

Specifications

Model		EM32DX	
Display	Diagonal Size	32	
	Resolution	2,560 x 1,440(16:9)	
	Orientation	Landscape/Portrait	
	Active Display Area (mm)	696.32 (H) x 391.68 (V)	
	Pixel Pitch (mm)	0.272 x 0.272	
	Colors	6 colors (Red/Green/Blue/Yellow/White/Black) * Dithering for additional color support	
	Operation Hour	24/7	
Connectivity	INPUT	Data	USB-C 2.0 x 1 (Data Only)
		Power	USB-C x 1 (Power Only)
			RJ45 to USB type-C POE+ dongle compatible (Not included in the sales package)
	WiFi / BT		0 / 0
Mechanical Spec	Dimension (mm)	Set	727.3 x 422.7 x 17.9
		Package	877 x 482 x 57
	Weight (kg)	Set	2.3 (Excluding Battery)/2.4 (Including Battery)
		Package	4.2
	VESA Mount (mm)		200 x 200
VESA Mount Screw (mm)		M4, 8-10	
	Bezel Width (mm)		13.9 (U/B/L/R)
Design	Bezel Color		Grey White
Features	Internal Player	Operating System	Tizen 8.0
		Storage	8 GB
		Supported File Format	JPEG, JPG, PNG, BMP (No Video Supported)
	Special	H/W	3 button (Power/Control/BT Pairing) 3 LED Indicator (R/G/B) Kensington Lock
S/W		Samsung E-Paper Mobile App (Android/iOS) VXT Support	
Certification	Safety		60950-1 / 62368-1
	EMC		Class A
	IP Rating		IP5x
	Security		802.1 x (WPA2 Enterprise) : EAP-TLS, EAP-TTLS, EAP-PEAP WPA3-Personal
Power	Power Supply		AC 100 - 240 V, 50/60 Hz
Operating Condition	Temperature (°C)		0-40
	Humidity (%)		30-70 , non-condensing
Accessories	Included		25W External USB-C Adapter USB-C Power Cable 4600mAh Li-ion Battery Rear Holders(2) / Hanging Brackets(2) Quick Setup Guide Warranty Card

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Color E-Paper

For more information about Samsung Color E-Paper, visit www.samsung.com/business

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2025-03



Color E-Paper

EMDX series

Paper to E-Paper, flexibility meets efficiency

Introducing the Color E-Paper EMDX series, Samsung's next-generation product featuring paper-thin, lightweight displays with ultra-low power consumption. Equipped with a built-in battery and supported by a mobile app, it delivers paperlike picture quality without requiring additional infrastructure, digitizing the traditional paper experience. Moreover, 55% of the EMDX series' housing materials are made from recycled plastics, while its entire packaging—including the box, cushion, handle, and accessory box—is crafted from 100% paper, helping to reduce environmental impact. Revolutionize your displays by digitizing the traditional paper experience.

Key features



Paper-thin Design

With a paper-thin depth of just 17.9mm, it enhances various business spaces with unmatched elegance and aesthetically pleasing design.

* The EMDX series' packaging only includes rear holders (2) and hanging brackets (2). Other accessories for installation must be purchased separately.



Versatile Placement with Embedded Battery

A dedicated embedded battery with USB Type-C support is included in the EMDX series to deliver ultimate convenience with an easy-to-move, lightweight frame for effortless handling in indoor environments.

* The EMDX series' packaging only includes rear holders (2) and hanging brackets (2). Other accessories for installation must be purchased separately.



Energy Efficient Usage

Revolutionize your display experience with the EMDX series' stable and ultra-low energy consumption. Maintaining the display's image requires only 0.00 watts, lasting more than 500 days once fully charged for 3 hours**.

* Activities related to refreshing or changing content will require additional power.

** Image refreshing once every 3 days is required to protect panel cells and prevent ghosting.

* Screen flickering during the refresh or image change is normal due to the characteristics of EPD technology.

* The power measurement is based on IEC62301 standards from the International Electrotechnical Commission. According to the standards, the average power below 0.005W is indicated as 0.00W.

** The estimation is based on Samsung's internal testing under conditions that protect panel cells and use Samsung's official 25W EMDX charger.

** Actual durability may vary depending on usage patterns and other factors.



Color Imaging Algorithm

With Samsung's display technology expertise, the EMDX series leverages advanced color imaging algorithm to analyze optimized content for paperlike visibility. Its reduced contour, smooth gradation, and enhanced colors can replace standard printouts like posters and point-of-purchase displays.

* EMDX series' color may gradually change from its initial state. This discoloration is a characteristic inherent to EPD technology.



Samsung E-Paper App

Available on Android and iOS mobile devices, the dedicated Samsung E-Paper App allows users to easily control the EMDX series locally.

* Samsung E-Paper App requires mobile device running Android 10 or later or iOS 15 or later.



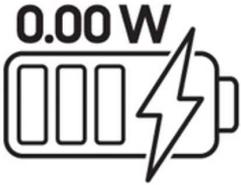
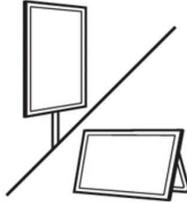
Samsung VXT

Samsung VXT combines content and remote device management, allowing you to effortlessly manage hardware settings and troubleshoot issues while creating and deploying content.

* Samsung VXT must be purchased separately.

Color E-Paper

EMDX series



Samsung E-Paper app



For Android



For IoT



USB
TYPE C

USB Folder Name :
SAMSUNG_E-Paper
Images type :
.jpg .bmp .png
Resolution (16:9) :
2,560 x 1,440 px



Reset Procedure for new pairing

- Keep Power cable attached
- Keep pressed 2 buttons (Mode+BT) for 10s
- Wait 5 sec then press Power button for 2s
- Reset procedure starts (it takes about 10s)
- Led changing colors during reset green/blue
- QR code appears

EM32DX (LH32EMDIBGBXEN)

ePaper (EPD - Electro-Phoretic Display)
Spectra 6™, 6 colors per pixel
(R/G/B/Y/W/K)

ePaper lifespan: over 1 million cycles
Bluetooth, Wi-Fi support
RJ45 to USB type-C POE+ dongle comp.

Dimensions: 695,3x420,5x17,9mm

Weight (kg): 2,4 Kg incl. battery

VESA mount spec: 200x200mm,
M4, 8~10

Battery Voltage: 3.85V

Battery Capacity: 4600mAh/17.71 Wh

Battery Dimensions:

6.23×66.32×90.21mm

Operating temperature: 0°C to 50°C

IP/IPX rating: IP5X certification

Storage: 8GB

Parts	LED Status	Description
Red	On	Charging in progress.
	Off	Charging complete.
Blue	On (3 seconds)	Bluetooth pairing has been completed.
	Blinks (0.25-second interval)	The product is waiting for the Bluetooth pairing.
Green	On	Copying pictures from the USB memory device.
	Blinks (0.5-second interval)	The product is turning on.
	Blinks (0.25-second interval for 2 seconds)	Switching between Auto to Manual mode.
	Blinks (0.25 second, 0.75 second)	Software update in progress.

Native Color on ePaper	sRGB Monitor Equivalent
Red (R)	#9A0000 (154, 0, 0)
Green (G)	#145510 (20, 85, 16)
Blue (B)	#00249A (0, 36, 154)
Yellow (Y)	#FFEB00 (255, 235, 0)
Black (K)	#000000 (0, 0, 0)
White (W)	#FFFFFF (255, 255, 255)



E-Paper

Setup & Web API's Guide

E-Paper Device Set Up - Pre-requisite & Device Addition

Pre-requisite

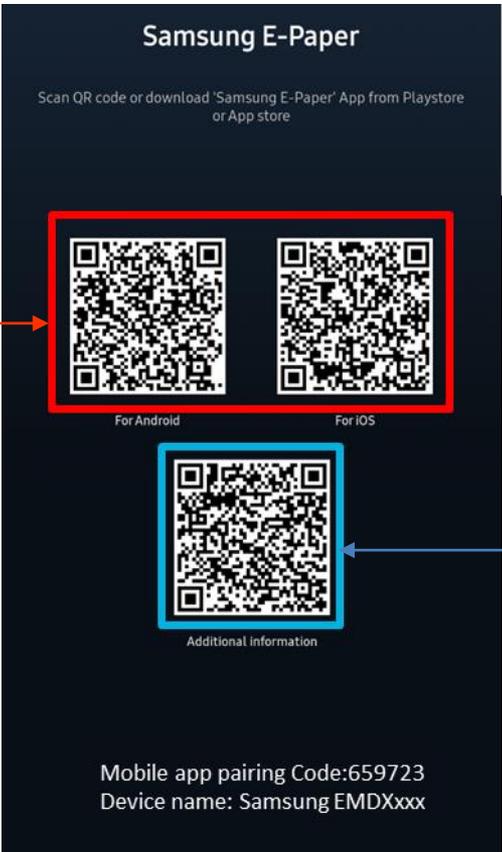
Network Requirement

- Wi-Fi network is must

Mobile Requirement

- Currently **ONLY** Android version(10 & above) is supported.
- For **APK** file, please contact to local pre-sales team.

QR code to download the Mobile App
(* Do not use these, as currently Mobile App is not hosted on play store)



E-Paper Device Screen

Device Addition

Methods to add E-Paper Device in Mobile App

There are 2 ways

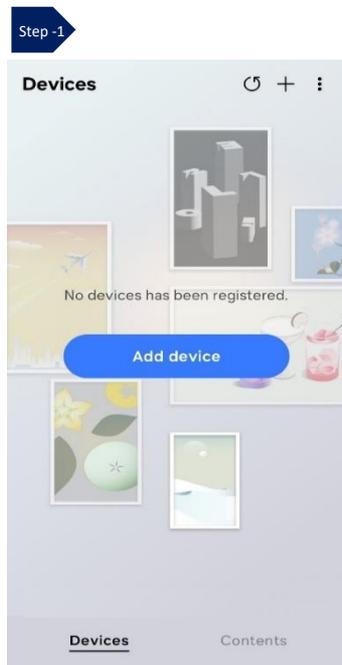
- **Method 1** - Click "Add Device" button on Mobile app home screen
- **Method 2** - Click (+) icon on Mobile app home screen

QR code to add the device
(Use this while using method -1 to add device)

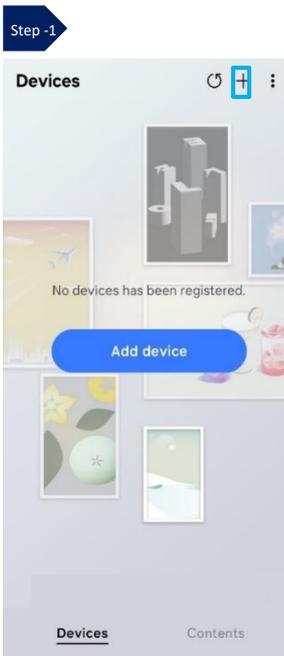
E-Paper Device Set Up - Mobile App (Device Addition)

Method - 1

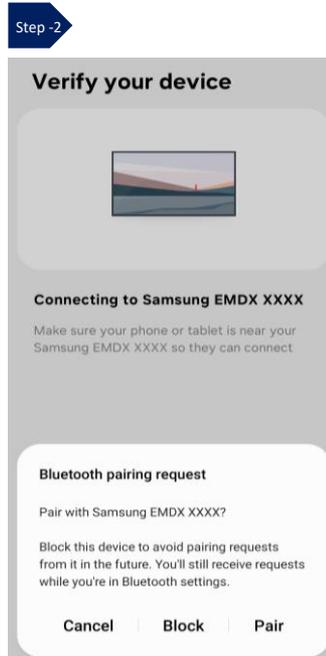
- Open Mobile App & Click “Add Device” icon
- Scan the QR displayed on E-Paper device then jump to **step-4**



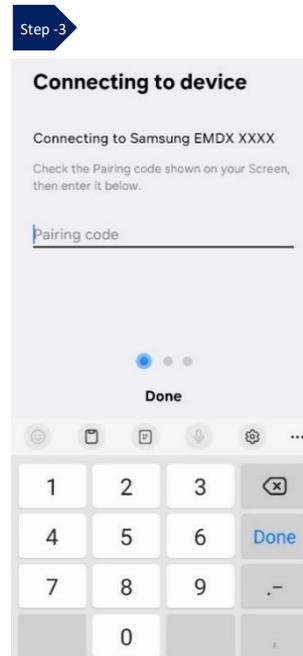
Method - 2



Open Mobile App & Click “+” icon at top right



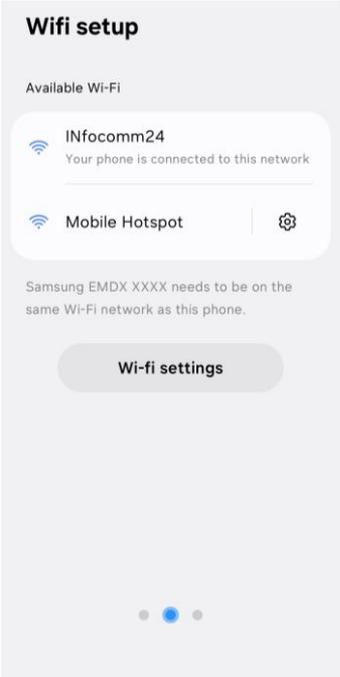
Choose “Pair” option



Enter the Pairing code
(pairing code is visible on E-paper device)

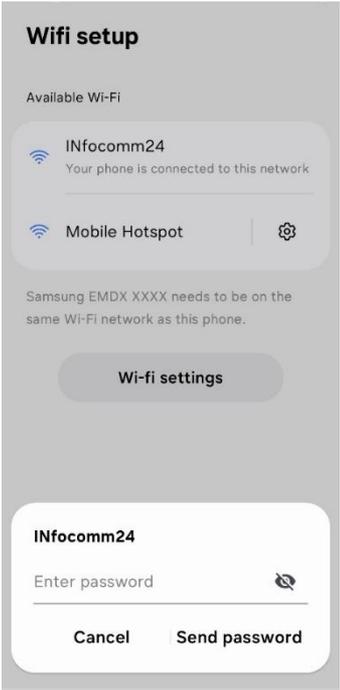
E-Paper Device Set Up - Mobile App (Network Configuration)

Step -4



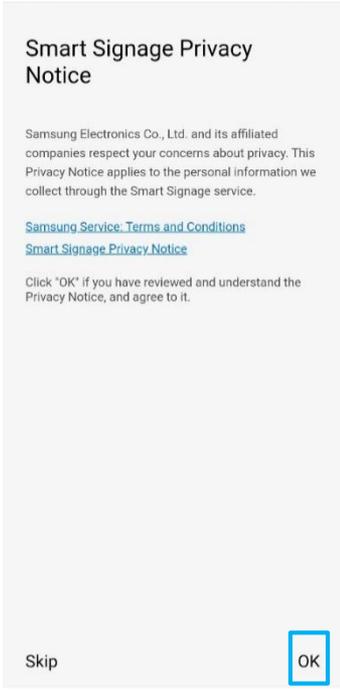
Choose "Wi-Fi"

Step -5



Enter the "Wi-Fi password"

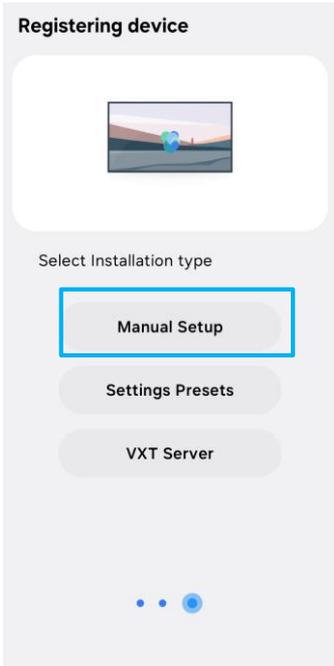
Step -6



Accept T&C ("Do not skip")

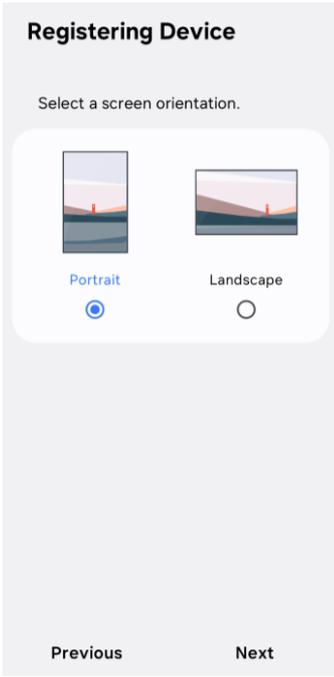
E-Paper Device Set Up - Mobile App (Device Configuration)

Step -7



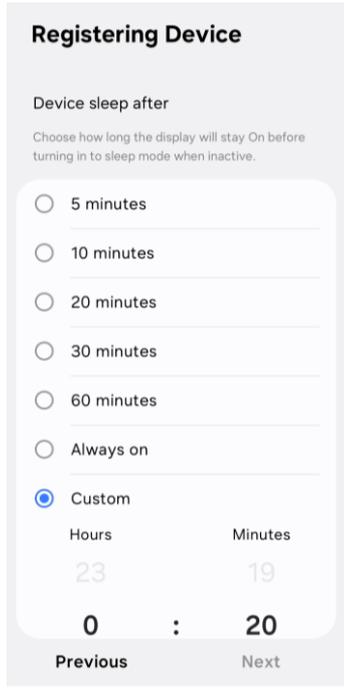
Choose "Manual Setup"

Step -8



Select device "Orientation"

Step -9

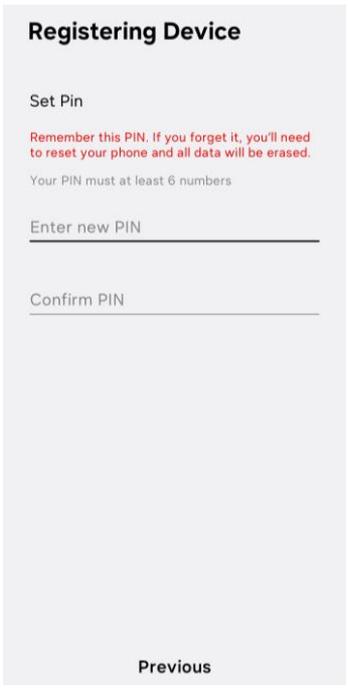


Set Device "Sleep Time"

**Choose how long the display will stay ON before turning in to sleep mode when inactive

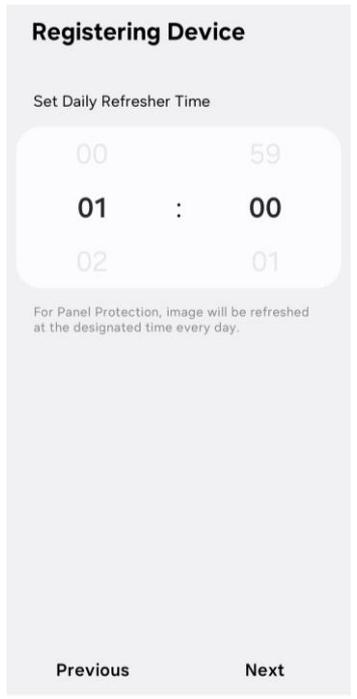
E-Paper Device Set Up - Mobile App (Device Configuration)

Step -10



Set Device security "Pin"

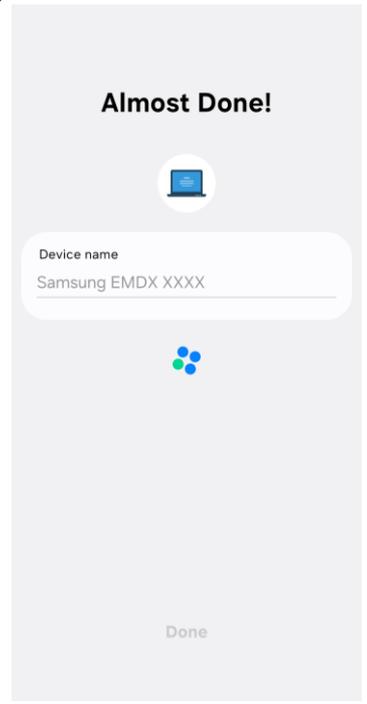
Step -11



Set Device "Refresh Time"

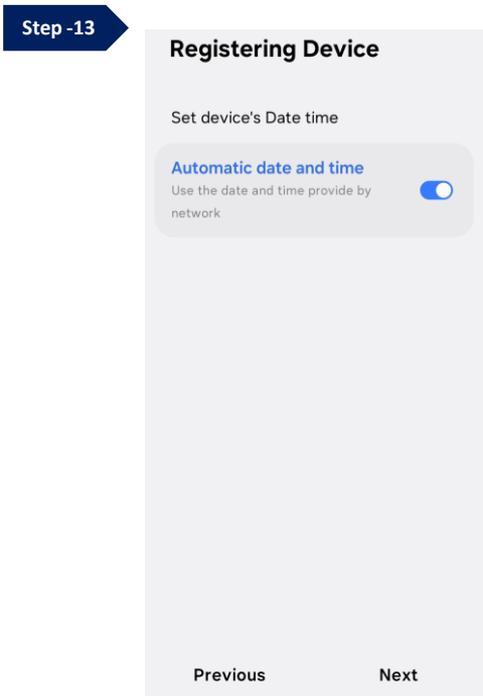
For panel protection - Set the content refresh time, which will be refreshed at the designated time every day.

Step -12

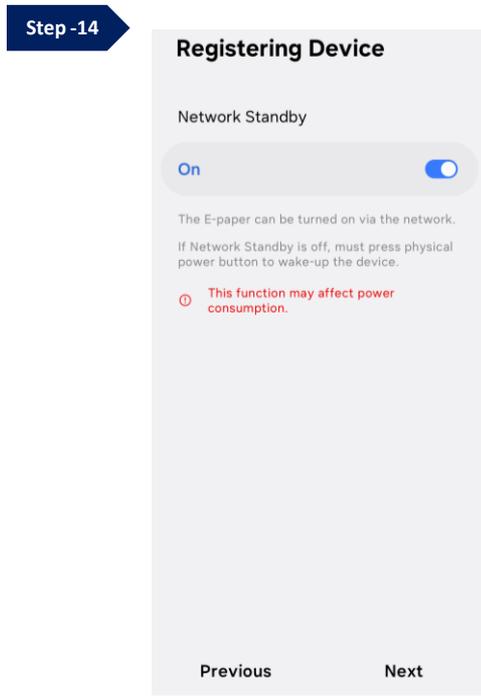


Set "Device Name"

E-Paper Device Set Up - Mobile App (Device Configuration)

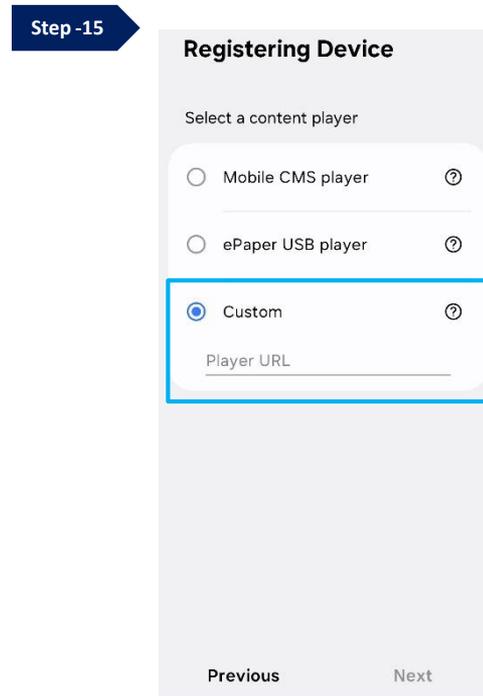


Set Device "Date & Time"



Set Device "Network Standby"

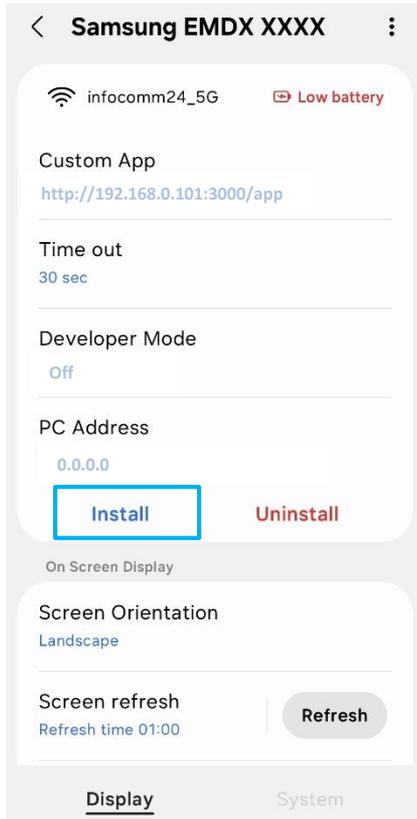
If user turns on "Network Standby" then device may consume additional power.



Choose "Custom" option to set Custom App URL

E-Paper Device Set Up - Mobile App (Device Configuration)

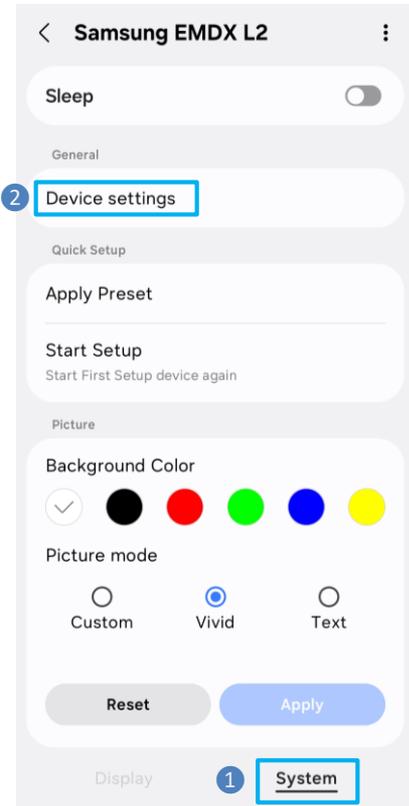
Step -16



- Press the “Install” button
- Custom App will install successfully on the device

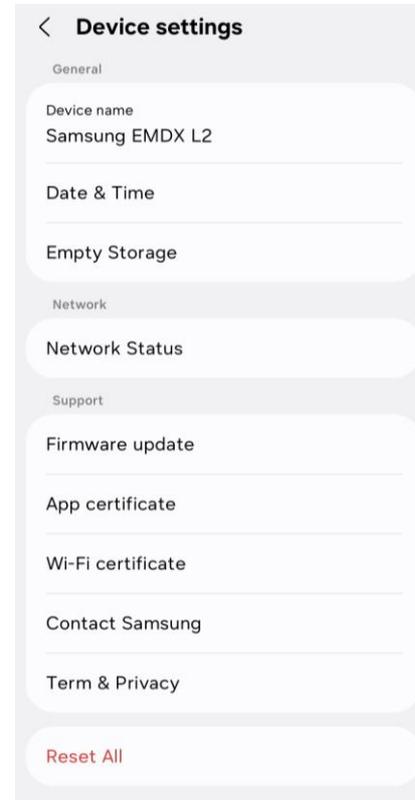
E-Paper Device Set Up - Mobile App (Device Information)

Step -1



- Within “System” Tab, select the “Device settings” option

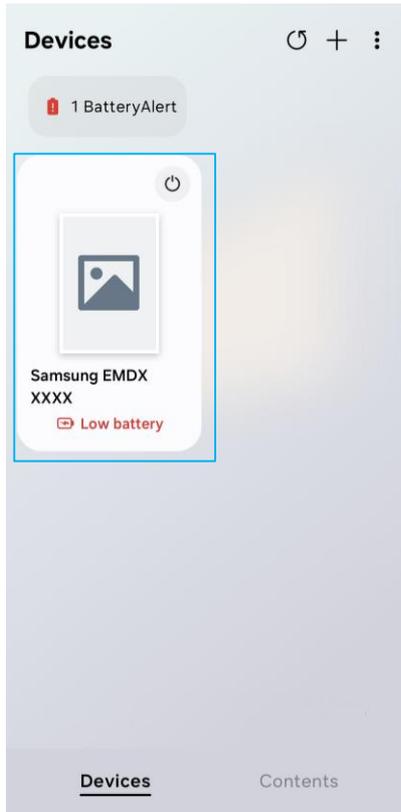
Step -2



- Device setting information like Network status, Date & Time, Firmware details etc., can be explored here
- Choose individual option to check details
- User can also Reset the device by choosing “Reset All” option

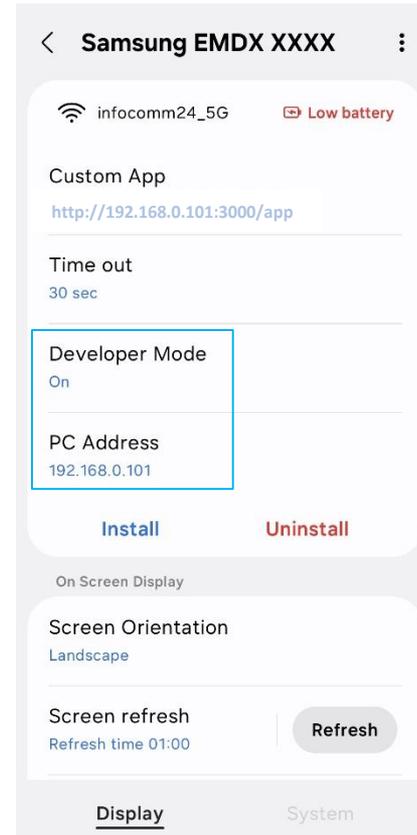
E-Paper - Custom App (Debugging Steps)

Step -1



Select the device appearing on home screen on the mobile app

Step -2



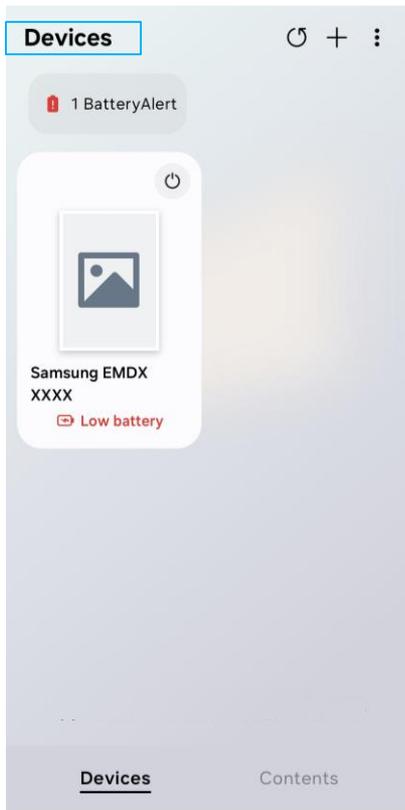
- Set Developer Mode as → ON
- Enter the PC IP address &
- Restart the E-paper device
[Device restart is must](#)

Tizen SDK steps

- Open Tizen SDK
- Connect Device
- Install App in Debug mode

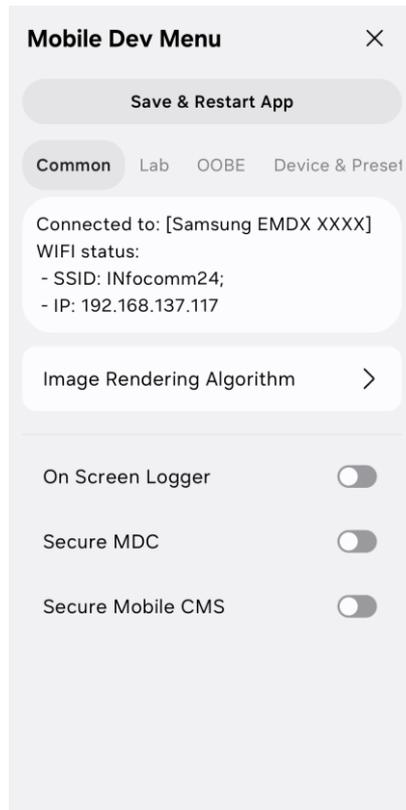
E-Paper - Mobile App (Security Information)

Step -1



Press "Devices" icon 10 times.

Step -2

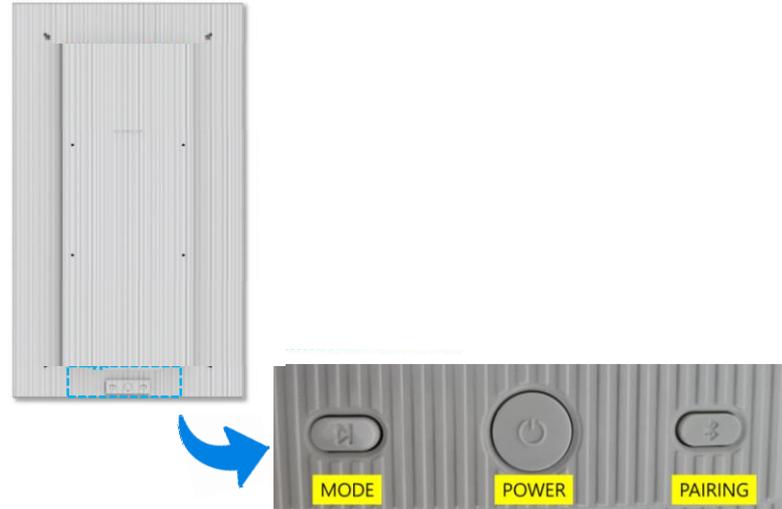


Security related parameters like Secure MDC, Custom App Player etc. can be set here.

E-Paper – Device (Reset)

Cavo alim collegato

- Press PAIRING and MODE Key at the same time for **10 sec**
- Device reset will begin - Wait for 10 sec for process to complete.
- Then, Press POWER Key to Turn ON the device. **2 sec**
- Device Reset is now complete



Custom App – Pre-requisites

1. Mandatory Tag

```
<tizen:metadata key=http://samsung.com/tv/metadata/application/epaper.support value="true"/>
```

Note - add this Tag in config.xml, else app would not be installed

2. sssp_config.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<widget>
<!-- The Size MUST equal as actual .wgt file size (bytes) -->
<ver>640</ver>
<size>67631</size>
<widgetname>EPaper</widgetname>
<webtype>tizen</webtype>
</widget>
```

Note - add the “size” tag, else app would not be installed

E-Paper Web API's

Library Required:

```
<script type='text/javascript' src='$WEBAPIS/webapis/webapis.js'></script>
```

Privilege Required:

```
<tizen:privilege name="http://developer.samsung.com/privilege/systemcontrol"/>
```

API Name	Information
<code>webapis.epaper.getVersion();</code>	Get the E-Paper API support version.
<code>webapis.epaper.screenRefreshNow();</code>	Allows the device to refresh screen.
<code>*webapis.epaper.setScreenRefreshTime(refreshTime);</code>	Set the interval for screen refresh.
<code>webapis.epaper.getScreenRefreshTime();</code>	Get the screen refresh time.
<code>webapis.epaper.setLEDStateOff(color);</code>	Set state-off in the LED of an e-Paper device with specific color scheme.
<code>webapis.epaper.setLEDStateOn(info);</code>	Set state-on in the LED of an e-Paper device with specific color scheme.
<code>*webapis.epaper.setLEDStateBlink(info);</code>	Set state-blink in the LED of an e-Paper device with specific color scheme.
<code>webapis.epaper.getBatteryWarningIconDisplay();</code>	Get the battery warning icon status.

* API's currently are not working in E-Paper Device

Above API's are supported **ONLY** on E-Paper device.

E-Paper Web API's

API Name	Information
<code>webapis.epaper.isScheduledPlayBootReason();</code>	Get the status of device power wake up.
<code>webapis.epaper.getNetworkStandby();</code>	Get the value of Network standby mode.
<code>webapis.epaper.setNetworkStandby(mode);</code>	Set network standby mode.
<code>webapis.epaper.cancelScheduleWakeupTime(id);</code>	Cancel schedule wakeup time set previously.
<code>webapis.epaper.getScheduleWakeupTime(id);</code>	Get the value of the wakeup time.
<code>webapis.epaper.setScheduleWakeupTime(wakeup_time);</code>	Set a schedule for the device wake up. (time unit in seconds. E.g. for 1 week, set value as 1~ 604800 sec)
<code>webapis.epaper.goToSleep();</code>	Set the sleep mode.
<code>webapis.epaper.getAutoSleepTime();</code>	Get the sleep time.
<code>webapis.epaper.setAutoSleepTime(delayTime);</code>	Set the sleep time.
<code>webapis.epaper.resetAutoSleepTime();</code>	Reset the sleep time.
<code>webapis.epaper.setBatteryWarningIconDisplay(mode);</code>	Set the battery warning icon in display mode as ON or OFF.

E-Paper – Web API's (Code-Flow)

screenRefreshNow

```
try {
  webapis.epaper.screenRefreshNow();
} catch (e) {
  console.log("[screenRefreshNow]" + e.code + "] name: "
  + e.name + " message: " + e.message);
}
```

setScreenRefreshTime

```
var refreshTime = {
  "hour" : 6,
  "minute" : 15
};
try {
  webapis.epaper.setScreenRefreshTime(refreshTime);
} catch (e) {
  console.log("[setScreenRefreshTime] +e.code + "] name:
  " + e.name + " message: " + e.message);
}
```

getScreenRefreshTime

```
var mode;
try {
  mode = webapis.epaper.getScreenRefreshTime();
} catch (e) {
  console.log("[getScreenRefreshTime] " + e.code + "]
  name: " + e.name + " message: " + e.message);
}
if (mode) {
  console.log("[getScreenRefreshTime]" + mode);
}
```

E-Paper – Web API's (Code-Flow)

setLEDStateOff

```
var color = "LED_GREEN";
try {
webapis.epaper.setLEDStateOff(color);
} catch (e) {
console.log("[setLEDStateOff]" + e.code + "] name: " +
e.name + " message: " + e.message);
}
```

setLEDStateOn

```
var info = {
"color" : "LED_GREEN",
"duration" : 150
};
try {
webapis.epaper.setLEDStateOn(info);
} catch (e) {
console.log("[setLEDStateOff]" + e.code + "] name: " +
e.name + " message: " + e.message);
}
```

setLEDStateBlink

```
var info = {
"color" : "LED_GREEN",
"onIntervalTime" : "LED_250MS",
"offIntervalTime" : "LED_250MS",
"duration" : 180
};
try {
webapis.epaper.setLEDStateBlink(info);
} catch (e) {
console.log("[setLEDStateBlink] " + e.code + "] name:
" + e.name + " message: " + e.message);
}
```

isScheduledPlayBootReason

```
var reason;
try {
reason = webapis.epaper.isScheduledPlayBootReason();
} catch (e) {
console.log("[isScheduledPlayBootReason] " + e.code +
"] name: " + e.name + " message: " + e.message);
}
if (reason) {
console.log("[isScheduledPlayBootReason] " + reason);
}
```

E-Paper – Web API's (Code-Flow)

getBatteryWarningIconDisplay

```
var mode = null;
try {
mode = webapis.epaper.getBatteryWarningIconDisplay();
} catch (e) {
console.log("[IconDisplay] + e.code + "] name: " +
e.name + " message: " + e.message);
}
if (mode) {
console.log("[IconDisplay]" + mode);
}
```

setBatteryWarningIconDisplay

```
var mode = "ON";
try {
webapis.epaper.setBatteryWarningIconDisplay(mode);
} catch (e) {
console.log("[setBatteryWarningIconDisplay] " + e.code +
"] name: " + e.name + " message: " + e.message);
}
```

setAutoSleepTime

```
var delayTime = "30MIN";
try {
webapis.epaper.setAutoSleepTime(delayTime);
} catch (e) {
console.log("[setAutoSleepTime] " + e.code + "]
name: " + e.name + " message: " + e.message);
}
```

resetAutoSleepTime

```
try {
webapis.epaper.resetAutoSleepTime();
} catch (e) {
console.log("[resetAutoSleepTime] " + e.code + "]
name: " + e.name + " message: " + e.message);
}
```

E-Paper – Web API's (Code-Flow)

getNetworkStandby

```
var mode = null;
try {
  mode = webapis.epaper.getNetworkStandby();
} catch (e) {
  console.log("[getNetworkStandby]" + e.code + "] name: "
+ e.name + " message: " + e.message);
}
if (mode) {
  console.log("[getNetworkStandby] " + mode);
}
```

setNetworkStandby

```
var mode = "ON";
try {
  webapis.epaper.setNetworkStandby(mode);
} catch (e) {
  console.log("[setNetworkStandby] " + e.code + "] name: "
+ e.name + " message: " + e.message);
}
```

cancelScheduleWakeupTime

```
var id = 10;
try {
  webapis.epaper.cancelScheduleWakeupTime(id);
  console.log("[cancelScheduleWakeupTime]");
} catch (e) {
  console.log("[cancelScheduleWakeupTime] " + e.code +
"] name: " + e.name + " message: " + e.message);
}
```

getScheduleWakeupTime

```
var id = 10;
try {
  data = webapis.epaper.getScheduleWakeupTime(id);
  console.log("[getScheduleWakeupTime]" + date);
} catch (e) {
  console.log("[getScheduleWakeupTime] " + e.code + "]
name: " + e.name + " message: " + e.message);
}
```

E-Paper – Web API's (Code-Flow)

setScheduleWakeupTime

```
var wakeup_time = {
  "year" : 2024,
  "month" : 12,
  "day" : 15,
  "hour" : 8,
  "minute" : 55,
  "second" : 43
}
try {
  var timerId =
webapis.epaper.setScheduleWakeupTime(wakeupTime);
console.log("[setScheduleWakeupTime] " + timerId);
} catch (e) {
console.log("[setScheduleWakeupTime] " + e.code + "] name: "
+ e.name + " message: " + e.message);
}
```

goToSleep

```
try {
  webapis.epaper.goToSleep();
} catch (e) {
  console.log("[goToSleep]" + e.code + "] name: " +
  e.name + " message: " + e.message);
}
```

getAutoSleepTime

```
var time = null;
try {
  time = webapis.epaper.getAutoSleepTime();
  console.log("[getAutoSleepTime] " + time);
} catch (e) {
  console.log("[getAutoSleepTime] " + e.code + "] name: "
+ e.name + " message: " + e.message);
}
```

E-Paper – Web API's (System Control)

Library Required:

```
<script type='text/javascript' src='$WEBAPIS/webapis/webapis.js'></script>
```

Privilege Required:

```
<tizen:privilege name="http://developer.samsung.com/privilege/systemcontrol"/>
```

API Name	Information
<code>webapi.systemcontrol.unsetCustomAppDownloadListener</code>	Unregisters the asynchronous custom app's on downloaded callback.
<code>webapi.systemcontrol.isCustomAppDownloaded</code>	Check if custom app has been downloaded.
<code>webapi.systemcontrol.setCustomAppDownloadListener</code>	Registers an asynchronous custom app's on downloaded callback.
<code>webapi.systemcontrol.getSerialNumber</code>	Get the device serial number.
<code>webapi.systemcontrol.captureScreen</code>	Screen capture of the device.
<code>webapi.systemcontrol.rebootDevice</code>	Reboot the device.
<code>webapi.systemcontrol.updateFirmware</code>	Updates the firmware on device.
<code>webapi.systemcontrol.setUpdateFirmwareListener</code>	Registers an asynchronous on change firmware update progress callback.
<code>webapi.systemcontrol.unsetUpdateFirmwareListener</code>	Unregisters the asynchronous on Change firmware update progress callback.

**** ONLY these above SystemControl API's are supported on E-Paper device.**

E-Paper – Web API's (System Control)

API Name	Information
<code>webapi.systemcontrol.getButtonLock ()</code>	Get the Button Lock information.
<code>webapi.systemcontrol.getOnScreenMenuOrientation ()</code>	Get the menu orientation of the device.
<code>webapi.systemcontrol.setCustomAppInfo</code>	Set custom app URL and timeout.
<code>webapi.systemcontrol.getCustomAppInfo</code>	Get custom app URL and timeout.
<code>webapi.systemcontrol.setButtonLock</code>	Set the Button Lock.

**** ONLY these above SystemControl API's are supported on E-Paper device.**

E-Paper – Web API's (Timer)

Library Required:

```
<script type='text/javascript' src='$WEBAPIS/webapis/webapis.js'></script>
```

Privilege Required:

```
<tizen:privilege name="http://developer.samsung.com/privilege/devicetimer" />
```

API Name	Information
webapi.timer.setSystemTimeSyncTimeout	Set the sync timeout for the device.
webapi.timer.setCurrentTime	Set the clock (date and time) of device.
webapi.timer.getCurrentTime	Get the current date and time of device.
webapi.timer.setNTP	Set the NTP info of the device.
webapi.timer.getNTP	Get the NTP info of the device.
webapi.timer.setDST	Set the DST mode of the device.
webapi.timer.getDST	Get the DST mode of the device.
webapi.timer.getSystemTimeSyncTimeout	Get the time sync of the device.

**** ONLY** these above Timer API's are supported on E-Paper device.



Thank You