

32“ EPD Digital Signage

SAVING ENERGY TO THE
NEXT LEVEL

Our Vision: Saving Energy on Every Smart Surface



Environment Friendly

Lower Energy Consumption, Lower CO₂ Emission

Bi-Stable: no power needed to hold an image

Scenario: 1 set of 32" Display, operating for 16 hours daily, over 3 years

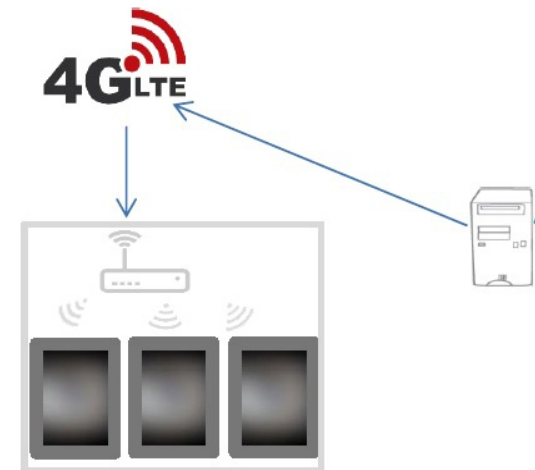
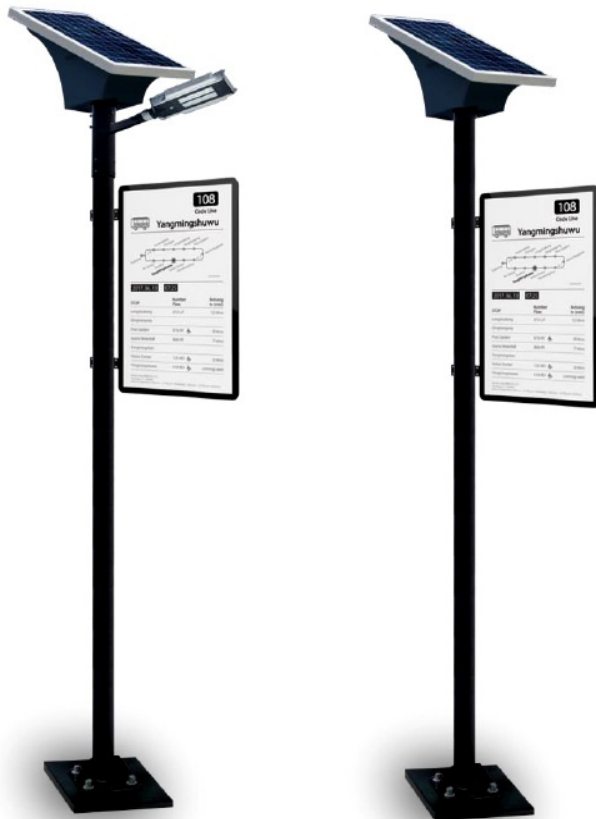
	Energy Consumption (kWh)	CO ₂ Emission(kg)	Energy consumption / CO ₂ emission (multiple vs. EPD)	
E Ink 32" EPD (outdoor/indoor)	29	20	---	
32" LCD Outdoor	3,504	2,384	120	Times more than EPD
32" LCD Indoor	876	596	30	

LCD consumes 120 times more power than EPD

Assumption

- Power consumption of 32" LCD signage system: 200W (outdoor) / 50W (indoor)
- Power consumption of 32" EPD outdoor/indoor signage system: update image 23.7W(includes control board), still image 1.3W
- Images on EPD update every 1 minute and take 1 sec to complete image update
- CO₂ conversion: 1kWhr = 1.5lbs of CO₂ emissions (Source: www.EPA.gov) , 1 lbs = 0.45359 kg

32" EPD Bus Stop 24/7 Proposal (Outdoor Use)



- Low Power Consumption
- Sunlight/Light Readable
- Data update Via LAN / Wi-Fi/4G LTE
- 24/7 solar/battery echo system

32" Bus Stop Display & Solar System Technical Specifications

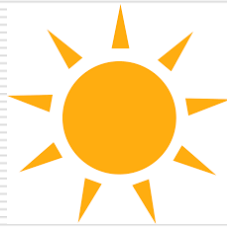
Display Technical Specifications

Model	E320M
Active Area	32"
Screen Technology	E Ink Monochrome
Resolution	2560 x 1440
Color	16 Gray Level
Contrast Ratio	12:1
Flash Size	eMMC 8G
DDR	DDR 2 LP 512MB
G Sensor	For Portrait Mode & Landscape Mode
Key	Power on/off. Reset
Connector	Micro USB, SD Card Slot, DC In
Connectivity	Wi-Fi, BT4.1, 4G LTE, LAN
Storage	External SD card
Battery(Optional)	Detachable Rechargeable lithium battery 10,200 mAh
OS	Android 4.4 or up
Type	DC (12V/4A)
Bezel Width	5.7mm/5.7mm/5.7mm/15mm (Left/Right/Top/Bottom)
Wall Mount	200 x 200mm
External Dimension	691.2 x 410.5 x 21.3mm
Weight	5kg
IP Rated Enclosure	Customized
Operating temperature	0℃~50℃(4bit image), -20℃~+50℃(1bit image)

Solar system Technical Specifications

PV Module	P050
Rated Power	50W*1
Solar Cells	Poly-Crystalline Silicon
Certificate	IEC61215/IEC61730/UL1703
Solar Charge Controller	
Solar Charge Rated	6A
Charging Characteristic	PWM
Battery Bank	
Capacity	50Ah
Voltage	12V
Type	Deep Cycle, Gel-type
Material	Aluminum Alloy + Stainless Steel Screw
Structure PV Tilt	25°
Wind Speed Resistance	> 49m/s (95knot)
Power Generation is based on ESH 1.83Hr/day in Dec.(ESH = Equivalent Sunshine Hours)	
Daily Power Generation	63Wh

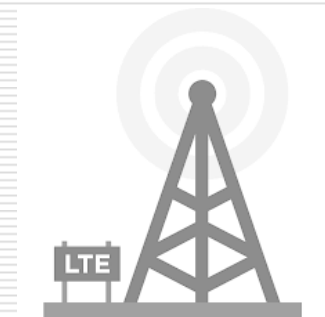
32" EPD Bus Stop 24/7 Proposal (Outdoor Use)- Key Feature



- Sunlight Readable
- Light Readable



- Anti External Mechanical impacts(IK07)



- Low Power Consumption
 - Daily Power Consumption under 35W
- 4G Connection
 - BT/WIFI Connection (Optional)
 - Ethernet (Optional)

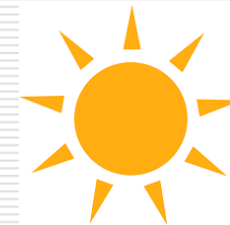
32" EPD Bus Stop 24/7 Proposal (Outdoor Use) –Key Feature



- Moisture Protection & Dust Tight (IP65)



- Anti Theft



- UV Cutting
- AR Reflection

32" Bus Stop Display & Solar System Technical Specifications

Display Technical Specifications

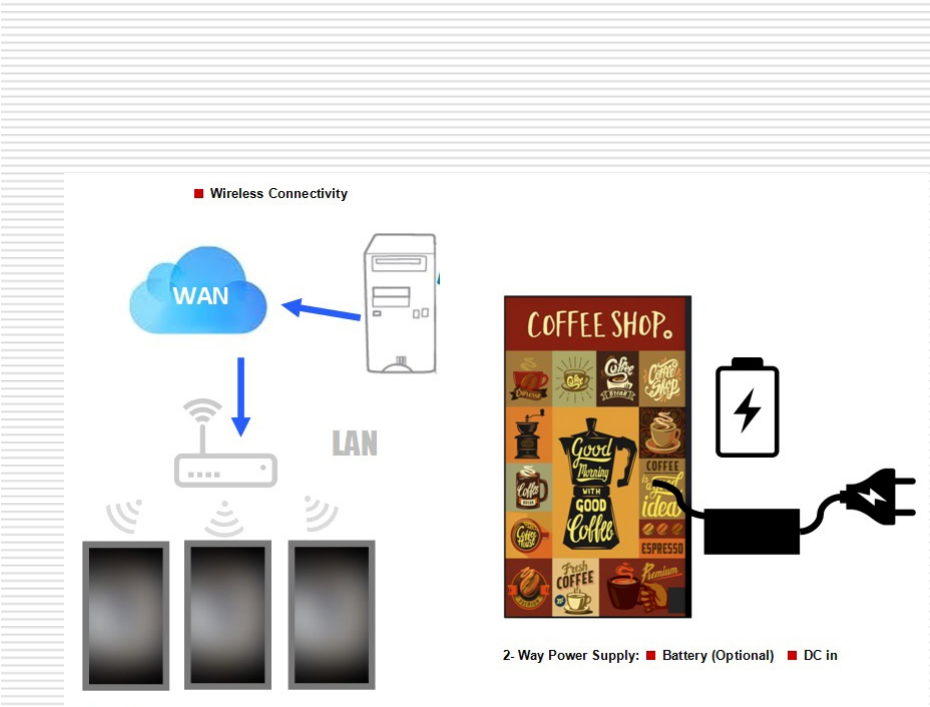
Model	M31Q06
Active Area	32"
Screen Technology	E Ink Monochrome
Resolution	2560 × 1440
Color	16 Gray Level
Contrast Ratio	12:1
Flash Size	eMMC 8G
DDR	DDR 2 LP 512MB
G Sensor	For Portrait Mode & Landscape Mode
Key	Power on/off. Reset
Connector	Micro USB, SD Card Slot, DC In, Mini SIM Card Connector, RJ45
Connectivity	BT4.1, PCIe LTE Module, Cat 3., LAN
Storage	External SD card
OS	Android 4.4.2
Type	DC (12V/4A)
Bezel Width	21.0/21.0/21.0/21.0mm (Left/Right/Top/Bottom)
Wall Mount	200 x 200mm
External Dimension	772 x 467.6 x 35 mm(With 5mm tempered Glass)
Weight	TBD
IP & IK Rated Enclosure	IP65 & IK07
Operating temperature	0°C~50°C(4bit image), -20°C~0°C (1bit image)



32" Bus Stop Display & Solar System Technical Specifications

HSL-01 Specification	
Specification	
Model	HSL-01-10-50-75
PV Module	
Solar Rated Power (*)	50W
Enclosure Rating	IP65
Battery Bank	
Battery Capacity @ 20hr rate	75Ah/12V
Battery Type	Deep Cycle Gel-type
Estimated Battery Service Life	4-5 years
Lasting cloudy day (under in EMS technology)	>5 days
結構	
LED light module & PV housing Material	Die-cast aluminum alloy
LED light module & PV housing Material Finishing	Outdoor Powder Paint
PV Housing Enclosure Rating	IP 54
Wind Resistance	50 m/s
Products Shipping	
Weight	42 kg
Dimension	
Pole Shipping (Option)	
Dimension	(Φ8.9×280) ×25×25cm
Column material	Steel
Column Finishing	Outdoor Powder Paint
Screw(Material+Finishing)	Steel
Weight	30 kg
Technique	
Installation	All wires with error-proof connectors ensure quick and reliable installation and to prevent human errors.
Rust-free Coating	Aluminum-alloy casing provides excellent corrosion protection. Lighter weight material is easy to pack and deliver, and to save more manpower.
Smart Charge Controller(Taiwan Patent: 99134159)	1. Precisely control lighting time and LED light brightness by detecting daily power generation and battery storage. Switch on at sunset and switch off at sunrise automatically with high stability and efficiency. 2. Full protection against overcharge or discharge.
Wind Resistance	50 m/s
(*)STC	The rated power of PV module is the effective measurement at Standard Test Conditions(STC) STC : irradiance=1000w/m ² , spectral distribution=AM 1.5, temp=25±2℃





32" EPD Artistic & Classical Style Display



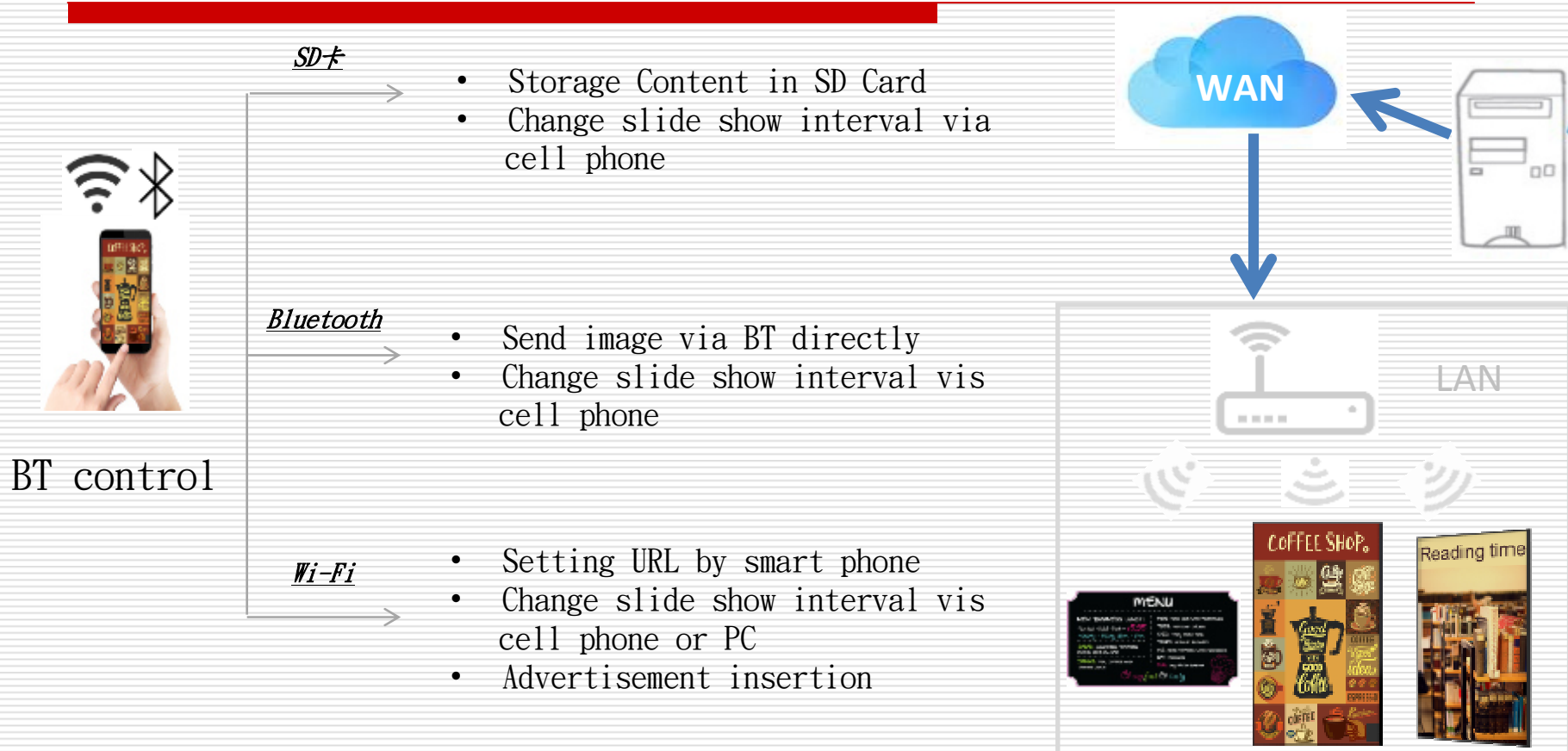
32" EPD Digital Signage Specifications (Indoor)

Display Technical Specifications

Model	C31Q14	M31Q14
Active Area	32"	32"
Screen Technology	E Ink Color	E Ink Monochrome
Resolution	1280 x 720	2560 x 1440
Color	16 Gray Level (4096 color)	16 Gray Level (monochrome)
Contrast Ratio	13:1	12:1
Flash Size	eMMC 8G	
DDR	DDR 2 LP 512MB	
G Sensor	For Portrait Mode & Landscape Mode	
Key	Power on/off. Reset	
Connector	Micro USB, SD Card Slot, DC In	
Connectivity	Wi-Fi, BT4.1, 4G LTE	
Storage	External SD card	
Battery(Optional)	Detachable Rechargeable lithium battery 10,400 mAh	
OS	Android 4.4 or up	
Type	DC (12V/4A)	
Bezel Width	5.7mm/5.7mm/5.7mm/15mm (Left/Right/Top/Bottom)	
Wall Mount	200 x 200mm	
External Dimension	703.6 x 410.5 x 8.8mm (Board Area 22.5)	
Weight	5kg	
Operating temperature	0°C~50°C(4bit image), -20°C~0°C (1bit image for monochrome)	



31.2“ EPD Operation



1888



Usage Scenarios Proposal

(1) Advertisement - 31.2" EPD Signage



31.2" EPD Signage



Split Screen for advertisement

Usage Scenarios Proposal

(2) Price Table - 31.2" EPD signage



31.2" EPD Signage

手工调制浓缩咖啡 ESPRESSO	
特浓冰咖啡	特浓冰咖啡
拿铁/豆奶拿铁	拿铁/豆奶拿铁
香草/榛果风味拿铁	香草/榛果风味拿铁
冰拿铁咖啡	冰拿铁咖啡
燕麦白	燕麦白
摩卡	摩卡
卡布奇诺	卡布奇诺
美式咖啡	美式咖啡
冰拿铁咖啡	冰拿铁咖啡
更多选择	更多选择

手工调制浓缩咖啡 ESPRESSO	
特浓冰咖啡	特浓冰咖啡
拿铁/豆奶拿铁	拿铁/豆奶拿铁
香草/榛果风味拿铁	香草/榛果风味拿铁
冰拿铁咖啡	冰拿铁咖啡
燕麦白	燕麦白
摩卡	摩卡
卡布奇诺	卡布奇诺
美式咖啡	美式咖啡
冰拿铁咖啡	冰拿铁咖啡
更多选择	更多选择

Split Screen for advertisement

Usage Scenarios Proposal

(3) Price tag - 2.9" 、5.65" Color ESL



2.9" color ESL



2.9" B/W ESL



5.65" Color ESL

Usage Scenarios Proposal

(4) Promotion Information - 31.2" EPD、5.65" ESL、
13.3" E-book



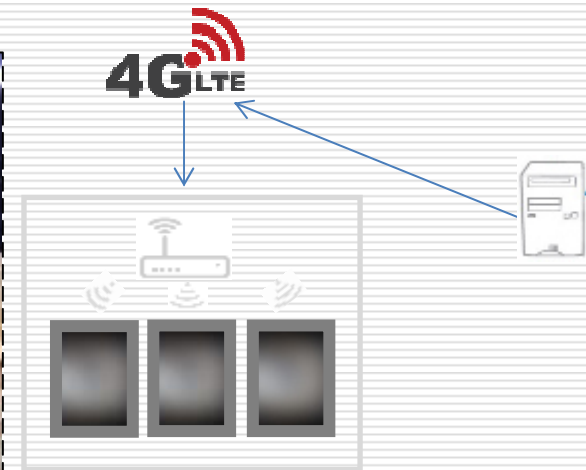
5.65" Color ESL



13.3" E-Book

Usage Scenarios Proposal

(5) Bus Stop & Information Board – 31.2” EPD



- Low Power Consumption
- Sunlight/Light Readable
- Data update Via LAN / Wi-Fi/4G LTE
- 24/7 solar/battery echo system

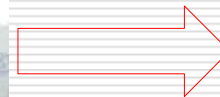
Usage Scenarios Proposal

(5) Bus Stop & Information Board – 31.2” EPD



Smart Bus Stop

- 32” (B/W)EPD Signage
- Real-time timetable Update
- Sunlight readable
- Solar System
- 27/7
- Information Board
- Advertisement



Usage Scenarios Proposal

(6) Government information Board – 31.2” EPD



Information Board
Indoor & Outdoor

- 32” Color/ Mono EPD
- Real-time Update
- Sunlight readable
- Saving manpower



Advertisement
Outside Bus Station

- 32” Color EPD
- Real-time slide show
- Sunlight readable

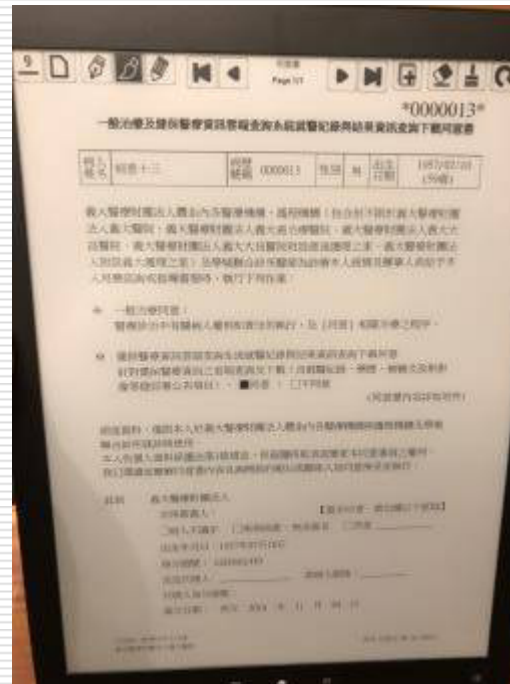
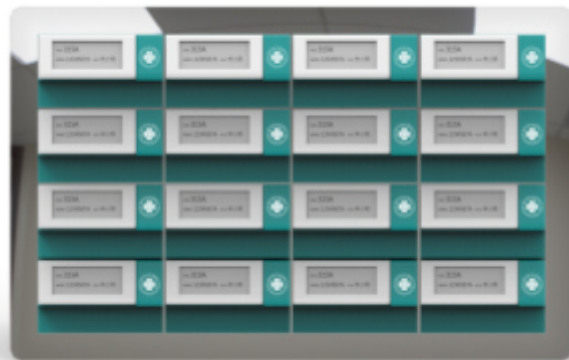


Bus timetable
Inside & Outside Bus Station

- 32” (B/W) EPD
- Real-time bus timetable update
- Sunlight readable
- Solar Power

Usage Scenarios Proposal

(7) Smart Hospital - Smart medicine Box and Consent



2.9" B&W or Color ESL



13.3" Monochrome E-book

EPD Deployed in the world –Actual Installations

Transportation – Bus Stop, Public Transit Sign



- Easy to install – No need to add major infrastructure changes
- Low power consumption, Low TCO (Total Cost of Ownership)
- Solar power operated possible – Without external power source
- Real time information update (bus routes, hazard warning, advertisements) via cellular network

Paper-Like: All New Dynamic Digital Signage

EPD Signage



Billboard



Menu Board



- Sunlight Readable
- Paper-Like, Paint-Like
- Dynamic
- Low Power Consumption

Gas Station Application

Gas Price
for
Euro Gas Station



Large Size
Segment Design
Sunlight Readable
Better Visual



2014
December

- Outdoor Using
- Easy Update Price Via control center
- Sunlight Readable



Learn More:

<http://displays.gds.com/gas-stations-market/>

Menu Board

Menu Board
China Shanghai

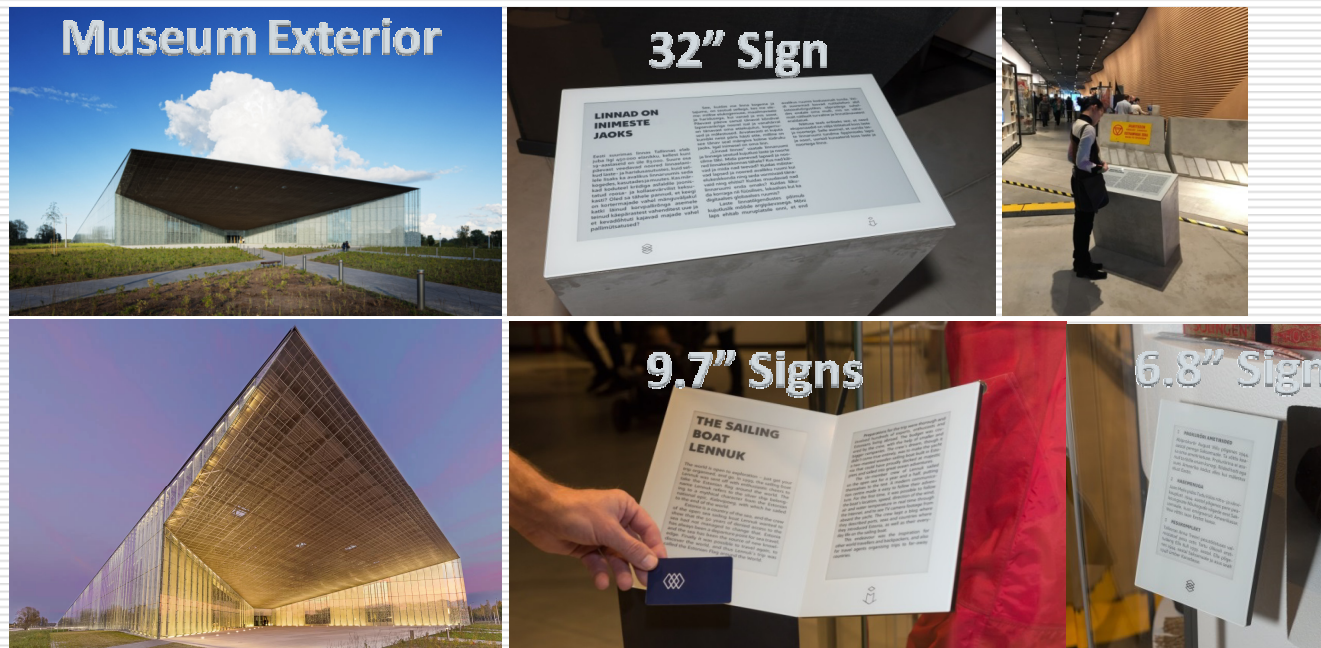
Classical Paint-Like
Menu Board

2016
July

- Renaissance Style
- High Class
- Restaurant Feeling
- Update Price table via control center
- Happy Hour



Estonia Museum



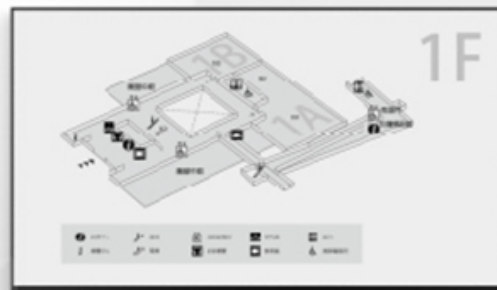
E Ink electronic paper of high quality texture, can bring out the museum of the exhibits aesthetics effect, And through the instant update feature, allows visitors to easily understand the exhibits and increase the viewing experience

Museum Application

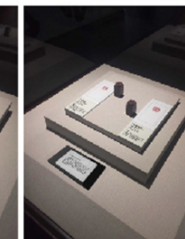
- Low Power Consumption
- EPD Display,
- Wireless, BT Update
- Dynamic Content Update
- Sunlight Readable



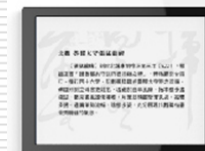
Context Simulation



Context Simulation



on the wall



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Thank You