# User Guide Standards

## Giant with 75” Kaleido™ Outdoor ePaper Display (EC750TT1)

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# ePaper Display Update SOP

## 1 Introduction

Giant evaluation kit support to highlight the features and benefits of the ePaper display driven by LVDS interface. This document will provide details on how to operate the Giant evaluation kit with E Ink Kaleido™ Outdoor LVDS interface panel. Please make sure if you already prepare following components on hand before starting to operate.

### (1) Giant evaluation kit



GT2001 timing control board×1



PMIC board×2



Power Adapter ×1



FFC cable×4

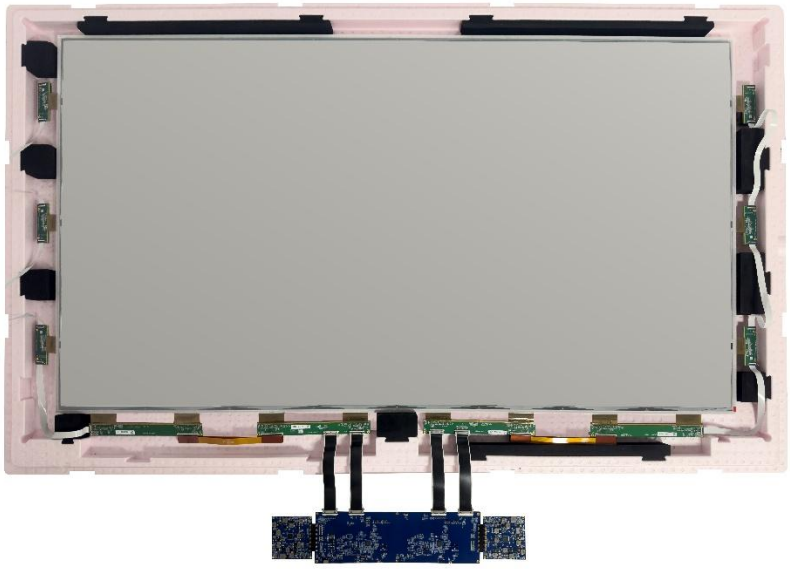


Temperature sensor board×1



Cable for temperature sensor board×1

## (2) 75 inch Kaleido™ Outdoor ePaper display

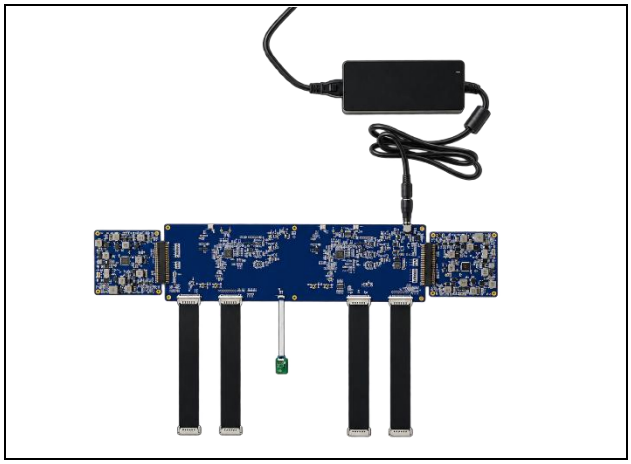


75” Kaleido™ Outdoor ePaper display

# 2 Hardware Setup Guide

This section describes the hardware setup procedures of the Giant evaluation kit for 75” Kaleido™ Outdoor ePaper display.

### (1) Hardware requirements for drive 75” Kaleido™ Outdoor ePaper display



Giant evaluation kit



Windows PC (Prepare by customer)



75” EPD panel



Mircro USB×2

Table 1 Minimum PC Requirements (Prepare by customer)

| CPU | Pentium III 800 MHz or higher |
|---|---|
| **RAM** | 128MB or higher |
| **Required Software** | Windows 7 or higher version |
| **Interface** | USB port x 2 |

## (2) Connect method of Giant evaluation kit with 75” Kaleido™ Outdoor ePaper display

Connect the Giant evaluation board with 75” ePaper display is shown as following figure 2.1.

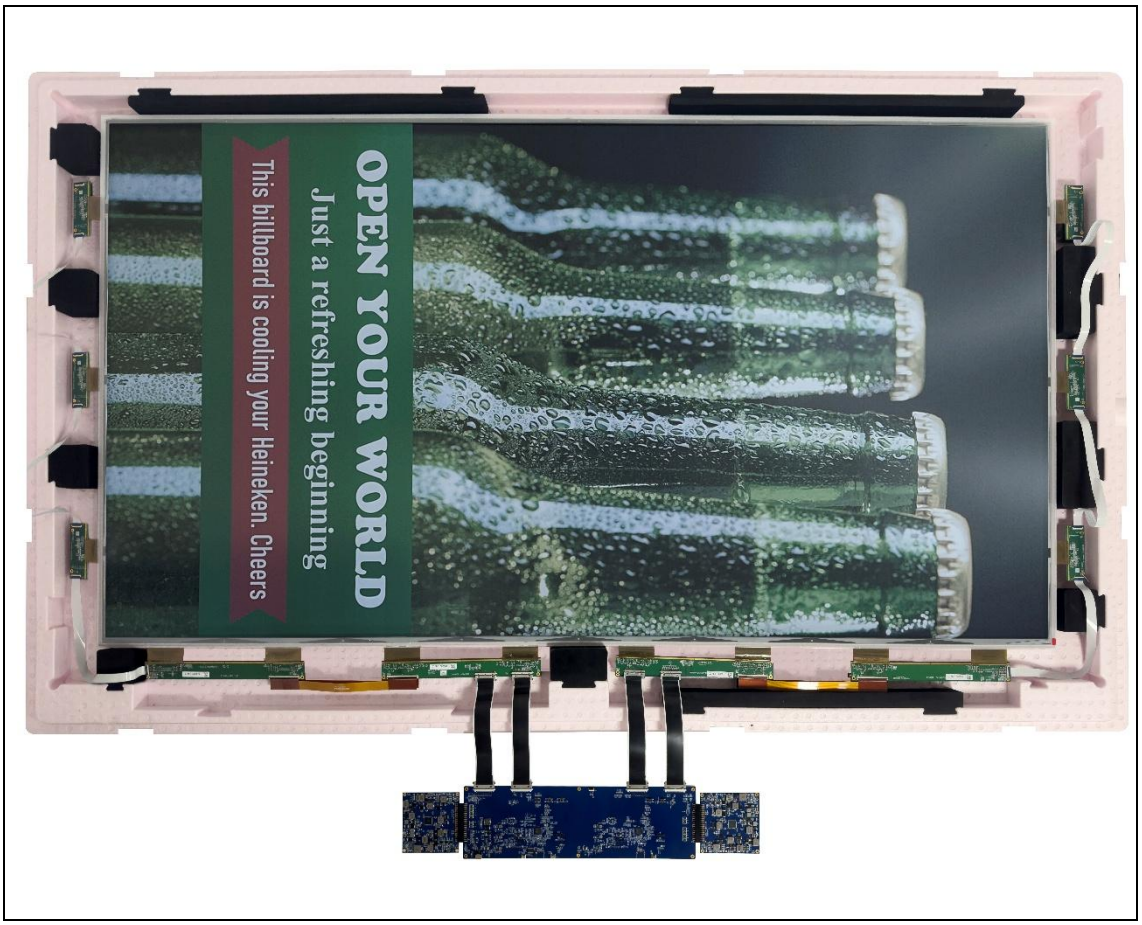



Figure 2.1

# 3 How to Demo the Picture

## (1) Recommend picture format

The picture is recommend in BMP (24bit) format and size needs to fit the resolution of 75” ePaper display (10240*1440).

## (2) Operating procedures

After power up, check power indicator LED if is lighting.

## (3) Make sure Giant evaluation kit and 75” EPD as well as PC are connected

- Connect the 75-inch ePaper display to the 75” evaluation kit (refer to Figure 2.1)
- The PC is connected to the 75” evaluation kit via two Micro-USB cables.
- Execute the " GT2001_DemoAP_v.6.0.12_1022 " software and check the EnMulEPD box and click the "Connect" button to ensure that the software is successfully connected to the physical drive. (refer to Figure 3.1)

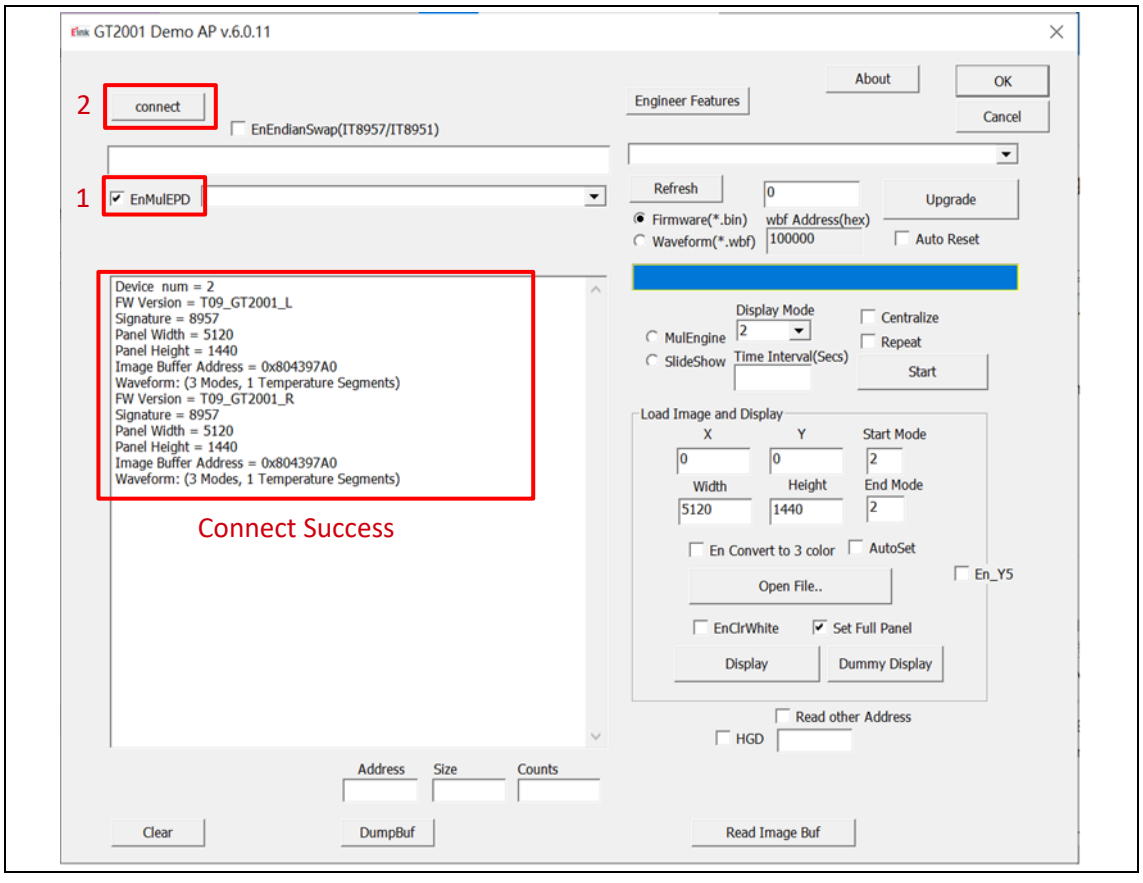
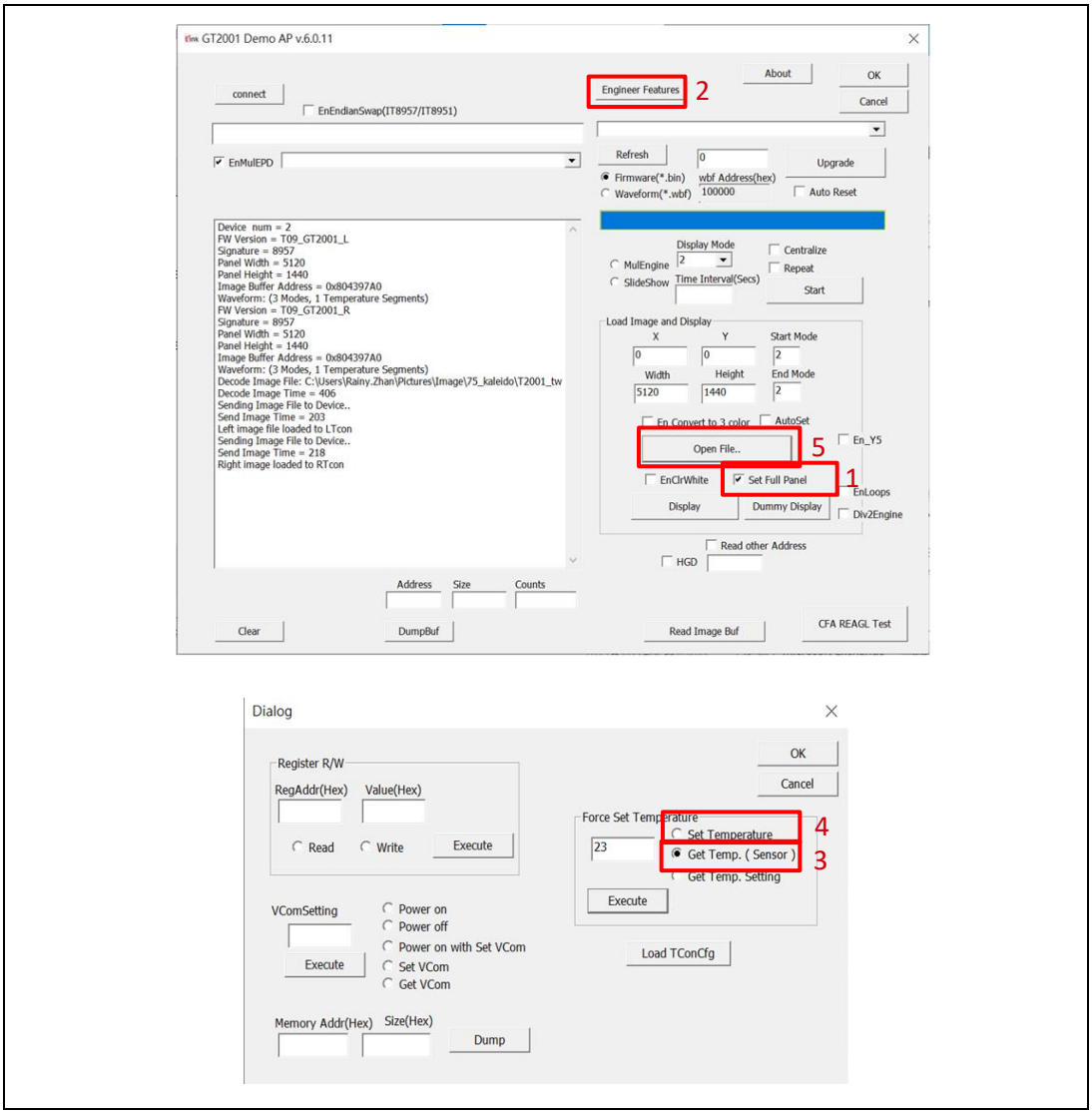



Figure 3.1

### (4) Update picture to ePaper display

Execute GT2001 Demo AP (refer to Figure 3.2)

- Enable “Set full Panel” (step 1)
- Click “Engineer Features” (setp 2)
- Select Get Temp.(Sensor) to Execute to get temperature (step 3)
- Select Set Temperature to Execute to set temperature (step 4)
- Back to Main. Click “Open File..” to choose the color mapping picture (step 5&6)
- Set “Start mode” and “End mode” to 2 (step 7)
- Click “ Display” button to show selected picture on ePaper display (step 8)



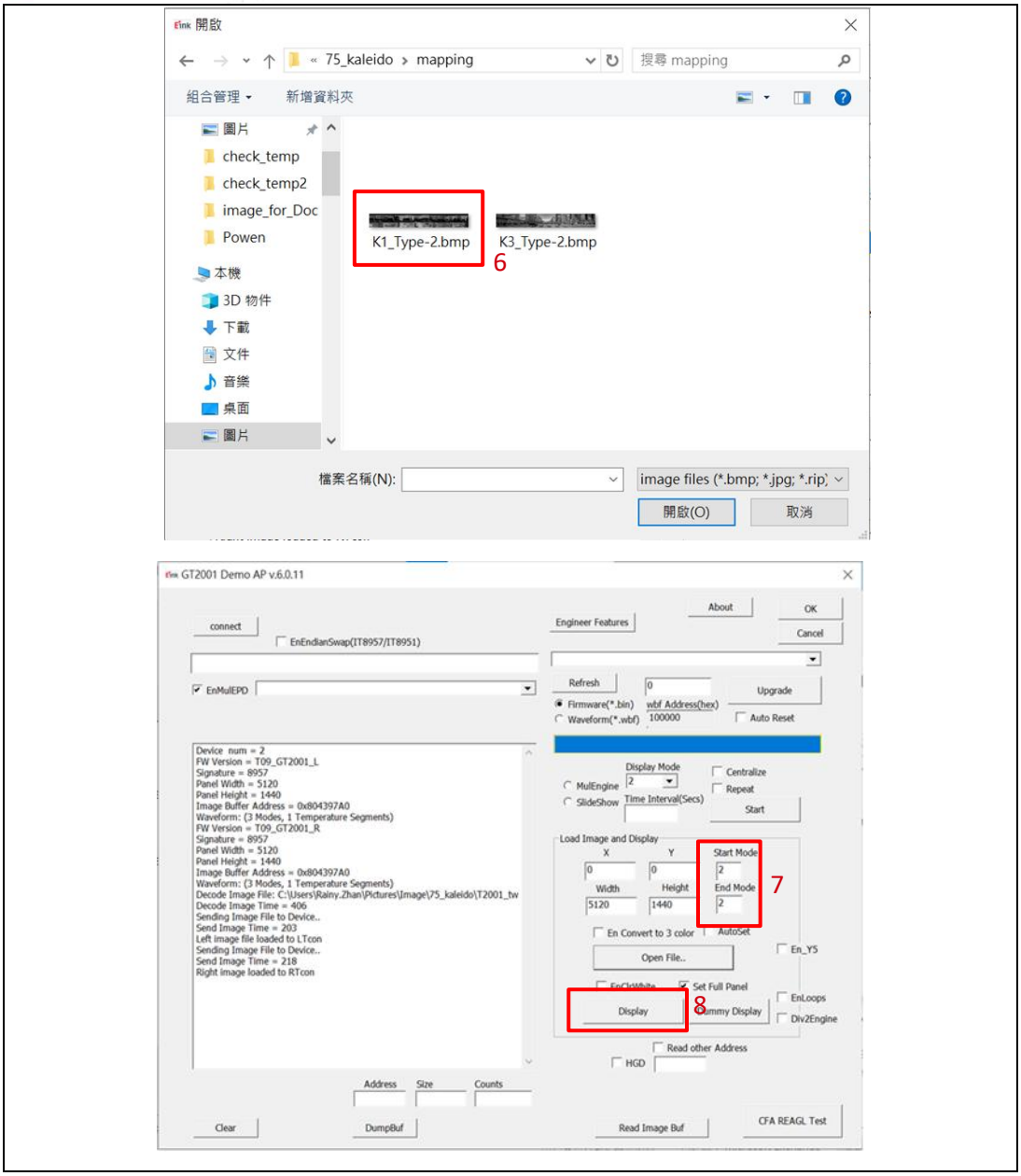



Figure 3.2 Update picture to 75” ePaper display

# 4 Appendix

## (1) How to minimize artifact

- Execute GT2001 Demo AP (refer to Fig 3.3)
- Enable “Set full Panel” (step 1)
- Select “EnClrWhite” option (step 2)
- Set “Start mode” and “End mode” to 0, (step 3)
- Click “Display” button. ePaper display will show white picture. Repeat above steps if necessary. Unselect “EnClrWhite” option after done with minimizing artifact.

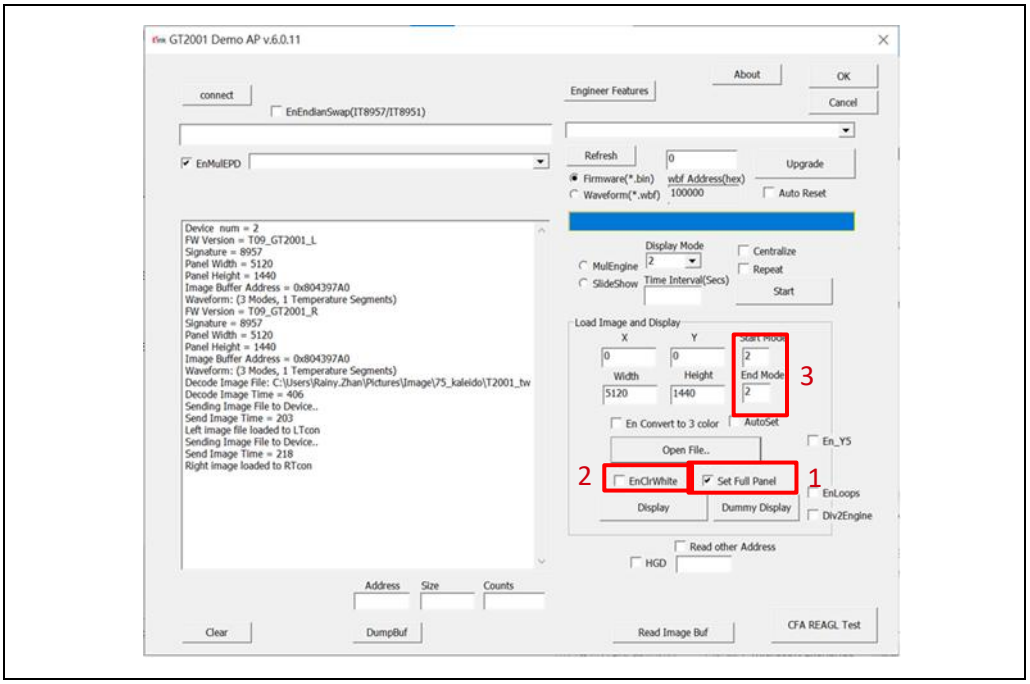



Figure 3.3

## (2) How to upgrade firmware

- Execute GT2001 Demo AP(refer to Figure 3.4)
- Check the EnMulEPD box (step 1)
- Click the “connect” button (step 2)
- Choose “Firmware(*.bin) (step 3)
- Click “Refresh” and “choose the FW you want to use. (step 4&5)
- Click “ Upgrade” (step 6)
- If update is success, please re-plug the power adapter and USB cable (reset)

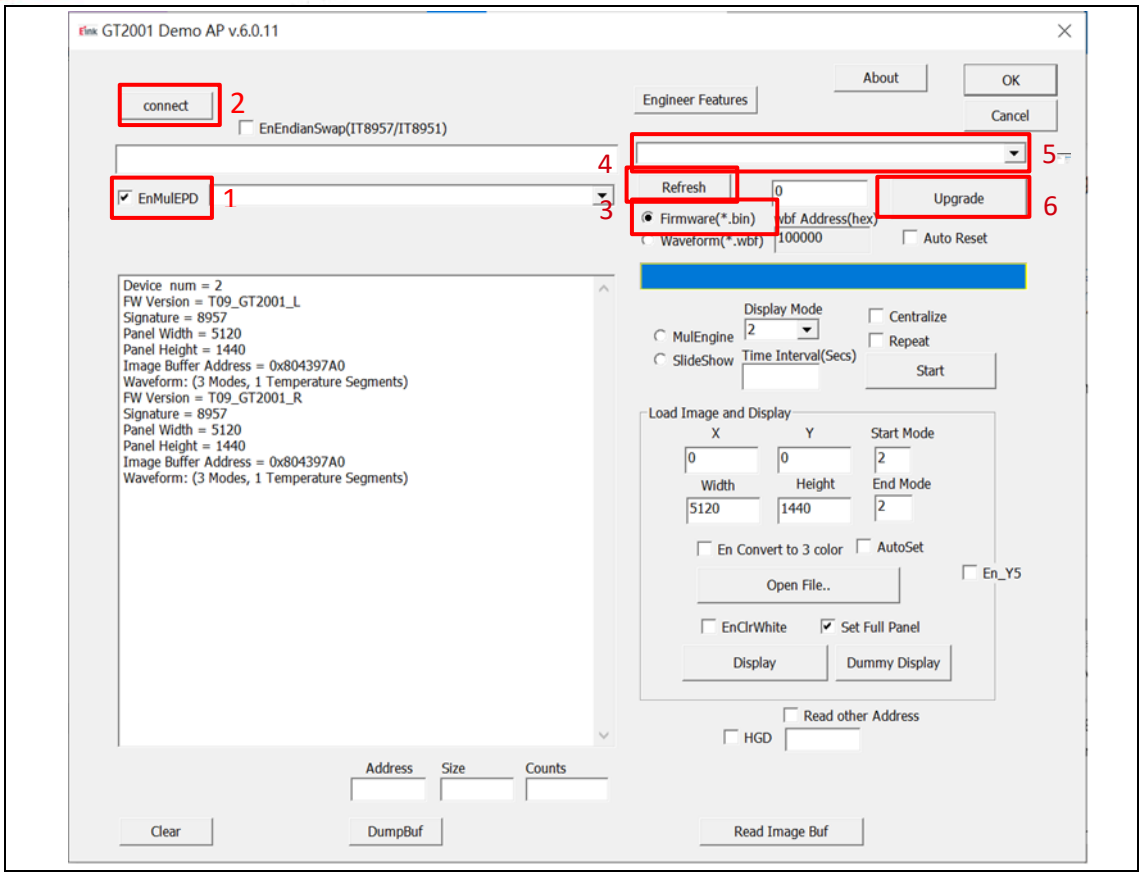



Figure 3.4

### (3) How to upgrade waveform

- Execute GT2001 Demo AP (refer to Figure 3.5)
- Check the EnMulEPD box (step 1)
- Click the “connect” button (step 2)
- Choose “Firmware (*.wbf) (step 3)
- Click “Refresh” and “choose the WF you want to use. (step 4&5)
- Click “ Upgrade” (step 6)
- If update is success, please re-plug the power adapter and USB cable (reset)

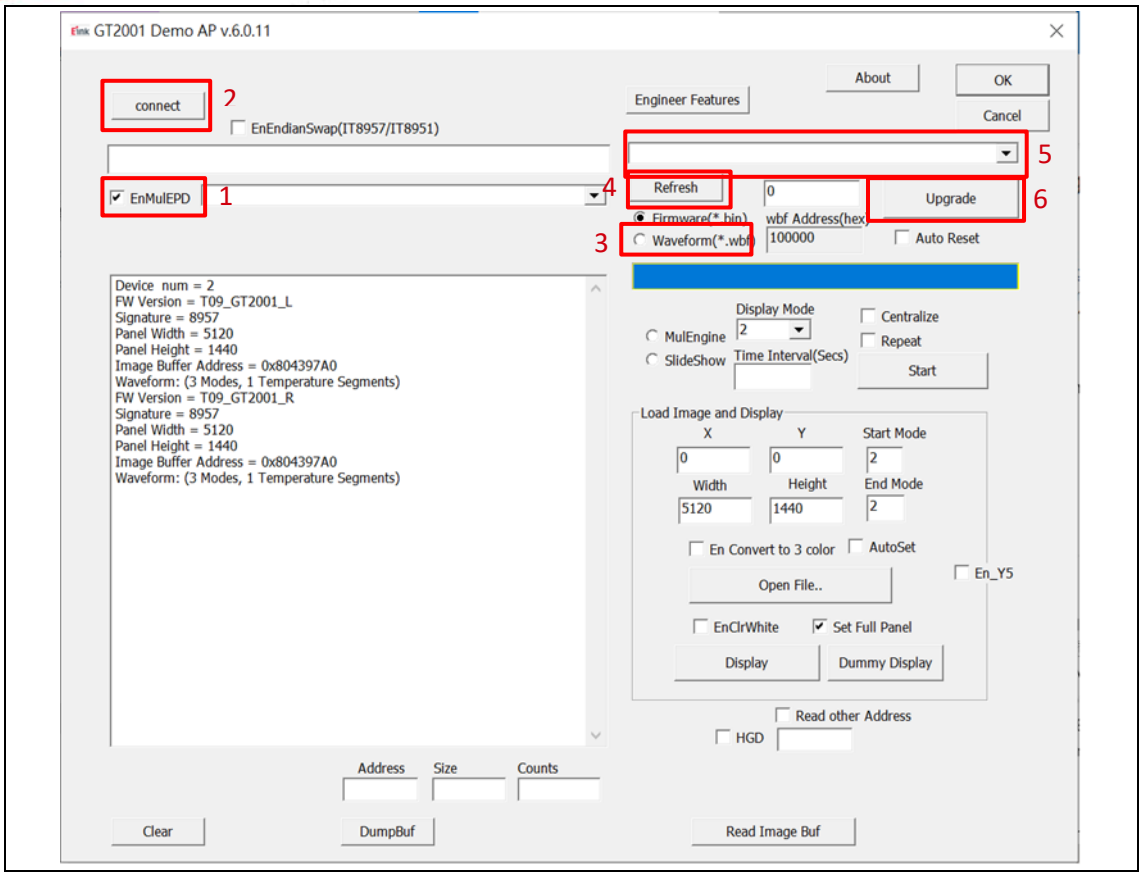



Figure 3.5

### (4) How to slideshow

- Execute GT2001 Demo AP (refer to Figure 3.6)
- Check the EnMulEPD box (step 1)
- Click the “connect” button (step 2)
- Upload all images under the folder name as “SlideShowImages”
- Set “Display Mode” and “Time Interval” (step 3)
- Select “SlideShow” option and click “Start”botton. (step 4)

Note:

* If the GT2001_Demo_AP.exe put in a Demo AP folder, the slideShowImages folder also needs under Demo AP folder.

* Time interval requires more than one picture update time.

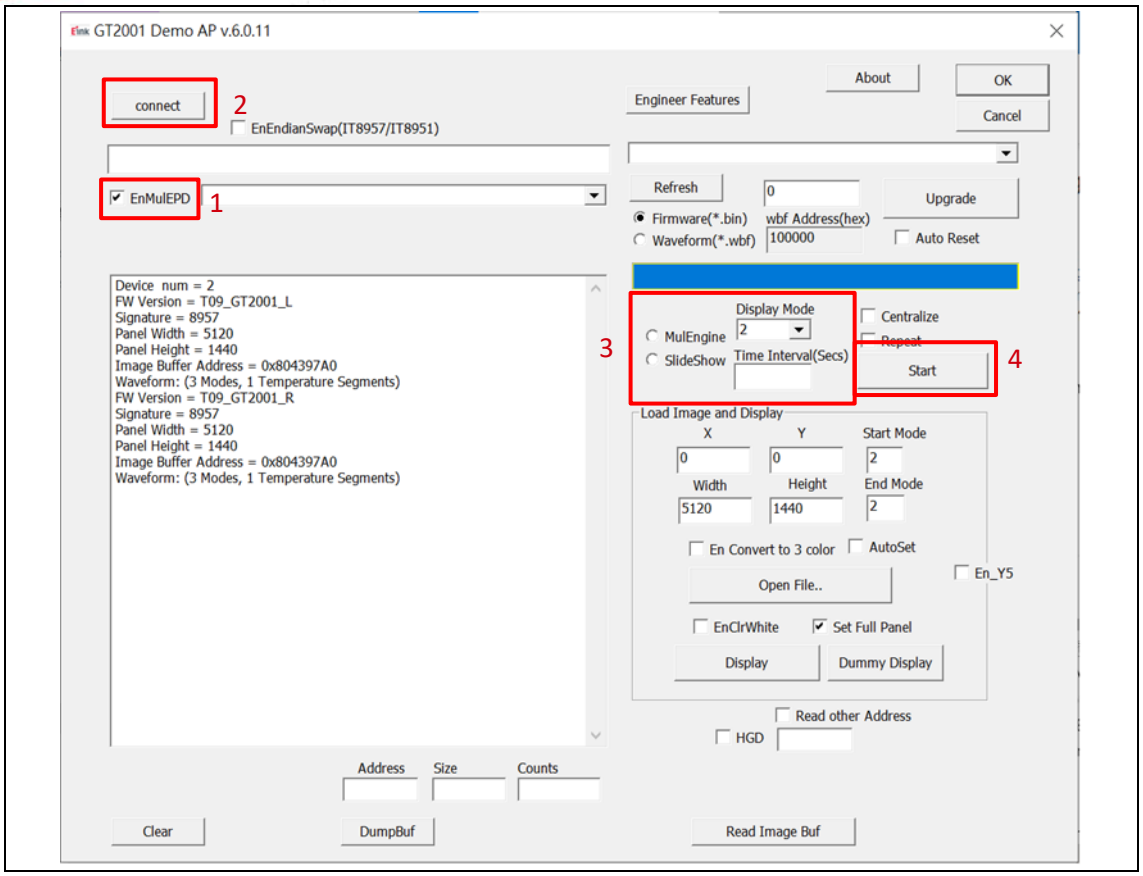

GT2001 Demo AP v.6.0.11
connect
2
EnEndianSwap(IT8957/IT8951)
EnMulEPD
1
Engineer Features
About
OK
Cancel
Refresh
0
Upgrade
Firmware(*.bin)
wbf Address(hex)
Waveform(*.wbf)
100000
Auto Reset
Device num = 2
FW Version = T09_GT2001_L
Signature = 8957
Panel Width = 5120
Panel Height = 1440
Image Buffer Address = 0x804397A0
Waveform: (3 Modes, 1 Temperature Segments)
FW Version = T09_GT2001_R
Signature = 8957
Panel Width = 5120
Panel Height = 1440
Image Buffer Address = 0x804397A0
Waveform: (3 Modes, 1 Temperature Segments)
3
Display Mode
MulEngine
SlideShow
Time Interval(Secs)
Centralize
Repeat
Start
4
Load Image and Display
X
Y
Start Mode
0
0
2
Width
Height
End Mode
5120
1440
2
En Convert to 3 color
AutoSet
En_Y5
Open File..
EnClrWhite
Set Full Panel
Display
Dummy Display
Read other Address
HGD
Address
Size
Counts
Clear
DumpBuf
Read Image Buf

Figure 3.6

## (5) How to set VCOM & temperature

- Execute GT2001 Demo AP (refer to Figure 3.7)
  - Set Vcom
    - Click “Engineer Features “button (Step 1)
    - VCOM Set/Get (Step 2)
    - Set/Get VCOM voltage value.
    - Click “Execute” button to Set/Get VCOM.
    - Click “OK” button
  - Set temperature
    - Click “Engineer Features “button (Step 1)
    - Temperature Set/Get (step 3)
    - Set/Get temperature value.
    - Click “Execute” button to Set/Get temperature.
    - Click “OK” button

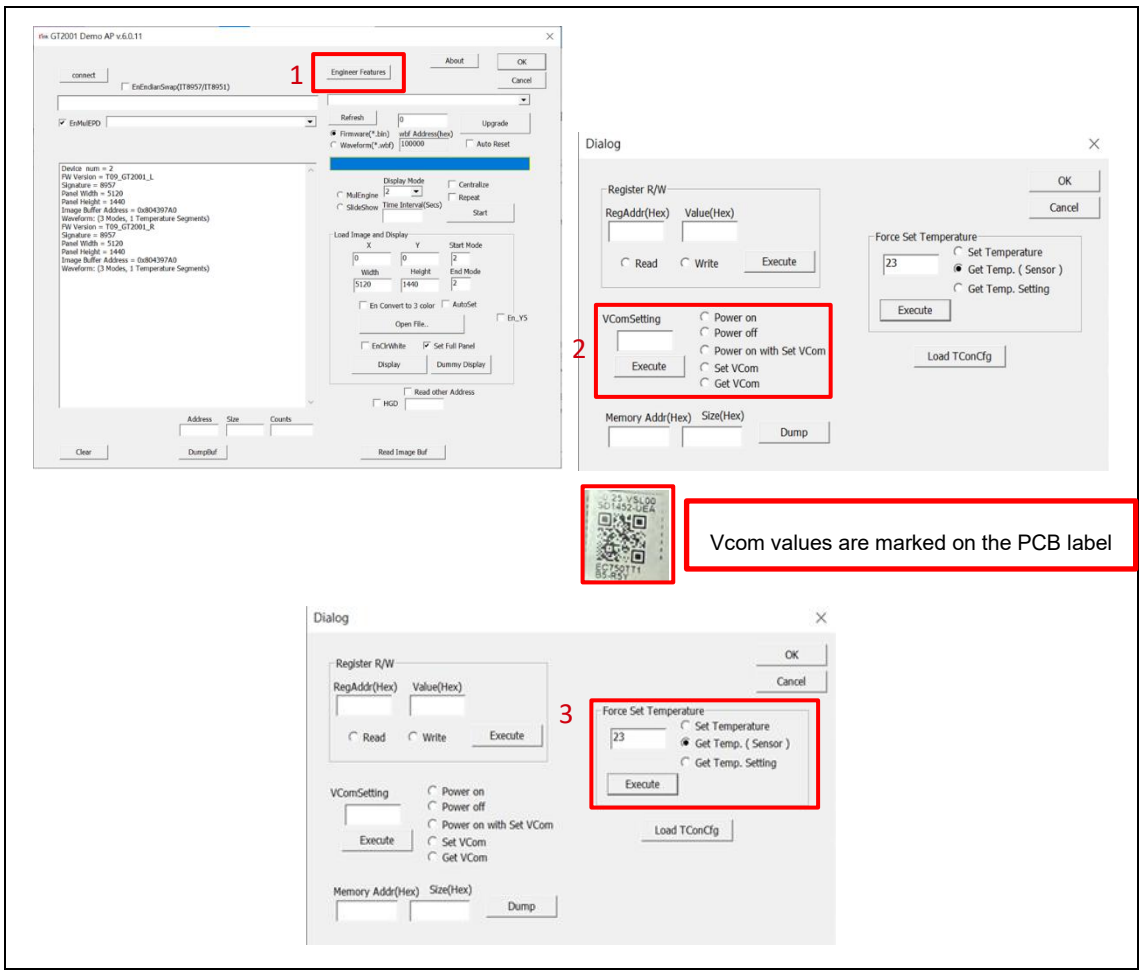



Figure 3.7

# 5 Troubleshooting

Below is a list of commonly asked questions and basic troubleshooting steps of GT2001 evaluation board.

Table 4.1 Troubleshooting

| Num | Issue | Possible Cause and Solution |
|---|---|---|
| **1** | GT2001 device is not visible on PC | USB cable damage |
| | | Replace USB cable. |

# 6 Contact Information

For more information, please visit

http://www.eink.com

For sales office addresses, please visit

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

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