



Manufacturer Certificated



CERT. No.: 282Q19070712006



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Product Specification

Model: TBJ116HD-02

HDMI/TYPE-C Display Board

This module uses RoHS material

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1. Overview

This is a multi-functional LCD display driver board that can support the highest resolution of 2K.

It has a mini HDMI interface and two Type-C interfaces which support signal and power supply.

It also supports HDCP1.4 and HDR (High-Dynamic Range), which can provide more dynamic range and image details.

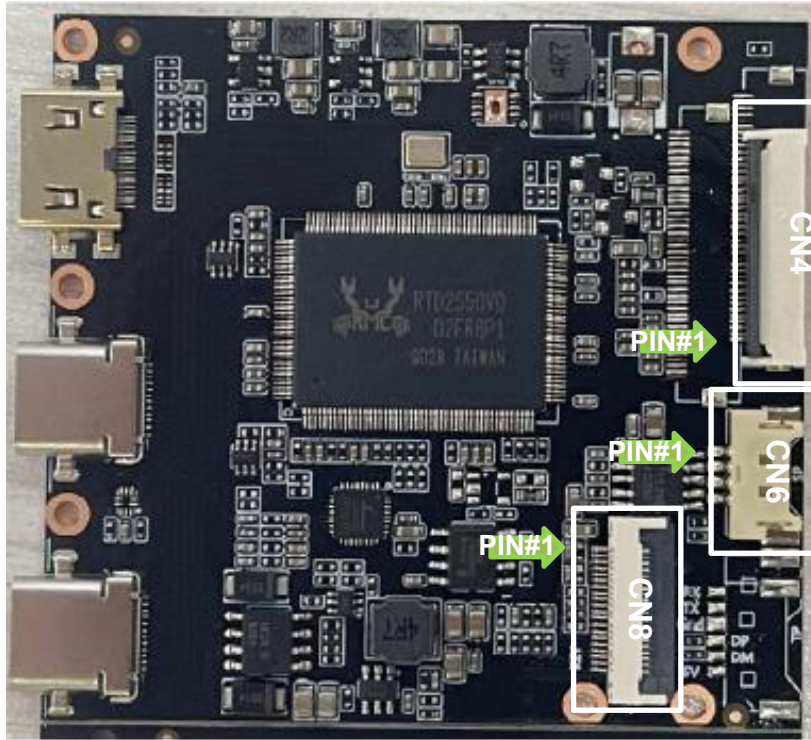
With power amplifier output (drives 2 channels of 1 watt speaker drive capability)

2. Main features

Main Control IC	support Max. resolution of FHD/2K		
Interface	Input	Type-C input x 2	Supports data transmission, image display functions, and intelligent charging
		Mini HDMI input	standard HDMI1.4
	Output	LCM interface	eDP 30PIN
		Amplifier output	1.25mm*4, 3.5mm
Power	Power input	5V-20V Type-C PD protocol	
	Drive screen voltage	3.3V	
	Amplifier power	2*1W	
OSD controller board (optional)	OSD Menu	Brightness, contrast, automatic correction, function settings, reset, etc.	
	OSD Language	Chinese, English, etc. 16 total languages	
	Functions	Power, OSD control panel	

3. Product image

Top view



Note: take note on the pin 1 of each interface

Side view



4. Interface definition

CN4 (FPC30 0.5MM horizontal seat): 2LAN eDP output interface

Pin	Term	Description
1	NC	NC
2	DGND	DGND
3	EDP_1N	EDP_1N
4	EDP_1P	EDP_1P
5	DGND	DGND
6	EDP_0N	EDP_0N
7	EDP_0P	EDP_0P
8	DGND	DGND

9	AUX_P	AUX_P
10	AUX_N	AUX_N
11	DGND	DGND
12	VDD	3.3V
13	VDD	3.3V
14	NC	NC
15	DGND	DGND
16	DGND	DGND
17	HPD	Hot Plug Detect
18	BL_GND	LED_GND
19	BL_GND	LED_GND
20	BL_GND	LED_GND
21	BL_GND	LED_GND
22	BL_EN	LED BL_Enable control
23	BL_ADJ	LED Dimming Control
24	NC	NC
25	NC	NC
26	BL_PWR	LED_VCC
27	BL_PWR	LED_VCC
28	BL_PWR	LED_VCC
29	BL_PWR	LED_VCC
30	NC	NC

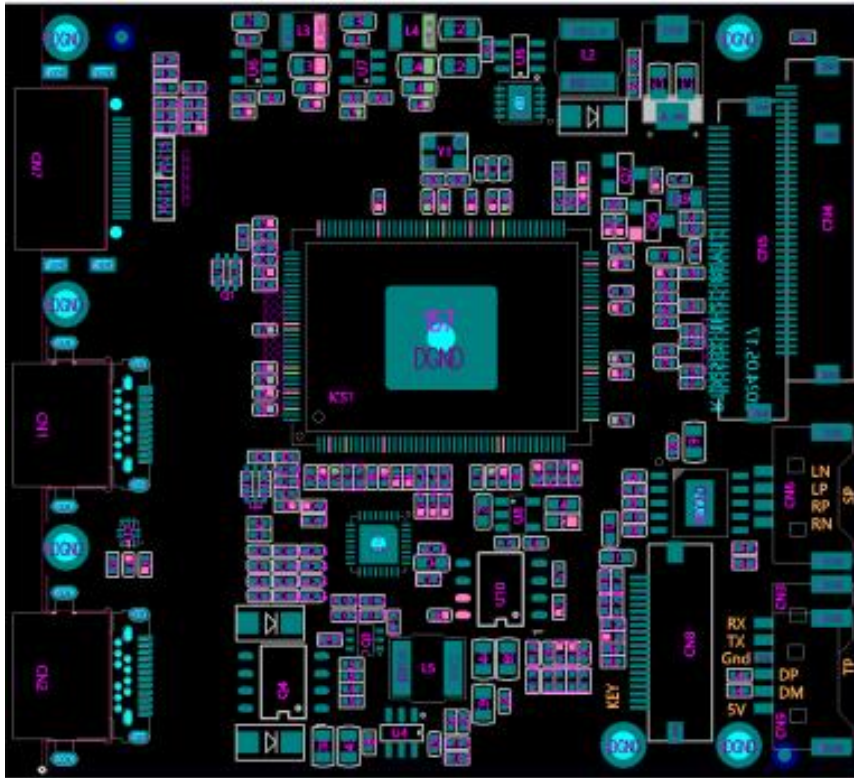
CN6 (1.25MM*4 horizontal seat): speaker output interface

Pin	Term	Description
1	LN	Left channel negative pole
2	LP	Left channel positive
3	RP	Right channel positive
4	RN	Right channel negative

CN8 (FPC20 0.5MM horizontal seat): output for the OSD controller board

Pin	Term	Description
1	GND	land
2	GND	land
3	GND	land
4	R	Headphone signal
5	GND	GND
6	L	Headphone signal
7	HP-IN	Headphone detection signal
8	+5V	Power supply positive 5V
9	+5V	Power supply positive 5V
10	+5V	Power supply positive 5V
11	+5V	Power supply positive 5V
12	DM	USB2.0 signal
13	DP	USB2.0 signal
14	GND	land
15	LED1+	LED light positive pole
16	MENU	menu
17	LEFT/UP	Up selection key
18	RIGHT/D	down select key
19	LED2+	LED light positive pole
20	POWER	Power on/off key/return key

5. Product structure and dimensions (unit: mm)



(1)PCB outline: 60mm*56mm*1.2mm

(2) PCB thickness + component height: 4mm

(3) Diameter of the screw hole: 2mm

6. Precautions for use:

In order to ensure the normal use of this product and prevent accidents such as electric shock or fire, please read and understand all usage requirements and operating procedures before using this product.

Strictly comply with the following requirements:

1. The DC power supply required by this product is generated by an AC/DC power adapter, and the AC/DC power adapter should be kept away from heat sources and placed in a well-ventilated place.
2. The AC power socket and AC power cord must be well grounded and able to withstand sufficient current demand.
3. Pay attention to good ventilation and heat dissipation, and do not place it in a closed, non-heat-conducting shell or box; nor allow it to be exposed to direct sunlight or other heat sources.
4. Care should be taken to avoid excessive humidity and excessive dust to avoid circuit corrosion and failure.
5. When assembling, pay attention to leaving a certain space to provide air convection heat dissipation on the board surface, and to prevent electrical conductors and board components from contacting short circuits.
6. When assembling, be careful to prevent the drive plate from buckling due to extra pressure.
7. When assembling the board, pay attention to electrostatic protection and avoid short circuit and damage to the board by static electricity on your hands.
8. All input and output interfaces need to be operated without power (unplugging and plugging connectors).
9. This product is suitable for general commercial use and household use.

The operating environment temperature is: $-10\sim+40^{\circ}\text{C}$, and the relative humidity is: $\leq 80\%$.
10. Please unplug the power when not in use for a long time.