Tailorpixels

A Professional Manufacturer of Display

Product Specification

Model:TBQ801HD-01

HDMI Display Board

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CONTENT

REVISION HISTORY

Rev	Description	Page	Date
1.2	Initial Release	All	2025-5-24

1. Hardware introduction

1.1. Introduction of the master control IC

The LT6911UXC is a high performance HDMI1.4 to MIPI®DSI/CSI/LVDS chip for VR/Smart phone/Display application. For MIPI®DSI/CSI output, LT6911UXC features configurable single-port or dual-port MIPI®DSI/CSI with 1 high-speed clock lane and 1~4 high-speed data lanes operating at maximum 1.5Gbps/lane, which can support a total bandwidth of up to 12Gbps. LT6911UXC supports burst mode DSI video data transferring, also supports flexible video data mapping path. For LVDS output, LT6911UXC can be configured as single-port or dual-port. For 2D video stream, the same video stream can be mapped to two separated panels, for 3D video format, left side data can be sent to one panel, and right side data can be sent to another panel.

1.2. **Interface introduction**

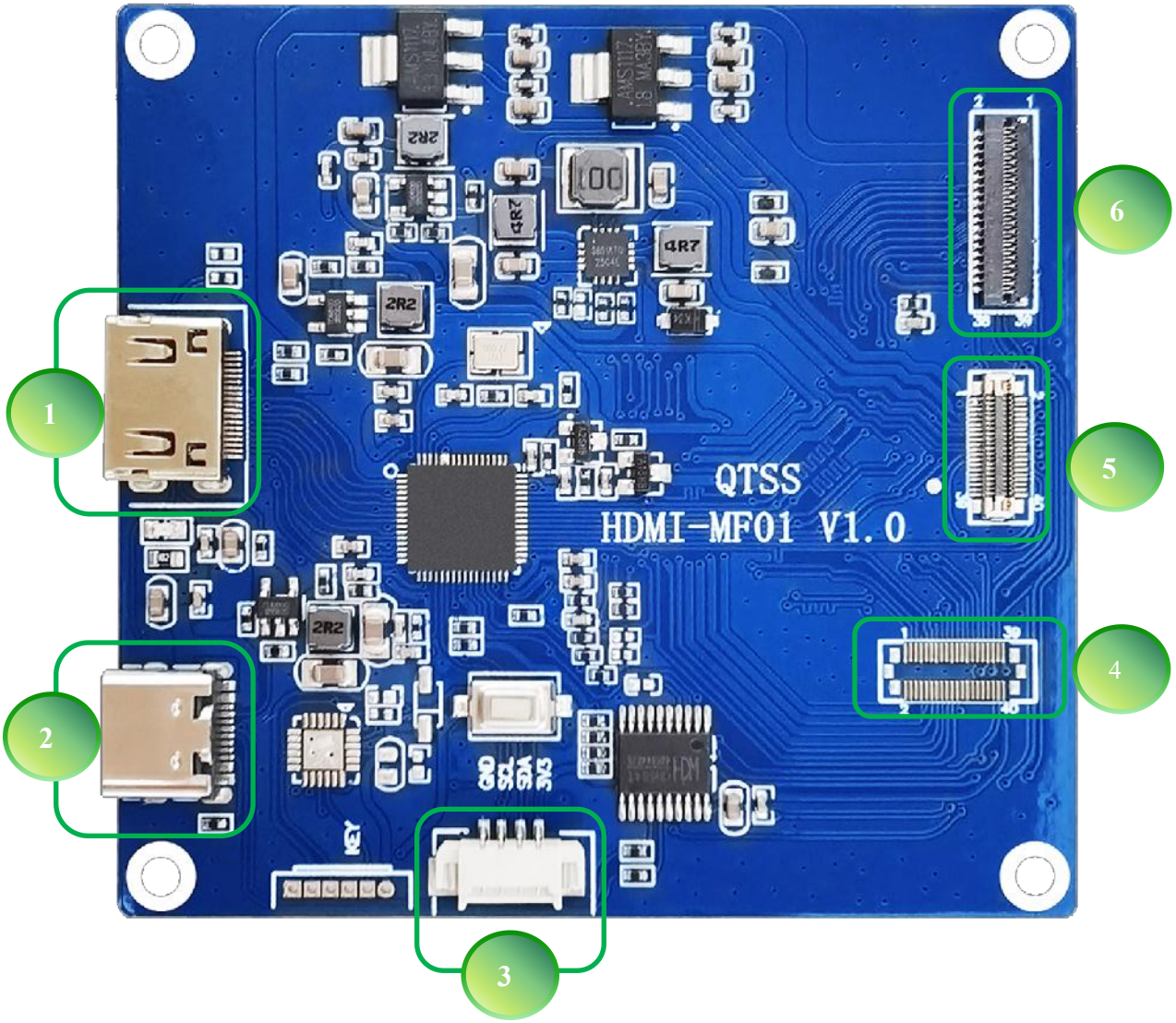

Figure 1 The interface introduction figure

① HDMI signal input. Adopting MINIHDMI/19Pin port, compliant with HDMI 1.4 specification, TMDS data rate up to 7Gbps/channel.

② Power supply and power supply input. With a USB Type-C interface, the input voltage is + 5V.

③ Firmware download port. The download ports of IIC are 3.3V, SDA, SCL, and GND from right to left.

④ MIPI signal output. Use BF035-I40B-C08-D(Public seat) ,Can be equipped with Driving AMOLED Panel.The interface definition is as follows:

⑤ MIPI signal output. Use OK-121GF040 seat, Can be equipped with Driving AMOLED Panel.The interface definition is as follows:

⑥ MIPI signal output. Use OK-F302-39115 seat, Can be equipped with Driving AMOLED Panel.The interface definition is as follows:

1.3. **Product specification**

Product Parameter	
demonstration of the type	HDMI-MF01 V1.0
product line	HDMI series
master control IC	LT6911UXC High-performance MIPI driver
Resolution	1080 *1920、1860×2480（Customizable）
Adapt to the display	7、8.01inch（Customizable）
voltage	5.0V
maximum power	4W
HDMI specifications	MINIHDMI--19P
firmware upgrade	USB Download
PCB size dimension	L49.95*W35.15*H5mm
working temperature	-20°C ~ 60°C
storage temperature	-30°C ~ 80°C
Working humidity	10% ~ 95%
Storage humidity	10% ~ 95%
testing environment	Reference is made to the national standard GB2423.2 test method

1.4. Use OK-F302-39115 seat, Drive the 7inch AMOLED screen pin definition

Pin No.	Symbol	Description	Note
1-3	GND	Power ground	
4-8	VBAT	Power supply for EL PMIC	
9	GND	Power ground	
10-11	NC	NC	
12	GND	Power ground	
13	D3P	HSSI_D3_P are differential small amplitude signals.	
14	D3N	HSSI_D3_N are differential small amplitude signals.	
15	GND	Power ground	
16	D0P	HSSI_D0_P are differential small amplitude signals.	
17	D0N	HSSI_D0_N are differential small amplitude signals.	
18	GND	Power ground	
19	CLKP	HSSI_CLK_P are differential small amplitude signals	
20	CLKN	HSSI_CLK_N are differential small amplitude signals	
21	GND	Power ground	
22	D1P	HSSI_D1_P are differential small amplitude signals.	
23	D1N	HSSI_D1_N are differential small amplitude signals.	
24	GND	Power ground	
25	D2P	HSSI_D2_P are differential small amplitude signals.	
26	D2N	HSSI_D2_N are differential small amplitude signals.	
27	GND	Power ground	
28	RST	Chip reset signal	
29	VDI	Supply voltage to the interface pins (+1.8V or +2.8V)	
30	VCI	Power supper 3.0-3.6 V	
31	TE	Tearing effect signal	
32	GND	Power ground	

33	TP-AVDD	Analog power for TP IC(3.0-3.6 V)	
34	TP-DVDD	Analog power for TP IC(+1.8V or +2.8V)	
35	TP-SDA	IIC SDA for TP IC	
36	TP-SCL	IIC SCL for TP IC	
37	TP-RST	RST for TP IC	
38	TP-INT	INT for TP IC	
39	NC	NC	

1.5. Use OK-121GF040 seat, Drive the 8.01inch AMOLED screen pin definition

Pin No.	Symbol	Description	Note
1	ELVSS	Negative gate driver output voltage level -4.6V	
2	TP_SDA	IIC SDA for TP IC	
3	ELVSS	Negative gate driver output voltage level -4.6V	
4	TP_INT	INT for TP IC	
5	MTP_PWR	OTP Panel	
6	TP_SCL	IIC SCL for TP IC	
7	ELVDD	Positive gate driver output voltage level +3.0V	
8	TP_VDD	Analog power for TP IC(3.0-3.6 V)	
9	ELVDD	Positive gate driver output voltage level +3.0V	
10	TP_IOVCC	Analog power for TP IC(+1.8V or +2.8V)	
11	AVDD	Analog Circuit output voltage level +6.7V.	
12	TP_RST	RST for TP IC	
13	VDDI	Supply voltage to the interface pins (+1.8V or +2.8V)	
14	GND	Power ground	
15	VCI	Power supper 3.0-3.6 V	
16	D2P	HSSI_D2_P are differential small amplitude signals.	
17	NC	NC	
18	D2N	HSSI_D2_N are differential small amplitude signals.	

19	AVDD_EN	Power IC enable control pin(Note:"H"=VDD level, "L"=VSSI level.	
20	D1P	HSSI_D1_P are differential small amplitude signals.	
21	SWIRE	Swire protocol setting pin of Power IC.	
22	D1N	HSSI_D1_N are differential small amplitude signals.	
23	TE	Tearing effect signal	
24	GND	Power ground	
25	RST	Chip reset signal	
26	CLKP	HSSI_CLK_P are differential small amplitude signals	
27	NC	NC	
28	CLKN	HSSI_CLK_N are differential small amplitude signals	
29	GND	Power ground	
30	GND	Power ground	
31	NC	NC	
32	D0P	HSSI_D0_P are differential small amplitude signals.	
33	NC	NC	
34	D0N	HSSI_D0_N are differential small amplitude signals.	
35	NC	NC	
36	D3P	HSSI_D3_P are differential small amplitude signals.	
37	NC	NC	
38	D3N	HSSI_D3_N are differential small amplitude signals.	
39	NC	NC	
40	GND	Power ground.	

1.6. Use BF035-I40B-C08-D(Public seat), Drive the 6.67inch AMOLED screen pin definition

Pin No.	Symbol	Description	Note
1	GND	Power ground.	
2	ELVSS	Negative gate driver output voltage level -4.6V	

3	D3N	HSSI_D3_N are differential small amplitude signals.	
4	ELVSS	Negative gate driver output voltage level -4.6V	
5	D3P	HSSI_D3_P are differential small amplitude signals.	
6	VOTP	Not connected.	
7	GND	Power ground.	
8	ELVDD	Positive gate driver output voltage level +3.0V	
9	D0N	HSSI_D0_N are differential small amplitude signals.	
10	ELVDD	Positive gate driver output voltage level +3.0V	
11	D0P	HSSI_D0_P are differential small amplitude signals.	
12	VCI	Power supper 3.0-3.6 V	
13	GND	Power ground.	
14	AVDD	Analog Circuit output voltage level +6.7V.	
15	CKN	HSSI_CLK_N are differential small amplitude signals	
16	IOVCC	Analog power for TP IC(+1.8V or +2.8V)	
17	CKP	HSSI_CLK_P are differential small amplitude signals	
18	OLED_EN	Power IC enable control pin(Note:"H"=VDD level, "L"=VSSI level.	
19	GND	Power ground.	
20	EL_CTRL	Swire signal for PMIC	
21	D1N	HSSI_D1_N are differential small amplitude signals.	
22	TE	Tearing effect signal	
23	D1P	HSSI_D1_P are differential small amplitude signals.	
24	DUMMY	Not connected.	
25	GND	Power ground.	
26	GND	Power ground.	
27	D2N	HSSI_D2_N are differential small amplitude signals.	
28	DUMMY	Not connected.	
29	D2P	HSSI_D2_P are differential small amplitude signals.	
30	DUMMY	Not connected.	

31	GND	Power ground.	
32	DUMMY	Not connected.	
33	RESET	Chip reset signal	
34	DUMMY	Not connected.	
35	DUMMY	Not connected.	
36	GND	Power ground.	
37	TP_INT	INT for TP IC	
38	TP_SDA	IIC SDA for TP IC	
39	TP_SCL	IIC SCL for TP IC	
40	TP_VDD	Power supper 3.0-3.6 V for TP	

2. Size of dimensions

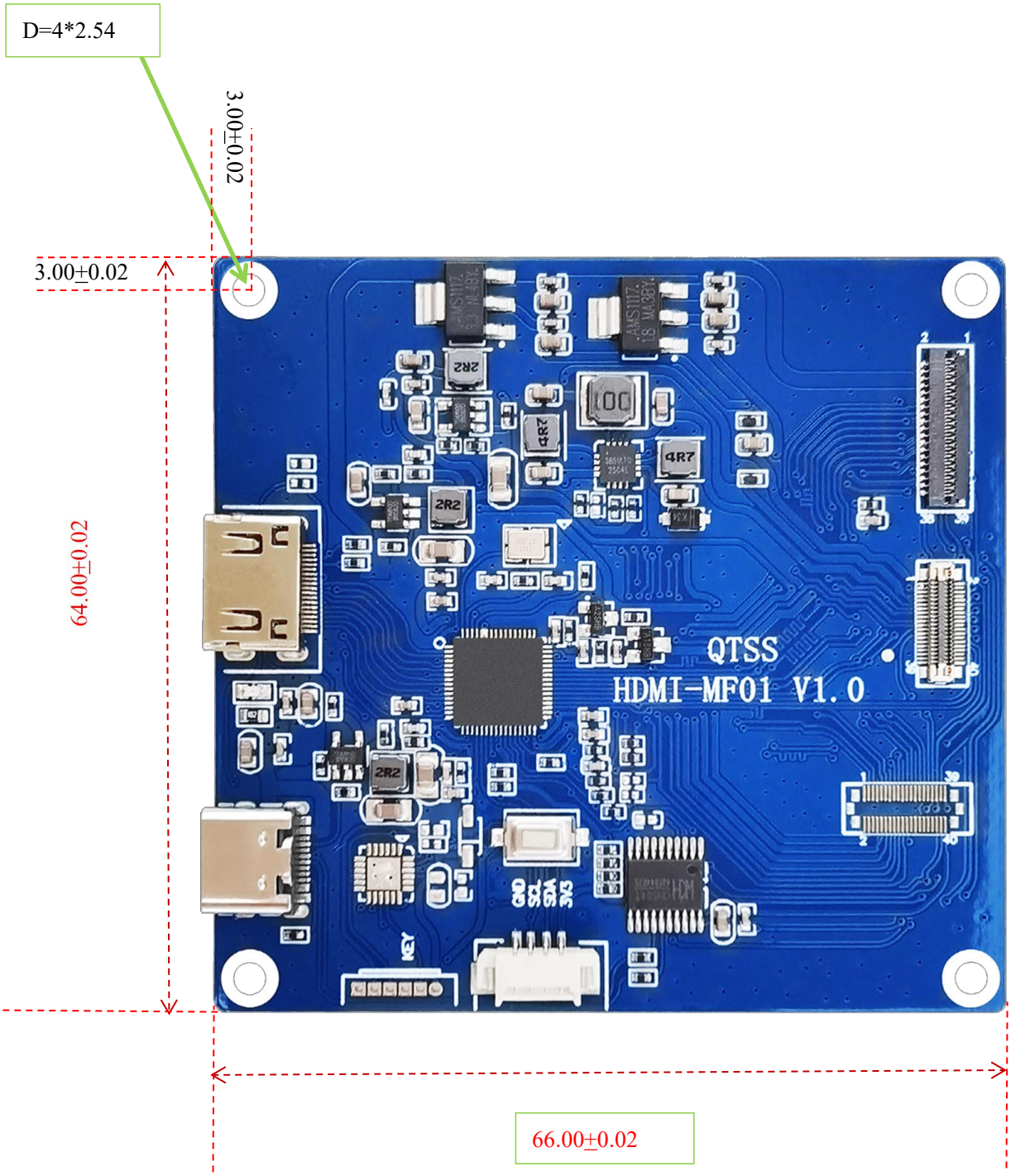

Figure 2 Physical reference figure

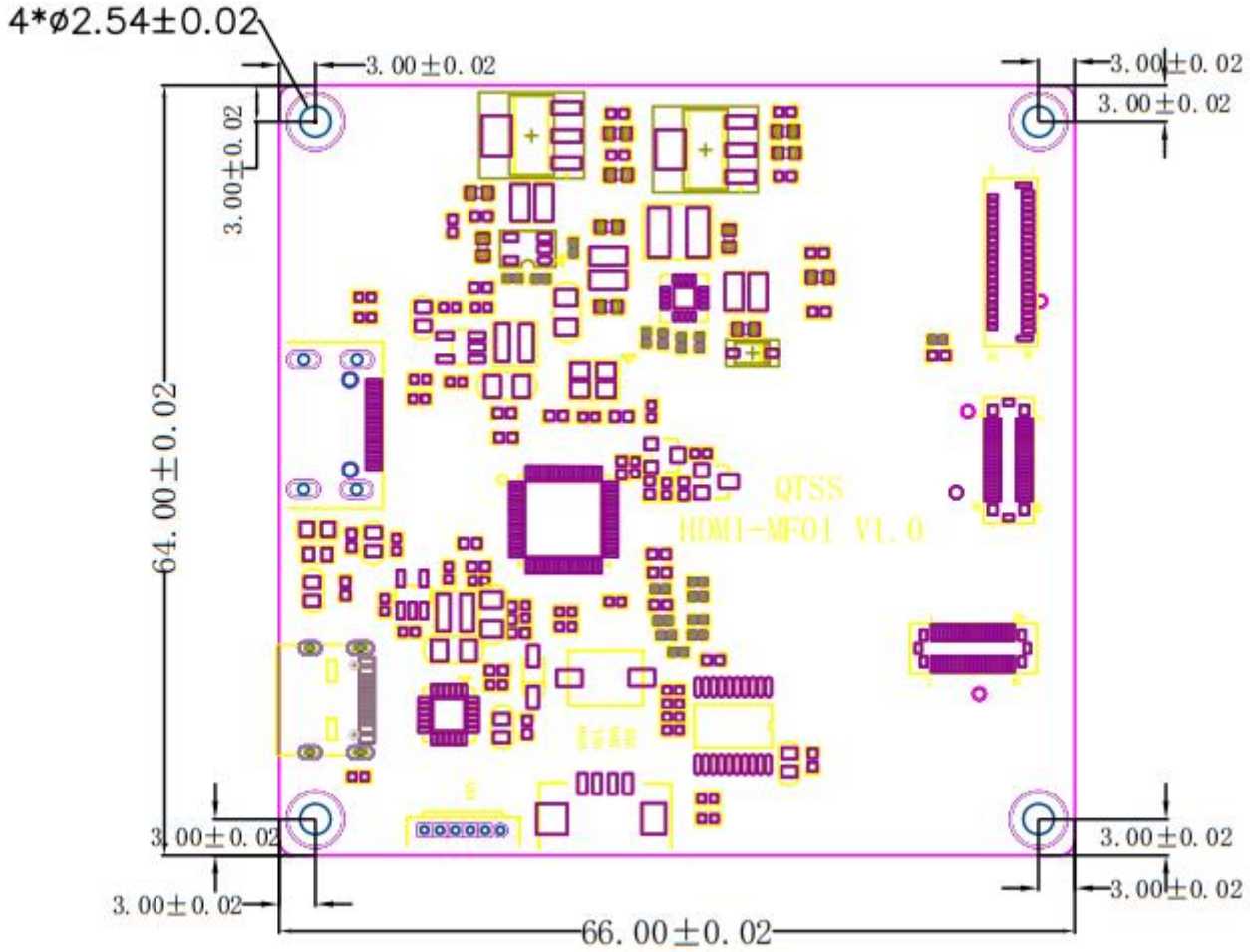

Figure 3. Dimensional diagram

3. Application examples

CUSTOMIZABLE

Figure 4 7 inch AMOLED Screen

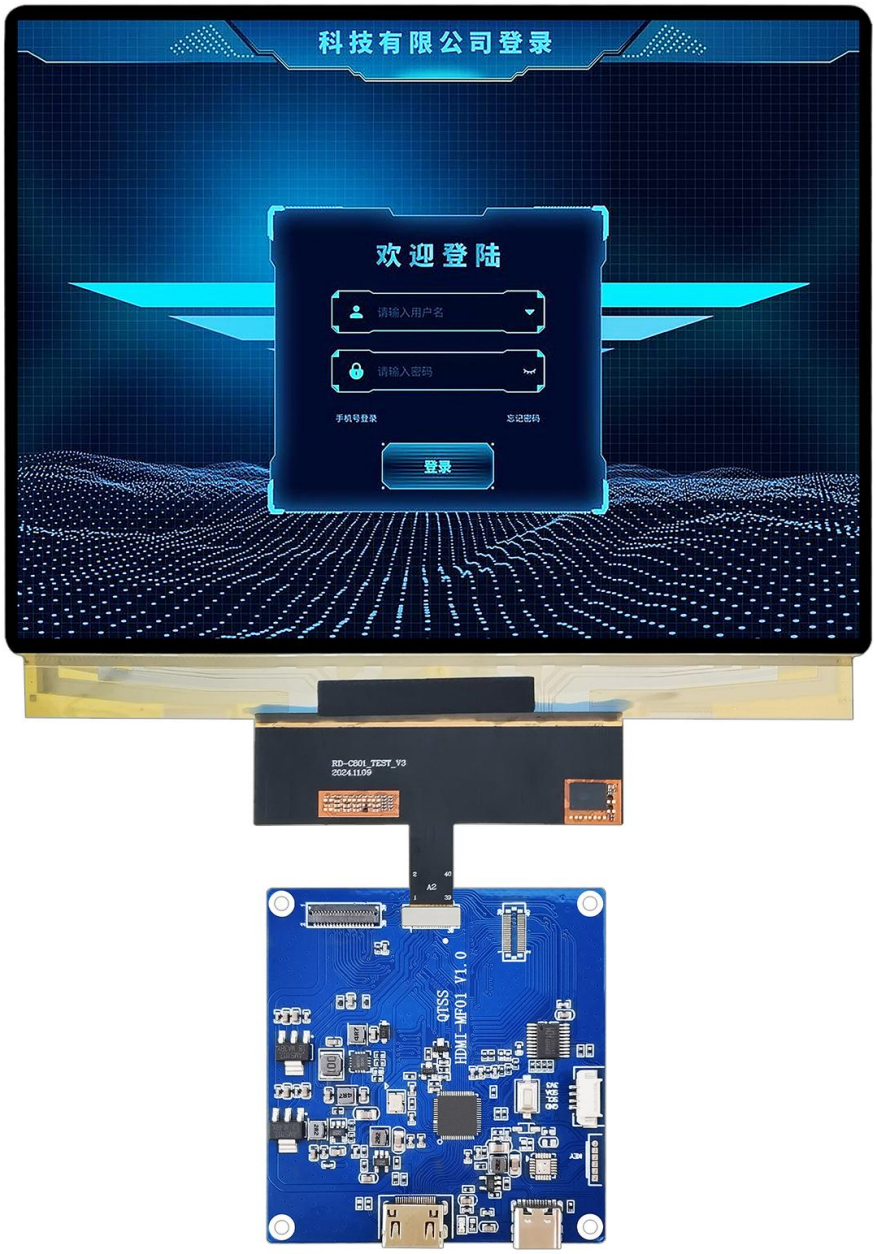

Figure 5 8.01 inch AMOLED Screen

4. Disclaimer

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