User Guide Standards

FLASH (NFC Driving Board)

Table of Contents

Introduction

Thank you for using the **FLASH** (**NFC driving board)**. FLASH includes the NFC communication function and the EPD driving function to drive 2.9" EPD display module (LV1932-BJB). Use a smartphone that supports NFC to control FLASH and update the display content of LV1932-BJB without the battery and the power supply. The features of FLASH can be used on Android smartphone with NFC function. In this manual, chapter 2 contains an introduction of Android app and a step-by-step guide for operating the app.

1   Package Contents

The Fig. 1.1 shows the appearance of FLASH (NFC driving board).

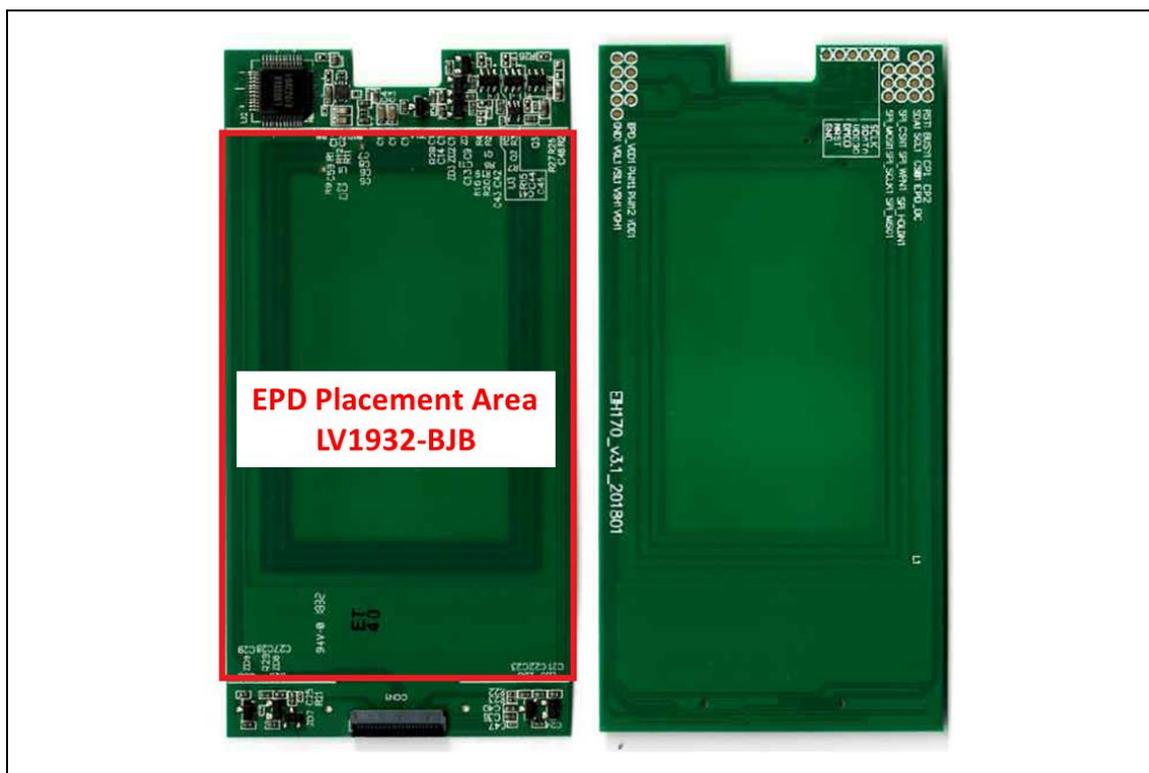● FLASH (NFC driving board) .1 PCS. Refer to Fig. 1.1. (Not included LV1932-BJB EPD)

Fig. 1.1

2   Android App Introduction

The chapter 2 shows the step-by-step guide for operating Android app.

(1) The operation of Android app

● Step 1: Install E Ink NFC 2.9 app from Google Play Store. Refer to Fig. 2.1.
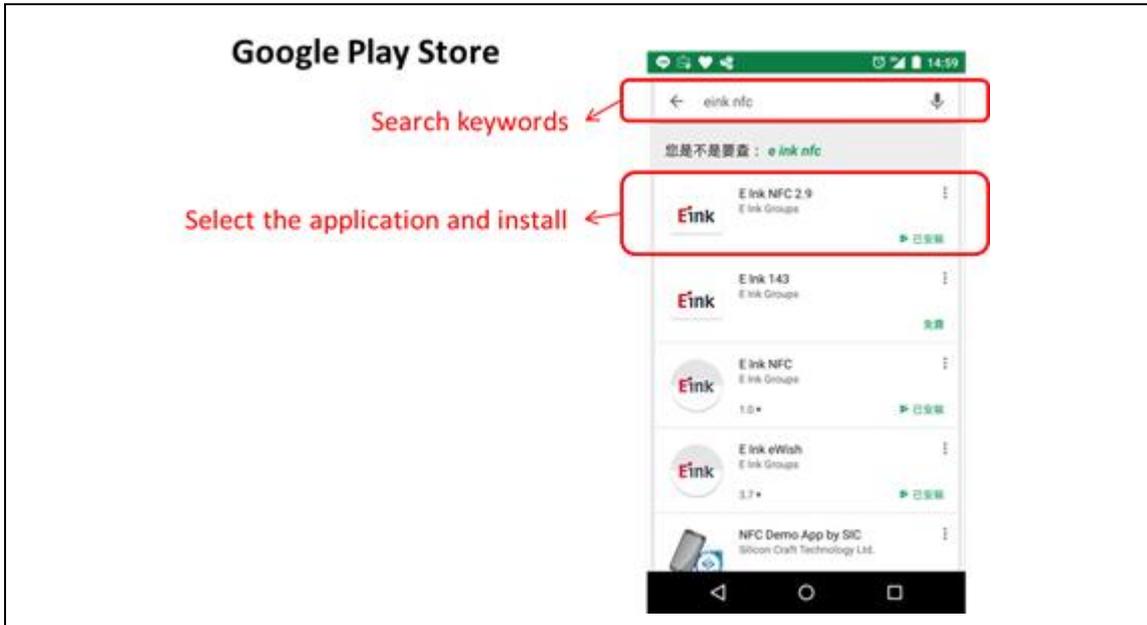

Fig. 2.1

● Step 2: Execute the NFC29 app. Refer to Fig. 2.2.

Fig. 2.2

● Step 3: Select an image.

● Step 3.1: Touch the screen in the area. Refer to Fig. 2.3.

● Step 3.2: Select an image. Refer to Fig 2.4 and Fig 2.5.

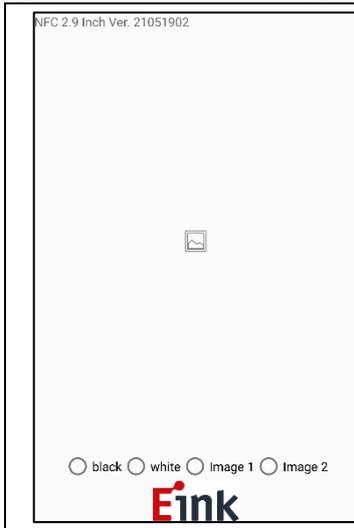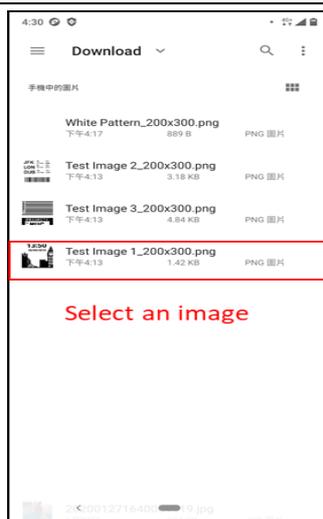∗ **Note:** The image resolution is 200*300 with black and white.

| Fig. 2.3 | Fig. 2.4 | Fig. 2.5 |

- **Step 4:** Update LV1932-BJB EPD by FLASH kit.

- **Step 4.1:** The NFC antenna area of FLASH is shown in Fig. 2.6 and the NFC antenna area of user smartphone will be various and design depending. Please find out the NFC antenna location of the smartphone before you start to update EPD through FLASH kit.

- **Step 4.2:** When the data is transferred via NFC interface, the smartphone will show that data is being transferred and please keep touching FLASH kit. Refer to Fig 2.7.

- **Step 4.3:** After the data transmission is successful, if the power supply is sufficient, FLASH kit will update the image.
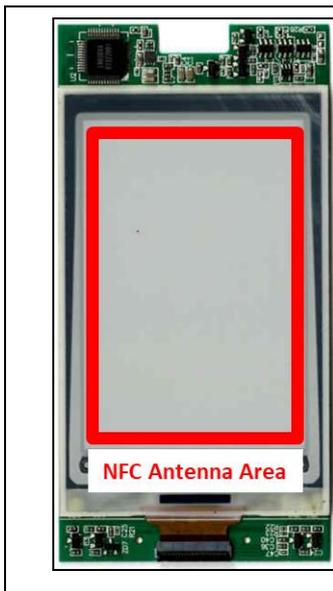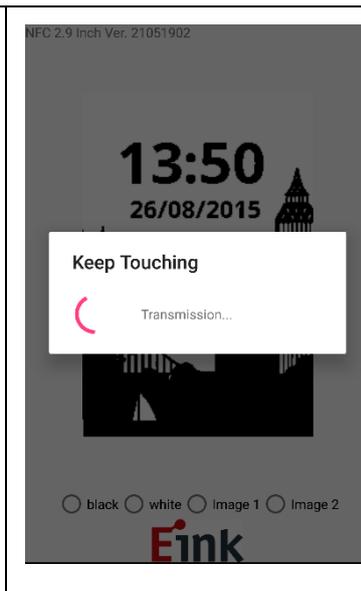

| Fig. 2.6 | Fig. 2.7 | Fig. 2.8 |

＊ For simple operation method, please refer to video 2.0

3 Full Temperature Enable/Disable

You can use APP to enable or disable full temperature setting. Different temperature range would be effect display performance.

Enable full temperature: Driving waveform support temperature range from $0℃$ to $50℃$.

∗ Disable full temperature: Driving waveform support room temperature only

● Step1: click setting icon. (Fig3.1)

● Step2: select enable/disable full temperature. (Fig3.2)

● Step3: contact to flash kit.

● Step4: Get feedback from flash kit. (Fig3.3)
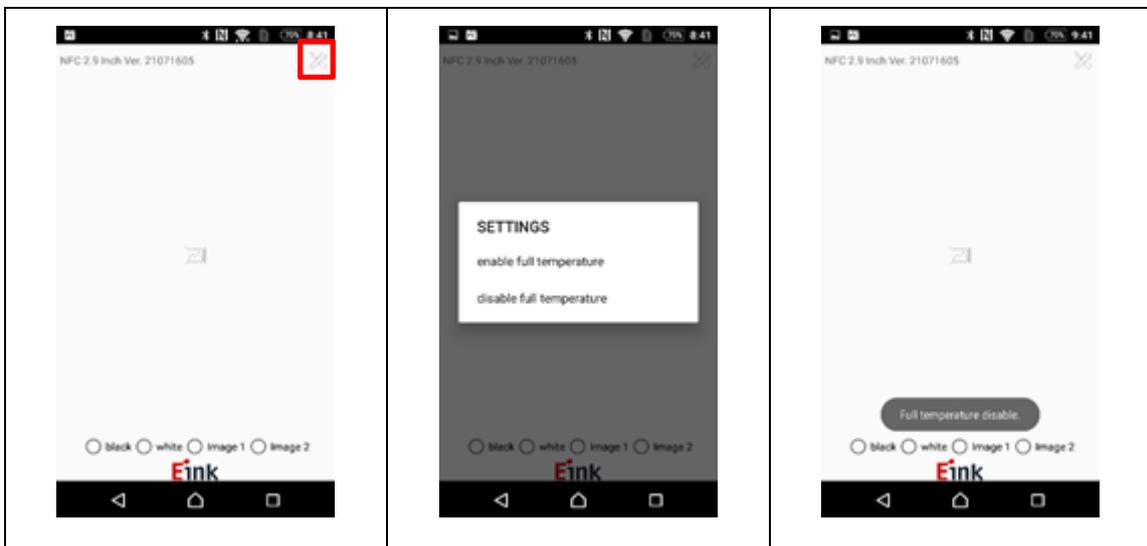

| Fig. 3.1 | Fig. 3.2 | Fig. 33 |

(1) Sample Code of Android App

Please refer to the file "FLASH Application Note for Android V2.0.pdf".

(2) FLASH Communication Protocol

Please refer to the file "FLASH Application Note V2.0.pdf".

(3) Troubleshooting

Below is a list of commonly asked questions and basic troubleshooting steps of FLASH.

Table 5.1 Troubleshooting

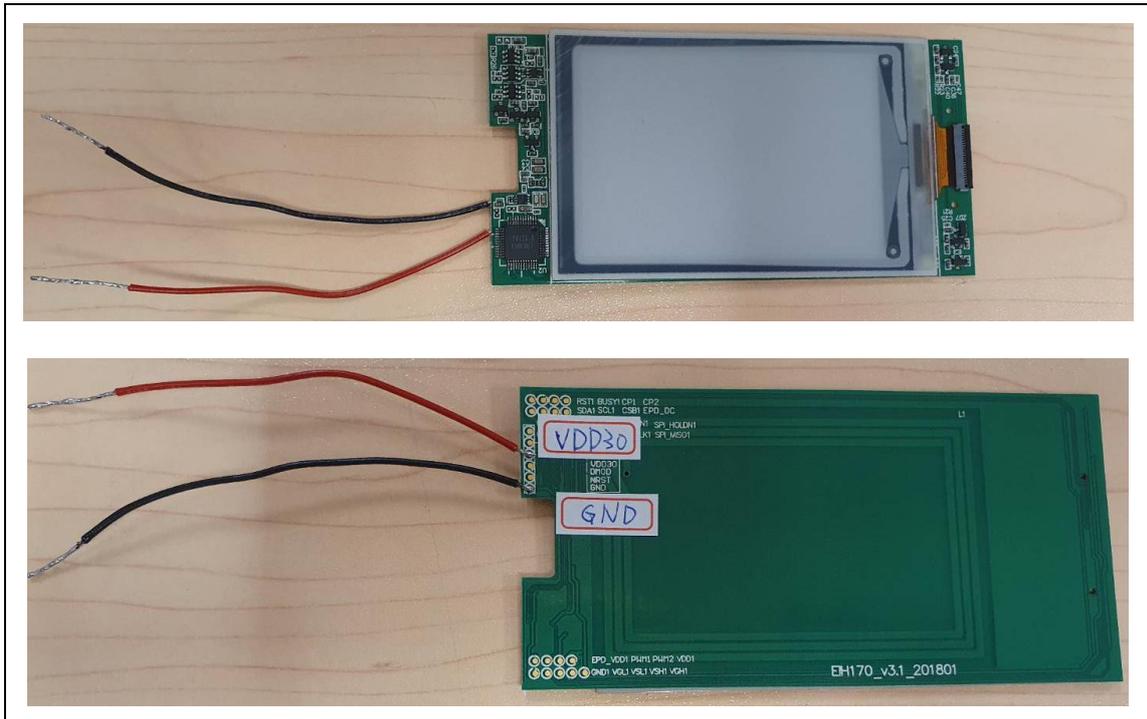| No.	Issue	Possible Cause and Solution
1	The smartphone app shows the transfer is successful but the e-Badge is not updated.	Please confirm whether the smartphone's NFC antenna is correctly aligned with FLASH's.
		After EPD displays abnormality, please wait 3 to 5 seconds for the next test.
2	The image file cannot be selected normally on the smartphone app.	The NFC power of the smartphone might be insufficient, so it is recommended to use a USB NFC Reader for the testing.

Fig.2.9

Drive FLASH by adding external power supply.mp4

Video 1.0

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	Page	Description	Author
1.0	2020/11/30		Initial	Duran Liu
2.0	2021/05/03		Change format	Duran Liu
3.0	2021/07/19		Full temperature	Leon
4.0	2021/08/02		Add Application note and Application note for Android	Vincent