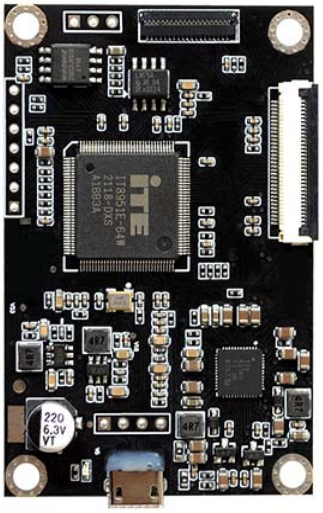
Development Board for 13.3 inch E-paper

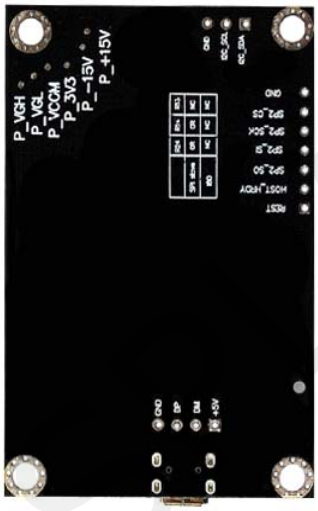
GooDisplay®

DEXA-C133

Dalian Good Display Co., Ltd.

Product Specifications





Customer	**Standard**
Description	**Drive Board for 13.3'' E-paper**
Model Name	**DEXA-C133**
Date	**2021/11/10**
Revision	**1.0**

	Design Engineering		
	Approval	**Check**	**Design**
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Version	Date	Edit	Check	Remark
V1.0	2021/11/05			

Contents

1.Overview

DEXA-C133 is the special driver board for GDEP133UT3. It can directly drive the display through special software.

Model	Working Temp.	E-paper Display Model	Color
DEXA-C133	-20℃ ~ 70℃	GDEP133UT3	Monochrome 16 Grayscale

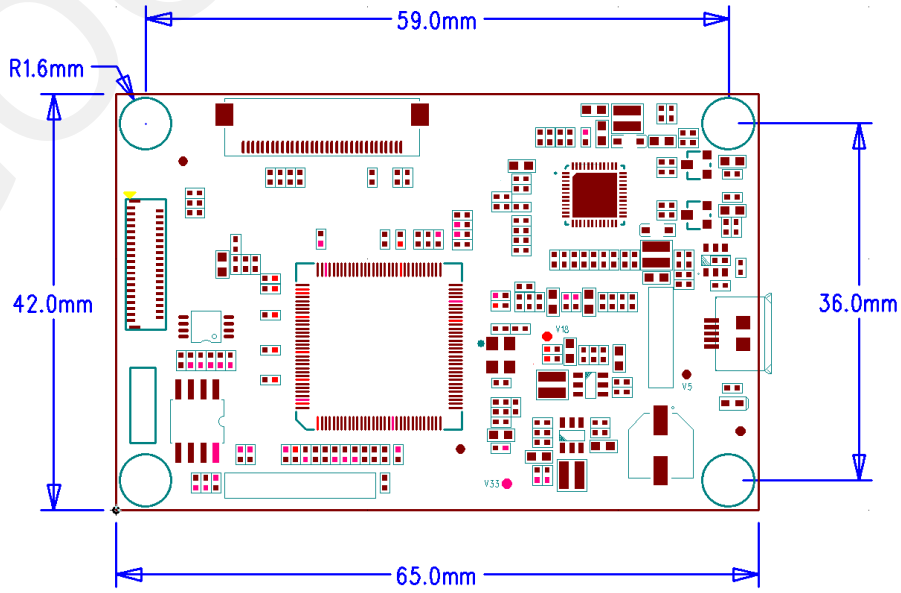
2. Function

DEXA-C133 can support to drive GDEP133UT3, providing e ink screen driving solution for client's e ink screen equipment, reducing customers' development workload on screen driver so as to complete the product scheme more quickly and efficiently.

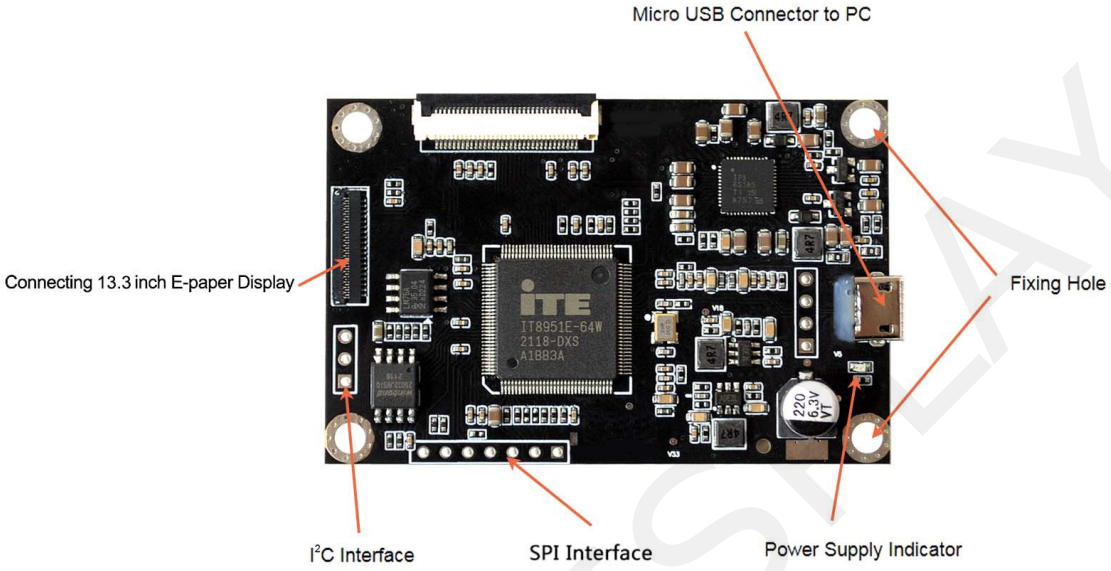
3. Structure Specification

Function	Driving E-paper Display
Input Interface	1. Micro USB interface 2. I2C interface
Output Interface	EPD Interface, Press-down Connection （connector 1）
Indicator	Power Supply Indicator
Outline Dimension	65*42*7 mm
Fixing	Screw Hole*4

Outline Dimension:



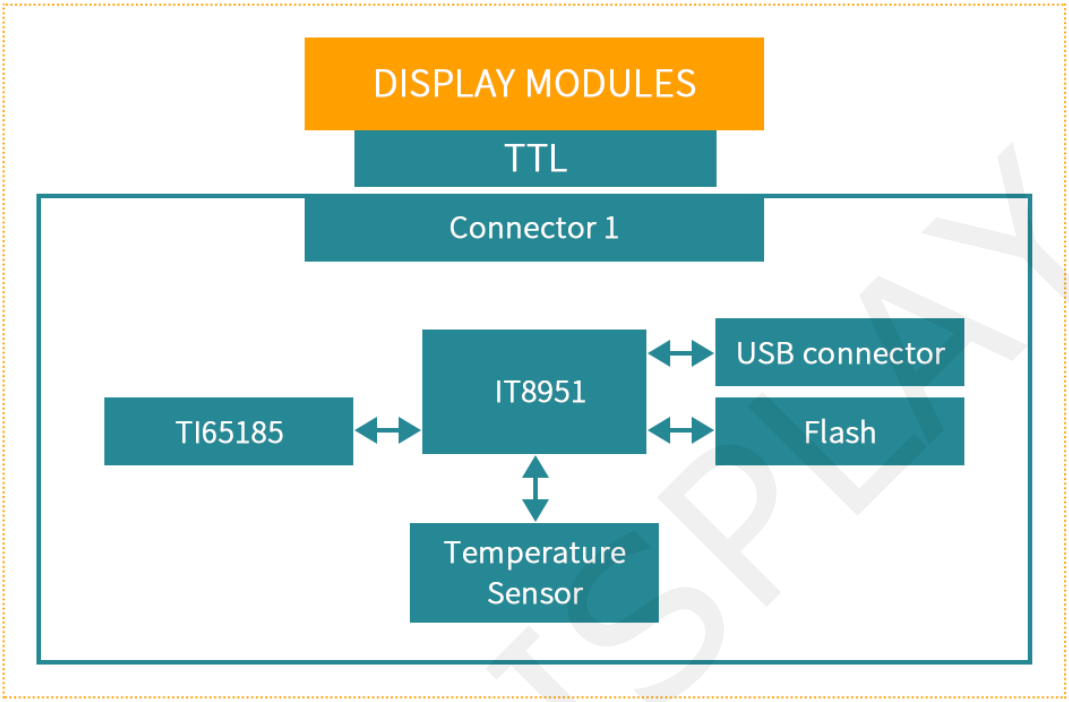
4. Appearance



5. Hardware Specification

Function	Driving E-paper Display
Input Power Supply	DC5V
Working Current	● 35mA（Stand-by）
Max Grayscale	16 Grayscale
Size of EPD Supported	13.3” EPD
Working Temp.	-20℃ ~ 7 0℃

6. Architecture Diagram



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7. Pin Definition:

Pin	Signal	Description	Remark
1	VNEG	Negative power supply source driver	
2	VPOS	Positive power supply source driver	
3	VSS	Ground	
4	VDD	Digital power supply drivers	
5	XCL	Clock source driver	
6	XLE	Latch enable source driver	
7	XOE	Output enable source driver	
8	VSS	Ground	
9	VSS	Ground	
10	NC	No Connection	
11	XSTL	Start pulse source driver	
12	D0	Data signal source driver	
13	D1	Data signal source driver	
14	D2	Data signal source driver	
15	D3	Data signal source driver	
16	D4	Data signal source driver	
17	D5	Data signal source driver	
18	D6	Data signal source driver	
19	D7	Data signal source driver	
20	VSS	Ground	
21	NC	No Connection	
22	VCOM	Common connection	
23	VGH	Positive power supply gate driver	
24	VGL	Negative power supply gate driver	
25	NC	No Connection	
26	NC	No Connection	
27	NC	No Connection	
28	MODE1	Output mode selection gate driver	
29	VSS	Ground	
30	VSS	Ground	
31	VSS	Ground	
32	SPV	Start pulse gate driver	
33	CKV	Clock gate driver	
34	BORDER	Border connection	
35	VSS	Ground	
36	VSS	Ground	
37	VSS	Ground	
38	VSS	Ground	
39	VSS	Ground	

8. Software Specification

DEXA-C133 can be connected to PC or motherboard to run software for driving screen.

9. Power Supply State

Input power supply is DC5V via USB interface.

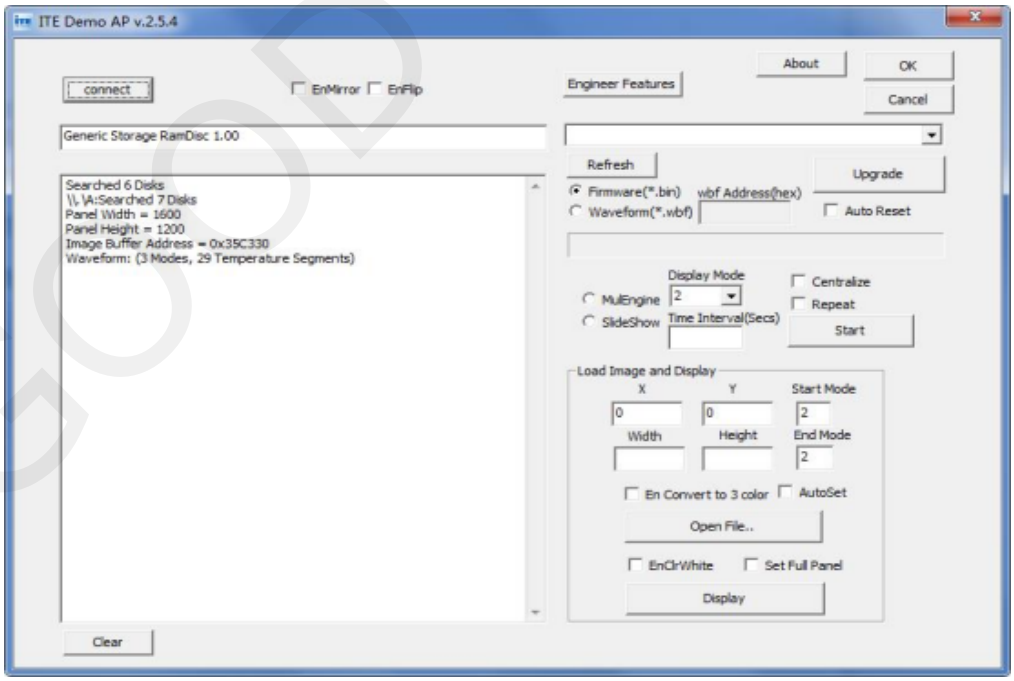
10. Indicator State

When the indicator light is on, the power supply is normal.

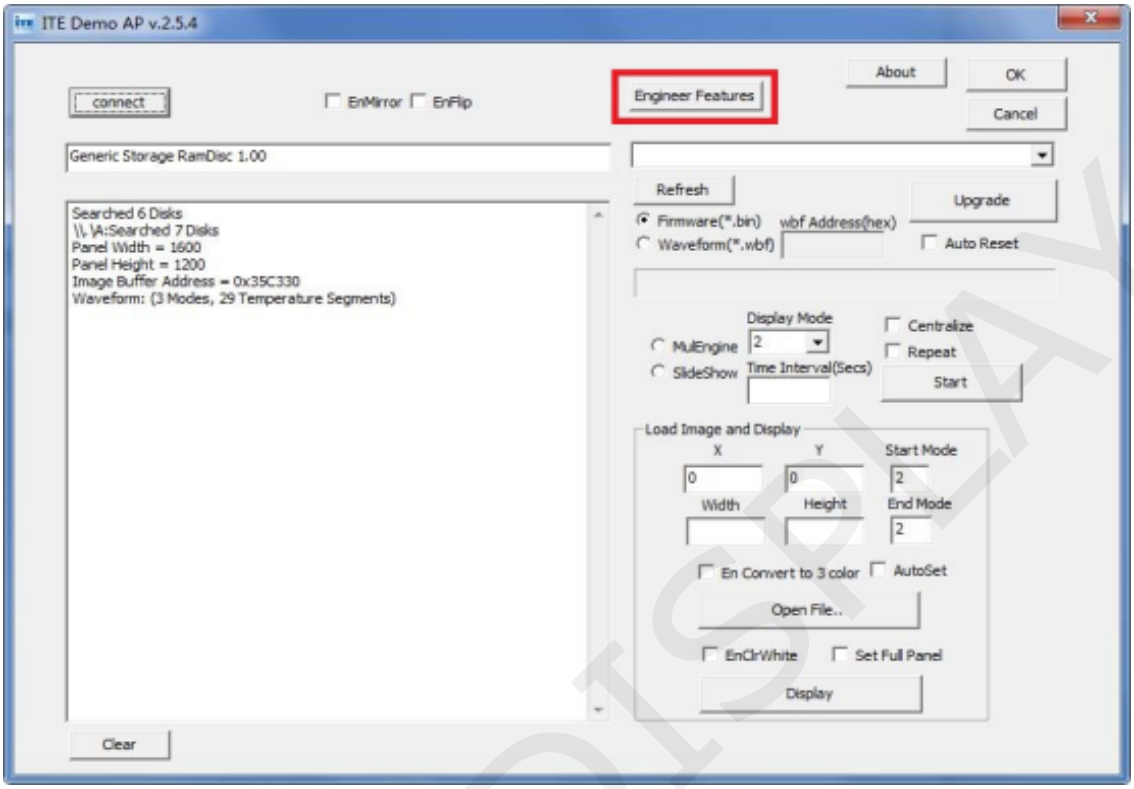
11. V-COM Voltage Adjustment

Default value for V-com of DEXA-C133 is -2.50V. Users can via upper computer software ITE_TCon_DemoAP_v.2.5.4 to adjust the voltage as shown below:

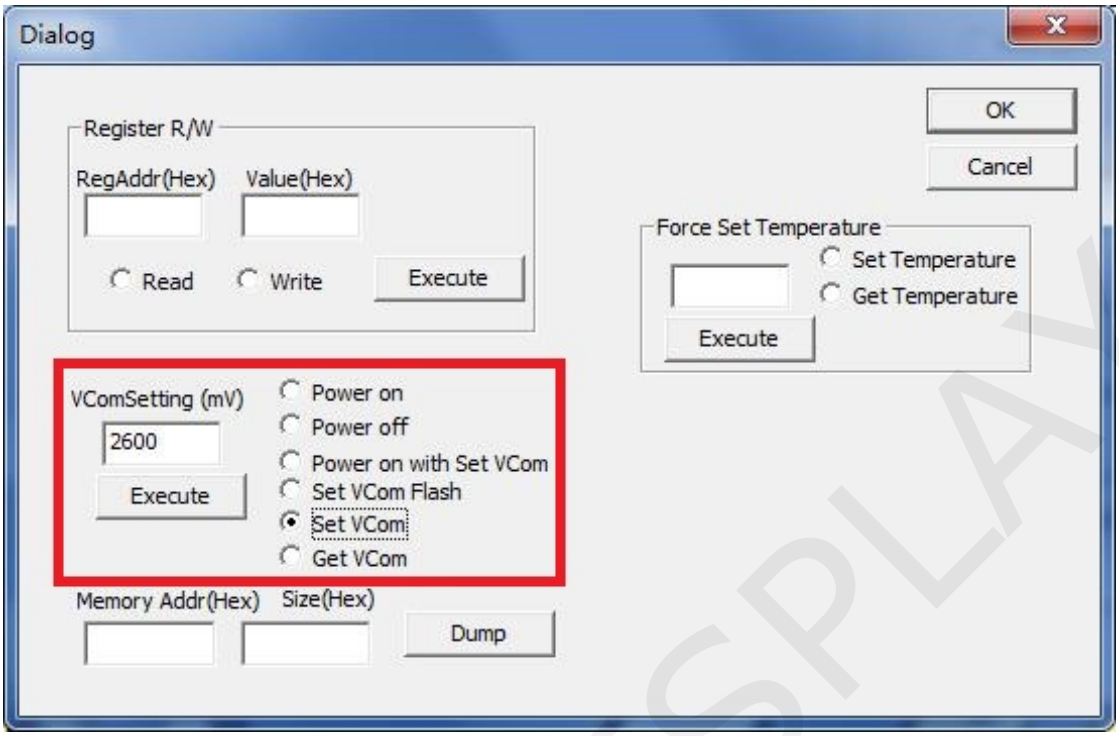
1) Connect the controller board to PC end via USB interface
2) Open " ITE_TCon_DemoAP_v.2.5.4 " testing software
3) Click connect to see interface as shown below：



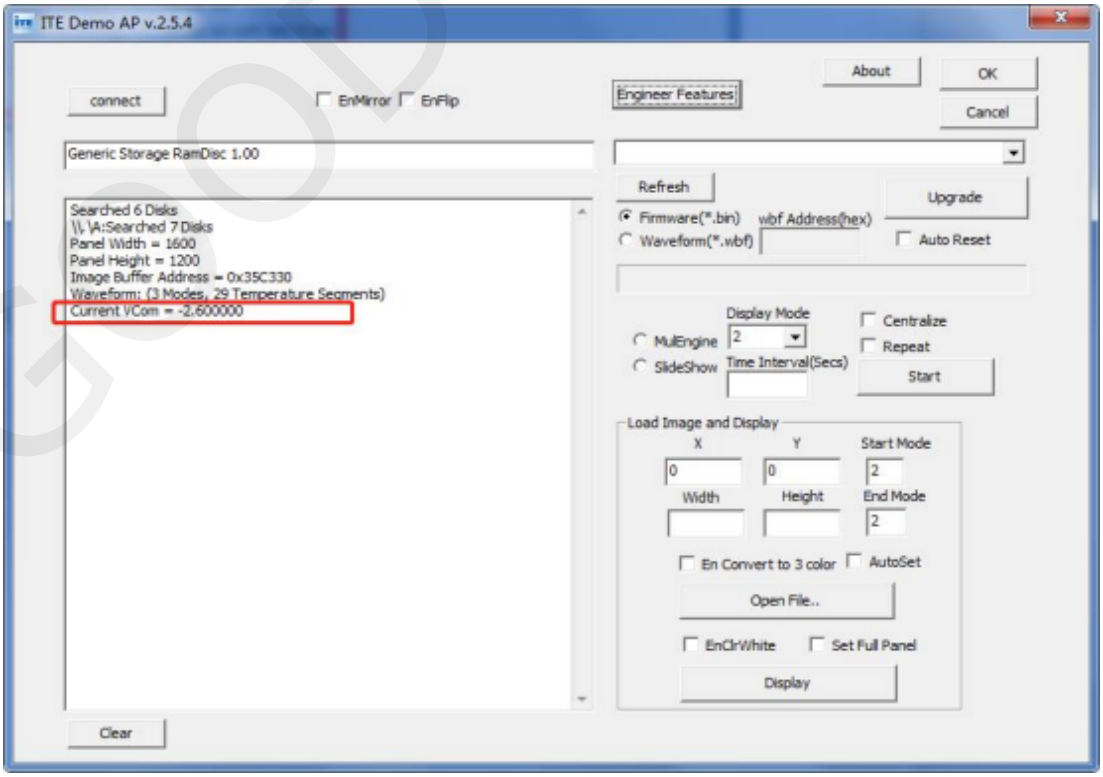
4) Click " Engineer Features " as shown below：



5) Input V-com voltage value in " VComSetting（mV） " box (Please note: the value should be minus and unit mV), e.g. If for -2.6V, then enter 2600. Then select Set VCom (This option will not save when disconnected) or Set VCom Flash (This option will save when disconnected) and click " Execute " to finish settings.



6) After V-Com voltage setting will appear the current V-com voltage value in the main interface, which means the V-com voltage setting is complete as shown below:



12. Voltage Testing Points

There are eight voltage testing points on the back of the motherboard from top to bottom: P_ VGH、P_ VGL、P_ VCOM、P_ 3V3、P_- 15V、P_+ 15V. To test the voltage of the testing point, contact the negative probe of the multi-meter or other voltage test instruments with the GND, the positive probe with the point to be tested and read the voltage parameters.

Voltage Testing Point

13. Remarks