



PRODUCT SPECIFICATION

KADI Model: **KD123HD03**

CUSTOMER Model: **-**

Description: **HDMI TO MIPI**

Version: **1.0**

KADI	PREPARED BY	CHECKED BY	APPROVED BY
SIGNATURE			
DATE	2025.06.13	2025.06.13	2025.06.13

CUSTOMER APPROVAL	SIGNATURE	DATE



Record of Revisions

[illegible]



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1. General Specifications

1.1 General Information

Item	Description
Input Source	HDMI 1.4a
Support resolution	720*1920 up to 1200*1920,60Hz
LCD interface	MIPI
Voltage for LCD	3.3V
Power input	DC 12V
Operation Temperature	-20~70 °C
Storage Temperature	-30~80 °C

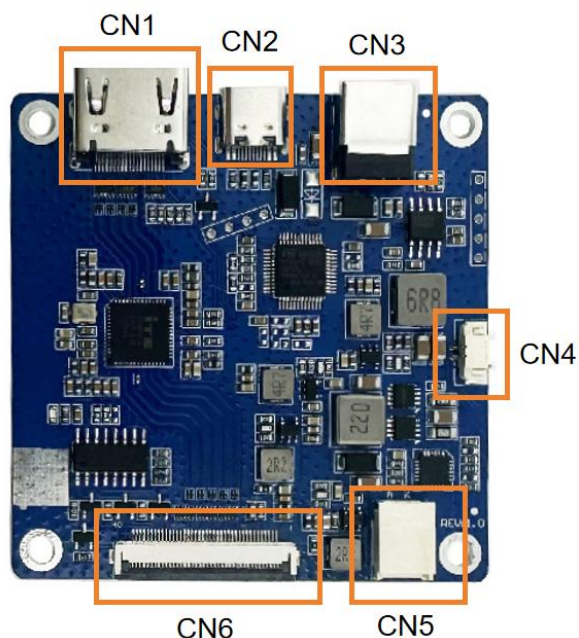
Note1:Requirements on environmental protection RoHS compliant.



2. Interface

2.1 PCB overview

Picture below shows the connectors exact placement and their descriptions.



2.2 Connector Description

Item	Type	Description
CN1	HDMI	HDMI 1.4a
CN2	Touch	USB-C 2.0
CN3	Power Jack	DC Jack (5.9mm OD/2.1mm ID)
CN4	PWM	PWM Control Signal (2PIN-1.25mm)
CN5	Backlight	BH3.5 (2PIN-3.5mm)
CN6	LCM	LCM Interface (40PIN-0.5mm)



2.3 CN1 (HDMI) HDMI 1.4a

Pin No.	Symbol	Description
1	TMDS_Data 2+	TMDS differential signal 2+
2	TMDS_Data 2_S	Data2 shielding ground
3	TMDS_Data 2-	TMDS differential signal 2-
4	TMDS_Data 1+	MDS differential signal 1+
5	TMDS_Data 1_S	Datal shielding ground
6	TMDS_Data 1-	TMDS differential signal 1-
7	TMDS_Data 0+	TMDS differential signal 0+
8	TMDS_Data 0_S	Data0 shielding ground
9	TMDS_Data 0-	TMDS differential signal 0-
10	TMDS_CLK+	TMDS differential signal Clock+
11	TMDS_CLK_S	Clo6ck shielding ground
12	TMDS_CLK-	TMDS differential signal clock-
13	CEC	Electronic protocol CEC
14	NC	No connection
15	SCL	IIC clock Line
16	SDA	IIC data Line
17	DDC/CEC_GND	Data display channel
18	+5V	HDMI 5V
19	HOT_PLUG_DET	Hot plug detect

2.4 CN2 (Touch) USB-C 2.0

Pin No.	Symbol	Description
A1B12	GND	Ground
A4B9	VBUS	VBUS Power;5V
A5	CC1	Configuration channel
A6	DP1	USB differential pair, position 1, positive
A7	DN1	USB differential pair, position 1, negative



A8	SBU1	Sideband use
B5	CC2	Configuration channel
B6	DP2	USB differential pair, position 2, positive
B7	DN2	USB differential pair, position 2, negative
B8	SBU2	Sideband use
B4A9	VBUS	VBUS Power;5V
B1A12	GND	Ground

2.5 CN3 (DC) 5.9mm OD/2.1mm ID

Pin No.	Symbol	Description
1	VDD	Power supply DC;12V
2	GND	GND

2.6 CN4 (PWM) 2PIN-1.25mm

Pin No.	Symbol	Description
1	PWM	PWM dimming control
2	GND	Ground

2.7 CN5 (Backlight) 2PIN-3.5mm

Pin No.	Symbol	Description
1	LEDA	Positive backlight
2	LEDK	Negative backlight



2.8 CN6 (LCM) 40PIN-0.5mm

No.	Symbol	Description
1	NC	No connection
2	VCC	Power supply
3	VCC	Power supply
4	NC	No connection
5	IOVCC	Power supply
6	IOVCC	Power supply
7	NC	No connection
8	BIST_EN	BIST mode enable, high active.(It is weak pull-low inside IC).
9	RESET	Global reset pin
10	NC	No connection
11	GND	Ground
12	MIPI_TDN0	MIPI Negative data signal(-)
13	MIPI_TDP0	MIPI Positive data signal(+)
14	GND	Ground
15	MIPI_TDN1	MIPI Negative data signal(-)
16	MIPI_TDP1	MIPI Positive data signal(+)
17	GND	Ground
18	MIPI_TCN	MIPI Negative clock signal(-)
19	MIPI_TCP	MIPI Positive clock signal(+)
20	GND	Ground
21	MIPI_TDN2	MIPI Negative data signal(-)
22	MIPI_TDP2	MIPI Positive data signal(+)
23	GND	Ground
24	MIPI_TDN3	MIPI Negative data signal(-)
25	MIPI_TDP3	MIPI Positive data signal(+)
26	GND	Ground
27	NC	No connection
28	NTC-(NC)	No connection
29	CTP_3.3V	Power supply for CTP (3.3V)
30	NTC+(NC)	No connection
31	CTP_SDA	I2C data input and output for CTP
32	LED-	Power for LED backlight (Cathode)
33	LED-	Power for LED backlight (Cathode)
34	CTP_SCL	I2C clock input for CTP
35	CTP_INT	Interrupt signal for CTP
36	GND	Ground
37	GND	Ground
38	CTP_RST	Reset Pin for CTP



39	LED+	Power for LED backlight (Anode)
40	LED+	Power for LED backlight (Anode)

3. Function Block

