SMART DISPLAY MODULE SPECIFICATION

PCBA-UEDX6911-HDMI-V2.0 series	
Model:	ALL-UE021WV-RH30-A013A(PCBA-UEDX6911-HDMI-V2.0)
Version:	V1.2
Date:	2026-10-19

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Customer Confirmation

Approved by	Notes

REVISION HISTORY

Revision	Date	Contents of Revision Change	Remark
V1.0	20250720	Preliminary release	
V1.1	20250821	Add VIEWE display screen model	
V1.2	20261019	Add detailed specifications for the support screen	

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1. Introduction

1.1 Appearance picture



1.2 Features

1) Compatible with multiple MIPI screens
2) With capacitive touch screen, support 5-point model control, USB touch, free drive.
3) Also monitor Raspberry Pi, BB Black, Banana Pi and other mainstream mini PCS
4) When used as a Raspberry Pi monitor, it supports Raspbian, Ubuntu, WIN10IOT and other systems, with single o 'clock control and no drive
5) When used as a computer monitor, it supports Windows 7/8/81/10, five-point touch, free drive
6) Support common game consoles such as Microsoft PS4, XBOX360 and Nintendo.

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1.3 On-board chip：LT6911C

HDMI1.4 to Dual-port MIPI DSI/CSI/LVDS with Audio

1) HDMI1.4 Receiver

   a. Compliant with the HDMI 1.4 specification with TMDS data rates up to 3.4Gbps per channel

   b. Support HDCP 1.4

   c. Adaptive receiver Equalization for PCB, cable and connector losses

2) Single/Dual-Port MIPI® DSI/CSI Transmitter

   a. Compliant with DCS1.02, D-PHY1.2& DSI1.02 &CSI-2 1.0

   b. 1 Clock Lane, and 1~4 Configurable Data Lanes per port

   c. 1/2 configurable port

   d. 80Mbps~1.5Gbps per data lane

   e. Maximum 64pixels overlap for each half

   f. Both non-burst and burst video mode supported

   g. Support RGB666, Loosely RGB666, RGB888, RGB565, 16-bit YCbCr4:2:2,20-bit YCbCr4:2:2,24-bit YCbCr 4:2:2 Video Format

   h. Video stream copy mode for each port

   i. Side-by-side 3D support

3) Single/Dual-Port LVDS Transmitter

   a. Compatible with VESA and JEIDA standard

   b. 1/2 Configurable Port

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c. 1 clock lane and 4 configurable data lanes per port

d. Support Maximum Data Rate 1.2Gbps/lane

e. Output Color Depth supports 6-bit and 8-bit

f. Video stream copy mode for each port

g. Side-by-side 3D support

4) Miscellaneous

a. 3.3V/1.2V Supply Power

b. Internal CSC support conversions between YCbCr 4:4:4 and RGB, and between YCbCr 4:2:2 and YCbCr 4:4:4

c. Support SPDIF and 2-channel IIS audio output

d. Support 100KHz I2C slave

e. Integrated Microprocessor

f. Temperature Range: -40°C ~ +85°C

g. ESD 2kV HBM

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1.4 Quick view supported

	Resolution	Interface Mode	Driver IC	Touch IC	shape	VIEWE MODEL
2.1inch	480 × 480	30PIN MIPI 2lane	ST7701	CST826	Round	UE021WV-RH30-A013A
2.76inch	480 × 480	30PIN MIPI	ST7701S	CST836U	Round	UE028VG-RB30-A045A
4.0inch	480 × 480	30PIN MIPI 2Lane	GC9503V	FT6336U	Square	UE040WV-RH30-A064B
	480 × 480	30PIN MIPI 2Lane	GC9503V	FT6336U	Square	UE040WV-RH30-A120A
	720 × 720	30PIN MIPI 4Lane	FL7703NI	FT6336U	Square	UE040HD-RB30-A146A
	720 × 720	30PIN MIPI 4Lane	FL7707	-	Round	UE040HD-RB30-L145A
6.86inch	480 × 1280	40PIN MIPI	FL7707N	-	Strip	UE068HD-RI40-L004A
9.3inch	600 × 1600	40PIN MIPI	FL7707N	-	Strip	UE093FH-RB40-L001A
10.11inch	440 × 1920	40PIN MIPI	FL7707N	GT911	Strip	UE101FH-RB40-A063A

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1.5 Display Specific Parameters

UE021WV-RH30-A013A：

Item 项目	Specification 规格	Unit 单位	Remark 备注
Pixel Driving element	TFT	-	-
Screen Size	2.1	Inch	Diagonal
Resolution	480(W)*3(RGB)*480(H)	Dots	-
Driver IC	ST7701		
CTP IC	CST826		
Active Area	57.6(W)*43.2(H)	mm	-
Pixel pitch (W*H)	0.111(H)*0.111(V)	mm	-
Module Size (W*H*D)	56.18(W)*59.71(H)*2.3(D)	mm	-
Luminance	350	cd/m2	-
Interface Mode	MIPI 2lane	-	-
Viewing Direction	ALL	O'clock	-
Display Color	16.7M	Colors	24bits

UE028VG-RB30-A045A:

Item	Specification	Unit	Remark
Pixel Driving element	IPS TFT	-	-
Screen Size	2.76	Inch	Diagonal
Resolution	480(W)*3(RGB)*480(H)	Dots	-
Active Area	70.13(W)*70.13(H)	mm	-
Module Size (W*H*D)	73.03(W)*76.48(H)*2.34(D)	mm	
Driver IC	ST7701S	-	
CTP IC	CST836U	-	
Interface Mode	30PIN MIPI 2 LANE	-	

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Display mode	Normally Black	-	
Luminance	300	cd/m^2	Typ.
Viewing Direction	ALL	O'clock	-
Display Color	16.7M	Colors	24bits
LED life time	30,000 Hours	-	

UE040WV-RH30-A064B:

Item	Specification	Unit	Remark
Pixel Driving element	IPS TFT	-	-
Screen Size	4.0	Inch	Diagonal
Resolution	480(W)*3(RGB)*480(H)	Dots	-
Interface	MIPI	-	2 Lanes
Driver IC	GC9503V	-	
CTP IC	FT6336U	-	
Module Power Consumption	0.85	Watt	Typ.
Active Area	71.86(W)*70.18(H)	mm	-
Pixel pitch (W*H)	0.1497(W)*0.1462(H)	mm	-
Module Size (W*H*D)	84(W)*84(H)*2.71(D)	mm	-
Luminance	350	cd/m^2	Typ.
Viewing Direction	All	O'clock	-
Display Color	16.7M	Colors	24bits

UE040WV-RH30-A120A:

Item	Specification	Unit	Remark
Pixel Driving element	IPS TFT	-	-
Screen Size	4.0	Inch	Diagonal
Resolution	480(W)*3(RGB)*480(H)	Dots	-

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Interface	MIPI	-	2 Lanes
Module Power Consumption	0.85	Watt	Typ.
Driver IC	GC9503V	-	
CTP IC	FT6336U	-	
Active Area	71.86(W)*70.18(H)	mm	-
Pixel pitch (W*H)	0.1497(W)*0.1462(H)	mm	-
Module Size (W*H*D)	84(W)*84(H)*3.11(D)	mm	-
Luminance	350	cd/m^2	Typ.
Viewing Direction	All	O'clock	-
Display Color	16.7M	Colors	24bits

UE040HD-RB30-L145A

Item	Specification	Unit	Remark
Pixel Driving element	A-Si TFT	-	-
Screen Size	4.0	Inch	Diagonal
Resolution	720(W)*3(RGB)*720(H)	Dots	-
Active Area	101.52(W)*101.52(H)	mm	-
Module Size (W*H*D)	105.3(W)*109.62(H)*2.3(D)	mm	-
Driver IC	FL7707	-	
Interface Mode	MIPI 4Lane	-	-
Viewing Direction	ALL	O'clock	-
Display Color	16.7M	Colors	24bits

UE040HD-RB30-A146A

Item	Specification	Unit	Remark
Pixel Driving element	TFT	-	-

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Screen Size	4.0	Inch	Diagonal
Resolution	720(W)*3(RGB)*720(H)	Dots	-
Active Area	71.93(W)*71.93(H)	mm	-
Pixel pitch (W*H)	0.117(H)*0.117(V)	mm	-
Module Size (W*H*D)	84.0(W)*84.0(H)*3.2(D)	mm	-
Driver IC	FL7703NI	-	
CTP IC	FT6336U	-	
Interface Mode	MIPI 4Lane	-	-
Luminance	220	cd/m^2	Typ.
Viewing Direction	ALL	O'clock	-
Display Color	16.7M	Colors	24bits

UE068HD-RI40-L004A

Item	Specification	Unit	Remark
Pixel Driving element	IPS TFT	-	-
Screen Size	6.86	Inch	Diagonal
Resolution	480(W)*3(RGB)*1280(H)	Dots	-
Module Power Consumption	-	Watt	
Active Area	60.02(W)*160.59(H)	mm	-
Pixel pitch (W*H)	125.4(W)*125.4(H)	um	-
Module Size (W*H*D)	66.6(W)*181(H)*7.15(D)	mm	
Driver IC	FL7707N	-	
Interface Mode	MIPI 4LANE	-	
Display mode	Normally Black	-	
Luminance	300	cd/m^2	Typ.
Viewing Direction	85/85/85/85(Typ)	Deg	-
Display Color	16.7M	Colors	24bits
LED life time	30,000 Hours	-	

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UE093FH-RB40-L001A

Item	Specification	Unit	Remark
Pixel Driving element	IPS TFT	-	-
Screen Size	9.3	Inch	Diagonal
Resolution	600(W)*3(RGB)*1600(H)	Dots	-
Module Power Consumption	-	Watt	
Active Area	82.94(W)*221.18(H)	mm	-
Pixel pitch (W*H)	0.04608(W)*0.13824(H)	um	-
Module Size (W*H*D)	89(W)*231(H)*7.3(D)	mm	
Driver IC	FL7707N	-	
Interface Mode	MIPI 4LANE	-	
Display mode	Normally Black	-	
Luminance	500	cd/m^2	Typ.
Viewing Direction	80/80/80/80(Typ)	Deg	-
Display Color	16.7M	Colors	24bits
LED life time	30,000 Hours	-	

UE101FH-RB40-A063A

Item	Specification	Unit	Remark
Pixel Driving element	IPS TFT	-	-
Screen Size	10.11	Inch	Diagonal
Resolution	440(H) RGB x 1920(V)	Dots	-
Interface	4-Lane MIPI	-	-
Driver IC	FL7707N	-	
CTP IC	GT911	-	
Module Power Consumption	TBD	Watt	Typ.

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Active Area	57.948(H) ×252.864 (V)	mm	Typ
Pixel pitch (W*H)	43.9(H) × 3 × 131.7(V)	mm	Typ
Module Size (W*H*D)	64.98(W)*266.09 (H)*7.25(D)	mm	Typ
LCM Luminance	420	cd/m^2	Typ.
Viewing Direction	85/85/85/85	O'clock	(CR≥10) Typ.
Display Color	16.7M	Colors	

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2. Product information

2.1 Hardware Interface Description

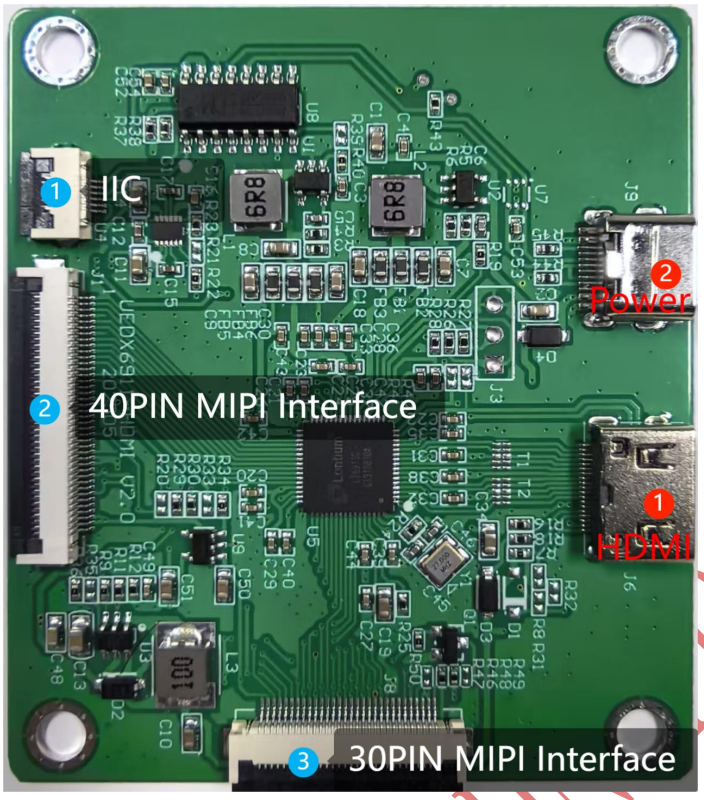


Figure 1

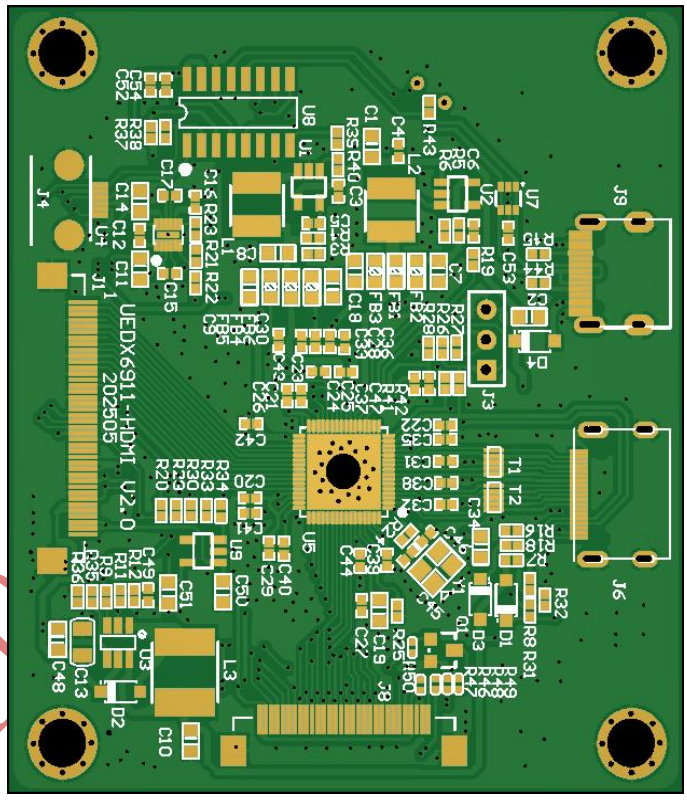
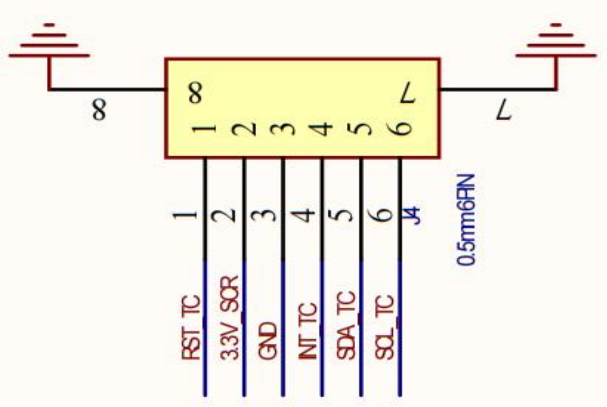


Figure 2

Figure 1：

① IIC： touch interface

Schematic:：



② Display Interface： 40pin display interface for other product

③ Display Interface： 30pin display interface for this product

2.2 30PIN Display Interface Description (eg: 4inch)

NO.	PIN NAME	Description
1	LEDA	LED anode
2	LEDK1	LED Cathode
3	LEDK2	LED Cathode
4	VCI	Power Supply 3.3V
5	IOVCC	Power Supply 3.3V
6	RESET	LCM reset signals
7	TE	Tearing effect output
8	PWM	The PWM frequency output for LCD driver control.
9	GND	Ground
10	D0P	DSI-D0+ data signals
11	D0N	DSI-D0- data signals
12	GND	Ground
13	D1P	DSI-D1+ data signals
14	D1N	DSI-D1- data signals
15	GND	Ground
16	CLKP	DSI-Clock+
17	CLKN	DSI-Clock-
18	GND	Ground
19	NC	NC
20	NC	NC
21	GND	Ground
22	VCI	Power Supply 3.3V
23	VCI	Power Supply 3.3V
24	GND	Ground
25	TP_INT	Touch Interrupt
26	TP_SDA	Touch IIC Data signal
27	TP_SCL	Touch IIC Clock signal
28	TP_RESET	Touch Reset Signal
29	TP_VCI	Touch Power supply
30	TP_IOVCC	Touch Power supply

I：Input；O：Output；P：Power

2.3 40PIN Display Interface Description (eg: 9.3inch)

Pin No.	Symbol	I/O	Description
1	GND	P	Power Ground
2	D0P	I/	MIPI data0 Positive input
3	D0N	I/	MIPI data0 Negative input
4	GND	P	Power Ground
5	D1P	I	MIPI data1 Positive input
6	D1N	I	MIPI data1 Negative input
7	GND	P	Power Ground
8	CLKP	I	MIPI clk Positive input
9	CLKN	I	MIPI clk Negative input
10	GND	P	Power Ground
11	D2P	I	MIPI data2 Positive input
12	D2N	I	MIPI data2 Negative input
13	GND	P	Power Ground
14	D3P	I	MIPI data3 Positive input
15	D3N	I	MIPI data3 Negative input
16	GND	P	Power Ground
17	GND	P	Power Ground
18-19	IOVCC	P	Power supply for digital circuits +1.8V input
20-23	NC	-	No connect
24	RESET	I	Reset pin
25	STBYB	I	Select standby mode
26	NC	-	No connect
27	GND	P	Power Ground
28-29	LEDK	P	LED Negative
30	GND	P	Power Ground
31	NC	-	No connect
32-33	GND	P	Power Ground
34	NC	-	No connect
35-36	LEDA	P	LED Positive
37	GND	P	Power Ground
38-39	VCC	P	Power supply for digital circuits +3.3V input
40	NC	-	No connect

I：Input；O：Output；P：Power

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2.4 Voltage & Current

Item	Conditions	Min	Typ	Max	Unit
Power Voltage	DC	4. 0	5.0	5.5	V
Operation Current	VCC= +5V, Maximum backlight current		260		mA
	VCC= +5V,backlight off	-	150	-	mA
Recommended power supply:5V 1A DC					

2.5 Reliability Test

Item	Conditions	Min	Typ	Max	Unit
Working Temperature	60%RH at 5V voltage	-20	25	70	C
Storage Temperature	---	-30	25	85	C
Working Humidity	25°C	10%	60%	90%	RH
ESD	---	Contact: ±4KV Air: ±8KV			KV

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3. Operating instructions

3.1 Used in Raspberry PI Raspbian/Ubuntu Mate/Win10 IoT Core system

Step 1： Install the official image

A. Download the latest image from the official

B. Install the system according to the steps of the official tutorial

Step 2： Modify the config.txt configuration file Step 1 After the burn is completed, open the config.txt file in the root directory of the Micro SD card and add the following code at the end of the file. Save and safely eject the Micro SD card.

```
hdmi_force_edid_audio=1
max_usb_current=1
hdmi_force_hotplug=1
config_hdmi_boost=7
hdmi_group=2
hdmi_mode=1
hdmi_mode=87
hdmi_drive=2
hdmi_cvt 480 480 60 6 0 0 0
```

Step 3： Insert the Micro SD card into the Raspberry PI, connect the HDMI cable to the Raspberry PI and the LCD, connect the USB cable to any of the four USB ports of the Raspberry PI, connect the other end of the USB cable to the USB port of the LCD, and then power up the Raspberry PI. If the display and touch are normal, the drive is successful.

3.2 How to use it as a computer monitor

Step 1: Use an HDMI cable to connect the computer's HDMI output signal to the HDMI interface of the LCD.

Step 2: Connect one end of the MicroUSB cable (either of the two MicroUSB ports can be used) to the USB Touch interface of the LCD and the other end to the USB port of the computer.

If there are multiple monitors, please unplug the interfaces of other monitors first and test this LCD as the only monitor.

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