

Datasheet

FORTEC Integrated

PrismaECO-4K-00

PrismaECO-4K-00 UHD Control Board eDP

PR-01-470

PR-01-470_A1



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 APOLLO DISPLAY
TECHNOLOGIES



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1 Revision History

Date	Rev.No.	Description	Page
19.08.2020	1.0.0	Initial release	All
09.11.2020	1.1.0	OSD menu and Electrical specifications updated	All
16.02.2021	1.1.1	Electrical Specifications updated	15
08.03.2021	1.1.2	Preliminary Version HDCP Optional Added Rise time	All 5 14
24.03.2021	1.2.0	Added Battery and RC to reference Kits. Operating temperature adapted. Current consumption adapted. Chapter "supported panels" removed	22 13 14 22
06.09.2021	1.2.1	ROSD protocol added USB to Serial UART converter and cable added	6 21
10.11.2021	1.2.2	Corrected SAP Nr ZU-02-406 Added (IR-) cables in reference kit	8 22
14.12.2021	1.2.3	Corrected J33, Pin 1 and 2	19
02.08.2023	1.2.4	Template updated. Font Arial. Power Management Power Supply Connectors J31-J33: Description adjusted.	All 7 17, 19
06.12.2023	1.2.5	Added SAP number PR-01-470_A1 Corrected table "mechanical specification" Changed template Changed Pictures	2 16 All 2, 19

2 General description

PrismaECO-4K-00 is a graphics processing board for UHD LCD panels supporting 4K@60Hz resolution signal input and output. It is capable of 10-bit 4-lane eDP interfaces with a resolution up to 4096x2160 @60Hz.

PrismaECO-4K-00 has two HDMI 2.0 and one DP 1.2 input interfaces plus 2x 8W (8Ω) stereo speaker output. High bandwidth Digital Content Protection (HDCP2.2) is supported for the various input modes (optional).

The PrismaECO-4K-00 supports auto detection for all the input ports as well as image position and color auto calibration.

PrismaECO-4K-00 has a 12-bit color processing engine that supports programmable 14-bit gamma CLUT. It is Adobe RGB and sRGB compliant with high brightness and color uniformity.

3 General Features

High-Quality Advanced Scaling

- Zoom scaling up and down
- Fully programmable zoom ratios
- Independent horizontal/vertical scaling
- Advanced zoom algorithm provides high image quality
- Sharpness/Smooth filter enhancement
- Support non-linear scaling from 4:3 to 16:9 or 16:9 to 4:3

Color Processor

- True 12-bit color processing engine
- Programmable 14-bit gamma support
- Programmable 12-bit 3D gamma support
- xvYCC supported
- Adobe RGB/sRGB compliant
- Advanced dithering logic for the fewer panel color depth enhancement
- Dynamic overshoot-smear canceling engine
- Brightness and contrast control

DisplayPort 1.2 Receiver

- Up to 3840x2160@60Hz input support at 6-bit, 8-bit, 10-bit and 12-bit
- Three link layer speed HBR2 (5.4GHz), HBR (2.7GHz), RBR (1.62GHz) are supported.
- HDCP2.2 support optional

Ultra-Reliable HDMI 2.0 Receiver

- Up to 3840x2160 @60Hz input support at 6-bit, 8-bit, 10-bit and 12-bit
- 2x HDMI2.0 (6GHz) or HDMI1.4 (3GHz) support
- HDCP2.2(3GHz) support optional

eDP HBR2 Interface

- 4-lane up to 4096x2160 @60Hz at 8-bit and 10-bit
- Fully programmable display timing generator
- 40 pin connector

Analog Audio Output

- Frequency Response 120Hz – 14000Hz @±3 dB
- Speaker Power 2×8W (8Ω) THD+N<10%@1 kHz at 12V supply and Audio Input: 0.5VRMS
- Analog Stereo Voltage Range 0.2 to 2.0Vrms

Power Management

- Single-Voltage Power Supply +12V 3A using DC Jack
- Single-Voltage Power Supply Module using a Pin Header
- Multi-Voltage Power Supply Module +12V, +5V and +5VSTB using a Pin Header
- Lowest Power < 0.2W in Deep Sleep
- Panel Power Supply +3.3V
- Backlight Power Supply +5V, +10V and +12V

OSD Control

- Keypad and IR

Remote Control

- DDC/CI
- UART (TTL signal level)

External Sensors

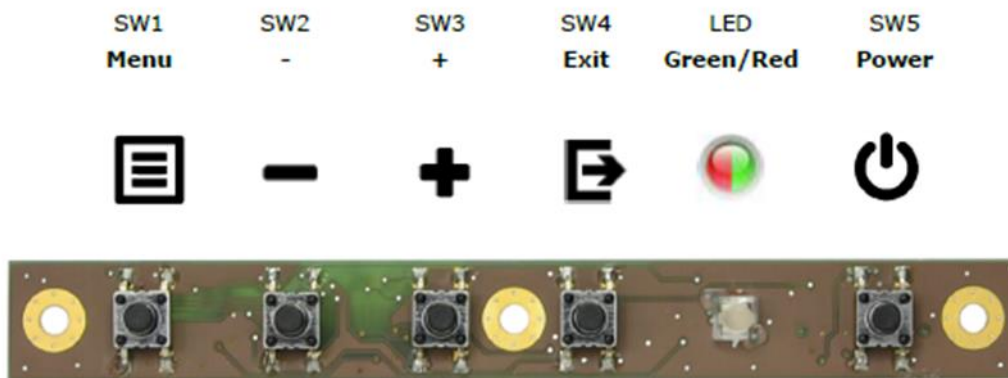
- Light and Temperature Sensor (coming soon)

4 OSD Menu and User Controls

The OSD allows selection of input source and fine tuning of various functional parameters like brightness, contrast etc. These parameters can be adjusted via an external interface.

4.1 OSD Control Through External Keypad

The 4-Button Keypad ZU-02-398 (IF398-00), by using at IR / OSD Keypad Connector J20 is fully supported.



The following tables give you an overview about the functionality.

	Menu	-	+	Exit	LED	Power
General					See below	Power ON/OFF
OSD closed	Open OSD	Volume-	Backlight	Input Select		
OSD open	Select	Down/Left/-	Up/Right/+	Exit/Back		

LED Status:

- Green : Signal Found
- Red : Power Safe
- LED OFF : Power OFF

4.2 OSD Control through IR Remote Control

Alternative to the external keypads, the PrismaECO-4K-00 can also be controlled through a remote-control device. To communicate through IR, an IR-receiver **DB-07-327** or **ZU-02-406** can be attached to connector J16 of the PrismaECO-4K-00. With this receiver you can control the PrismaECO-4K-00 with the IR Remote Control **RC-10-006** (see picture below).

When the OSD is closed press SW4 on your keypad (EXIT key on keypad) or button "INPUT" on your IR remote control. This opens the dialog shown on the left where you can manually switch to a specific input port.






Key	HEX	Function		
		General	OSD Closed	OSD Open
Power	01	Power on/off	-	-
Number Keys	00-0E	Not used	-	-
Number „0“	13	Not used	-	-
ID	19	Not used	-	-
Recall/Return	10	Not used	-	-
Disp	1D	Not used	Display Mode	-
Mute	12	Not used	-	-
Input	18	-	Input Select	-
Menu	41	-	Opens OSD	Select
Exit	09	-	-	Exit /Back
Up	17	Not used	-	-
Left	0D	-	Volume -	-
OK	15	-	-	Select
Right	14	-	Volume +	-
Down	1A	Not used	-	-


5 On-Screen-Menu (OSM)

Detailed Description of OSM including all menus:





5.1 Picture/Analog/Color

Main menu	Selection	Sub menu	Description	Remark
Picture 	Backlight	0~100	Adjusts the Backlight Default=100	HOT KEY "+" Picture adjustments are active as set in Menu Select Region
	Brightness	0~100	Adjusts Brightness Default=50	
	Contrast	0~100	Adjusts Contrast Default=50	
	Sharpness	0~4	Adjusts Sharpness Default=2	
Display 	Disp. Rotate	0/180	Change display orientation	
Color 	Panel Uniformity	ON/OFF	Sets Panel Uniformity ON/OFF	Color adjustments are active as set in Menu Select Region
	Gamma	OFF	Sets Gamma correction OFF	
		1.8	Sets Gamma correction to 1.8	
		2.0	Sets Gamma correction to 2.0	
		2.2	Sets Gamma correction to 2.2	
		2.4	Sets Gamma correction to 2.4	
	Temperature	9300	Sets Color Temperature to 9300K	
		7500	Sets Color Temperature to 7500K	
		6500	Sets Color Temperature to 6500K	
		5800	Sets Color Temperature to 5800K	
		sRGB	Sets Color Temperature to sRGB	
	Color Effect	USER	Sets Color Temperature to USER	R/G/B values can be adjusted manually via sub-sub menu
		Standard	Sets Color Effect to Standard	
		Game	Sets Color Effect to Game	
		Movie	Sets Color Effect to Movie	
Photo		Sets Color Effect to Photo		
Vivid		Sets Color Effect to Vivid		
User	Sets Color Effect to User	R, Y,G,B,M Hue and saturation can be adjusted individually via sub-sub-sub Menu		
PCM	User	Not available	NOT AVAILABLE	
	Native			
HUE	0~100	Sets Hue		
Saturation	0~100	Adjusts Color Saturation		

5.2 Advance

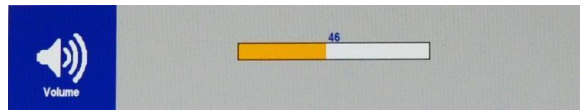
Main menu	Selection	Sub menu	Description	Remark	
Advance 	Aspect Ratio	Full	Sets aspect ratio to full screen	Advance adjustments are active as set in Menu Select Region	
		16:9	Sets aspect ratio to 16:9		
		4:3	Sets aspect ratio to 4:3		
		5:4	Sets aspect ratio to 5:4		
		1:1	Sets aspect ratio to 1:1		
	Over Scan	ON/OFF	Sets over scan on/off		
	Over Drive	ON/OFF	Sets overdrive		
		OD Gain 0~100	Sets gain		
	DDCCI	ON/OFF	Activates display control using DDC/CI protocol		
	Ultra-Vivid	OFF	Sets ultra-vivid off		
		L	Sets ultra-vivid to L		
		M	Sets ultra-vivid to M		
		H	Sets ultra-vivid to H		
	DP Option	D0	Not available		DP 0 doesn't exist
		D1	Sets Option for Display Port 1		Display Port version can be set to 1.1, 1.2 or 1.3 using sub-sub-menu
		D2	Not available	DP 2 doesn't exist	
		D6	Not available	DP 6 doesn't exist	
	DP EDID		Not available		
	AMD Free Sync		Not available	NOT AVAILABLE	
	TypeC Config	D0	Not available	DP 0 doesn't exist	
D1		Sets used DP lanes	Can be set to Auto/2Lane/4Lane		
D2		Not available	DP 2 doesn't exist		
D6		Not available	DP 6 doesn't exist		

5.3 Input/Audio/Information

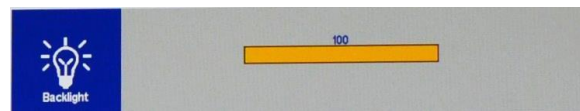
Main menu	Selection	Sub menu	Description	Remark
Input 	Auto	-	Selects Input A0~D6	HOT KEY "Exit"
	D1: DP	-	Selects Input DisplayPort	
	D2: HDMI	-	Selects Input HDMI 1	
	D3: HDMI	-	Selects Input HDMI 2	
Audio 	Volume	0~100	Sets audio volume	HOT KEY "--"
	Mute	ON/OFF	Mutes Audio	
	Stand Alone	On/OFF	Not used	
	Audio Source		Not used	
Other 	Reset	-	Resets all adjustments Factory Reset	
	Menu Time	0~60	Sets OSD OFF time from 0~60 seconds	
	OSD H Position	0~100	Sets OSD Position Horizontal	
	OSD V Position	0~100	Sets OSD Position Vertical	
	Language	English/ Russia	Switches OSD Language	
	Transparency	0~100	Sets Transparency of OSD Menu	
	Rotate	0/ 90/ 180/ 270	Rotates the OSD	
Info 	-	-	Displays Information: Resolution, Input, Frequency, Firmware version etc.	

5.4 Hot Keys

When OSM is off the following menus are available after pressing hot keys (SW2,3,4)



Menu Volume, Hot Key "-" (SW2)



Menu Backlight, Hot Key "+" (SW3)



Menu Input Select, Hot Key "Exit" (SW4)

6 Supported Input Modes

The PrismaECO-4K-00 can support the following input modes.

6.1 Display Port 1.2

The factory preset supported graphic input modes include:

Resolution
720 x 480 @ 60 Hz
1280 x 720 @ 60 Hz
1920 x 1080 @ 60 Hz
3840 x 2160 @ 60Hz
4096 x 2160 @ 60Hz

Table 1: Factory preset modes for Display Port 1.2 input.

6.2 HDMI 2.0

The factory preset supported graphic input modes include:

Resolution
720 x 480 @ 60 Hz
1280 x 720 @ 60 Hz
1920 x 1080 @ 60 Hz
3840 x 2160 @ 60Hz
4096 x 2160 @ 60Hz

Table 2: Factory preset modes for HDMI2.0 input (graphics).

The factory preset supported video input modes include:

Resolution
720 x 480 @ 60 Hz
1280 x 720 @ 60 Hz
1920 x 1080 @ 60 Hz
3840 x 2160 @ 60Hz
4096 x 2160 @ 60Hz

Table 3: Factory preset modes for HDMI2.0 input (video).

7 Absolute Maximum Ratings

DESCRIPTION	Signal	Min.	Max.	Unit	Note
Supply Voltage	V _{CC}	-0.2	14	VDC	1, 2, 3,4
Storage Temperature	T _{ST}	-30	+85	°C	
Operating Temperature	T _{OP}	-20	+60 (+40)	°C	5
Relative humidity	R _H		80	%	

Note 1): Within operating temperature range.

Note 2): Permanent damage to the device may occur if maximum values are exceeded.

Note 3): Please refer to the panel datasheet for recommended voltage range.

Note 4): Supply voltage limits are for the Prisma-4K-01; converter supply limits must be met as well if the converter is to be powered through the Prisma-4K-00 board.

Note 5): When audio is used and power Input J31/J33 is used the maximum operating temperature is reduced to 40°C Refer to [8.2](#) Continuous output current: panel/backlight.

8 Electrical Specifications

8.1 Supply voltage/current consumption/rise time

All measurements are done at 25°C ambient temperature and resolution of 3840 x 2160@60Hz.

Item	Condition	MIN.	TYP.	MAX.	Unit	Note
Supply Voltage (12V)		11.7	12.0	13.0	VDC	
Current Consumption	Board Only HDMI 2.0	-	300	450	mA	1
Current Consumption	Board Only No Video Source	-	10	20	mA	
Power Consumption	Board Only Deep Sleep	-	-	0.2	W	
Total Continuous Output Current	VCC_PANEL, Speaker, Backlight	0	-	4.0	A	
Continuous Output Current	LCD_3V3	0	-	1.5	A	2
Peak Output Current	LCD_3V3	-	-	2.4	A	1ms
Output Voltage Rise Time	LCD_3V3	-	685	-	µs	
Peak Output Current	BL_PWR at 5V, 10V or 12V	-	-	2.4	A	1ms
Output Voltage Rise Time	BL_PWR at 5V	-	762	-	µs	
Output Voltage Rise Time	BL_PWR at 10V	-	388	-	µs	
Output Voltage Rise Time	BL_PWR at 12V	-	271	-	µs	

Note 6): When Audio is muted

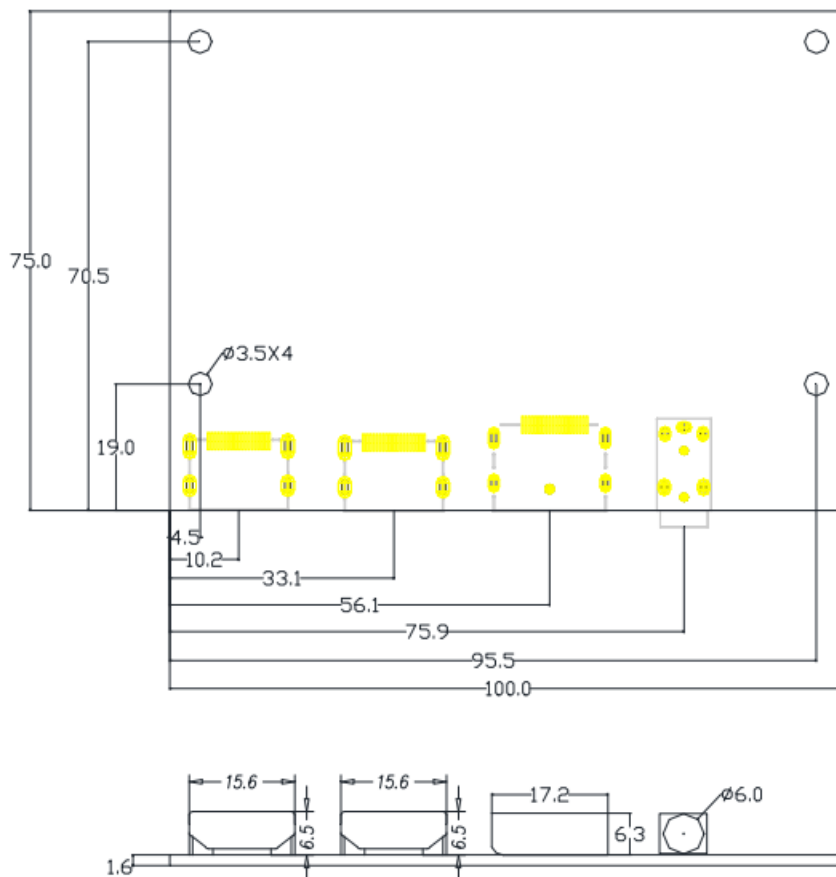
8.2 Continuous output current: panel/backlight

Remark: The maximum continuous output current depends on whether audio is used, and which power input is used. Refer to [10.2.5 Power Supply Connectors](#).

Power-Plug	Audio Status	Max. Ambient Temperature	Max.output current (panel power) VCC_Panel set to:			Max. output current (Backlight and Panel combined)
			5V	10V	12V	
J31/J33	ON	40°	0.9A	1A	1A	Vcc+Vbacklight<1A
	Muted		0.9A	2A	1.4A	Vcc+Vbacklight<1.4A
	ON	60°	-	-	-	-
	Muted		0.9A	1.5A	1.4A	Vcc+Vbacklight<1.4A
J32	ON	40°C	1.0A	1.8A	1.6A	Vcc+Vbacklight<3A
	Muted	60°C				

9 Mechanical Specification

Item	Description	Remarks
Length (PCB)	100.0mm	± 0.2 mm
Length (incl overhang of components)	100.8mm	± 0.5 mm
Width (PCB)	75.0mm	± 0.2 mm
Width (incl. overhang of components)	77.5mm	± 0.5 mm
Height (top side)	12 mm	± 0.5 mm
Height (PCB)	1.6mm	± 0.1 mm
Height (bottom side)	2 mm	± 0.5 mm
Weight	63g	



10 Connectors and Switches

The following drawing shows the input and output interfaces of the PrismaECO-4K-00. The design is implemented as a single printed circuit board.

10.1 Connector Overview

See [Figure 1](#) and [Figure 2](#) for a board overview.

Connector	Description	Type	Manufacturer
CON3	eDP 30Pin Output	Not available	
CON4	eDP 40Pin Output (Bottom)	20455-040E-02	I-PEX
J1	Headphone output	PJ-322	INTECH
J7	Left Speaker Output	B2B-XH-A	JST
J8	Right Speaker Output	B2B-XH-A	JST
J9/J10	Panel Power Select	by jumper cap	
J19	Backlight Control Output	B6B-PH-K-S 2.0mm (2A, 100V)	JST
J21	DisplayPort Input	3660HF1R	Nexus
J22	HDMI2.0 Input	3600HFR	Nexus
J23	HDMI2.0 Input	3600HFR	Nexus
J25	IR / OSD Keypad	B14B-PH-K-S 2.0mm	JST
J27	ADC Sensor	B4B-PH-K-S 2.0mm	JST
J28	UART (TTL level RS232) Interface	B4B-PH-K-S 2.0mm	JST
J29	V-By-One Output	Not available	
J31	External +12V Power Supply Input	Power Jack 2.0mm	e.g., Kycon
J32	Internal Power Supply Input	B13B-XH-A	JST
J33	Internal +12V Power Supply Input	B4B-XH-A	JST

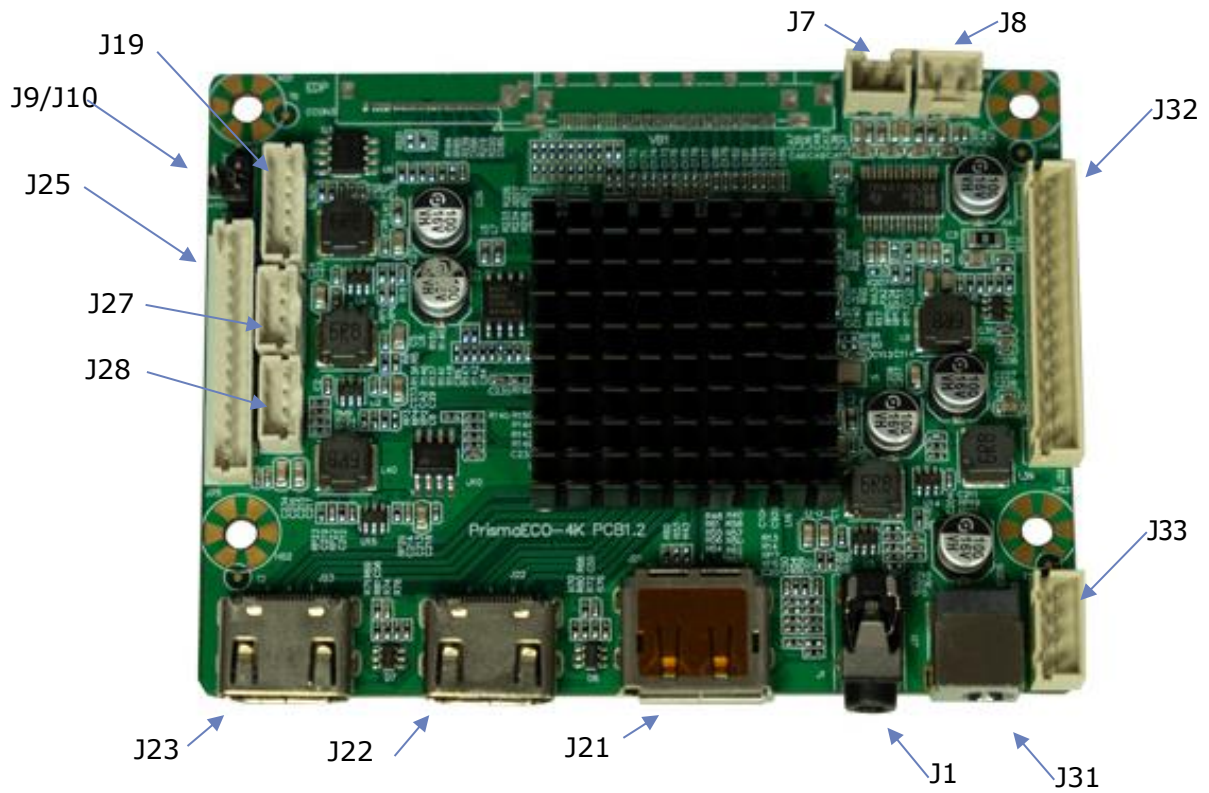


Figure 1 Board Top

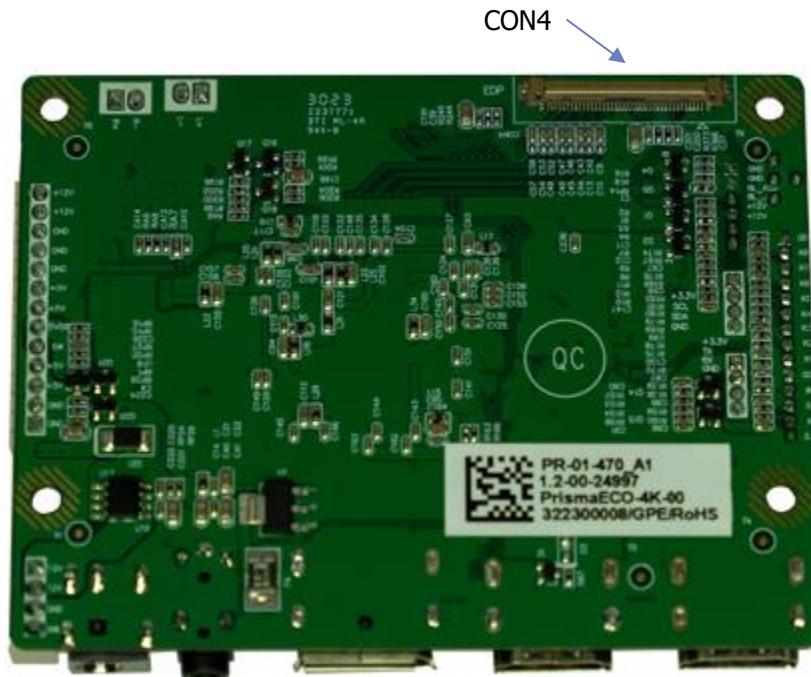


Figure 2 Board bottom

10.2 Input Connectors

10.2.1 DP1: Display Port Input Connector

Pin	Signal	Description
1	DP3-_IN	Pair-3 negative
2	GND	Ground
3	DP3+_IN	Pair-3 positive
4	DP2-_IN	Pair-2 negative
5	GND	Ground
6	DP2+_IN	Pair-2 positive
7	DP1-_IN	Pair-1 negative
8	GND	Ground
9	DP1+_IN	Pair-1 positive
10	DPO-_IN	Pair-0 negative

Pin	Signal	Description
11	GND	Ground
12	DPO+_IN	Pair-0 positive
13	GND	Ground
14	GND	Ground
15	DPA+_IN	Aux channel positive
16	GND	Ground
17	DPA-_IN	Aux channel negative
18	HPD	Hot Plug Detect
19	Power Return	Return for +3.3V
20	+3.3V_DP	DisplayPort +3.3V

10.2.2 HDMI1/HDMI2: HDMI2.0 Input Connector

Pin	Signal	Description
1	TMDS2+	Differential TMDS Data 2+
2	GND	Ground
3	TMDS2-	Differential TMDS Data 2-
4	TMDS1+	Differential TMDS Data 1+
5	GND	Ground
6	TMDS1-	Differential TMDS Data 1-
7	TMDS0+	Differential TMDS Data 0+
8	GND	Ground
9	TMDS0-	Differential TMDS Data 0-
10	TMDSCLK+	Differential TMDS Clock+

Pin	Signal	Description
11	GND	Ground
12	TMDSCLK-	Differential TMDS Clock-
13	CEC	Consumer Electronic Control
14	Reserved	
15	HDMI_SCL	DDC Clock
16	HDMI_SDA	DDC Data
17	GND	Ground
18	HDMI_VCC	+5V
19	Hot Plug	Hot Plug Detection

10.2.3 J9, J10: Voltage selection for Panel Power

Jumper J9-J10 is responsible for selecting the panel voltage.

- + 12V J9 Pin 1-2
- + 10V J9 Pin 2 - J10 Pin 1
- + 5V J9 Pin 2-3



Figure 3 Jumper for voltage selection

10.2.4 J25: IR / OSD Keypad Connector

Pin	Signal	Description
1	VCC	Power supply to keypad and IR (+3.3V)
2	LED_R	LED Red indicator
3	LED_G	LED Green indicator
4	IR	Infrared
5	GND	Ground
6	K0	Key 0
7	K1	Key 1

Pin	Signal	Description
8	K2	Key 2
9	K3	Key 3
10	K4	Key 4
11	K5	Key 5
12	K6	Key 6
13	K7	Key 7
14	GND	Ground

10.2.5 Power Supply Connectors

There are two different ways for powering the board:

- J31/J33 using a single output power supply providing +12V.
- J32 using a multi output power supply providing +5VSTB, +5VSW and +12VSW.

Connectors J31 and J33 are in parallel.

Using a multi-voltage power supply by connecting J32 allows reducing power losses, see [8.2](#) Continuous output current: panel/backlight.

10.2.5.1 J31: Power Supply Connector

Pin	Signal	Description
Center	+12V	+12V Single Voltage Input

Pin	Signal	Description
Bottom	GND	Ground

10.2.5.2 J33: External +12V Power

Pin	Signal	Description
1	GND	GND
2	GND	GND

Pin	Signal	Description
3	+12V	+12V Single Voltage Input
4	+12V	+12V Single Voltage Input

10.2.5.3 J32: External Power Module Supply Connector

This connector is only for using a multi-voltage power supply unit.

Pin	Signal	Description
1	GND	Ground
2	GND	Ground
3	+5VSW	+5V Switchable PWR Input
4	+5VSW	+5V Switchable PWR Input
5	PSU_ON	Standby Control Output, 1)
6	+5VSTB	+5V Standby Input, 2)
7	+5VSW	+5V Switchable PWR Input

Pin	Signal	Description
8	+5VSW	+5V Switchable PWR Input
9	GND	Ground
10	GND	Ground
11	GND	Ground
12	+12VSW	+12V Switchable PWR Input
13	+12VSW	+12V Switchable PWR Input

Note 1): Use PSU_ON, Pin 5, for switching the external power supply to the standby mode. Output voltage level: 0V for standby mode and +5V for normal operation.

Note 2): The +5VSTB input voltage should be always present, even in standby mode.

10.3 Output Connectors

10.3.1 CON4: eDP 40Pin Connector (bottom)

Pin	Signal	Description
1	NC	NC
2	BL_PWR	Selectable Backlight Power 1)
3	BL_PWR	Selectable Backlight Power 1)
4	BL_PWR	Selectable Backlight Power 1)
5	BL_PWR	Selectable Backlight Power 1)
6	NC	NC
7	NC	NC
8	BL_ADJ	Backlight PWM 2)
9	BL_EN	Backlight Enable 2)
10	BL_GND	Backlight GND
11	BL_GND	Backlight GND
12	BL_GND	Backlight GND
13	BL_GND	Backlight GND
14	HPD	Hot Plug Detect
15	LCD_GND	Panel Logic GND
16	LCD_GND	Panel Logic GND
17	LCD_GND	Panel Logic GND
18	LCD_GND	Panel Logic GND
19	NC	NC
20	LCD_3V3	Panel Power +3.3V

Pin	Signal	Description
21	LCD_3V3	Panel Power +3.3V
22	LCD_3V3	Panel Power +3.3V
23	LCD_3V3	Panel Power +3.3V
24	GND	GND
25	AUX_N	DP Channel Aux -
26	AUX_P	DP Channel Aux +
27	GND	GND
28	Lane_0P	DP Channel 0 Output +
29	Lane_0N	DP Channel 0 Output -
30	GND	GND
31	Lane_1P	DP Channel 1 Output +
32	Lane_1N	DP Channel 1 Output -
33	GND	GND
34	Lane_2P	DP Channel 2 Output +
35	Lane_2N	DP Channel 2 Output -
36	GND	GND
37	Lane_3P	DP Channel 3 Output +
38	Lane_3N	DP Channel 3 Output -
39	GND	GND
40	NC	NC

Note 1): The panel voltage BL_PWR has to be selected by using the PWR switch, see 10.2.3)9, J10: Voltage selection for Panel Power.

Note 2): Open collector output, terminated by a 10kΩ resistor to the internal +3.3VDC.

10.3.2 J19: Backlight Connector

Pin	Signal	Description
1	GND	Ground
2	GND	Ground
3	BKLT_ADJ	Backlight DIM control 1)

Pin	Signal	Description
4	BKLT_EN	Backlight ON/OFF 1)
5	VCC_12V	Converter Power Output
6	VCC_12V	Converter Power Output

Note 1): Open collector output terminated by a 10kΩ resistor to the internal +5V_Standby.

10.3.3 J7/J8: Speaker L/R Out

Pin	Signal	Description J7
1	LOUT+	Left Speaker +
2	LOUT-	Left Speaker -

Pin	Signal	Description J8
1	ROUT+	Right Speaker +
2	ROUT-	Right Speaker -

10.4 Communication Connectors

10.4.1 J28: UART Connector

Pin	Signal	Description
1	+3.3V	VCC +3.3V output
2	UART-TX	TTL level output 1)

Pin	Signal	Description
3	UART-RX	TTL level input 1)
4	GND	Ground

Note 1): Use the USB to Serial UART converter board (ZU-02-430) and the Cable PrismaECO-4K/IF430-00_UART 300mm (KA-31-270) to convert the signals between the 5V-level-UART of the PrismaECO-4K-00 and the USB interface of your computer.

10.4.2 J27: I²C Connector

Pin	Signal	Description
1	+3.3V	VCC +3.3V output
2	SCL	I ² C Clock

Pin	Signal	Description
3	SDA	I ² C Data
4	GND	Ground

11 Ordering Information

Part number	Description	Comment
PR-01-470 PR-01-470_A1	PrismaECO-4K-00	Only the 40 Pin eDP connector

12 Reference KIT

12.1 KI-58-000 17.3" B173ZAAN1.0/PrismaECO-4K

Ordering Code	Description	Comment
UP-02-177	B173ZAAN1.0	
KA-30-983	Cable 2xl-PEX/20453-204	
KA-30-904	Cable OSD Prisma-4K/IF398 450mm	For IF-398-00 only
ZU-02-398	IF398-00-OSD-Board-Universal 4+1 Button	
KA-30-971	Cable OSD P4k t OSD(IF398) &IR 490/300mm	For IF-398-00 & DB-07-327
KA-30-993	Cable OSD P4k t OSD(IF398) &IR(IF406)1500	For IF-398-00 & IF406
DB-07-327	IR-Receiver Board B. IRYC42 for Prisma-4K	
ZU-02-406	IF406-00 Small Size IR-Sensor	
PA-43-002	PrismaECO-4K-00	
RC-10-006	IR Remote Contr.ZRC-02 (Prisma-4K-00)	
ZX-42-179	Battery 1.5V Micron (AAA)	2pcs required for RC
UP-02-177	B173ZAAN1.0	
KA-30-983	Cable 2xl-PEX/20453-204	
KA-30-904	Cable OSD Prisma-4K/IF398 450mm	For IF-398-00 only

12.2 KI-58-001 15.6" NE156QUM/PrismaECO-4K

Ordering Code	Description	Comment
BO-01-006	NE156QUM-N63	
KA-30-983	Cable 2xl-PEX/20453-204	
KA-30-904	Cable OSD Prisma-4K/IF398 450mm	For IF-398-00 only
KA-30-971	Cable OSD P4k t OSD(IF398) &IR 490/300mm	For IF-398-00 & DB-07-737
KA-30-993	Cable OSD P4k t OSD(IF398) &IR(IF406)1500	For IF-398-00 & IF406
ZU-02-398	IF398-00-OSD-Board-Universal 4+1 Button	
DB-07-327	IR-Receiver Board B. IRYC42 for Prisma-4K	
ZU-02-406	IF406-00 Small Size IR-Sensor	
PA-43-003	PrismaECO-4K-00	
RC-10-006	IR Remote Contr.ZRC-02 (Prisma-4K-00)	
ZX-42-179	Battery 1.5V Micron (AAA)	2pcs required for RC

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