EZ Sign™

4.2 & 2.9 Inch E-Paper Display
USER MANUAL

Safety Precautions

These precautions contain important information to ensure the safety of you and others,
and to prevent personal injury or

⚠ ATTENTION	Improper handling may result in minor injury to the user or cause property damage.

⚠ Installation, Storage, and Operating Environment

・Do Not Disassemble

　Do not disassemble this product. Doing so may cause malfunction or damage.

・Do Not Bend or Twist

　Bending or twisting the product may cause malfunction or damage.

　Please ensure that the product is not bent or twisted during handling or installation.

・Do Not Submerge in Water

　This product is not designed for underwater use.

　Do not submerge it in water, as doing so may cause malfunction.

・Do Not Allow Water Exposure (for non-IP65＊ products)

　Do not expose non-IP65 products to water, as this may cause malfunction.

　If the product becomes wet, discontinue use immediately.

・ Operating Temperature (during data rewriting): 0 to 50°C

・Storage Temperature (during display/storage): ： -25～60℃

＊IP65 indicates a rating that provides complete protection against dust and prevents
　harmful effects from water jets

⚠ Notes on Operating Environment (for IP65 certified products)

・Although the product is dustproof and waterproof, long-term exposure to water or use in
　environments with

・Whenever possible, prevent dust or water droplets from directly contacting the product.
　If dust or moisture adheres

・For storage, keep the product in a general indoor environment whenever possible.

Safety Precautions

⚠ Handling the Screen

・Do not rub the product's screen with sharp objects.

・When cleaning the screen, gently wipe it with a soft cloth.

・If using a cleaning agent, do not use alkaline or acidic detergents.
  Please use a neutral detergent diluted with water.

⚠ Avoid High Temperatures and Direct Sunlight

Using the product in excessively high-temperature environments may cause malfunction.

・Exercise caution when storing or using the product inside vehicles exposed to direct sunlight.

・When touching a product that has become extremely hot, use gloves or take
  other precautions to avoid injury.

⚠ Other Precautions

・Do not subject the product to impacts such as dropping.
  Strong impact from drops or similar accidents may cause malfunction or damage.

⚠ Cases Not Covered by Warranty

The following cases may not be covered under warranty:

- Damage or malfunction caused by bending, twisting, impact, or dropping

- Scratches, dirt, or discoloration of the product

- Malfunctions resulting from the customer's usage environment or handling

- Evidence of disassembly or modification

Product Overview

EZ Sign™ (hereinafter referred to as "the Product") is an electronic paper display that is rewritten via NFC (Near Field Communication / 13.56 MHz band).

Since the display consumes no power while showing an image, the product does not contain an internal battery.

Rewriting is powered by energy supplied through NFC communication.

To rewrite the display, you must install the dedicated application on a smartphone (Android/iOS) or a Windows PC.

When rewriting using a Windows PC, please prepare your own NFC reader/writer.
 • Recommended NFC reader/writer: Sony RC-S300

Notes

• Smartphones without NFC communication capability cannot be used with this product.
• Even with smartphones that support NFC, rewriting may be unstable or may not
  function depending on the model.
• The location of the NFC antenna differs by smartphone model.
  Please check the position before use.
• Depending on the installation environment of the product, communication may become unstable or
  rewriting may not be possible.
• Nearby metal objects or magnetic materials may interfere with rewriting.
• Rewriting on metal doors, magnetic whiteboards, or while using a smartphone with a
  metal-decorated case may cause instability due to interference. Please take caution.

App Installation Guide

EZ Sign™ is compatible with most personal devices, including iPhone (iOS 11 or later), Samsung (Galaxy series), and Google Pixel.

iOS App

Android App

Scan to Download

The app icon appears as shown below.

App Name: EZ Sign™ NFC

Developer: Santek

EZSign EZ Sign(TM) NFC
Image creating for EZ Sign   Open

Permissions & Privacy

• NFC: Used for writing data to the EZ Sign device.

• Photo Library: Used for loading and saving images.

• Personal information is not collected. Image processing is generally completed within the device.

Windows App

Download Link ;
https://www.santechnology.com/assets/EZ_Sign_NFC_windows.exe

An issue has been identified in which images may not save correctly,

if the file name is changed during the saving process.

All other functions, including upload and rewriting, operate normally.

A fix for this issue is currently under development and

will be released in an upcoming update.

We apologize for any inconvenience this may cause.

Santek®

About the Rewriting Software

◆ Operation Flow

STEP 01	STEP 02	STEP 03	STEP 04
Select Model	Select/Create Template	Create Display Content	Preview / Transfer Image

STEP 02 → Template Creation Options

STEP 03 →
- Text Input
- Freehand Input
- Image Input
- Camera Image Input (Smartphone only)

STEP 04 →
- Image Transfer
- Image Save

STEP 01
Select Model

STEP 02
Select/Create Template
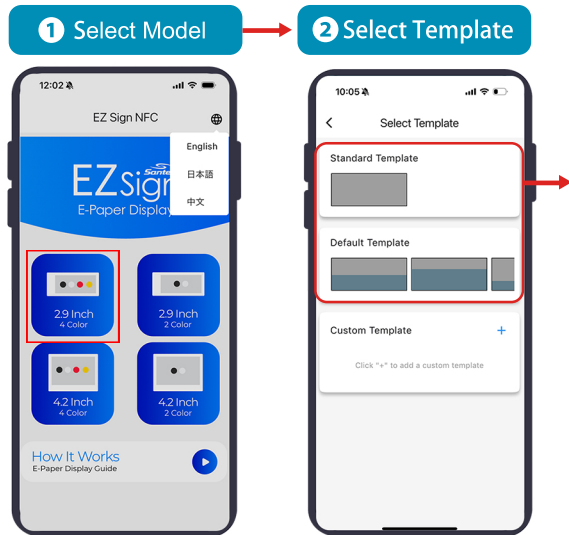
STEP 03
Create Display Content
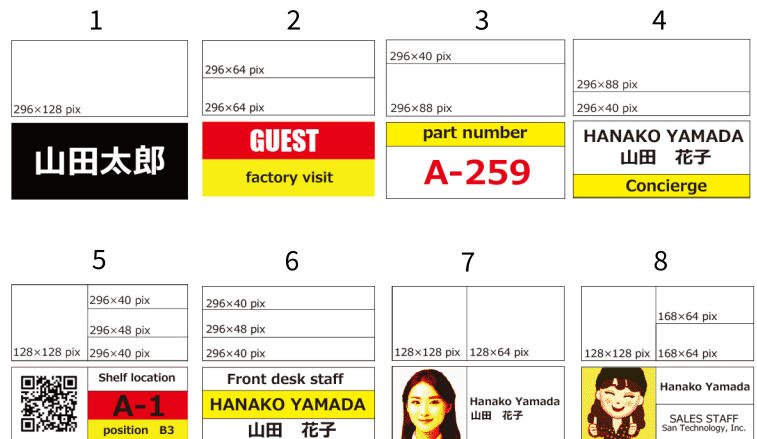
STEP 04
Preview / Transfer Image

Product Selection

① Tap the globe icon 🌐 in the upper-right corner to select the menu language.

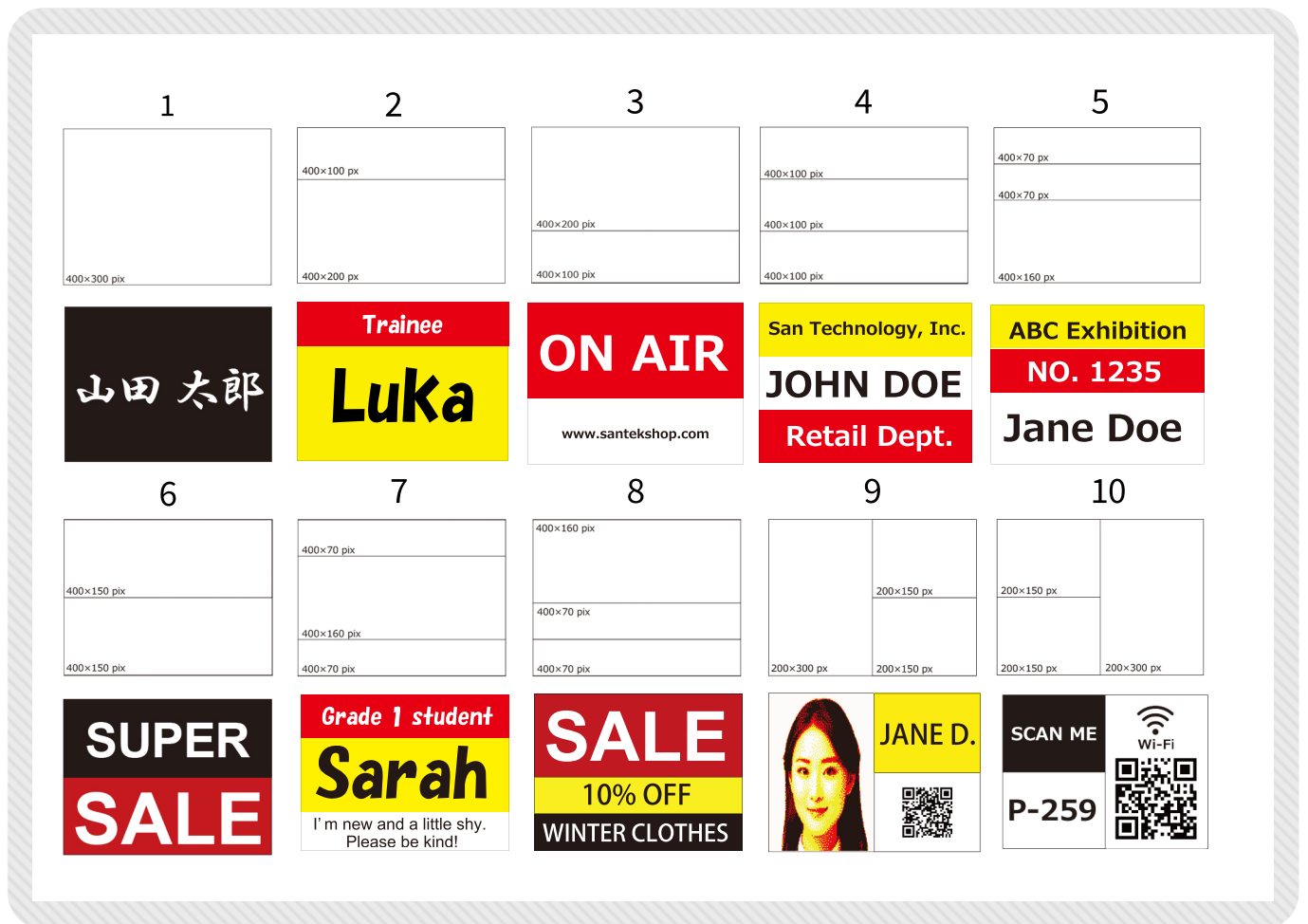② Select the EZ Sign™ model that you want to write an image.

❶ Language settings

12:02

EZ Sign NFC

English

日本語

中文

EZ Sign
E-Paper Display

❷ Select your EZ Sign™ model

2.9 Inch
4 Color

2.9 Inch
2 Color

4.2 Inch
4 Color

4.2 Inch
2 Color

How It Works
E-Paper Display Guide

STEP 01
Select Model

STEP 02
Select/Create Template

STEP 03
Create Display Content

STEP 04
Preview / Transfer Image

Select Template

❶ Select Model ➜ ❷ Select Template

◆ 2.9 Inch Templates

1
296×128 pix
山田太郎

2
296×64 pix
296×64 pix
GUEST
factory visit

3
296×40 pix
296×88 pix
part number
A-259

4
296×88 pix
296×40 pix
HANAKO YAMADA
山田　花子
Concierge

5
296×40 pix
296×48 pix
128×128 pix 296×40 pix
Shelf location
A-1
position　B3

6
296×40 pix
296×48 pix
296×40 pix
Front desk staff
HANAKO YAMADA
山田　花子

7
128×128 pix 128×64 pix
Hanako Yamada
山田　花子

8
168×64 pix
128×128 pix 168×64 pix
Hanako Yamada
SALES STAFF
San Technology, Inc.

◆ 4.2 Inch Templates

1
400×300 pix
山田 太郎

2
400×100 px
400×200 px
Trainee
Luka

3
400×200 pix
400×100 pix
ON AIR
www.santekshop.com

4
400×100 pix
400×100 pix
400×100 pix
San Technology, Inc.
JOHN DOE
Retail Dept.

5
400×70 px
400×70 px
400×160 px
ABC Exhibition
NO. 1235
Jane Doe

6
400×150 px
400×150 px
SUPER
SALE

7
400×70 px
400×160 px
400×70 px
Grade 1 student
Sarah
I'm new and a little shy.
Please be kind!

8
400×160 px
400×70 px
400×70 px
SALE
10% OFF
WINTER CLOTHES

9
200×150 px
200×300 px 200×150 px
JANE D.

10
200×150 px
200×150 px 200×300 px
SCAN ME
Wi-Fi
P-259

STEP 01
Select Model

STEP 02
Select/Create Template

STEP 03
Create Display Content

STEP 04
Preview / Transfer Image

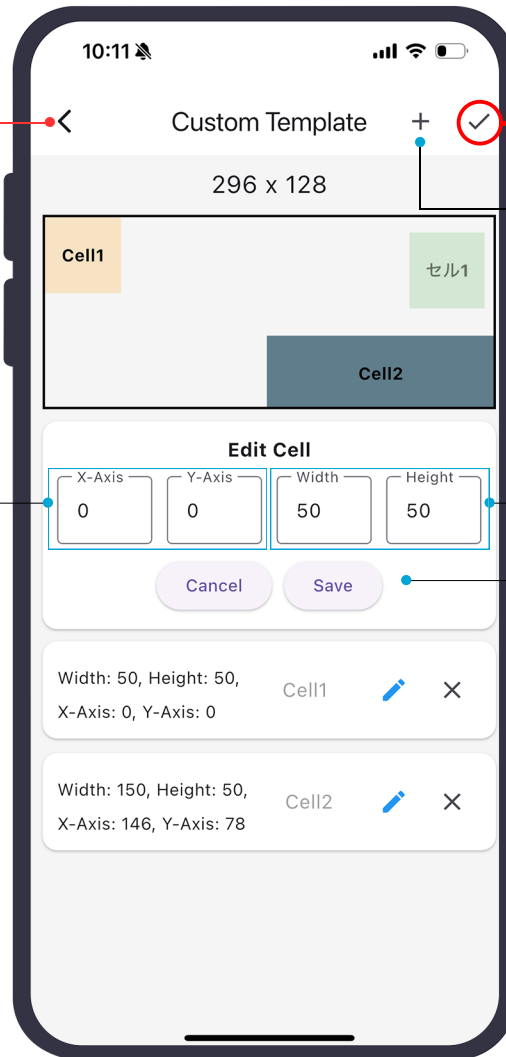# Create Custom Template

❶ Select Model   ❷ Select Custom Template   ❸ Create Custom Template
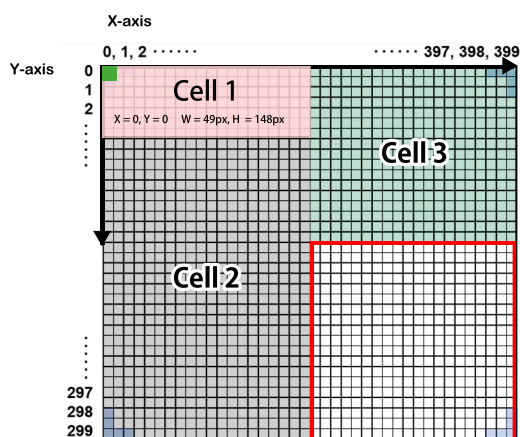
Finish or save

④ Add cells

❶ Position setting

• Set the position using the X and Y axes.

② Cell size

③ Save cell

X-axis
0, 1, 2 · · · · · · · · · · · · 293, 294, 295

Y-axis 0
1
2
Cell 1
X = 0, Y = 0   W = 49px, H = 148px
Cell 3
Cell 2
145
146
147
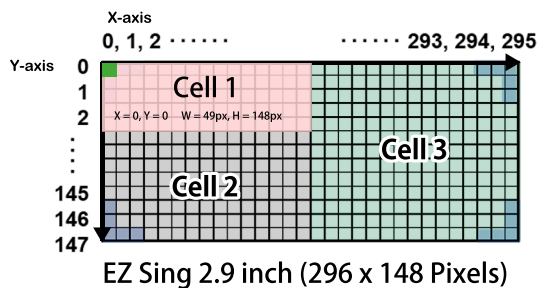
EZ Sing 2.9 inch (296 x 148 Pixels)

X-axis
0, 1, 2 · · · · · · · · · · · · 397, 398, 399

Y-axis 0
1
2
Cell 1
X = 0, Y = 0   W = 49px, H = 148px
Cell 3
Cell 2
297
298
299

EZ Sign 4.2 inch (400 x 300 Pixels)

Custom Template   +   ✓
296 x 128

Cell1   セル1

Cell2

Edit Cell

Cancel   Save

Width: 50, Height: 50,   Cell1   ✏️ ✕
X-Axis: 0, Y-Axis: 0

Width: 150, Height: 50,   Cell2   ✏️ ✕
X-Axis: 146, Y-Axis: 78

※If a cell is left empty with nothing placed in it, you will not be able to add content to that area later.
Please note that the area will appear in black when the template is rendered.

STEP 01
Select Model

STEP 02
Select/Create Template

STEP 03
Create Display Content

STEP 04
Preview / Transfer Image

Creating Display Content

◆ Structure of Creating Display Content

・ Elements use a layered structure (see below).

・ Image Input (import from file) and Camera Image Input can only be used one at a time.

※Each cell consists of four layers stacked from top to bottom—text, freehand, image/camera, and background color—and a single object cannot span multiple cells.

Objects can be moved up, down, left, or right by sliding with your finger.

On the Text and Freehand layers, you can change the order of layers (top/bottom) using the ⅠA operation.

On the Text and Freehand layers, you can add a background color To avoid covering lower layers, set the background color to transparent.

Tт Text

Freehand

Image / Camera

Background color

Select the items you want to display and freely update the layers.

| テキスト | フリーハンド | 画像 | 全表示 |

text

This diagram is based on the 2.9-inch display editor.

Santek®

Creating Display Content

◆ Display Editor Guide

A	B	C	D	
Tᴛ	🖊	🖼	📷	🪣
Text	Freehand	Image	Capture	Background
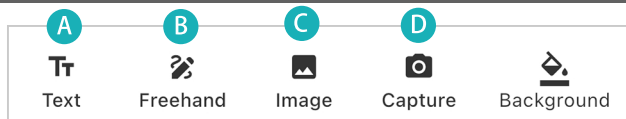
Text

① On the Display Editor screen,
   select the Text (Tᴛ) icon.

③ Text Color
④ Background Color
② Input text
⑤ OK

text
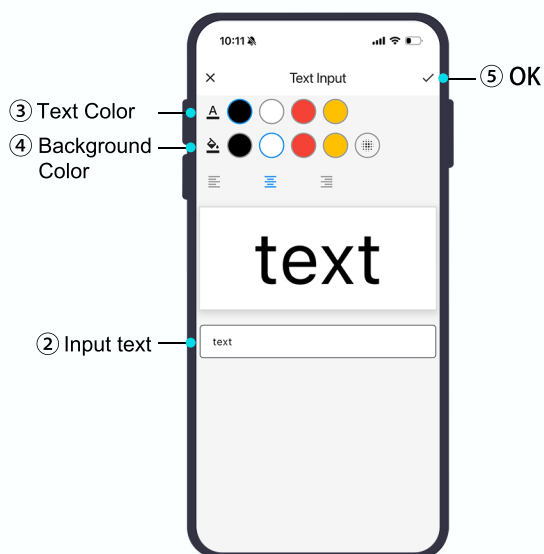
B. Freehand

① On the Display Editor screen,
   select the Freehand 🖊 icon.

⑤ OK
⑤ Freehand Area
③ Text Color
④ Background Color
② Stroke Thickness
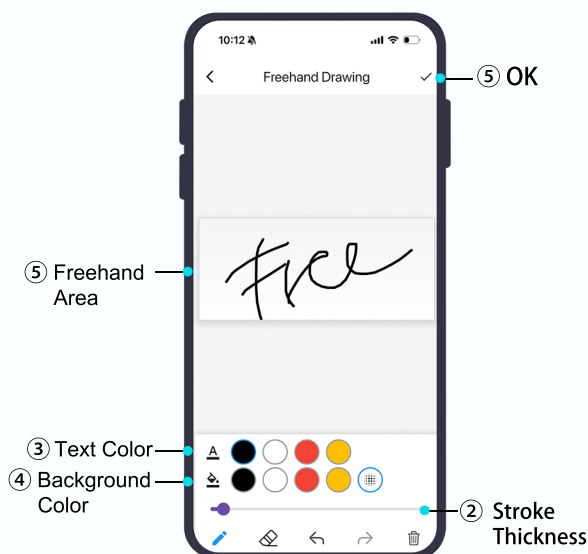
C. Image

① On the Display Editor screen,
   select the Image 🖼 icon.

② Select Image
④ OK
③ Edit Image
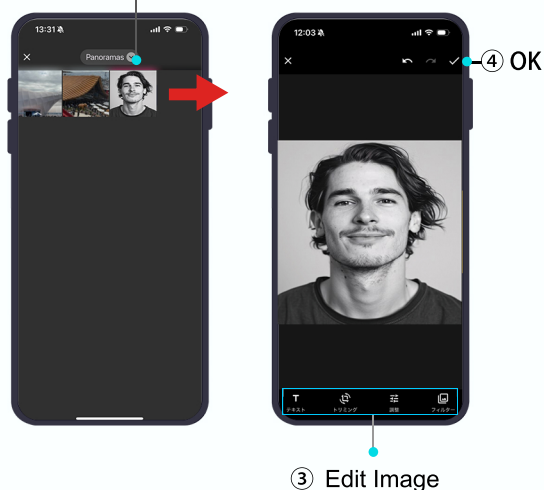
D. Camera

① On the Display Editor screen,
   select the Camera 📷 icon.

※ This feature is not available in the Windows app.

④ OK
② Click
③ Edit Image

STEP 01
Select Model

STEP 02
Select/Create Template

STEP 03
Create Display Content

STEP 04
Preview / Transfer Image
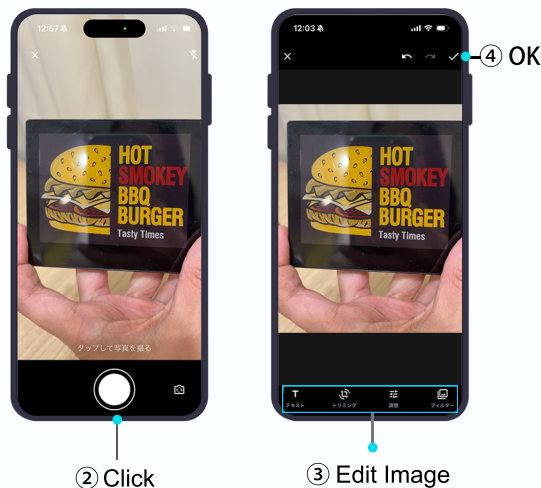
Creating Display Content

◆ Operation Tool Guide

Back to Previous Screen

- Clicking this button will clear the current display.

Display Area

Objects can be moved up, down, left, or right by sliding with your finger.

Operation Tools

- 🗑 Delete Tool
- ✏ Edit Tool
- ⛶ Resize Tool
- ↻ Rotate Tool
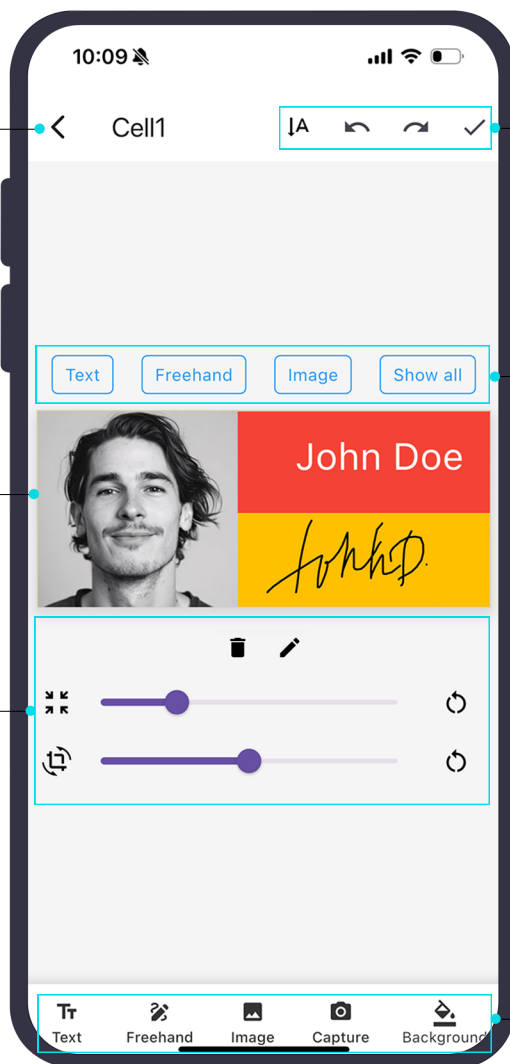
Main Toolbar

- IA Swap the order of Text and Freehand layers
- ↰ Redo
- ↱ Undo
- ✓ Preview

Display Toggle Function

- You can show or hide specific objects in the display area.

Display Editor

STEP 01
Select Model

STEP 02
Select/Create Template

STEP 03
Create Display Content

STEP 04
Preview / Transfer Image

Creating Display Images Using Image

· When creating images with commercial image editing software, please prepare the images according to the following recommended specifications.

· Image size 4.2inch: 400x300pixel   2.9inch: 296x128pixel

· Color specification（for 8-bit RGB）White : FF,FF,FF Black: 00,00,00 Red: FF,00,00Yellow : FF,FF,00

· Save as BMP or PNG. For black-and-white images, it is recommended to save as B/W data.

Image Data Requirements – 4.2-inch

400px

300px

tora.png / tora.bmp / tora.jpg
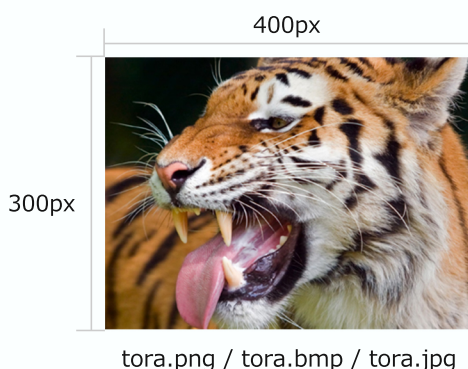
Create the image with a resolution of 400 × 300 pixels using only Black, White, Red, and Yellow. For 2-color images, use Black and White only.

Save the image in specific formats.

Supported formats:

PNG   BMP   JPG

4.2 Inch

296px

128px

tora.png / tora.bmp / tora.jpg

Create the image with a resolution of 296 × 128 pixels using only Black, White, Red, and Yellow. For 2-color images, use Black and White only.

Save the image in specific formats.

Supported formats:
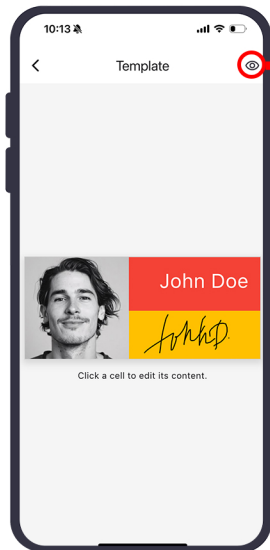
PNG   BMP   JPG

Preview / Image Transfer
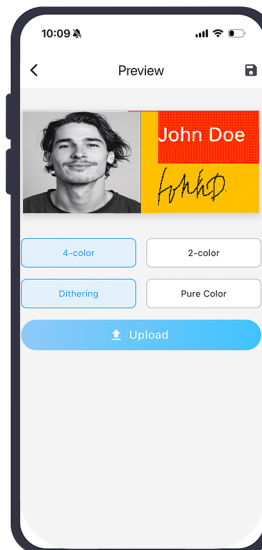
◆ Preview – Image Transfer / Image Save

1 STEP 01 Creating Image
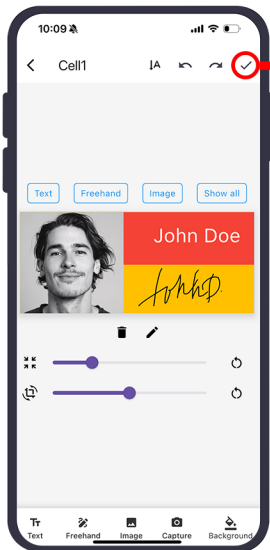
2 STEP 02 Final Check

3 STEP 03 Select Preview Rendering

💾 Press the Save button

· The rendered image displayed on the screen will be saved as a single image file with all layers merged.
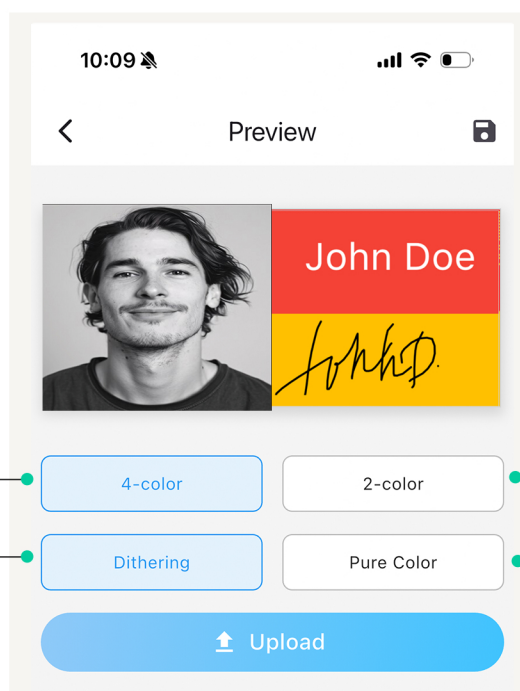
Start Data Rewriting

◆ Rendering

Black / White / Red / Yellow

· Dithering

· Pure Color

Black / White

· Dithering

· Pure Color

Product Specification

Item	EZ Sign **2.9 inch, 4 Color**	EZ Sign **2.9 inch, 2 Color**	EZ Sign **4.2 inch, 4 Color**	EZ Sign **4.2 inch, 2 Color**
Model Number	SE0290C1	SE0290B1	SE0420B1	SE0420C1
Display Device	E-Paper	E-Paper	E-Paper	E-Paper
Active Area Size	2.9 inch	2.9 inch	4.2 inch	4.2 inch
Resolution	296 x 128 pixel	296 x 128 pixel	400 x 300 pixel	400 x 300 pixel
Display Colors	B / W / R / Y (4 colors)	B / W (2 colors)	B / W / R / Y (4 colors)	B / W (2 colors)
Refresh Type	Full Refresh	Partial / Full Refresh	Full Refresh	
Refresh Time	Approx. 25 seconds	Approx. 3 seconds	Approx. 25 seconds	Approx. 3 seconds
Image Data Input	Via NFC	Via NFC	Via NFC	Via NFC
Storable Images	1	1	1	1
Weight	13g (0.46 oz)	13g (0.46 oz)	29g (1.02 oz)	29g (1.02 oz)
Cover Lens Hardness	≧6H	≧6H	≧6H	≧6H
Size Range	1.5～13.3 inch	0.97 ～42 inch	1.5～13.3 inch	0.97 ～42 inch
Display Area Dimensions	66.9 x 29.06(mm)	66.9 x 29.06(mm)	84.8 x 63.6(mm)	84.8 x 63.6(mm)
Body Dimensions	82.2 x 39 x 3.4(mm)	82.2 x 39 x 3.4(mm)	93.4 x 80.3 x 3.4(mm)	93.4 x 80.3 x 3.4(mm)
Frame Colors	Black, White, Silver	Black, White	Black, White, Silver	Black, White
Operating Environment (Recommended)	0～40℃	0～50℃	0～40℃	0～50℃
Storage Environment (Recommended)	-20～50℃	-25～60℃	-20～50℃	-25～60℃
IP-65	✓	✓	✓	✓
Power Consumption	No power required to maintain a static image			
NFC Reader	Required only when using via windows App			
App Adaptable Devices	Apple (iOS 11+), Samsung (Galaxy Series), Google Pixel, and more			
Built-in Battery	No built-in battery; image updates are powered via NFC.			
Note	Size Range: Diagonal; Large range appllies to 2-color models.Temperature (℃): 2-color models allow higher operating temperature.			