

Manufacturer Certificated



CERT. No.: 282Q19070712006

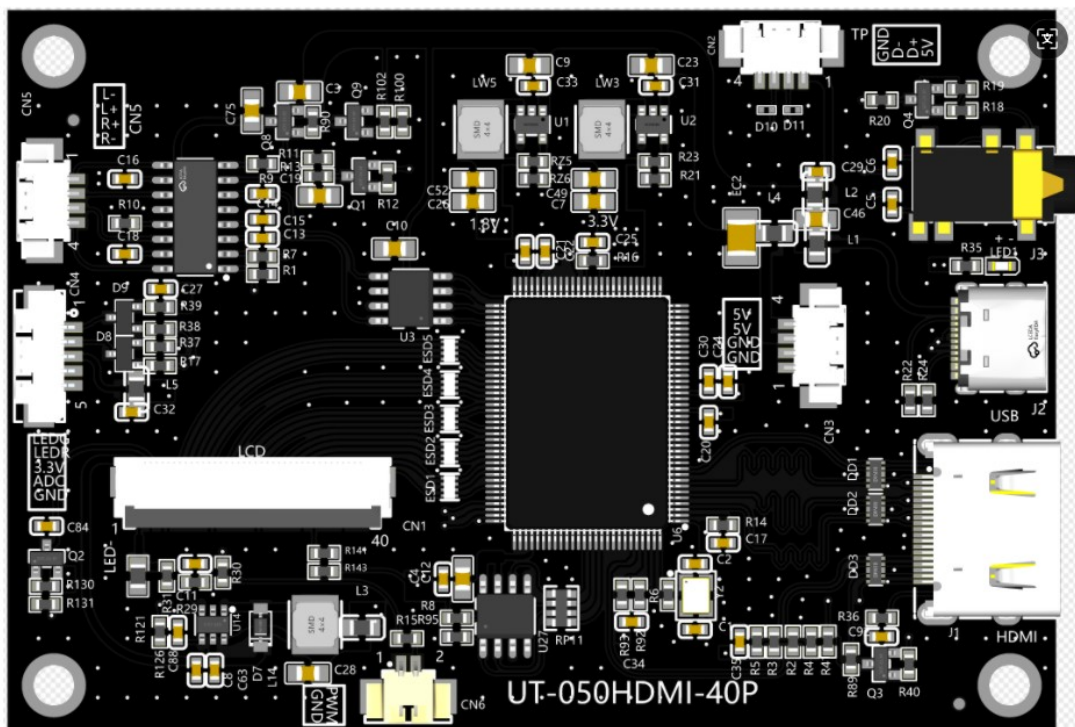
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Product Specification

Model: TBJ050HD-01

HDMI Display Board

This module uses ROHS material



Tailor Pixels Technology Co., Ltd.

www.tailorpixels.com

tailor@tailorpixels.com

Ph: 86-755-8821 2653

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1. Record of Revision

Version	Revise Date	Content	Remark
V1.0	2024/12/10	-	-

2. General Specifications

TBJ050HD-01 driver board is a HDMI HD signal input, drive RGB single 40P LCD screen of high performance driver board. The driver board integrates HDMI interface input, TYPE-C interface power supply and USB touch, speaker power amplifier driver, 3.5 headphones, OSD function.

Feature		Spec
Characteristics	Size	-
	LCM Resolution supported(Max)	800*480
	Pixel Configuration	R.G.B.-Stripe
	Interface	HDMI
	Power input	TYPE-C
	Signal input	HDMI 1.2
Mechanical	PCB (W x H)	90.0*62.0mm
	LCM connector	40PIN/0.5m
	HDMI connector	HDMI-A,19PIN

3. Electrical Characteristics

Item	Symbol	MIN	Typ	MAX	Unit
Supply Voltage	VDD	4.5	5.0	5.3	V
Direct Current	Idd	320	300	280	mA
Operating Temperature	TOPR	-20	-	70	℃
Storage Temperature	TSTG	-20	-	70	℃

4.PIN-MAP

4.1 J1(HDMI PIN-MAP)



Pin	Signal	Description
1	TMDS Data 2+	TMDS Transition differential signal 2+
2	TMDS Data2 Sh	Data2 Shielding ground
3	TMDS Data 2-	TMDS Transition differential signal 2-
4	TMDS Data 1+	TMDS Transition differential signal 1+
5	TMDS Data1 Sh	Data1 Shielding ground
6	TMDS Data 1-	TMDS Transition differential signal 1-
7	TMDS Data 0+	TMDS Transition differential signal 0+
8	TMDS Data 0 S	Data0 Shielding ground
9	TMDS Data 0-	TMDS Transition differential signal 0-
10	TMDS Clock+	TMDS Transition differential signal Clock+
11	TMDS Clock Sh	Clock Shielding ground
12	TMDS Clock-	TMDS Transition differential signal Clock-
13	CEC	Electronic protocol CEC
14	NC	NC
15	SCL	I2C Clock Line
16	SDA	I2C DATA Line
17	DDC/CEC GND	Data display channel
18	+5V	+5V Power
19	Hot Plug Detec	Hot Plug Detec

4.2 CN4 (Key board option) PH 1.25-5P

NO 管脚	SYMBOL 板上丝印	DESCRIPTION (描述)
1	LEDG	Green led (指示灯绿灯)
2	LEDR	Green led (指示灯绿灯)
3	3.3V	3.3V 输出
4	ADC	OSD-ADC 电压检测
5	GND	Ground(地)

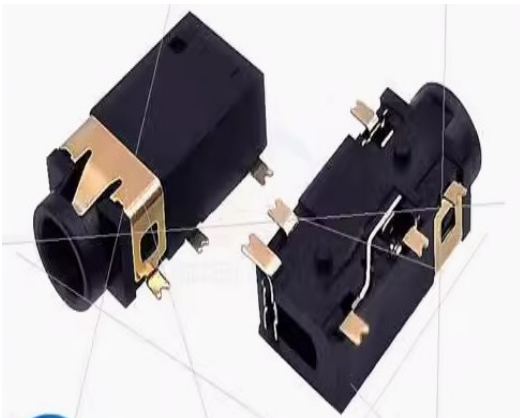
4.3 CN5 (Speaker) PH 1.25-4P

NO 管脚	SYMBOL 板上丝印	DESCRIPTION (描述)
1	L-	左声道-
2	L+	左声道+
3	R+	右声道-
4	R-	右声道+
Remark	Max 4ohm,2.6W	

4.4 CN2 (Touch connector) PH 1.25-4P

NO 管脚	SYMBOL 板上丝印	DESCRIPTION (描述)
1	5V	5V 输出
2	D+	数据+
3	D-	数据-
4	GND	地

4.5 J2(headphones)



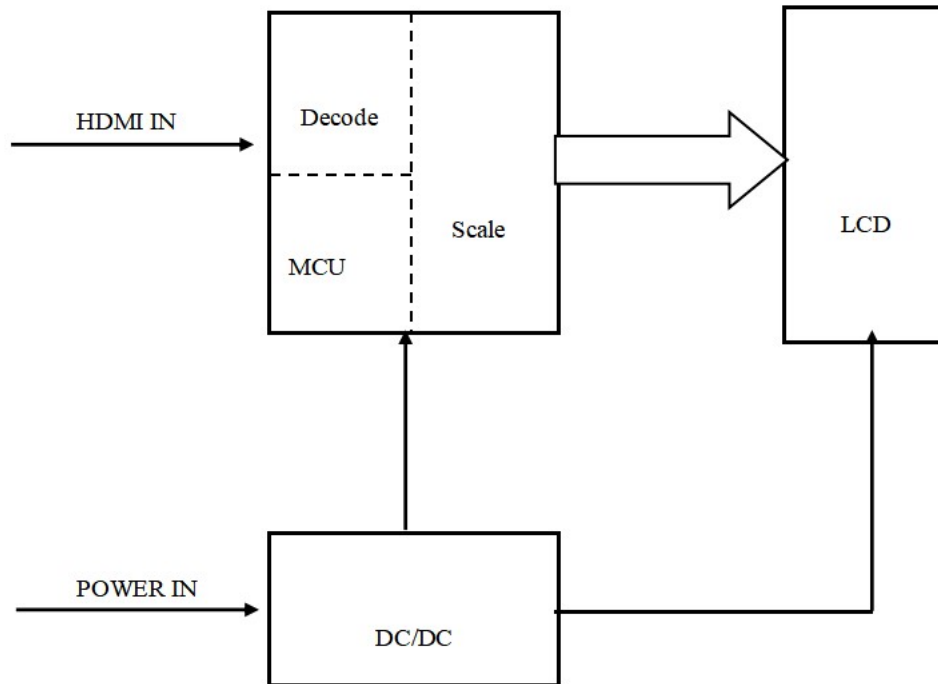
4.6 J2(TYPE-C-16P)



4.7 CN1(LCM) 40PIN/ 0.5mm

管脚序号	定义	描述
1	VLED-	Power for LED backlight cathode
2	VLED+	Power for LED backlight anode
3	GND	Power ground
4	VDD	Power voltage
5	R0	Red data (LSB)
6	R1	Red data
7	R2	Red data
8	R3	Red data
9	R4	Red data
10	R5	Red data
11	R6	Red data
12	R7	Red data (MSB)
13	G0	Green data (LSB)
14	G1	Green data
15	G2	Green data
16	G3	Green data
17	G4	Green data
18	G5	Green data
19	G6	Green data
20	G7	Green data (MSB)
21	B0	Blue data (LSB)
22	B1	Blue data
23	B2	Blue data
24	B3	Blue data
25	B4	Blue data
26	B5	Blue data
27	B6	Blue data
28	B7	Blue data (MSB)
29	GND	Power ground
30	CLK	Pixel clock
31	DISP	Display on/off
32	NC	No connection
33	NC	No connection
34	DE	Data Enable
35	NC	No connection
36	GND	Power ground
37-40	NC	No connection

5. Block Diagram



6. Mechanical Drawing(90.0*62.0*1.6 mm)

