

User Guide Standards

Salt System Board

For 42["] monochrome ePaper Display Application



Table of Contents

Tab	ole o	f Cont	ents	.2
	1	 Introduction Hardware Guide 		
	2			
	3	Usage		3
		(1)	Uploading image	. 3
		(2)	Procedure is as following	. 3
	4 Contact Information		act Information	.9
	5	Lega	I Information	.9

1 Introduction

E Ink's 42" evaluation kit Salt is intended to highlight the features and benefits of the 42" EPD display. This document will provide details on how to use the Salt to display.

To be advised that EVK is not suitable to use in outdoor as a product because if the condense water occur on EVK, it might cause the short circuit to damage the board.



2 Hardware Guide

This section describes the hardware setup of the Salt evaluation kit for 42".

This demo kit contains the following:

- Salt System Board
- FFC cable*5
- Adapter 12V 5A



Module Name	Description
Salt board	TCON
Transfer board	Bridging of panel and salt board
FFC	Connect for 42" panel and Salt board

3 Usage

(1) Uploading image

When connected to a PC, the interface, AP, could upload pictures in BMP(24bit) or JPG(24bit) format from PC to Salt through Micro USB.

Note : the picture format needs to be fit the resolution of EPD.

(2) Procedure is as following

Connection

- (1) Salt connected to PC.
- (2) Connect 42" EPD to Salt. (Tcon board + transfer board)
- (3) Connect Micro USB to Salt.
- (4) Run "T1000_Windows_AP.exe" software.
- (5) Click "Connect" button to make sure the software has connected to Physical Drive.

connect	EnMirror En_ EnFlip EnCF	42_Flip FA_RGB565 ate_CCW_90	Engineer Features OK Cancel
Generic Storage RamDis	: 1.00		42inch_BX_V1.0.bin
earched 1 Disks 1 T1000, FA Image Buffer Addri FA Image Buffer Addri W Version = v.002.00 gnature = 8957 anel Width = 2880 anel Height = 2160 inage Buffer Address = Vaveform: (6 Modes, 1	ess H = 0x 0 ess L= 0x 0 L053 0x430910 4 Temperature Segments)	Succes	Refresh Upgrade Firmware(*.bin) wbf Address(hex) Waveform(*.wbf) 900000 Display Mode Centralize MulEngine 2 SlideShow Time Interval(Secs)
		•	Load Image and Display X Y Start Mode 0 0 2 Width Height End Mode En Convert to 3 color AutoSet Open File EnCIrWhite Set Full Panel Display
		Ŧ	
Clear			

Software connected to Physical Drive

- VCOM Set/Get
 - (1) VCOM to set by the AP is currently not valid.
 - (2) Currently VCOM is adjusted by variable resistor(VR1), recommend to use plastic screwdriver.
 - (3) VCOM voltage is measured by TP_VCOM1.



Set/Get VCOM

• Display EPD operation (single image mode)

- (1) Select "en_42_flip" and "Set Full Panel".
- (2) Click "Open File.." to load image.
- (3) Edit display area and select waveform mode to display current image.
- (4) Click "Display" to show selected image on EPD.

(5) In the begin of the connection, in order to minimize artifact, to select "EnClrWhite" option and Start Mode/End Mode select 0, click "Display" button, the EPD should show with white picture.

Notice : The "EnClrWhite" is only allow to use in the beginning of the connection.



Load image to Salt and display the image

Load Image and Display
X Y Start Mode
0 0 0
Width Height End Mode
2880 2160 0
🔲 En Convert to 3 color 🔲 AutoSet
Open File
5 EnClrWhite Set Full Panel
Display

Minimize artifact

• Display EPD operation (slide show mode)

- (1) Salt connected to PC.
- (2) Upload all images under the folder name as "SlideShowImages".
- (3) Set "Display Mode" and "Time Interval".
- (4) Select "SlideShow" option and click "Start" botton.



Run slideshow

- Other Features Description
 - Firmware Update
 - (1) Salt connected to PC.
 - (2) Firmware and "T1000_Windows_AP.exe" in the same folder.
 - (3) Select the "Firmware" and click "Refresh" button and select the FW.
 - (4) Click "Upgrade" button to update FW.
 - (5) If update is success, please re-plug the power.(reset)





- Waveform Update
 - (1) Salt connected to PC.
 - (2) Waveform and "T1000_Windows_AP.exe" in the same folder.
 - (3) Select the "Waveform" and click "Refresh" button and select the WF.
 - (4) Click "Upgrade" button to update WF.
 - (5) If update is success, please re-plug the power.(reset)



- Select the Waveform
- ◆ Temperature Set/Get
 - (1) First Click "Engineer Features" button.
 - (2) Set/Get temperature value.
 - (3) Click "Execute" button to Set/Get temperature.
 - (4) Click "OK" button.

Dialog	
Register R/W RegAddr(Hex) Value(Hex) Read Write Execute VComSetting (mV) Power on Power off Power on with Set VCom Execute C Set VCom Get VCom	OK Cancel Force Set Temperature 27 C Get Temperature Execute Load TConCfg
Memory Addr(Hex) Size(Hex)	

Temperature Set/Get

Checkbox function explanation
 Each of the checkbox described above the AP has to be selected before you
 load an image using "Open File" button based on different firmware.

- (1) EnMirror : No function
- (2) EnFlip : Select in 31.2" display, to flip image into Tcon image buffer.
- (3) En_42_Flip : Select in 42" display, to flip left side of the 42" panel in gate scan direction.
- (4) EnCFA_RGB565 : Select it When using 31.2" CFA EPD.
- (5) Rotate_CCW_90 : Select in 31.2" display if image is landscape, Rotate counter clockwise 90 degrees.

EnMirror	En_42_Flip
EnFlip	EnCFA_RGB565
	Rotate_CCW_90

Other Features

4 Contact Information

For more information, please visit

http://www.eink.com

For sales office addresses, please visit

http://www.eink.com/contact_sales.html

5 Legal Information

Definitions

The document is a draft version only. The content is still under internal review and subject to formal approval which may result in modifications or additions. E Ink does not give any representations or warranties as to the accuracy or completeness of information included herein and shall have no liability for the consequences of use of such information.

• Right to make changes

E Ink reserves the right to make changes to information published in this document, including without limitation specifications and product descriptions, at any time and without notice.

Suitability for use

Products described in this document are intended for development purposes only and comes without any warranty. E Ink accepts no liability for inclusion and/or use of E Ink products in commercial products or applications and therefore such inclusion and/or use is at the customer's own risk. In no event shall E Ink be liable for any direct, indirect, incidental, special, exemplary, or consequential damages (including, but not limited to, procurement of substitute goods or services; loss of use, data, or profits; or business interruption) however caused and on any theory of liability, arising in any way out of the use of the software.

Applications

Applications that are described herein for any of these products are for illustrative purposes only. E Ink makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.

• No offer to sell or license

Nothing in this document may be interpreted or construed as an offer to sell products that is open for acceptance or the grant, conveyance or implication of any license under any copyrights, patents or other industrial or intellectual property rights.

• Trademarks

Notice: All referenced brands, product names, service names, and trademarks are the property of their respective owners.

Revision History

Version	Date	Pag	Description	Author
1.2	2019/8/14		Initial	Ryan
1.3	2020/8/11	1	Modify photo	Ryan