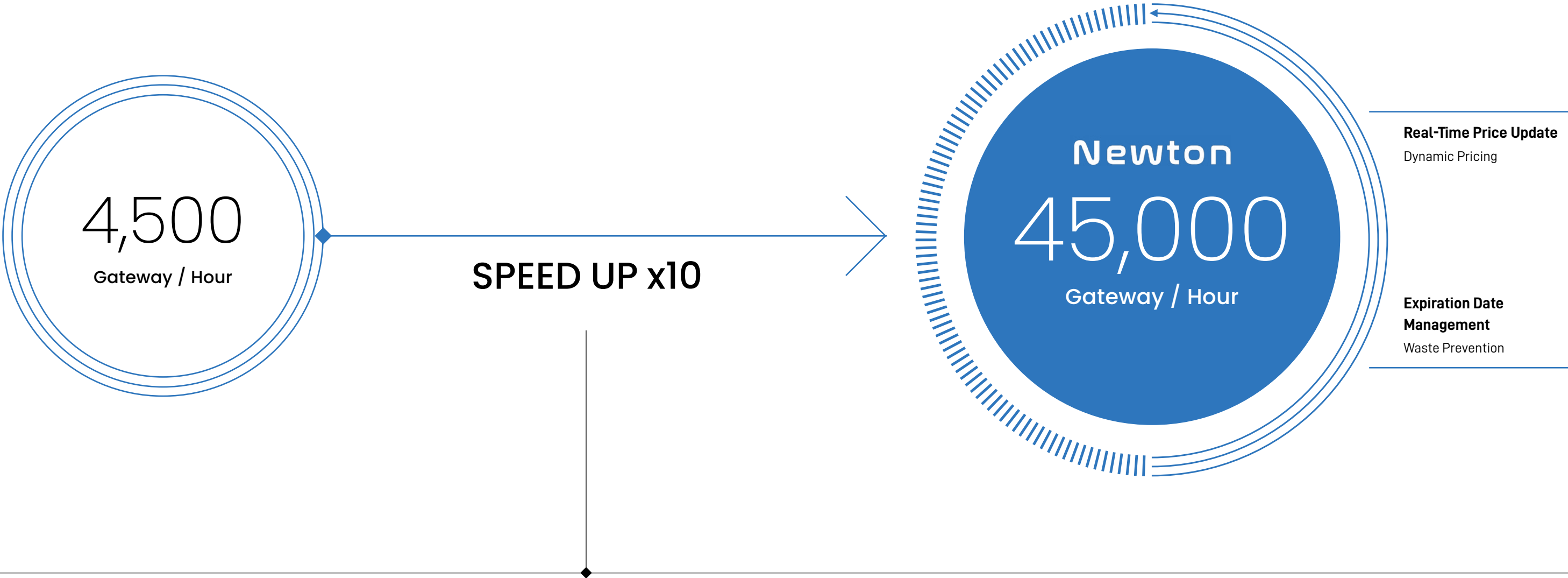
CUSTOMIZABLE DESIGN



Various
Features

MULTI FUNCTION

ESL PERFORMANCE



Item	Previous Generation	NEWTON
1 Tag Assignment	~ 12 sec.	~ 5 sec.
LED Response Time	~ 12 sec.	~ 5 sec.

Benefits of NEWTON's Real-Time Price Updates

- Easy to use and fast updates
- Minimizes update risks during stores' open hours
- Reduces the information exchange time between ESL and POS
- Fast LED response time for the Pick-by-Light feature



ESL RESOLUTION PERFORMANCE

Newton 2.9"



70%
CLEARER
INFORMATION

H Company 2.9"



144 dpi
(384*168)



Clearer Labels with 30%
Enhanced Resolution

NEWTON	NEWTON LITE
1.6": 188 dpi (vs 140 dpi)	1.6": 188 dpi (vs 140 dpi)
2.2": 156 dpi (vs 111 dpi)	2.2": 156 dpi (vs 111 dpi)
2.6": 152 dpi	2.6": 152 dpi
2.9": 144 dpi (vs 112 dpi)	2.9": 144 dpi (vs 112 dpi)

112 dpi
(296*128)

ESL 7PAGES DETAILS



01

Can save information up to 7 pages

02

Can select a different layout for each page
Can show different types of information including product info, promotions and information about available stock

Examples

Product Reviews and Information



Product Ingredients



Out of Stock Information



03

Newton Remote Control , PDA App ,
Newton Products
Can turn label pages using a button or on server

04

On the server, you can make the label pages turn and show a flash sale or update automatically at a specific time

ESL DURABILITY

01



DUSTPROOF

IP67 Dustproof Rating for dust tight protection

02



WATERPROOF

IP67 Waterproof Rating that allows a device to withstand being submerged in at least 1 meter of water for 30 minutes.

03



PROTECTION COVER

The front cover can withstand up to 323kg m/s2 of external force

04



FROZEN

Operates at a temperature as low as -25°C

NEWTON PRO



NEWTON
PRO
LINE-UP

1.6~2.9"



NEWTON PRO 1.6 inch V

DIMENSION	36.7 x 44.9 x 10.45 mm / 1.45 x 1.77 x 0.41 inch
ACTIVE DISPLAY AREA	27.0 x 27.0mm (1.06 x 1.06 inch)
RESOLUTION (Pixel)	200 x 200
PIXEL COLORS	BW / BWR / BWY / BWRY



NEWTON PRO 2.2 inch

DIMENSION	67.0 x 37.4 x 10.45 mm / 2.64 x 1.45 x 0.41 inch
ACTIVE DISPLAY AREA	48.1 x 26.0mm (1.89 x 1.02 inch)
RESOLUTION (Pixel)	296 x 160
PIXEL COLORS	BW / BWR / BWY / BWRY



NEWTON PRO 2.6 inch

DIMENSION	79.2 x 42.5 x 10.45 mm / 3.12 x 1.67 x 0.41 inch
ACTIVE DISPLAY AREA	60.0 x 30.7mm (2.37 x 1.21 inch)
RESOLUTION (Pixel)	360 x 184
PIXEL COLORS	BW / BWR / BWY / BWRY



NEWTON PRO 1.6 inch H

DIMENSION	44.9 x 36.7 x 10.45 mm / 1.77 x 1.45 x 0.41 inch
ACTIVE DISPLAY AREA	27.0 x 27.0mm (1.06 x 1.06 inch)
RESOLUTION (Pixel)	200 x 200
PIXEL COLORS	BW / BWR / BWY / BWRY



NEWTON PRO 2.7 inch

DIMENSION	76.0 x 49.5 x 10.5 mm / 2.99 x 1.95 x 0.41 inch
ACTIVE DISPLAY AREA	57.3 x 38.2mm (2.25 x 1.50 inch)
RESOLUTION (Pixel)	300 x 200
PIXEL COLORS	BW / BWR / BWY / BWRY



NEWTON PRO 2.9 inch

DIMENSION	85.9 x 41.30 x 10.45 mm / 3.38 x 1.62 x 0.41 inch
ACTIVE DISPLAY AREA	67.6 x 29.6 mm (2.66 x 1.16 inch)
RESOLUTION (Pixel)	384 x 168
PIXEL COLORS	BW / BWR / BWY / BWRY

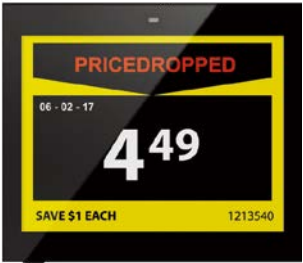
NEWTON
PRO
LINE-UP

3.5~6.0"



NEWTON PRO 3.5 inch

DIMENSION	100.2 x 49.6 x 10.45 mm / 3.94 x 1.95 x 0.41 inch
ACTIVE DISPLAY AREA	81.0 x 38.0 mm (3.19 x 1.50 inch)
RESOLUTION (Pixel)	384 x 180
PIXEL COLORS	BW / BWR / BWY / BWRY



NEWTON PRO 4.2 inch

DIMENSION	98.1 x 83.7 x 12.45 mm / 3.86 x 3.29 x 0.49 inch
ACTIVE DISPLAY AREA	84.8 x 63.6mm (3.34 x 2.50 inch)
RESOLUTION (Pixel)	400 x 300
PIXEL COLORS	BW / BWR / BWY / BWRY



NEWTON PRO 4.3 inch

DIMENSION	130.2 x 42.3 x 12.7 mm / 5.13 x 1.67 x 0.50 inch
ACTIVE DISPLAY AREA	105.4 x 30.7mm (4.15 x 1.21 inch)
RESOLUTION (Pixel)	522 x 152
PIXEL COLORS	BW / BWR / BWY / BWRY



NEWTON PRO 4.5 inch

DIMENSION	128.6 x 53.0 x 13 mm / 5.06 x 2.08 x 0.51 inch
ACTIVE DISPLAY AREA	104.2 x 38.2 mm / 4.10 x 1.50 inch
RESOLUTION (Pixel)	TBD
PIXEL COLORS	BW / BWR / BWY / BWRY



NEWTON PRO 5.8 inch

DIMENSION	164.0 x 66.8 x 14.3 mm (6.46 x 2.63 x 0.56 inch)
ACTIVE DISPLAY AREA	139.0 x 47.7 mm (5.47 x 1.88 inch)
RESOLUTION (Pixel)	792 x 272
PIXEL COLORS	BW / BWR / BWY / BWRY



NEWTON PRO 6.0inch

DIMENSION	133.0 x 109.0 x 14.30 mm / 5.23 x 4.29 x 0.56 inch
ACTIVE DISPLAY AREA	118.78 x 88.22 mm (4.68 x 3.47 inch)
RESOLUTION (Pixel)	648 x 480
PIXEL COLORS	BW / BWR / BWY / BWRY

NEWTON
PRO
LINE-UP

6.1~12.2"



NEWTON PRO 6.1 inch

DIMENSION	133.20 × 109.96 × 14.90 mm (5.24 x 4.33 x 0.58 inch)
ACTIVE DISPLAY AREA	118.78 x 88.22 mm (4.68 x 3.47 inch)
RESOLUTION (Pixel)	648 x 480
PIXEL COLORS	BW / BWR / BWY / BWRY



NEWTON PRO 9.7 inch

DIMENSION	170.2 x 223.6 x 14.85 mm / 6.7 x 8.8 x 0.58 inch
ACTIVE DISPLAY AREA	141.12 x 201.6 mm (5.56 x 7.94 inch)
RESOLUTION (Pixel)	672 x 960
PIXEL COLORS	BW / BWR / BWY / BWRY



NEWTON PRO 11.6 inch

DIMENSION	192.0 x 269.1 x 15.35 mm (7.50 x 10.6 x 0.60 inch)
ACTIVE DISPLAY AREA	163.0 x 244.5 mm (6.42 x 9.63 inch)
RESOLUTION (Pixel)	640 x 960
PIXEL COLORS	BW / BWR / BWY / BWRY



NEWTON PRO 7.5 inch

DIMENSION	125.0 x 182.9 x 14.85 mm / 4.92 x 7.2 x 0.58 inch
ACTIVE DISPLAY AREA	97.9 x 163.2 mm (3.8 x 6.4 inch)
RESOLUTION (Pixel)	480 x 800
PIXEL COLORS	BW / BWR / BWY / BWRY



NEWTON PRO 12.2 inch

DIMENSION	216.2 x 260.0 x 15.35 mm (8.51 x 10.23 x 0.60 inch)
ACTIVE DISPLAY AREA	190.1 x 237.6 mm (7.48 x 9.35 inch)
RESOLUTION (Pixel)	768 x 960
PIXEL COLORS	BW / BWR / BWY / BWRY

NEWTON LINE-UP



CUSTOMIZE YOUR ESL TO YOUR BRAND IMAGE



NEWTON 4 COLOR & 7 COLOR



DUAL SCREEN LABEL



MODEL	8.2 inch	11.6 inch
DIMENSION	208.45 x 139.73 x 13.50 mm / 8.20 x 5.50 x 0.53 inch	269.10 x 191.80 x 13.80 mm / 10.60 x 7.55 x 0.53 inch
ACTIVE DISPLAY AREA	101.38 x 180.23 mm / 6.4 x 3.8 inch	244.51 x 163.01 mm / 9.63 x 6.42 inch
RESOLUTION (Pixel)	1024 x 576	640 x 960
PIXEL DENSITY	144 dpi	100 dpi
DISPLAY TECHNOLOGY	Full Graphic E-ink Display	Full Graphic E-ink Display
BEZEL COLOR	White / Black / Customizable Colors (Optional)	White / Black / Customizable Colors (Optional)
PIXEL COLORS	BWRY (Black, White, Red, Yellow)	BWR (Black, White, Red)
VIEWING ANGLE	Nearly 180°	Nearly 180°
USABLE PAGES	2 pages (each 1 page)	2 pages (each 1 page)
OPERATING TEMPERATURE	10 ~ 40°C (50 ~ 104°F)	0 ~ 40°C (32 ~ 104°F)
BATTERY	CR2450 × 5ea (Battery pack)	CR2450 × 6ea (Battery pack)
BATTERY LIFETIME	Up To 6 years (1 Update/day)	Up To 5 years (1 Update/day)
ENCRYPTION	128-Bit AES	128-Bit AES
COMPLIANCE	CE, RoHS, FCC	CE, RoHS, FCC
NFC	Not included	Not included
WATERPROOF	Not supported	Not supported
BUTTON	1	1
LED	7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)	7 Colors(Red/Green/Blue/Yellow/Cyan/Magenta/White)
ESL OPERATING FREQUENCY	2.4 GHz	2.4 GHz
WIRELESS FIRMWARE UPDATE	Yes	Yes

NEWTON
LINE-UP

1.6~2.7"



NEWTON 1.6 inch

DIMENSION	36.7 × 45.0 × 13.1 mm / 1.44 × 1.77 × 0.51 inch
ACTIVE DISPLAY AREA	27.0 × 27.0 mm / 1.06 × 1.06 inch
RESOLUTION (Pixel)	200 × 200
PIXEL COLORS	BW / BWR / BWY



NEWTON 2.2 inch

DIMENSION	76.0 × 49.5 × 13.1 mm / 2.99 × 1.94 × 0.51 inch
ACTIVE DISPLAY AREA	57.2 × 38.1 mm / 2.25 × 1.50 inch
RESOLUTION (Pixel)	300 × 200
PIXEL COLORS	BW / BWR / BWY



NEWTON 2.6 inch

DIMENSION	36.7 × 45.0 × 13.1 mm / 1.44 × 1.77 × 0.51 inch
ACTIVE DISPLAY AREA	27.0 × 27.0 mm / 1.06 × 1.06 inch
RESOLUTION (Pixel)	200 × 200
PIXEL COLORS	BW / BWR / BWY



NEWTON 2.7 inch

DIMENSION	86.0 × 41.3 × 13.1 mm / 3.38 × 1.62 × 0.51 inch
ACTIVE DISPLAY AREA	67.6 × 29.6 mm / 2.66 × 1.16 inch
RESOLUTION (Pixel)	384 × 168
PIXEL COLORS	BW / BWR / BWY



NEWTON 2.9 inch

DIMENSION	79.3 × 42.4 × 13.1 mm / 3.12 × 1.66 × 0.51 inch
ACTIVE DISPLAY AREA	60.1 × 30.7 mm / 2.36 × 1.20 inch
RESOLUTION (Pixel)	360 × 184
PIXEL COLORS	BW / BWR / BWY



NEWTON 4.2 inch

DIMENSION	98.1 × 83.8 × 14.5 mm / 3.86 × 3.29 × 0.57 inch
ACTIVE DISPLAY AREA	84.8 × 63.6 mm / 3.33 × 2.50 inch
RESOLUTION (Pixel)	400 × 300
PIXEL COLORS	BW / BWR / BWY

NEWTON
LINE-UP

6.0~11.6"



NEWTON 4.3 inch

DIMENSION	130.2 × 42.3 × 13.7 mm / 5.12 × 1.66 × 0.54 inch
ACTIVE DISPLAY AREA	105.4 × 30.7 mm / 4.14 × 1.20 inch
RESOLUTION (Pixel)	522 × 152
PIXEL COLORS	BW / BWR / BWY



NEWTON 7.5 inch

DIMENSION	125.0 × 183.0 × 15.2 mm / 4.92 × 7.20 × 0.59 inch
ACTIVE DISPLAY AREA	97.9 × 163.2 mm / 3.85 × 6.42 inch
RESOLUTION (Pixel)	480 x 800
PIXEL COLORS	BW / BWR



NEWTON 6.0 inch

DIMENSION	133.0 × 109.0 × 14.7 mm / 5.23 × 4.29 × 0.57 inch
ACTIVE DISPLAY AREA	114.9 × 85.8 mm / 4.52 × 3.37 inch
RESOLUTION (Pixel)	600 × 448
PIXEL COLORS	BW / BWR / BWY



NEWTON 11.6 inch

DIMENSION	192.0 × 269.3 × 21.9 mm / 7.55 × 10.60 × 0.86 inch
ACTIVE DISPLAY AREA	163.0 × 244.5 mm / 6.41 × 9.62 inch
RESOLUTION (Pixel)	640 × 960
PIXEL COLORS	BW / BWR / BWY

NEWTON X
LINE-UP

1~2.2"



NEWTON X 1 inch

DIMENSION	47.79 x 18.00 x 8.80 mm / 1.88 x 0.71 x 0.35 inch
ACTIVE DISPLAY AREA	22.26 x 10.65 mm / 0.87 x 0.41 inch
RESOLUTION (Pixel)	184 x 88
PIXEL COLORS	BWR



NEWTON X 1.3 inch

DIMENSION	28.8 x 64.45 x 5.95 mm / 1.13 x 2.53 x 0.23 inch
ACTIVE DISPLAY AREA	19.44 x 27.0 mm / 0.76 x 1.06 inch
RESOLUTION (Pixel)	144 x 200
PIXEL COLORS	BWR



Newton X 1.3 inch peghook

DIMENSION	28.8 x 71.3 x 5.95 mm / 1.13 x 2.80 x 0.23 inch
ACTIVE DISPLAY AREA	19.44 x 27.0 mm / 0.76 x 1.06 inch
RESOLUTION (Pixel)	144 x 200
PIXEL COLORS	BWR



Newton X 2.2 inch

DIMENSION	37.3 x 67.6 x 6.95 mm / 1.47 x 2.66 x 0.27 inch
ACTIVE DISPLAY AREA	26.0 x 48.1 mm / 1.02 x 1.89 inch
RESOLUTION (Pixel)	160 x 296
PIXEL COLORS	BWR



NEWTON X 1"

NEWTON X 1.3"

NEWTON
LITE
LINE-UP

1.6~2.9"



NEWTON 1.6 inch

DIMENSION	37.12 × 46.81 × 14.00 mm / 1.46 × 1.84 × 0.55 inch
ACTIVE DISPLAY AREA	26.8 × 26.8 mm / 1.05 × 1.05 inch
RESOLUTION (Pixel)	200 × 200
PIXEL COLORS	BWR / BWY



NEWTON LITE 2.2 inch

DIMENSION	71.22 × 37.21 × 14.00 mm / 2.80 × 1.46 × 0.55 inch
ACTIVE DISPLAY AREA	48.35 × 23.50 mm / 1.90 × 0.92 inch
RESOLUTION (Pixel)	250 × 122
PIXEL COLORS	BWR / BWY



NEWTON LITE 2.6 inch

DIMENSION	80.27 × 43.03 × 14.00 mm / 3.16 × 1.69 × 0.55 inch
ACTIVE DISPLAY AREA	59.85 × 30.49 mm / 2.36 × 1.20 Inch
RESOLUTION (Pixel)	360 × 184
PIXEL COLORS	BWR / BWY



NEWTON LITE 2.9 inch

DIMENSION	87.48 × 43.03 × 14.00 mm / 3.44 × 1.69 × 0.55 inch
ACTIVE DISPLAY AREA	67.38 × 29.37 mm / 2.65 × 1.15 inch
RESOLUTION (Pixel)	384 × 168
PIXEL COLORS	BWR / BWY

ALL LINE-UP SPECIFICATION

FEATURES	NEWTON PRO	NEWTON
UPDATE SPEED	4 minutes for 3,000 tags / GW	4 minutes for 3,000 tags / GW
AVAILABLE CHANNELS	Over 60 Channels	Over 60 Channels
AVAILABLE MODEL	1.6"V, 1.6"H, 2.2", 2.6", 2.7", 2.9", 3.5", 4.2", 4.3", 4.5", 5.8", 6.0", 6.1", 7.5", 9.7", 11.6", 12.2"	1.6", 2.2", 2.6", 2.7", 2.9", 4.2", 4.3", 6.0",7.5", 11.6"
EXPECTED BATTERY LIFE (IN ROOM TEMPERATURE)	*BWRY Up to 10 Years (2 Update/day) Only 2.2", 2.6", 2.7", 2.9",3.5", 4.2", 4.3",4.5" Included	Up to 10 Years (2 Update/ day) Only 1.6", 2.2", 2.6", 2.7", 2.9", 4.2", 4.3" Included
	*BWRY Up to 10 Years (1 Update/ day) Only 5.8", 6.0", 6.1", 7.5", 9.7", 11.6",12.2 Included	Up to 10 Years (1 Update/ day) Only 6.0", 7.5", 11.6" Included
	*BWRY Up to 5 Years (1 Update/day) Only 1.6"V, 1.6"H Included	Up to Up to 5 Years Only 1.6" Included
PROTECTION SCREEN	included	Included
BUTTONS	1 button included	2 buttons included
LEDS	7 color LED included	7 color LED included
NFC	Included	Included
PAGES	Up to 7 pages included	Up to 7 pages included
WATER & DUST PROOF	IP68	IP67
MARKET RELEASED	MAR 2024	JAN 2020

NEWTON X	NEWTON LITE	NEWTON CORE
4 minutes for 3,000 tags / GW	4 minutes for 3,000 tags / GW	4 minutes for 3,000 tags / GW
Over 60 Channels	Over 60 Channels	Over 60 Channels
1.0" 1.3"(Peghook), 2.2"	1.6", 2.2", 2.6", 2.9"	1.6", 2.2", 2.6", 2.9", 3.5", 4.2", 4.3", 5.8", 6.0", 6.1", 7.5", 9.7", 11.6", 12.2"
Up To 3 Years (2 updates & 1 led blinking(10sec) / day)	Up To 5 years (2 Update/day)	*BWR/BWRY Up to 10 Years (2 Update/day) Only 2.2", 2.6" 2.9", 3.5", 4.2", 4.3" Included
Up to 2 Years Only 1.0" Included		*BWR, BWY Up to 10 Years (1 Update/day) Only 5.85", 6.0", 6.1", 7.5",9.7", 11.6",12.2" Included
		*BWRY Up to 5 Years (1 Update/day) Only 1.6" Included
Only 1.0" included	Included	Not supported
1 button included	Not included	Not included
7 color LED included	7 color LED included	7 color LED included
Only 2.2" included	Included	Included
Up to 7 pages included	Up to 7 pages included	Up to 7 pages included
Not supported	Not supported	Not supported
OCT 2022	APR 2020	DEC 2023

NEWTON CORE



NEWTON
CORE
LINE-UP

1.6~4.2"



NEWTON CORE 1.6 inch

DIMENSION	36.95 x 46.63 x 11.62 mm (1.45 x 1.84 x 0.46 inch)
ACTIVE DISPLAY AREA	27.0 x 27.0 mm (1.06 x 1.06 inch)
RESOLUTION (Pixel)	200 x 200
PIXEL COLORS	BWR / BWY / BWRY



NEWTON CORE 2.2 inch

DIMENSION	66.95 x 36.95 x 11.62 mm (2.64 x 1.45 x 0.46 inch)
ACTIVE DISPLAY AREA	48.1 x 26.0 mm (1.89 x 1.02 inch)
RESOLUTION (Pixel)	296 x 160
PIXEL COLORS	BWR / BWY / BWRY



NEWTON CORE 2.6 inch

DIMENSION	78.12 x 42.79 x 11.62 mm (3.08 x 1.68 x 0.46 inch)
ACTIVE DISPLAY AREA	60.1 x 30.7 mm (2.37 x 1.21 inch)
RESOLUTION (Pixel)	360 x 184
PIXEL COLORS	BWR / BWY / BWRY



NEWTON CORE 2.9 inch

DIMENSION	85.67 x 42.79 x 11.62 mm (3.37 x 1.68 x 0.46 inch)
ACTIVE DISPLAY AREA	67.6 x 29.6 mm (2.66 x 1.17 inch)
RESOLUTION (Pixel)	384 x 168
PIXEL COLORS	BWR / BWY / BWRY



NEWTON CORE 3.5 inch

DIMENSION	99.73 x 49.35 x 12.80 mm (3.93 x 1.94 x 0.50 inch)
ACTIVE DISPLAY AREA	81.0 x 37.9 mm (3.19 x 1.49 inch)
RESOLUTION (Pixel)	384 x 180
PIXEL COLORS	BWR / BWY / BWRY



NEWTON CORE 4.2 inch

DIMENSION	97.13 x 82.18 x 13.55 mm (3.82 x 3.24 x 0.53 inch)
ACTIVE DISPLAY AREA	84.8 x 63.6 mm (3.34 x 2.50 inch)
RESOLUTION (Pixel)	400 x 300
PIXEL COLORS	BWR / BWY / BWRY

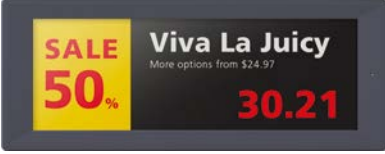
NEWTON
CORE
LINE-UP

4.3~9.7"



NEWTON CORE 4.3 inch

DIMENSION	128.73 × 41.90 × 12.80 mm (5.07 x 1.65 x 0.50 inch)
ACTIVE DISPLAY AREA	105.4 x 30.7 mm (4.15 x 1.21 inch)
RESOLUTION (Pixel)	522 x 152
PIXEL COLORS	BWR / BWY / BWRY



NEWTON CORE 5.8 inch

DIMENSION	166.16 × 65.67 × 13.26 mm (6.54 x 2.59 x 0.52 inch)
ACTIVE DISPLAY AREA	139.00 x 47.74 mm (5.47 x 1.88 inch)
RESOLUTION (Pixel)	792 x 272
PIXEL COLORS	BWR / BWY / BWRY



NEWTON CORE 6.0 inch

DIMENSION	133.20 × 109.96 × 14.85 mm (5.24 x 4.33 x 0.58 inch)
ACTIVE DISPLAY AREA	114.9 x 85.79 mm (4.52 x 3.38 inch)
RESOLUTION (Pixel)	600 x 488
PIXEL COLORS	BWR / BWY / BWRY



NEWTON CORE 6.1 inch

DIMENSION	133.20 × 109.96 × 14.90 mm (5.24 x 4.33 x 0.58 inch)
ACTIVE DISPLAY AREA	118.78 x 88.22 mm (4.68 x 3.47 inch)
RESOLUTION (Pixel)	648 x 480
PIXEL COLORS	BWR / BWY / BWRY



NEWTON CORE 7.5 inch

DIMENSION	124.10 x 185.50 x 14.85 mm (4.89 x 7.30 x 0.58 inch)
ACTIVE DISPLAY AREA	97.9 x 163.2 mm (3.85 x 6.43 inch)
RESOLUTION (Pixel)	528 x 880
PIXEL COLORS	BWR / BWY / BWRY



NEWTON CORE 9.7 inch

DIMENSION	168.05 x 224.07 x 14.81 mm (6.62 x 8.82 x 0.58 inch)
ACTIVE DISPLAY AREA	141.12 x 201.6 mm (5.56 x 7.94 inch)
RESOLUTION (Pixel)	672 x 960
PIXEL COLORS	BWR / BWY / BWRY

NEWTON
CORE
LINE-UP

11.6~12.2"



NEWTON CORE 11.6 inch

DIMENSION	190.31 x 267.70 x 14.85 mm (7.49 x 10.54 x 0.58 inch)
ACTIVE DISPLAY AREA	163.0 x 244.5 mm (6.42 x 9.63 inch)
RESOLUTION (Pixel)	640 x 960
PIXEL COLORS	BWR / BWY / BWRY



NEWTON CORE 12.2 inch

DIMENSION	215.95 x 259.82 x 14.85 mm (8.50 x 10.23 x 0.58 inch)
ACTIVE DISPLAY AREA	190.08 x 237.6 mm (7.48 x 9.35 inch)
RESOLUTION (Pixel)	768 x 960
PIXEL COLORS	BWR / BWY / BWRY

Newton Core
2.2 inch



Newton Core
5.8 inch



Newton Core
9.7 inch



NEWTON GATEWAY



NEWTON GATEWAY

NEWTON Gateway's digital numbering system makes it easier for managers to identify and manage Gateway IDs. Another great feature of NEWTON Gateway is a tag and load balancing system and this allows the number of connected labels to be always evenly distributed. There is no overload or underload between Gateways and there is no need to manually track Gateways' load. Each Gateway offers more than 60 RF channels which means that there's no interference issue between Gateways. Also, the auto-channel selection system prevents any channel collisions.

ITEMS	REMARKS
MODEL	EGS501NA0D
DIMENSION	243.0 × 243.0 × 45.57 mm / 9.56 × 9.56 × 1.79 inch
CPU	Quad Cortex-A53
FLASH MEMORY	4 GB
RAM	2 GB
RF INTERFACE	2.4 GHz SOLUM Proprietary
INTERFACE	Ethernet(10/100/1000 Mbps)
POWER CONSUMPTION	PoE (Power over Ethernet IEEE802.3af) AUX DC Input (5-12 V, 10W)
CAPACITY (2.9" BWR)	50,000 Labels
COVERAGE (INDOOR IN RADIUS)	UP to 30 m
TRANSMIT FREQUENCY	2401 MHz - 2480 MHz
RECEIVE FREQUENCY	2401 MHz - 2480 MHz
ANTENNA TYPE	External Antenna
ANTENNA GAIN	External 3.5 dBi
CHANNELS	80 CH
OPERATING TEMPERATURE	0°C to +40°C
WEIGHT	650 g / 23 oz
ENCLOSURES	Plastic (ABS)

※ The specifications above may vary depending on the installation environment or users' application.

NEWTON USB GATEWAY



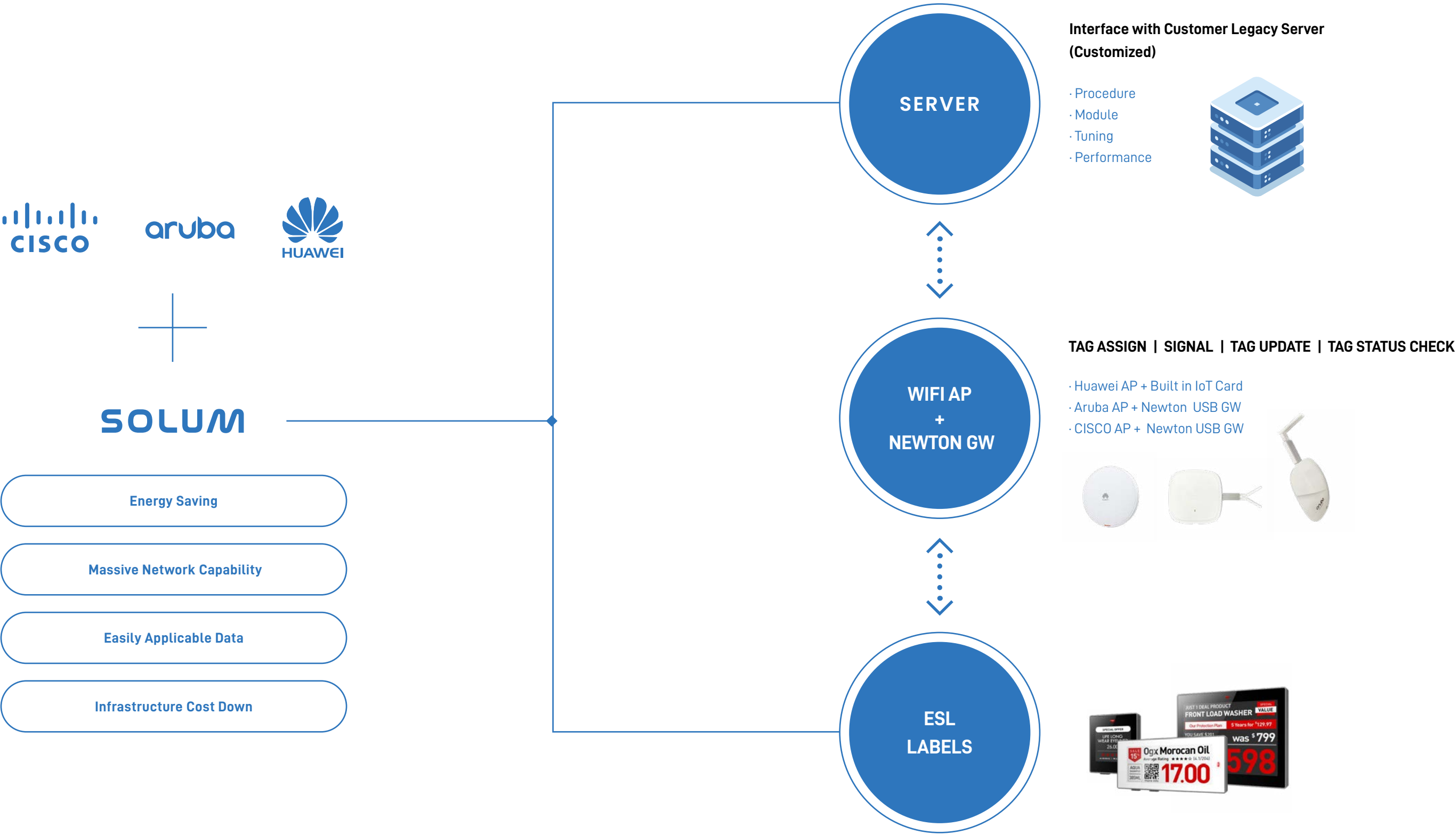
USB GATEWAY

Without any additional device, you can get additional capacity, memory and range with USB Gateway. USB Gateway can also be connected to your NEWTON Gateway. More over, using USB Gateway, you can freely transfer data between electronic tags and clients' central data processing devices.

ITEMS	REMARKS
MODEL	EGU200NA0X
DIMENSION	198.1 × 13.6 × 30 mm / 7.79 × 0.53 × 1.18 inch
CPU	Quad Cortex-A53
FLASH MEMORY	4 GB
RAM	2 GB
RF INTERFACE	2.4 GHz SOLUM Proprietary
INTERFACE	USB 2.0
POWER CONSUMPTION	2.5 W
CAPACITY (2.9" BWR)	50,000 Labels
COVERAGE (INDOOR IN RADIUS)	UP to 25 m
TRANSMIT FREQUENCY	2401 MHz - 2480 MHz
RECEIVE FREQUENCY	2401 MHz - 2480 MHz
ANTENNA TYPE	Antenna(external type) 2 ea Antenna(internal type) 1 ea
ANTENNA GAIN	External : 3.2 dBi / Internal : 2 dBi
CHANNELS	80 CH
OPERATING TEMPERATURE	0°C to +40°C
WEIGHT	50 g / 1.75 oz
ENCLOSURES	Plastic (ABS), Aluminum

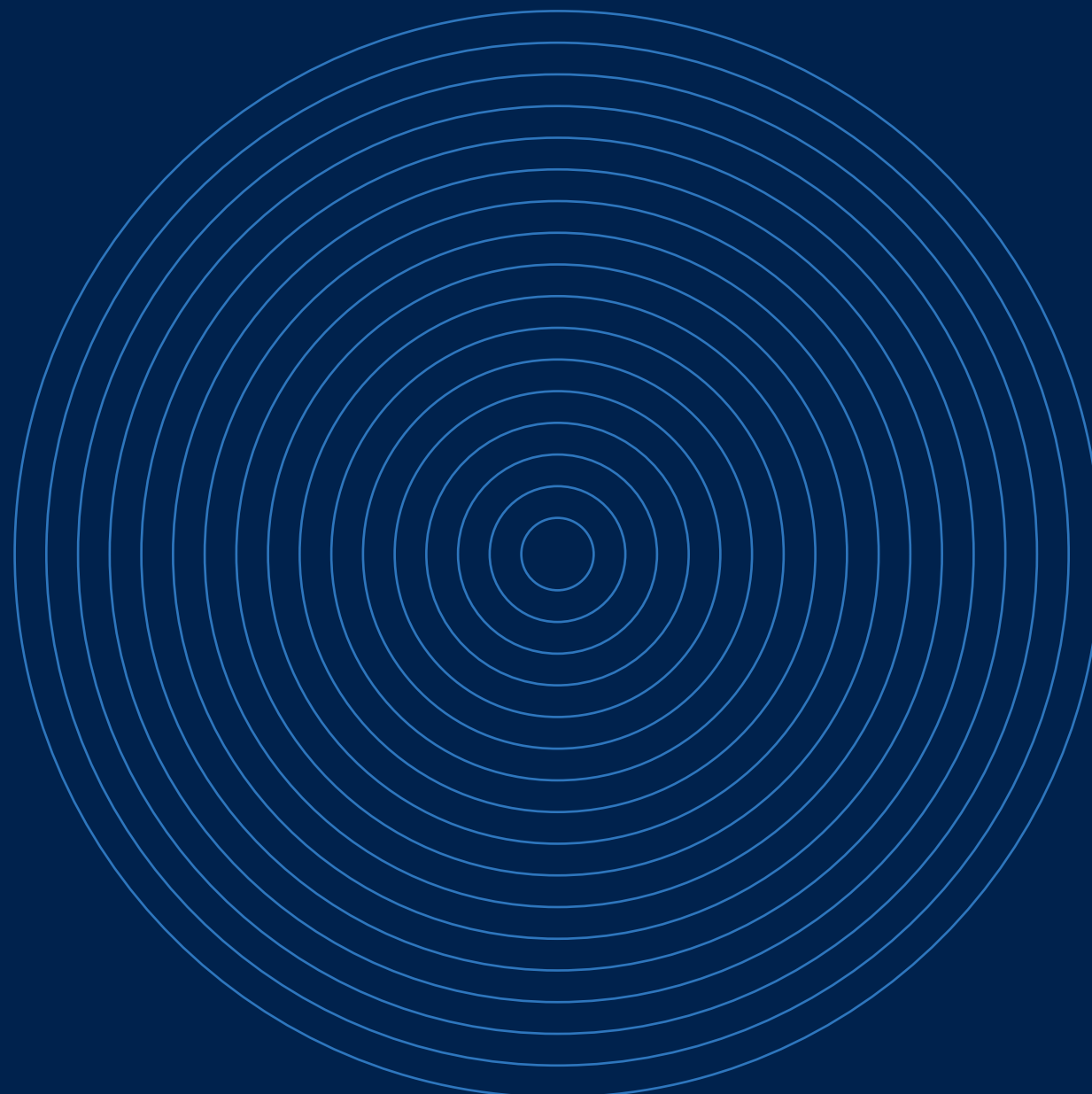
※ The specifications above may vary depending on the installation environment or users' application.

GLOBAL AP SOLUTION





ESL STORE
OPERATION
FEATURES



02

SMART STORE OPERATION

ESL REAL-TIME SYNCHRONIZATION SOLUTION

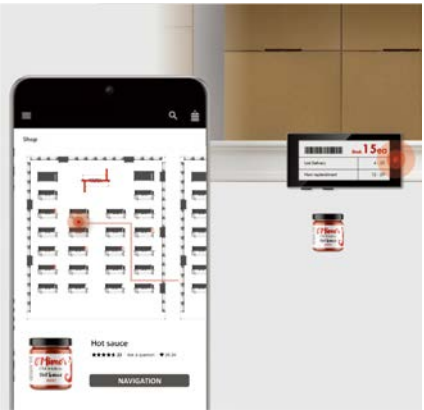


REPLENISH SHELF ITEMS



Low Stock

Before opening the store, you can check the stock on the second page of each label.



If There Are Goods in Stock at the Store

When checking the stock, you can activate the LED on the labels of the products that are low in stock and check their locations on a mobile device.



Restocking

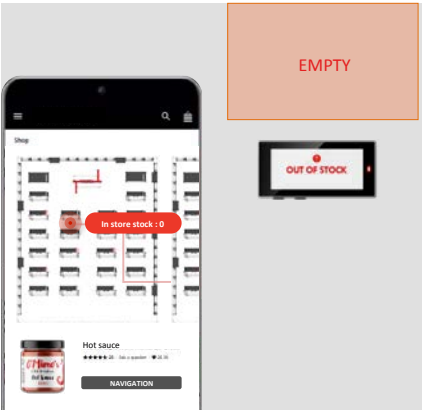
If there are goods in stock at the store, after filling the shelves with the products, you press the button that confirms completion of restocking for a short time.

SMART ORDERING



Out of Stock

You can send a 'Out of Stock' or 'Low Stock' message or alarm to store employee's mobile devices.



If Certain Goods are Out of Stock at the Store

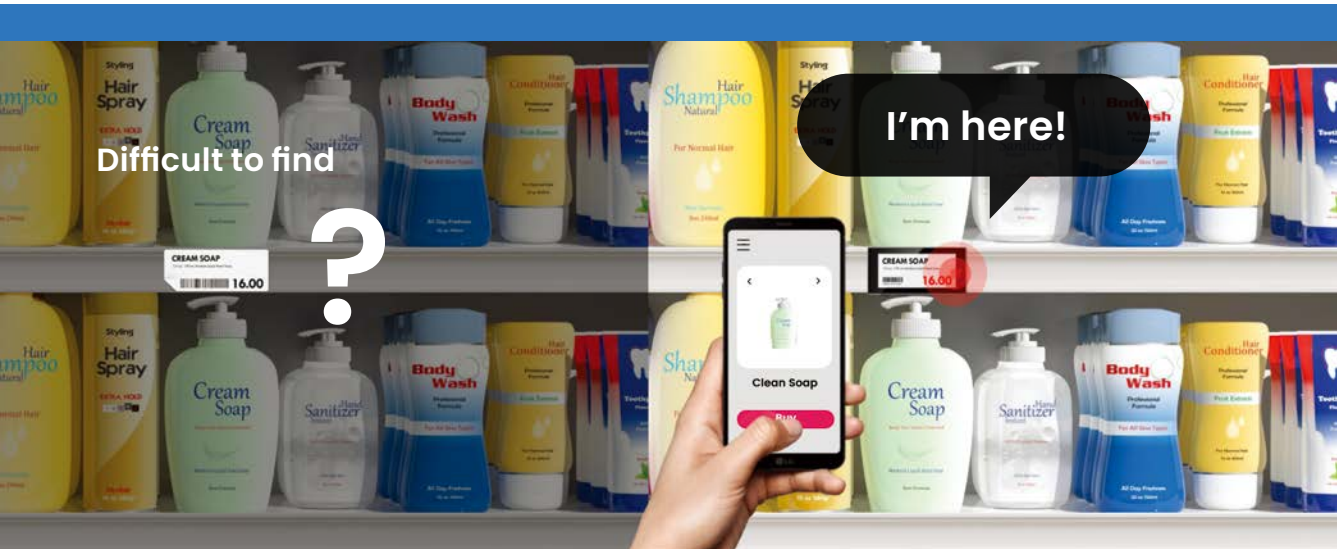
When checking the stock, you can activate the LED on the labels of the products that are out of stock and check their locations on a mobile device.



Restocking

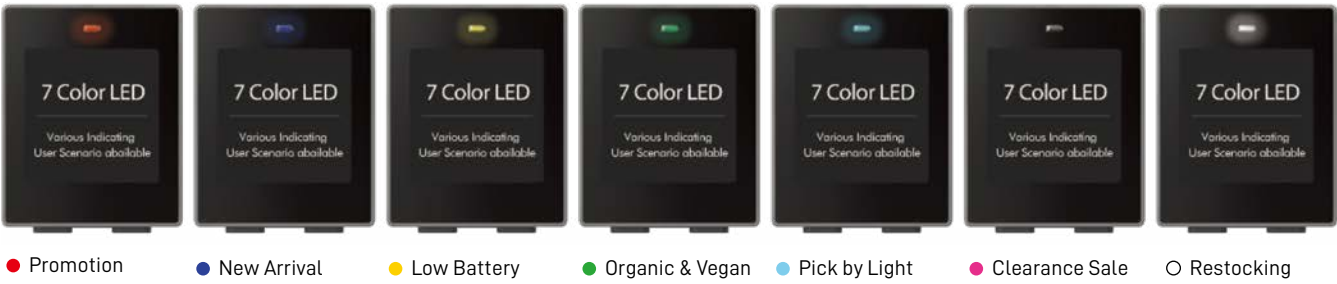
If there are no goods in stock at the store, you press the button for a long time to request goods to the warehouse.

ESL LED INDICATOR SOLUTION

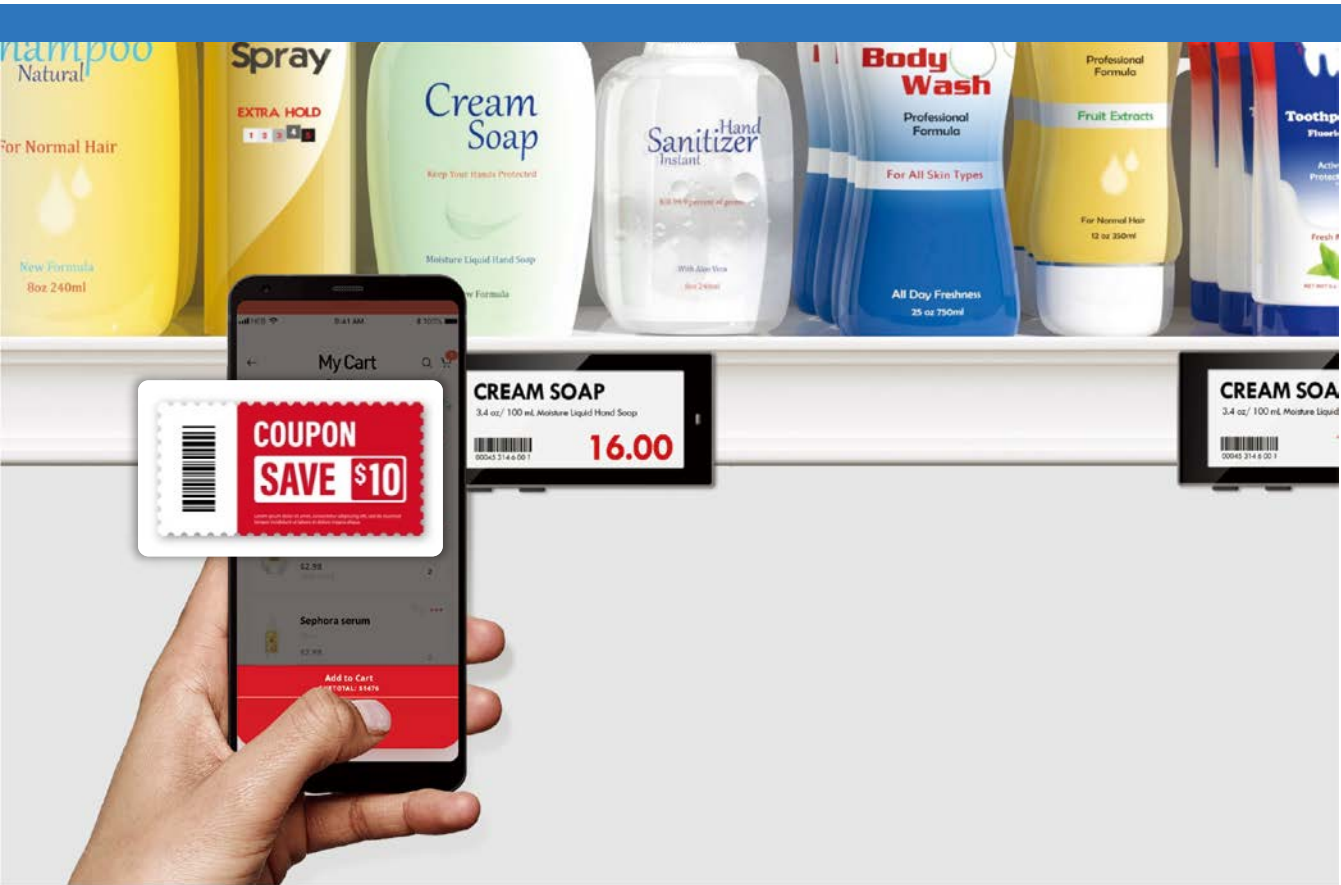


- Efficiency maximized and delay in restocking minimized by combining industry's fastest response time and blinking LED
- Customizable LED colors for special promotions and messages
- 180° viewing angle that allows the LED lights to be easily visible to the customers from the side
- Depending on the size, labels can be used up to 10 years when used for an hour every day
- 7 LED color options can be used for special promotions or messages
- LED colors and blinking feature can be customized on the server

LED INDICATOR EXAMPLE

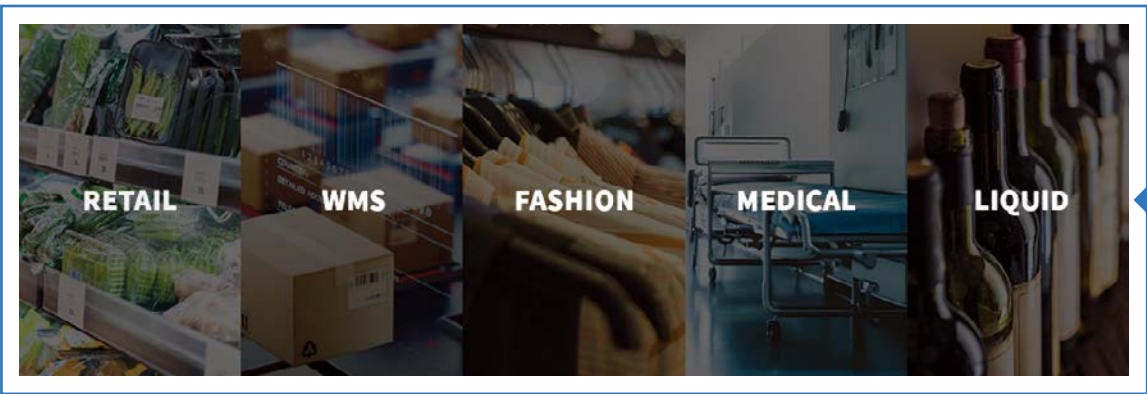


NFC SOLUTION



- NFC for communication between mobile devices and ESLs
- Digital coupon, marketing and web navigation applications can be used
- Coupon page with NFC
- If certain products are not on the shelf, they can be ordered online on the spot
- Product information (detailed information page and reviews)

BIG DATA CONSULTING PROCESS



ESLs Used in a Variety of Fields

ESLs can be used in a variety of fields including retail, factory and logistics services.



Data Collection

- 1. Web Portal: Analysis of customer's shopping patterns (places where customers stayed the longest, popular products)
- 2. Page Transitions: Analysis of customer preferences and interests
- 3. LCD Touches: Customer information acquired from events that customers participate in can be used for planning marketing campaigns in the future



Data Analysis and Reporting

All the data on buttons pressed by the customers are collected, converted into participation and interest indicators and sent to the AIMS server. SOLUM shares weekly, monthly and quarterly data analysis reports.



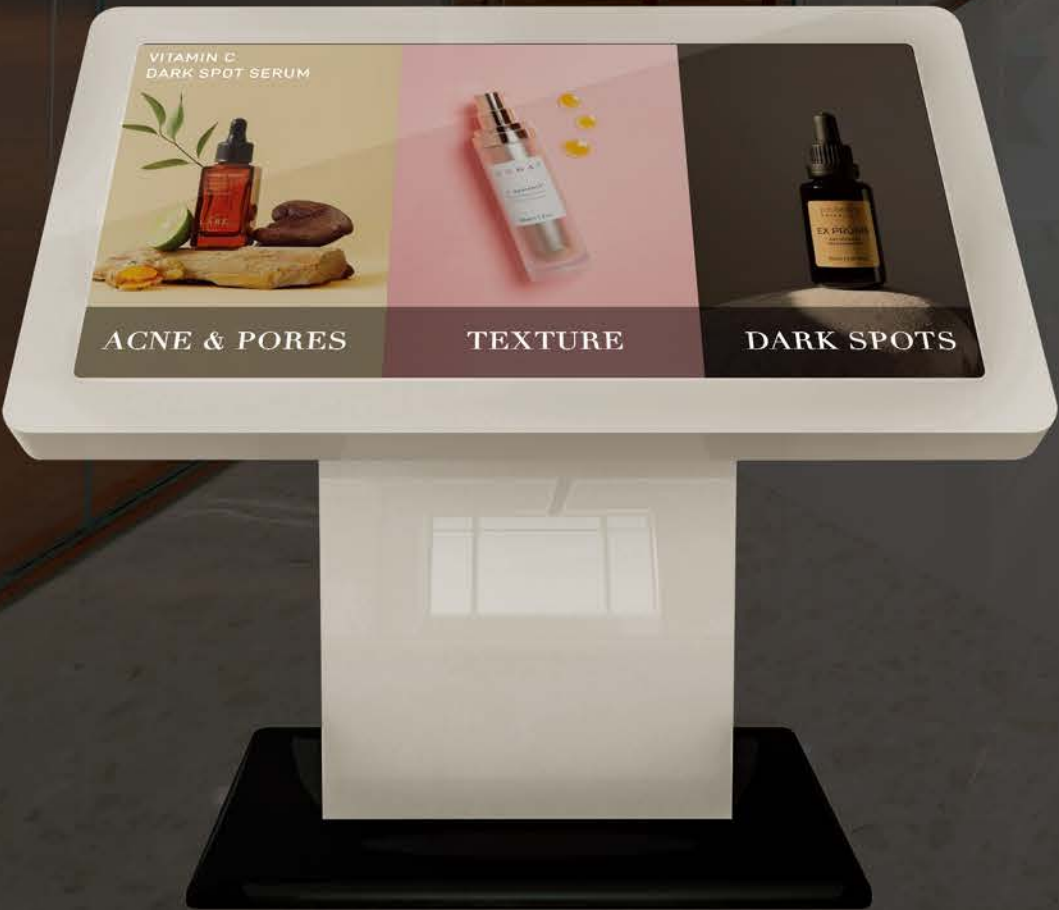
ESL SHOPPING
SOLUTION
FEATURES

03

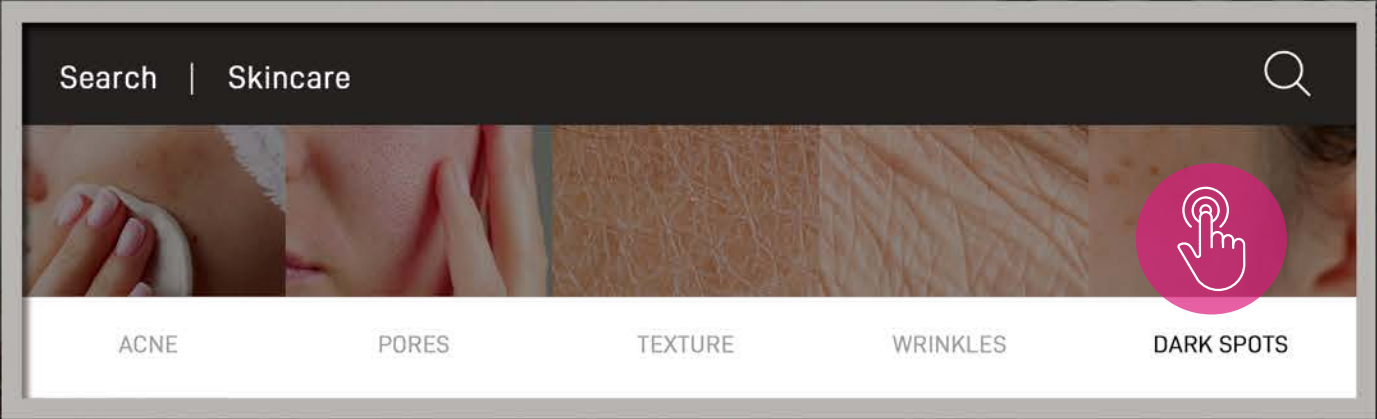
SMART SHOPPING SOLUTION



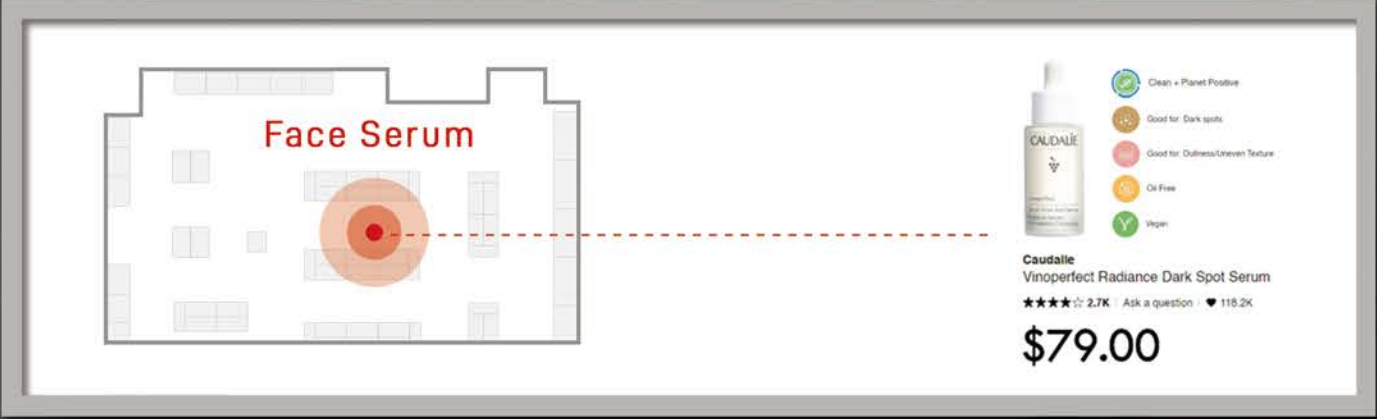
FLOOR NAVIGATION SOLUTION



01 Pressing a Category button on the 29" LCD touch screen activates the map showing the location of the products and the LED light.



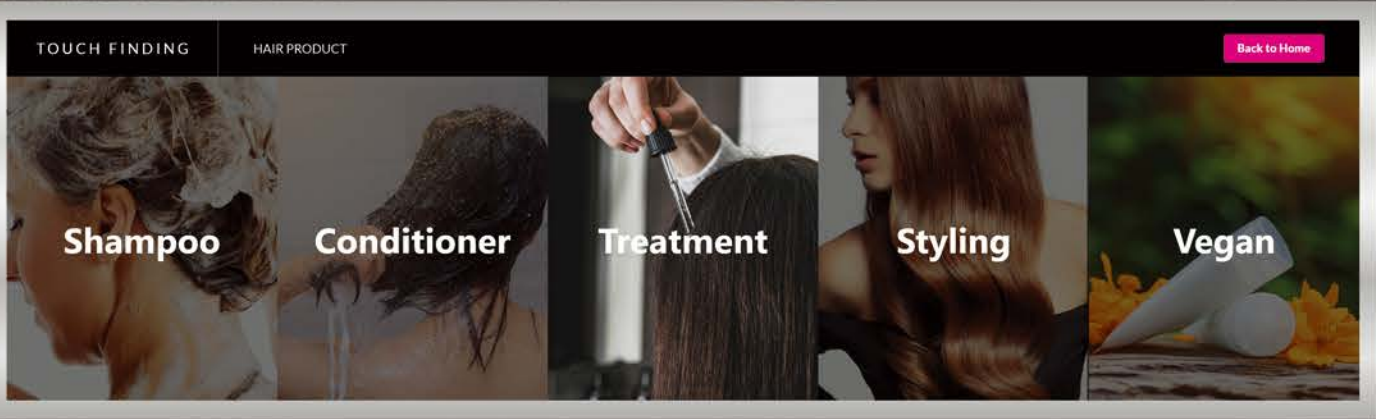
02 The location of the product is shown on the map.



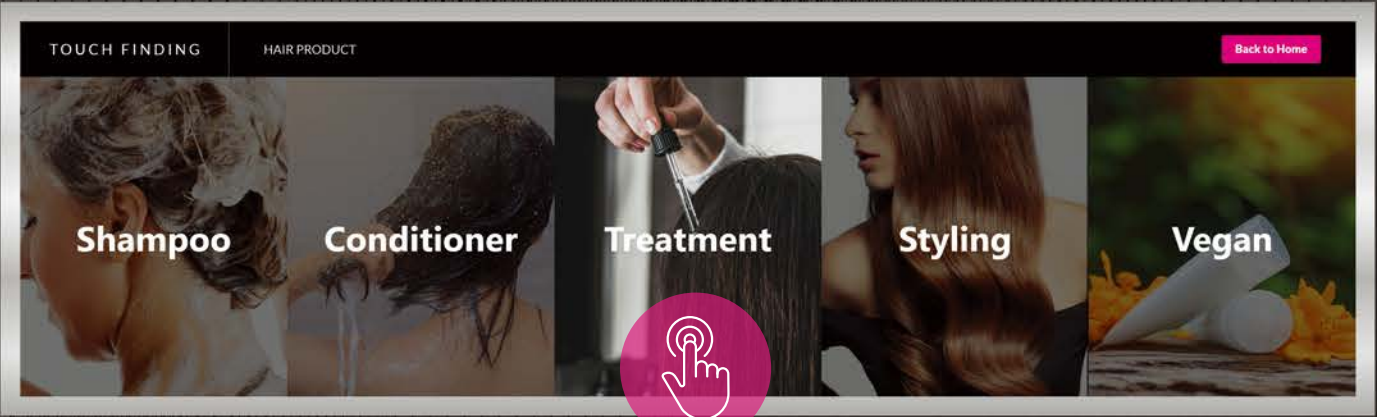
03 The LED light turns on and the customer can find where the product is located at.



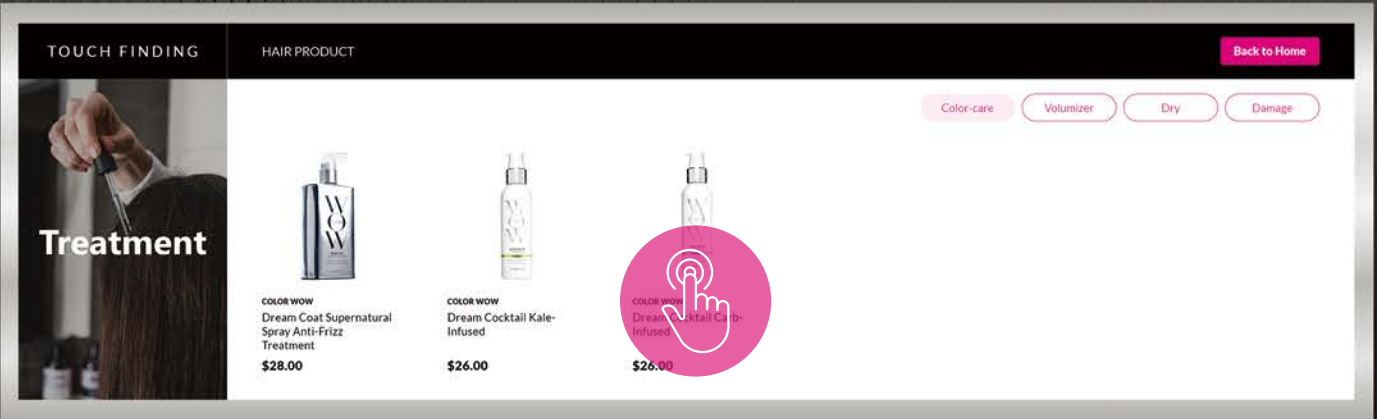
SECTION SOLUTION



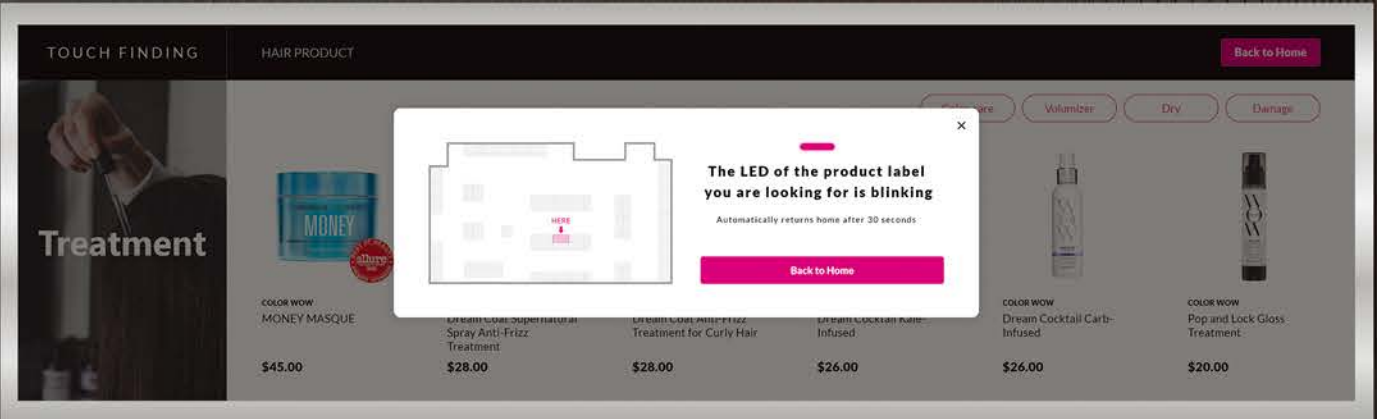
01 A category of hair products is selected.



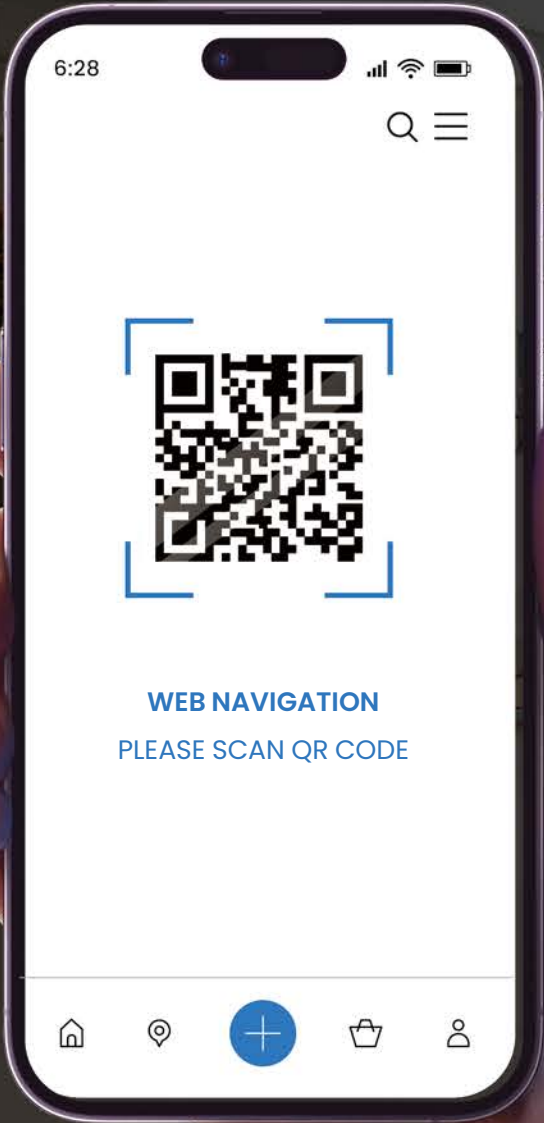
02 A product in the selected category is selected.



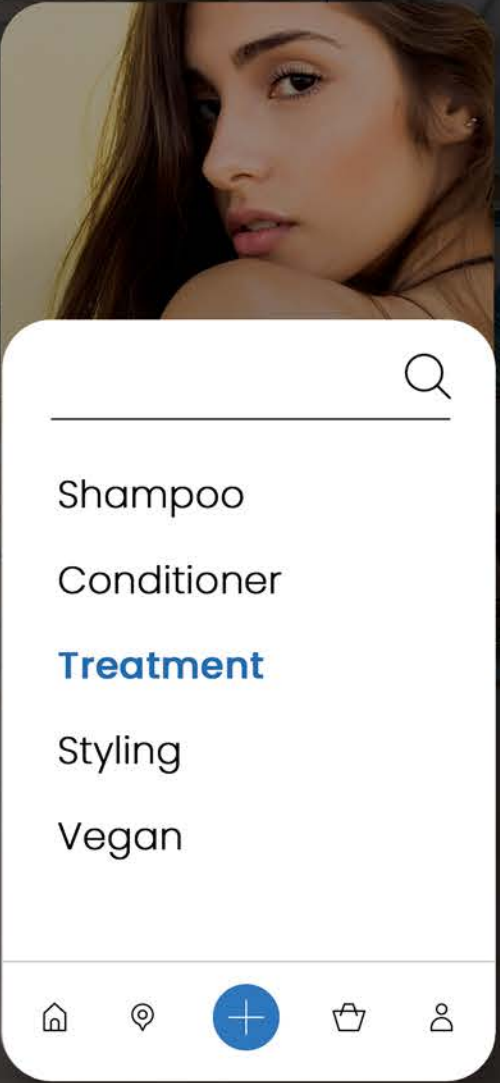
03 The location of the selected product is provided and the LED light on the ESL of that product is turned on.



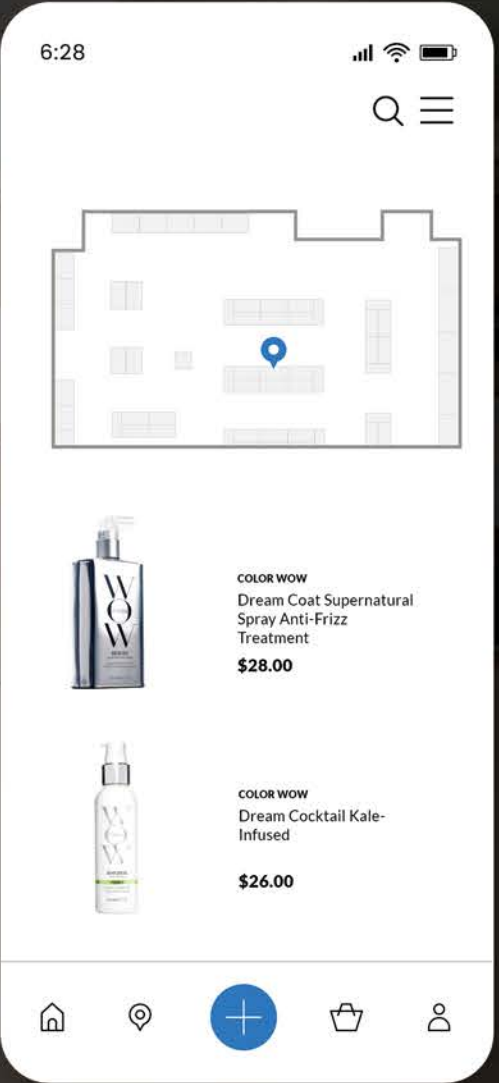
WEB NAVIGATION SOLUTION



Search on Menu



Search on Menu



Check Location of the Item

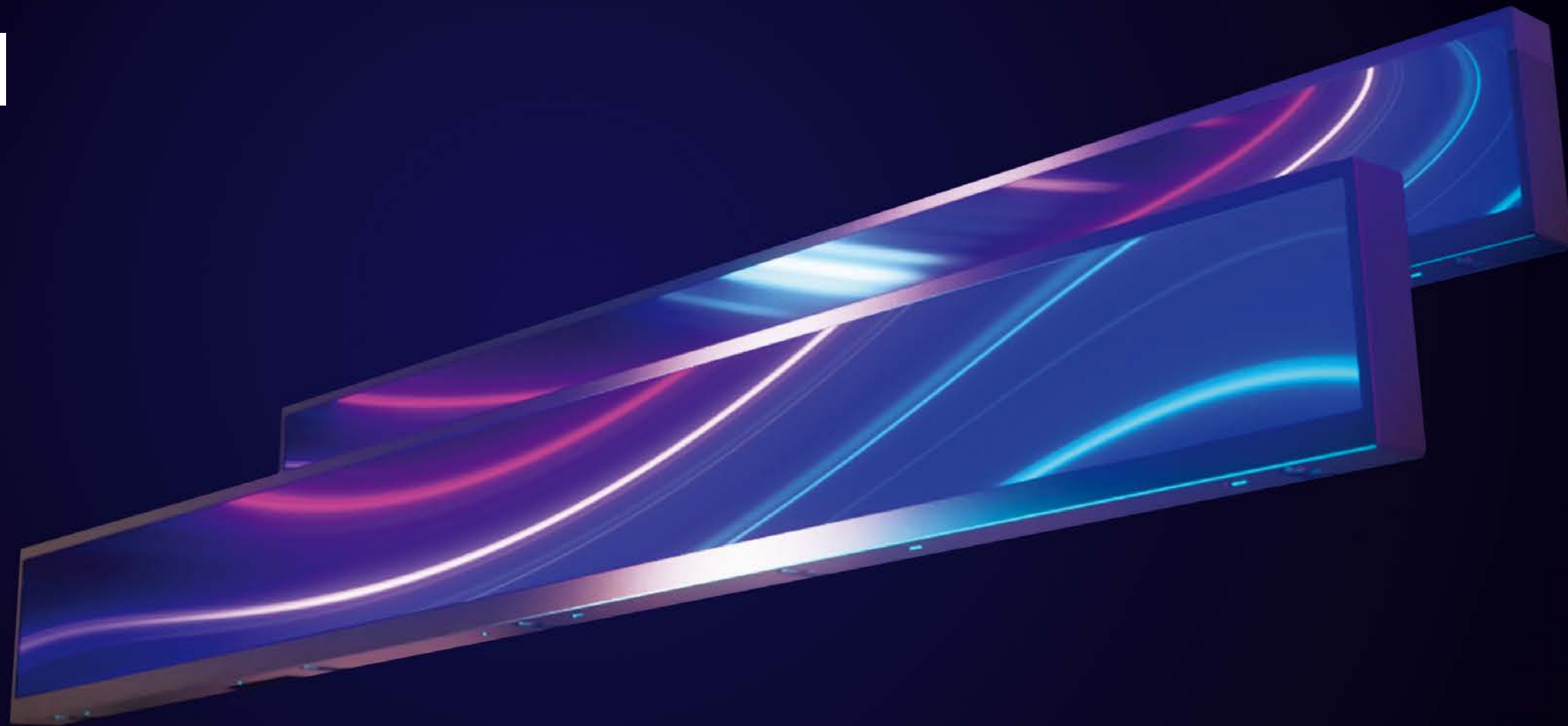
04

ESL SOLUTIONS

NEWTON TOUCH TECHNICAL FEATURES

ABOUT NEWTON TOUCH

Newton TOUCH

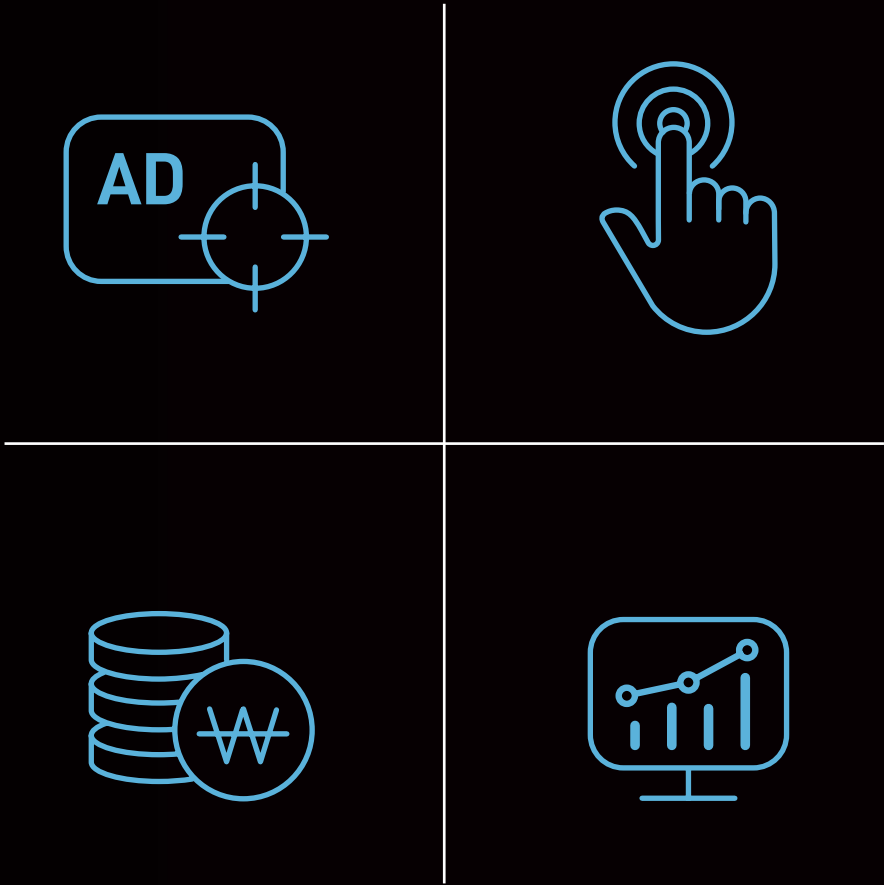


NEWTON TOUCH BENEFITS

Newton TOUCH



NEWTON TOUCH BENEFITS



Corporations across industries need to develop the way they communicate and interact with the customers to meet the expectations of the customers in the 21st century. Ordinary print ads and signs made of static text and images no longer could effectively serve their purposes today. SOLUM introduces full LCD promotional media Newton TOUCH that will make business promotion more engaging and immersive. Touch, swipe and scan.

By using Newton TOUCH, customers can directly interact with your products and services. At the same time, businesses can benefit from enhanced store campaigns, additional ad revenue and real-time customer data. Newton TOUCH allows you to offer enhanced customer experience and achieve better business results. Through Newton TOUCH, strengthen your competitiveness for the future and innovative your business.

NEWTON TOUCH 23" SPECIFICATION



SYSTEM

OS	Android 8.1
CPU	Quad-core ARM Cortex-A35, 1.35GHz
GPU	Mali-G31 MP2 GPU : 2D/3D Graphic Engine
RAM	DDR3 1GByte
Storage	eMMC 8GByte
Network	WLAN 802.11 b/g/n (2.4GHz)
Connectivity	Micro USB 2.0 (OTG 1 ea)

VIDEO CODEC

Image	JPEG, BMP, GIF, PNG
Video	MPEG-1/2, VP8, H.263, H.264, Motion JPEG

DISPLAY

Display type	23.1”TFT-LCD(IPS), edge LED Back-light
Touch	In-TOUCH (P-Cap in-cell Touch)
Active Area	585.56 x 48.18 mm
Resolution	1920 x 158
Display Colors	16.7 Million colors
Luminance, White	700 cd/m²(Typ.)
Viewing Angle (CR>10)	Viewing angle free (R/L 178(Min.), U/D 178 (Min.))
Bezel (mm, L/R/U/D)	4.1/4.1/5.6/9.6 mm
Life time (LED Backlight)	50,000hrs
Panel Surface	Anti-Glare, 4H

TOUCH

Accuracy (Ø8)	≤ 3.0mm (max)
Latency (Ø8)	≤ 45ms (Touch down), ≤ 35ms (Panning)
Multi Touch	≤ 10 points

MECHANICAL

Outline Dimension	593.8(H) x 63.4.0(V) x 19.6(D)mm
Weight	0.808Kg (Typ.)
Possible Display Type	Landscape / Portrait
Packing Dimension	660(L) x 210(W) x 219(H)mm
Cabinet Color	Black

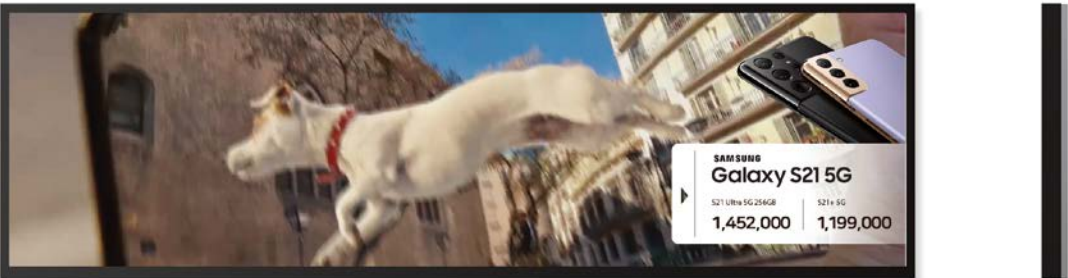
POWER REQUIREMENTS

Input Power Frequency	AC100-240V@50/60Hz
Output Voltage	12V
Output Current	1.5A
Output Power Connector To ISS product	USB Type C (Power Only)

ENVIRONMENTAL

Operation Temperature	0°C~45°C
Operation Humidity	10~80%RH
Storage Temperature	20°C~60°C

NEWTON TOUCH 29" SPECIFICATION



SYSTEM

OS	Android 8.1
CPU	Quad-core ARM Cortex-A35, 1.35GHz
GPU	Mali-G31 MP2 GPU : 2D/3D Graphic Engine
RAM	DDR3 1GByte
Storage	eMMC 8GByte
Network	WLAN 802.11 b/g/n (2.4GHz)
Connectivity	Micro USB 2.0 (OTG 1 ea)

VIDEO CODEC

Image	JPEG, BMP, GIF, PNG
Video	MPEG-1/2, VP8, H.263, H.264, Motion JPEG

DISPLAY

Display type	29” TFT-LCD (IPS), edge LED Back-light
Touch	In-TOUCH (P-Cap in-cell Touch)
Active Area	698.4 x 196.43 mm
Resolution	1920 x 540
Display Colors	16.7 Million colors
Luminance, White	500 cd/m²(Typ.)
Viewing Angle (CR>10)	Viewing angle free (R/L 178(Min.), U/D 178 (Min.))
Bezel (mm, L/R/U/D)	7.2/7.2/7.7/9.6 mm
Life time (LED Backlight)	50,000hrs
Panel Surface	Anti-Glare, 4H

TOUCH

Accuracy (Ø8)	≤ 3.0mm (max)
Latency (Ø8)	≤ 45ms (Touch down), ≤ 35ms (Panning)
Multi Touch	≤ 10 points

MECHANICAL

Outline Dimension	712.8(H) x 213.4(V) x 16.0(D)mm
Weight	2.46Kg (Typ.)
Possible Display Type	Landscape / Portrait
Packing Dimension	850(L) x 260(W) x 280(H)mm
Cabinet Color	Black

POWER REQUIREMENTS

Input Power Frequency	AC100-240V@50/60Hz
Output Voltage	12V
Output Current	2.5A
Output Power Connector To ISS product	USB Type C (Power Only)

ENVIRONMENTAL

Operation Temperature	0°C~45°C
Operation Humidity	10~80%RH
Storage Temperature	20°C~60°C

ESL AIMS SAAS

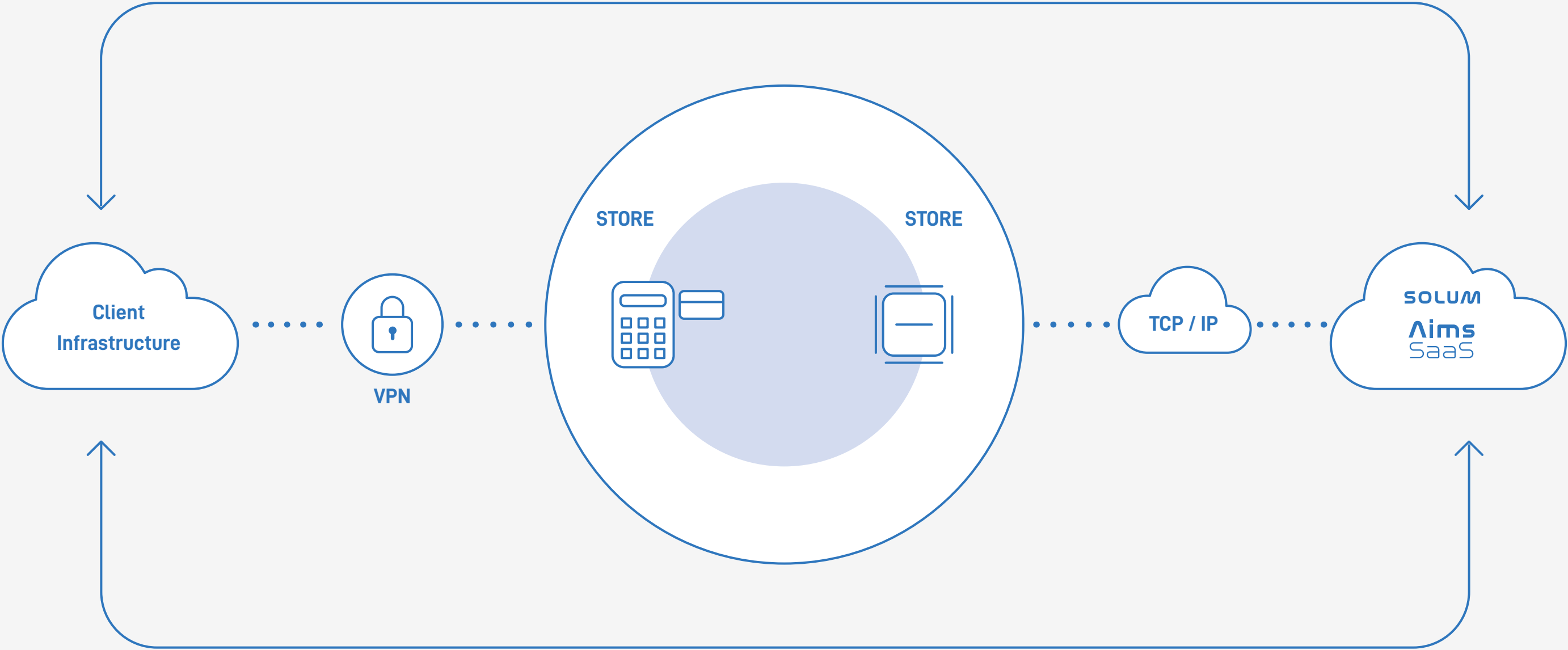
Aims
SaaS

Advanced Information Management System

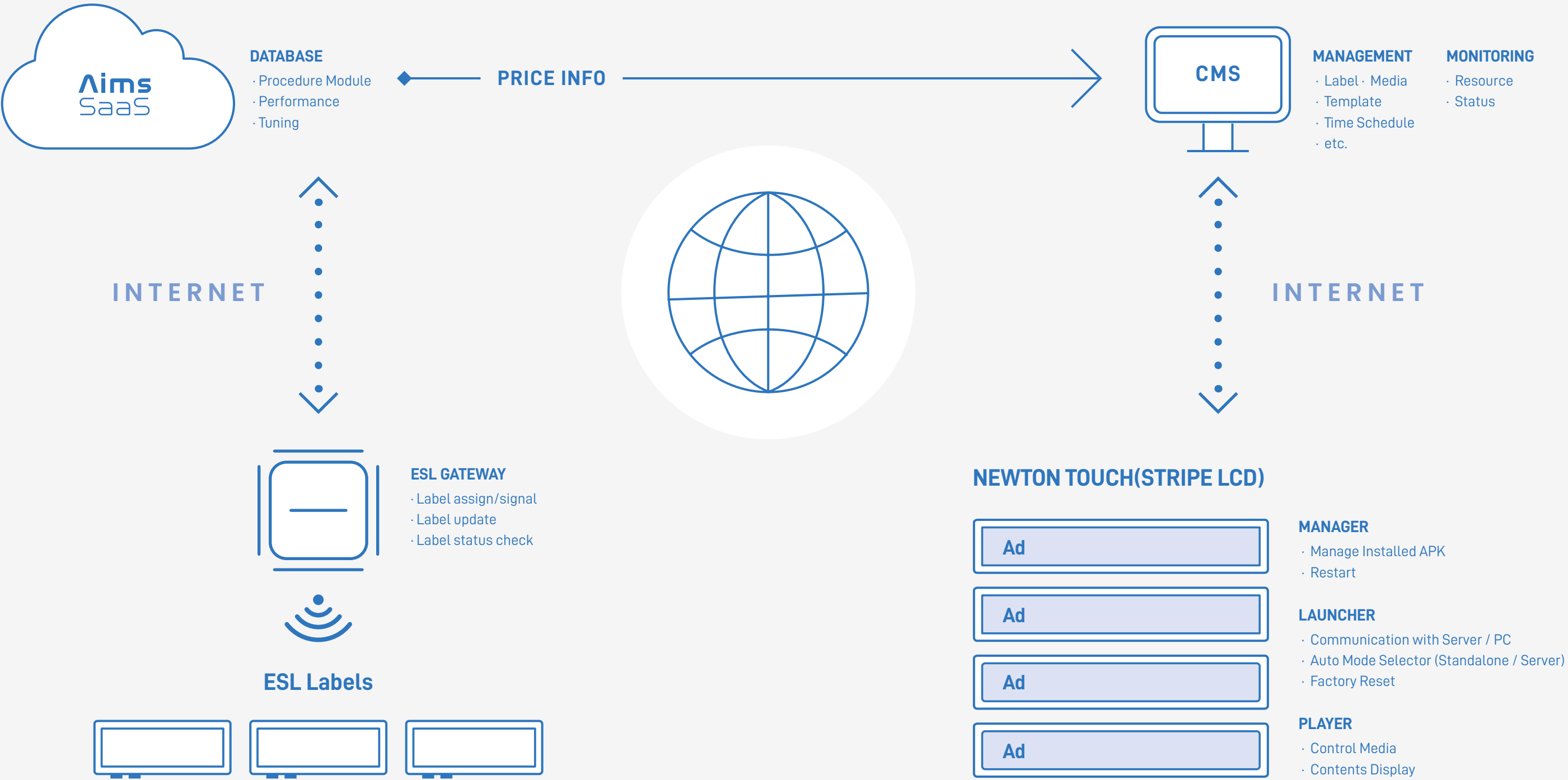


HOW DOES AIMS SAAS WORK?

SOLUM's AIMS SaaS can be integrated with all types of ERP platforms (public clouds, private clouds/data centers or store servers). Aims SaaS does not need infrastructure for cloud communication and can be operated with standard SOLUM Newton Gateway "HTTPS" and "MQTT over Websockets" which use security tokens known as SAS (Shared Access Signature) tokens through TSL/SSL are used between AIMS SaaS and SOLUM Newton Gateway.



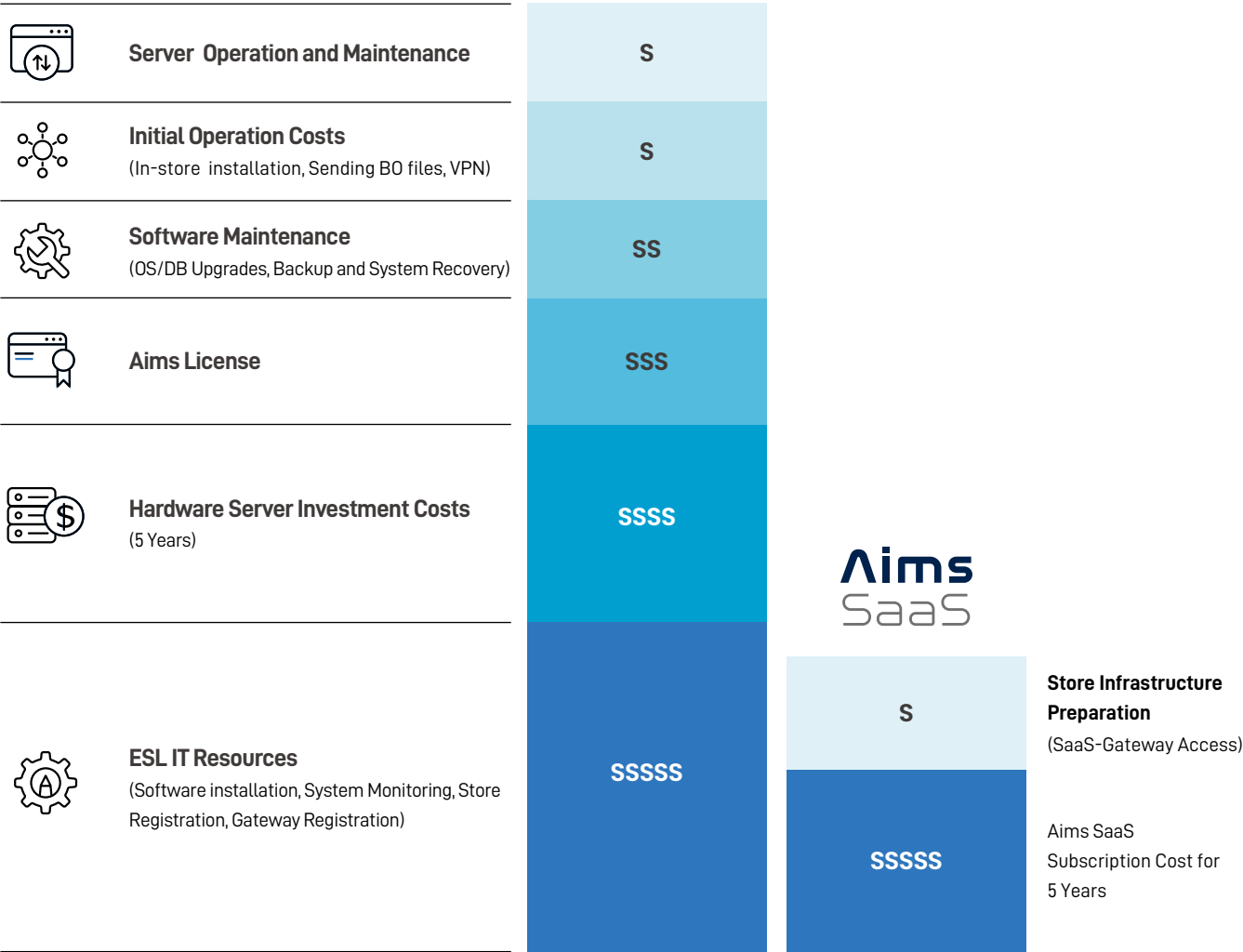
NEWTON TOUCH NETWORK



COST CHART

ON-PREMISE VS AIMS SAAS

By using Aims SaaS, you can distribute the software costs over time and, because Aims SaaS is hosted on the cloud, it's much more economical (CAPEX) than conventional ways of software operation. Thus, the costs of operating on-premise software and SaaS will be very different in the long run. You can look at the costs of two methods and see specific costs you can save.



※ Aims SaaS subscription period is based on a 5-year hardware server use period.

AIMS SAAS SERVICE

SERVICE		ON-PREMISE SERVER	AIMS SAAS SERVER
Server Hosting (Scaling Monitoring and Maintenance)		Client	SOLUM
Software Installation		Client	Not Needed
Server Hardware Costs		Client	Not Needed
Server Hardware Maintenance		Client	Not Needed
Data Security and Backup		Client	Not Needed
ESL System Management and Monitoring	· Software Installation and Upgrades · Store Registration and Unregistration · Gateway Registration, Unregistration, Settings and Upgrades · Software, Gateway and ESL Status Monitoring	Client	SOLUM Or Client
Hotline Service Availability (Level 1 Support – Support for Store Operation)		Unavailable	Available
Level 2 and 3 Supports for Server (Support for IT Departments)		SOLUM	SOLUM
Service Level : Time to Solve Problems		Can solve problems after granting SOLUM access to the DB	Can solve problems immediately upon sharing the situation with SOLUM

AIMS SAAS GUARANTY

DATA SECURITY



ID Management

Microsoft Azure Active Directory-based authentication and access authorization enables safe and smooth access to data and convenient user experience.



API Authentication and Authorization

Users can be granted with different access levels..
By tracking users that makes continuous API calls and authentication requests, you can block or limit requests according to users' access levels



Application Control

- SSL (Secure Sockets Layer) Termination
- End-to-end SSL/TLS Encrypted Encryption Protocol
- WAF_v2 (by Azure) – Centralized Protection



Privacy Protection

Every piece of information is saved on Azure Storage and Azure SQL Database.
Azure Storage and Azure SQL Database use Azure Disk Encryption and every piece of information gets encrypted.



LOGGING & AUDITING

Every piece of logging data is saved on an internal location.
You can set the storage period to comply with the data protection laws.



Backup and Recover

PostgreSQL and MongoDB Atlas backup data every 6 hours to enable data recovery.

SECURITY CERTIFICATIONS

SOLUM's first priority in using cloud-based technology is security and protection of clients' data and personal information. We guarantee your advanced client service, data security and service quality.



CSA-STAR

Aims SaaS CSA-STAR Certified



ISO9001

SOLUM H.Q ISO9001 Certified



ISO27001

SOLUM ISO 27001 Certified (Digital Information Security Control)



ISO27017

SOLUM ISO 27017 Certified
(ISO/IEC 27002-based Information Security Control for Cloud Service)



GDPR(General Data Protection Regulation)

General Data Protection Regulation which is EU's personal data protection law was established to strengthen and standardize data privacy laws for the people in the EU. SOLUM strictly obeys the DSGVO (Datenschutz-Grundverordnung) and treats all data safely as confidential data.

AIMS SAAS SPECIFICATION

ITEMS	AIMS SAAS
SCALABILITY	Automatic Calability
CAPACITY	Unlimited and Flexible
SLA 24/7	Included
PERFORMANCE (IMAGE GENERATION)	1 million within 5 minutes
MULTI-TENANT (ECONOMIES OF SCALE)	Yes
SINGLE SIGN-ON	Yes
DATA LAKE	EFK (Elasticsearch, FluentD and Kibana)
CLOUD SERVICE PROVIDER	Azure
SECURITY & BACKUP	Yes
UPTIME	99.95%
RECOVERY TIME	2 hours
CERTIFICATION	ISO9001(HQ), ISO27001, ISO27017, GDPR, CSA-STAR

05

APPENDIX

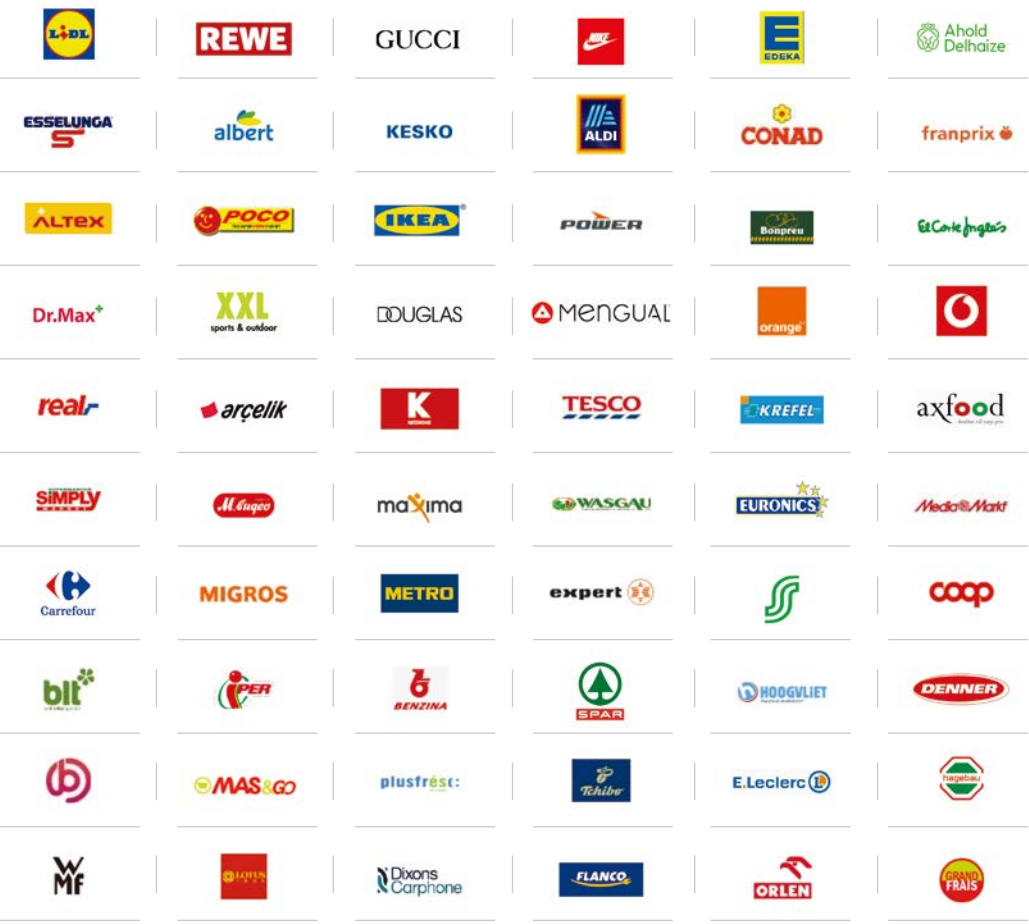
ESL
REFERENCE
COLLECTION

AIMS SAAS CUSTOMERS REFERENCE

SOLUM is an ESL solution provider that continuously builds trust with the clients.
SOLUM offers SaaS solutions that exceed clients' expectations.



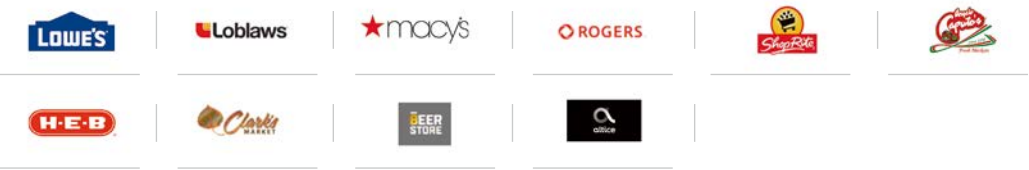
EU



ASIA



AMERICA





www.solum-group.com
www.linkedin.com/company/solumesl/

