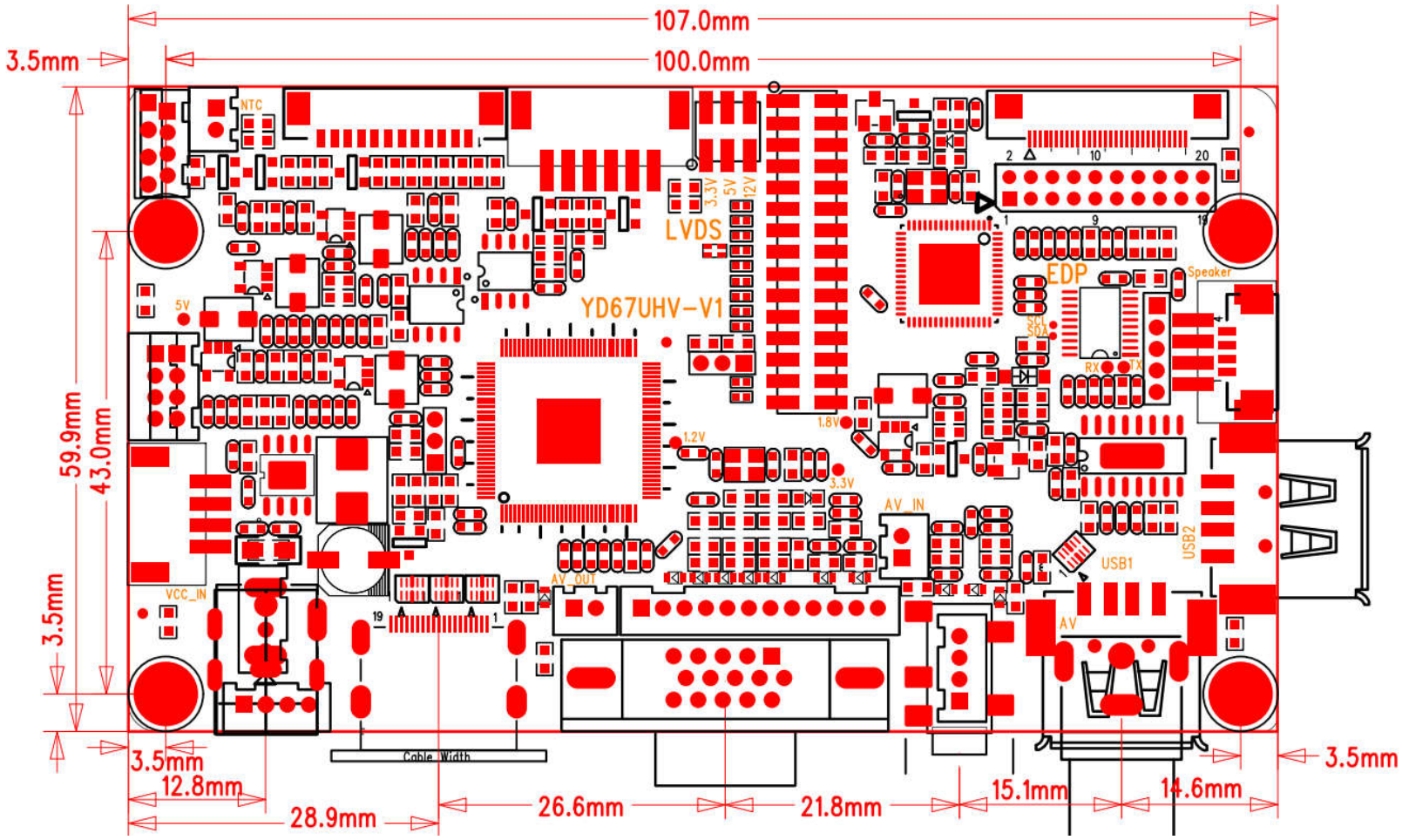
Product Manual

P/N No.: V860102108



USBMultimedia+HDMI+VGA_LVDSOutput

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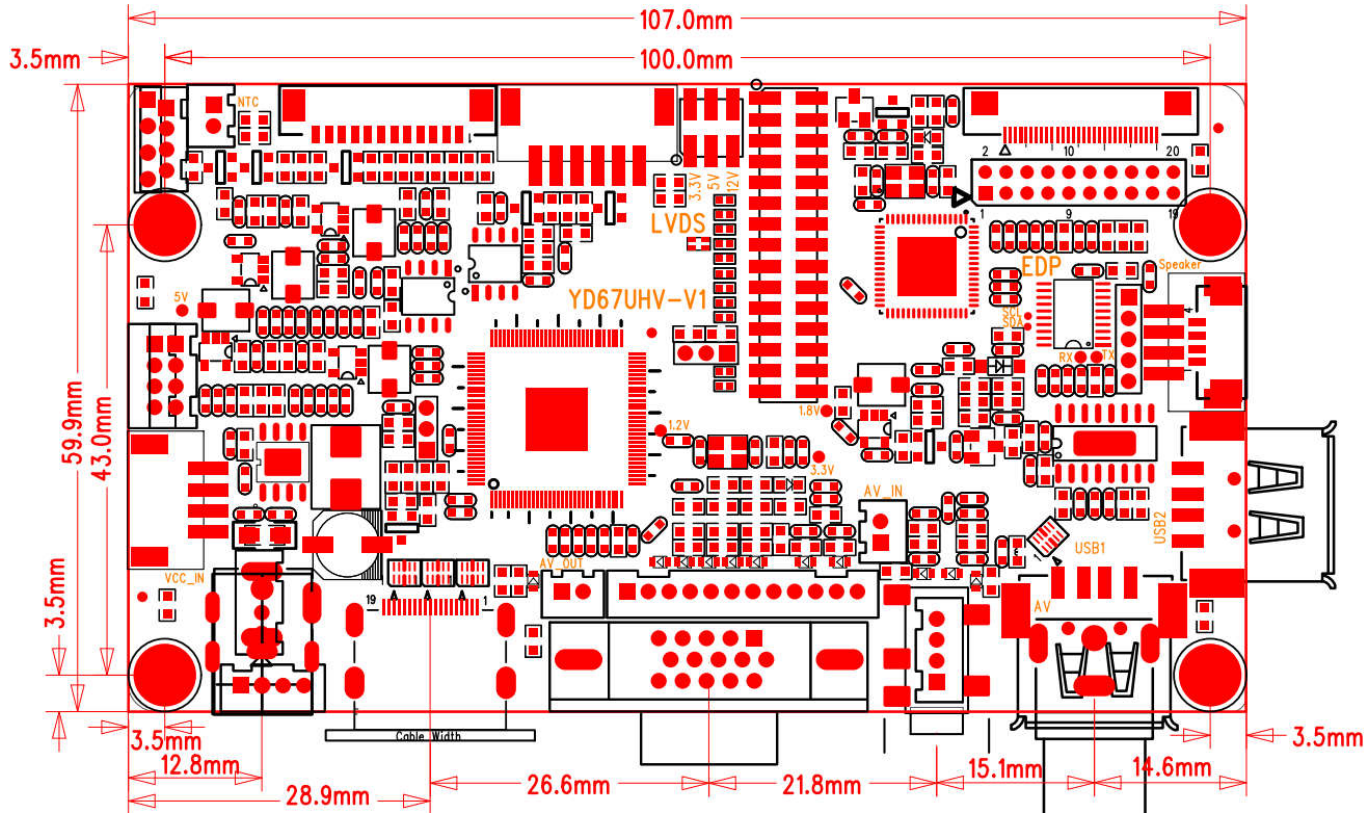
1.summary

LCDThe driver board is mainly forLVDS+eDPInterface LCD screen design.

- Input signal: Digital HD (HDMITwo-way), analog (RGB, VGA),simulationCVBSAll the way (3Dfilter),USB2.0Two channels, one channel for analog audio.
- Output signal:LVDSDouble eight-bit one way,eDPAll the way,CVBSOne way, digital audioSPDIFAll the way, amplifier2X15W All the way,PWM Fan control all the way.
- USBInterface: Two-wayUSBsupport1920x1080Video and picture playback,H.264,
- The board supports wide voltage input8V~25V;Typical Value12V(Screen power supply is12V When the board is powered12V)
- Wide operating temperature range: -20℃ ~ +70℃
- Backlight power support5V/12V(default12V),supportPWMDuty cycle adjusts backlight brightness
- Display output interface: **EDP Output 2lane /4lane, LVDS pa8BIT**
- adaptPC(Personal computer) graphics card high definitionHDMI,simulationRGB(VGA)Resolution:480x272,VGA,SVGA,XGA, SXGA, WXGA+,UXGA,1920X1200waitVESAStandard signal;
- Features: This board has the characteristics of simple operation and reliable performance.

2.Layout and Dimensions

TOPVIEW:



3.How to use

First, make sure the controller and related accessories are complete and correct. Please refer to the relevant connection diagrams and assembly precautions.

Check the controller settings to ensure they are correct (wrong settings may damage the display); Prepare

the signal source (such asPC);

Connect all links according to the connection diagram;

Be familiar with how to operate and product functions.

4.Precautions for use

This control panel is suitable for1920×1200,1920×1080,1600×1200,1280×1024,1024×768,1024×600,800×600,800×480 and640×480 Equal resolutionTFTFor LCD display solutions, the following issues need to be noted:

4.1Preparation

Understand the component configuration of the entire system in advance, prepare the connecting devices, understand the installation dimensions, assembly layout, etc. Work according to the guidance of the system connection diagram. The following are some necessary preparations for reference:

（1）LCD screen: This driver board is suitable for power supply3.3V,5Vor12V, the interface isEDPorLVDSInterface LCD screen.2）Control panel: When touching the control panel, be careful to avoid static electricity to avoid damaging components. Confirm that the control panel settings fully meet the requirements of the display. （3) LCD screen connection components: Different LCD screens may use different connectors and have different pin signal arrangements.

（4) Inverter: LCD screens without built-in inverters need to be equipped with inverters. You should choose a matching inverter based on the backlight parameters of the LCD screen.5) Inverter cable: Different inverters generally have different input signals, so you need to select matching cables. Improper connection may damage the inverter.

（6) Function control: Function control includes power switch, backlight adjustment and OSDMenu adjustment.7）

OSDAdjustment board connection cable: This cable is generally required to be1m Within.

（8) Signal standard cable: This cable is very important to the display quality and requires the use of high-quality shielded cable.

（9)power supply:12VDC power supply requires a stable power supply. The power supply power depends on the LCD screen and the inverter. Generally speaking,3.5A The power supply can meet the high brightness orLED1500Brightness determines the demand of LCD screen. Power fluctuations will affect the life of backlight, display quality and even damage the product.

4.2Power safety

becauseledThe driver outputs a high starting voltage and operating voltage (9~19VOr large size externalledDrive55V), the operating frequency is also relatively high (tens ofkHz) may have an impact on the display and system, and attention should be paid to the layout of the boost board.

4.3Electromagnetic Interference

It is necessary to take certain shielding measures to prevent external interference.

4.4Grounding

PCBThe mounting hole is connected to the ground.

4.5Controller Installation

When installing this controller, it is recommended that the component surface should be kept at least10mmHigh space, the other side at least maintain5mmAlso pay attention to: electrical insulation; good grounding; prevention of electromagnetic interference; reasonable cable layout.

It is important to note that the signal line of the LCD screen must be kept at a necessary distance from the backlight line to prevent signal crosstalk. Heat and

ventilation: LCD screens with high backlight brightness will generate relatively high heat, so attention should be paid to heat dissipation.

4.6Other issues that may affect system security and system performance

PCGraphics card output: Signal quality is very important ifPCThe graphics card output signal is noisy or unstable, and its impact may be directly reflected in the display. Please refer to Adapting the graphics card mode.

5.Connection and Operation

5.1connect

Connect and use:

1)Backlight andledBacklight driver: connects the backlight of the LCD screen (if the LCD does not have a built-in inverter) toledBoost board output,

led The input of the boost board is connected to the backlight interface of the control board;

2) LVDSSignal display: Connect the signal cable directly to theLVDSport, and the other end is connected to the LCD screen;

3)Function control: Use cable to OSDThe regulator board is connected to the controller OSDport;

4) HDMICables and controllers,HDMIConnect one end of the cable to the controllerHDMIport, the other end of the cable is connected toPC Graphics card output;

5) VGACables and Controllers:VGAConnect one end of the cable to the controller VGAport, the other end of the cable is connected toPCGraphics card output;

6)Power supply and controller:12VThe DC power supply is connected to the power input port of the controller;

7)Display power switch: through OSDAdjustment board to achieve.

5.2 PC set up

Although this controller is designed to accommodate a wide range of signals, it is recommended to optimize the display signal.PCThe display refresh rate is set to 60Hz——This will not easily cause the screen to flicker. It is best to set the resolution to match the LCD screen.

5.3Adjustment Operation

After the system is connected and working properly, you canOSDAfter adjustment, exit the menu and the parameters are automatically stored.

5.4Display system block diagram

Please see the picture on the next page:

illustrate:

1,TFTLCD screen;

2, Display controller:YD671UHV-V1;

3, backlight driver (if the LCD screen does not have a built-inledBooster board);

4,OSD（On Screen DisplayDisplay on the screen) Function adjustment board (manufacturers can make it according to the definitionOSDKeypad); 5, Cable connecting the LCD screen to the control board;

6, Cables connecting the inverter to the control board;

7,connectOSDCable from regulator board to control board.

5.5Feature Points

5.5.1Test Points

Logo	use way	Minimum	typical	maximum	unit	Ripple	Remark
12V	12V Test Points	10.8	12	13.2	V	400mV	By external module Decide
5V	5V Test Points	4.75	5	5.25	V	200mV	
3.3V	3.3V Test Points	3.13	3.25	3.46	V	150mV	
1.2V	1.2V Test Points	1.12	1.19	1.28	V	100mV	
GND	GND	-	-	-	V	-	
BL-EN	Backlight Enable	0.1	-	5	V	-	
BL-PWM	BacklightPWM	0.1	-	5	V	-	

5.6Interface Description

5.6.1Interface Overview

interface	use	Connector Description	Remark
CN3	12V DC power input	4P,2.0Pitch, single row,180°, socket	default NC
CN1	12V DC power input	DC JACK, positive inside and negative outside, positive electrode outer diameter ϕ2.0mm, negative electrode inner diameter ϕ5.5mm copper	
CN26	Inverter interface	6P,2.0Pitch, single row,180°, copper/socket	
CN11	USB1interface	USB2.0 HD decoder (H.264) /USB-A-90°Socket	
CN15	PC AUDIOenter	3.5mm Headphone holder	
CN4	HDMIenter	HDMI-19pin,90 degrees, copper plated with gold, Taiwan socket	
CN25	LVDS/Output Interface	2×15P,2.0pitch, double row pin30Pin,180°, socket	
CN24	EDP/Output interface/FPC30pinFlip	FFC0.5mm-30pin,socket	
CN23	EDP/Output Interface2.0_2X10_20PIN	2×10P,2.0pitch, double row pin20Pin,180°, socket	default NC
CN30	OSD Adjust keyboard interface	12P,1.25Pitch, single row, socket	
CN14	VGA Input standard socket	DB15FLC, female header,90°, black (or blue), copper feet/with screws	
CN34	VGA Input Substitution Plugin	12P,2.0Pitch, single row,180°, socket	default NC
CN4	5V Output	4P,2.0Pitch, single row,180°, socket	default NC
CN2	12V Output	4P,2.0Pitch, single row,180°, socket	default NC
CN21	Left and right channel speaker output2x15W	4P,2.0Pitch, single row,90°, socket	
J1	LCD screen power supply selection	1-2 Short circuit3.3V,3-4Short circuit5V,5-6Short circuit12V	
CN16	CVBS enter3D deinterlace	PH2.0-2,2.0pitch, double row pin20Pin,180°, socket	default NC
CN9	CVBS Output	PH2.0-2,2.0pitch, double row pin20Pin,180°, socket	default NC

5.6.2Interface definition description

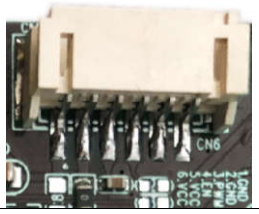
- Logo:CN3(default NC） Application:12VDC
- power input (default NC)
- type:4P,2.0Pitch, single row,180°, socket (JST/CVILUX),White
- Connectors:PH2.0mm-4PINDirect Plug
- Pin Definition

Pinout	symbol	explain bright	Pinout	symbol	explain bright
1	+12V	+12V DC power input (±10%)	2	+12V	+12V DC power input (±10%)
3	GND	land	4	GND	land

- Logo:CN1
- use:12VDC power input
- Type: positive inside and negative outside, positive outer diameterϕ2.0mm Copper gold-plated, negative inner diameterϕ
- 5.5mm, black connector:DC JACK（CVILUX）
- Pin Definition

Pinout	symbol	explain bright	Pinout	symbol	explain bright
1	+12V	+12V DC power input (±10%)	2	GND	land
3	GND	land			

- Logo:CN26
- Application: Boost board/inverter interface
- type:PH2.0mm-6PIN,6P,2.0Pitch, single row,180°, socket, white
- connector: (CVILUX)
- Pin Definition



Pinout	symbol	explain bright	Pinout	symbol	explain bright
1	GND	land	2	GND	land
3	Vadj	Connect the brightness adjustment terminal of the inverter2】	4	ON/OFF	On/Off (Enable)5V / 0V
5	+12V/5V	Default+12V, inverter power supply [Note1】	6	+12V/5V	Default+12V, inverter power supply [Note1】

- Logo:CN11
- use:USB1interface
- type:USB-A-90Spend
- Connectors:
- Pin Definition

Pinout	symbol	explain bright	Pinout	symbol	explain bright
1	USB_5V	USB - 5V	2	USB_D+	USB_D+
3	USB_D-	USB_D-	4	GND	land

- Logo:CN12
- use:USB2interface
- type:USB-A-90Spend
- Connectors:
- Pin Definition

Pinout	symbol	explain bright	Pinout	symbol	explain bright
1	USB_5V	USB - 5V	2	USB_D+	USB_D+
3	USB_D-	USB_D-	4	GND	land

- Logo:CN15
- use:PCAudio input interface
- type:3.5mm Headphone jack
- Connectors:
- Pin Definition

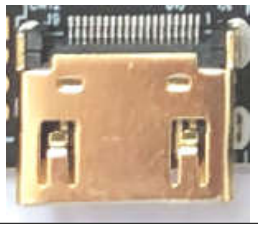
Pinout	symbol	explain bright	Pinout	symbol	explain bright

1	VGA_IN_L	Left channel input	2	NC	NC
3	GND	GND	4	VGA_IN_R	Right channel input
5	GND	GND			

- Logo:CN22
- Application: Headphone audio output interface
- type:3.5mm Headphone jack
- Connectors:
- Pin Definition

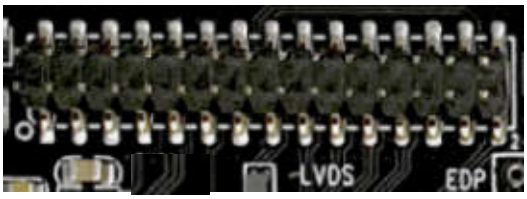
Pinout	symbol	explain bright	Pinout	symbol	explain bright
1	VGA_IN_L	Left channel output	2	OUT_HPD	Headphone insertion detection
3	GND	GND	4	VGA_IN_R	Right channel output
5	GND	GND			

- Logo:CN4
- use:HDMISignal input
- type:HDMI-19PIN/4Pin plug/gold-plated copper/
- 90Connector:HDMI-19PIN
- Pin Definition



Pinout	symbol	explain bright	Pinout	symbol	explain bright
1	Data2+	DPdata0+	2	GND	land
3	Data2-	DPdata0-	4	Data1+	DPdata1+
5	GND	land	6	Data1-	DPdata1-
7	Data0+	DPdata2+	8	GND	land
9	Data0-	DPdata2-	10	Clock-	DPdata3+
11	GND	land	12	Clock+	DPdata3-
13	GND	land	14	GND	land
15	AUX_P	AUX_P	16	GND	land
17	AUX_N	AUX_N	18	HPD	Hot plug DetectHot plug identification
19	RE-PWR	RE-PWER	20	PWR	PWR

- Logo:CN25
- use:LVDSSignal output
- type:2×15P,2.0pitch,180°Direct plug, double row socket,
- connector: DuPont2.0-2X15/DF11-30DP
- Pin Definition



Pinout	symbol	explain bright	Pinout	symbol	explain bright
1	VCC	3.3V/5V（±5%）	2	VCC	3.3V/5V（±5%）
3	VCC	3.3V/5V（±5%）	4	NC	NC
5	GND	land	6	GND	land
7	TXO0-	Odd channel channel1Output negative	8	TXO0+	Odd channel channel1Output positive
9	TXO1-	Odd channel channel2Output negative	10	TXO1+	Odd channel channel2Output positive

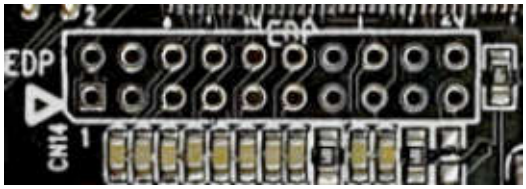
11	TXO2-	Odd channel channel3Output negative	12	TXO2+	Odd channel channel3Output positive
13	GND	land	14	GND	land
15	TXOC-	Negative clock output of odd channel	16	TXOC+	Odd channel clock output positive
17	TXO3-	Odd channel channel4Output negative	18	TXO3+	Odd channel channel4Output positive
19	TXE0-	Even channel1Output negative	20	TXE0+	Even channel1Output positive
twenty one	TXE1-	Even channel2Output negative	twenty two	TXE1+	Even channel2Output positive
twenty three	TXE2-	Even channel3Output negative	twenty four	TXE2+	Even channel3Output positive
25	GND	land	26	GND	land
27	TXEC-	Negative clock output of even channel	28	TXEC+	Even channel clock output positive
29	TXE3-	Even channel4Output negative	30	TXE3+	Even channel4Output positive

- Logo:CN24
- use:EDPSignal output
- type:FFC0.5mm-30pin, flip socket
- connector:

- Pin Definition

Pinout	symbol	explain bright	Pinout	symbol	explain bright
1	NC	No function	2	GND	land
3	eDP1P/1+	eDP LANE 1+ Signaldata	4	eDP1N/1-	eDP LANE 1- Signaldata
5	GND	land	6	Edp0P/0+	eDP LANE 0+ Signaldata
7	eDP0N/0-	eDP LANE 0- Signal data	8	GND	land
9	AUX_P/+	Edp AUX_P + Signaldata	10	AUX_N/-	Edp AUX_N - Signaldata
11	GND	land	12	VCC-Panel	LCD screenEDPpowered by
13	VCC-Panel	LCD screenEDPpowered by	14	NC	No function
15	GND	land	16	GND	land
17	EDP_HPD	EDP_Hot plug Detect	18	BK_GND	LCD backlight power supply negative electrode
19	BK_GND	LCD backlight power supply negative electrode	20	BK_GND	LCD backlight power supply negative electrode
twenty one	BK_GND	LCD backlight power supply negative electrode	twenty two	BK_EN	LCD backlight switch
twenty three	BK_PWM	LCD backlightPWM Brightness adjustment	twenty four	NC	No function
25	NC	No function	26	BK_VCC	LCD backlight power supply positive electrode
27	BK_VCC	LCD backlight power supply positive electrode	28	BK_VCC	LCD backlight power supply positive electrode
29	BK_VCC	LCD backlight power supply positive electrode	30	NC	No function

- Logo:CN23(default NC)
- Application:EDPSignal output
- type:2×10P,2.0pitch,20pin,180°Straight plug, double row socket,
- connector:DF11-20DP-2DSA



- Pin Definition

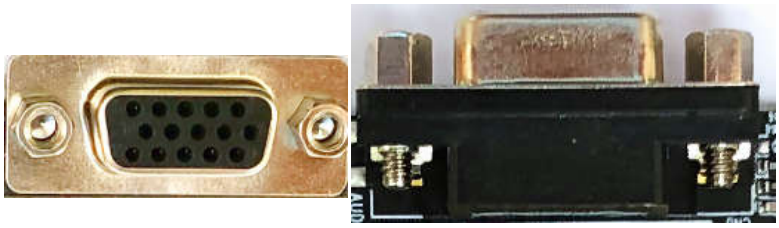
Pinout	symbol	explain bright	Pinout	symbol	explain bright
1	VCC-Panel	LCD screenEDPpowered by	2	VCC-Panel	LCD screenEDPpowered by
3	GND	land	4	GND	land

5	eDP0N/0-	eDP LANE 0- Signal data	6	eDP0P/0+	eDP LANE 0+ Signaldata
7	eDP1N/1-	eDP LANE 1- Signal data	8	eDP1P/1+	eDP LANE 1+ Signaldata
9	eDP2N/2-	eDP LANE 2- Signal data	10	eDP2P/2+	eDP LANE 2+ Signaldata
11	eDP3N/3-	eDP LANE 3- Signal data	12	eDP3P/3+	eDP LANE 3+ Signaldata
13	GND	land	14	GND	land
15	AUX_N/-	Edp AUX_N - Signaldata	16	AUX_P/+	Edp AUX_P + Signaldata
17	GND	land	18	GND	land
19	NC/3.3V	NC	20	EDP_HPD	EDP_Hot plug Detect

- Logo:CN30
- use:OSDFunction control connector
- type:Molex1.25mm-12PIN,12P,1.25Pitch, single row,180°, socket, white
- connector: (Molex) or compatible
- Pin Definition

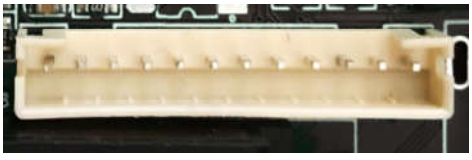
Pinout	symbol	explain bright	Pinout	symbol	explain bright
1	IR	Infrared remote control signal input	2	GND	land
3	VCC5V	5V	4	I/O（Source）	Signal source selection shortcut key/exit keyK1
5	I/O（Menu）	Menu Key K2	6	Auto	NC/ReserveK3
7	I/O（Left）	Left Adjustment KeyK4	8	I/O（Right）	Right Adjustment KeyK5
9	GND	land	10	LED_GREEN	Green indicator light
11	LED_RED	Red indicator light	12	I/O（Power）	Power buttonK6

- Logo:CN14
- Purpose: SimulationRGB（VGA) Input
- type:DB15FLC（JST/CVILUX),blue
- Connectors:HL128-15F-101-910（CVILUX）
- ESDgrade:3class
- Pin Definition



Pinout	symbol	explain bright	Pinout	symbol	explain bright
1	RED	Analog red signal	2	GRN	Analog green signal
3	BLU	Analog blue signal	4	NC	No connection
5	GND	Digitally	6	AGND	Analog Ground
7	AGND	Analog Ground	8	AGND	Analog Ground
9	5V	DDCuse5V	10	GND	Digitally
11	NC	No connection	12	VGA_DDC_SDA	DDCSerial Data
13	HSYNC	Horizontal sync input	14	VSYNC	Vertical Sync Input
15	VGA_DDC_SCL	DDCSerial Clock			

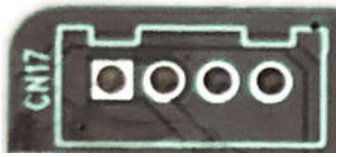
- Logo:CN34(default NC） Application:VGA
- Signal input replacement connector
- type:PH2.0mm-12PIN,2.0Pitch, single row,180°, socket, white
- connector: (CVILUX)
- Pin Definition



Pinout	symbol	explain bright	Pinout	symbol	explain bright

1	VGA_SCL	DDCSerial Clock	2	VGA_SDA	DDCSerial Data
3	AGND	Analog Ground	4	BLU	Analog blue signal
5	AGND	Analog Ground	6	GRN	Analog green signal
7	AGND	Analog Ground	8	RED	Analog red signal
9	GND	Digitally	10	HSYNCIN	Horizontal sync input
11	VSYNCIN	Vertical Sync Input	12	GND	Digitally

- Logo:CN4(defaultNC)
- Application:5V Voltage output
- type:PH2.0mm-4PIN,2.0Pitch, single row,180°, socket, white (defaultNC)
- Connector:（CVILUX) or compatible
- Pin Definition



Pinout	symbol	explain bright	Pinout	symbol	explain bright
1	+5V	5V Power Supply (±5%)	2	+5V	5V Power Supply (±5%)
3	GND	land	4	GND	land

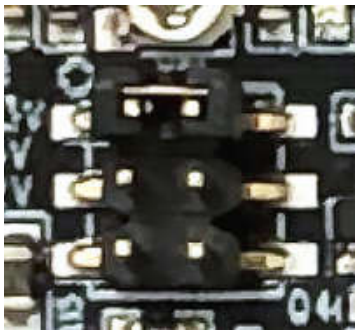
- Logo:CN2(default NC)
- Application:12VVoltage output
- type:PH2.0mm-4PIN,2.0Pitch, single row,180°, socket, white (defaultNC)
- Connector:（CVILUX) or compatible
- Pin Definition

Pinout	symbol	explain bright	Pinout	symbol	explain bright
1	+12V	12V Power Supply (±5%)	2	+12V	12V Power Supply (±5%)
3	GND	land	4	GND	land

- Logo:CN21
- Application: Left and right channel speaker output2X15W
- type:PH2.0mm-4PIN,2.0Pitch, single row,90°, socket, white
- connector:
- Pin Definition

Pinout	symbol	explain bright	Pinout	symbol	explain bright
1	SP_R+	Amplifier right channel positive output	2	SP_R-	Amplifier right channel negative output
3	SP_L-	Amplifier left channel negative output	4	SP_L+	Amplifier left channel positive output

- Logo:J1
- Purpose: Jumper screen power supply voltage selection
- Type: Double row2.0mm,2X3,6pin
- Pin Definition



Jumper Wires	Configuration	Function
J1	1-2 Short Circuit	LCDpanel3.3V Power selection (default)
	3-4 Short Circuit	LCDpanel5V Power Supply Selection
	5-6 Short Circuit	LCDpanel12V Power Supply Selection

- Logo:CN16
- use:CVBSenter
- type:PH2.0mm-2PIN,2.0Pitch, single row,180°, socket, white
- connector:
- Pin Definition

Pinout	symbol	explain bright	Pinout	symbol	explain bright
1	AV_IN	AV Signal/CVBSSignal input	2	GND	Ground

- Logo:CN16(defaultNC） Application:SPDIFDigital audio output
- (default NC) type:PH2.0mm-2PIN,2.0Pitch, single row,180°, socket,
- white connector:
-
- Pin Definition

6.Technical Parameters

Product Model		V1Version:V1		
Dimensions		106.8mm×60 mm×16.5mm（L×W×H）		
Display Color		twenty fourBit(16.7M）		
Display screen interface		LVDS,eDP		
Control scope		480×272~1920×1200Equal resolutionLCD		
Signal input	Input signal type	VGA,HDMI,DP		
	Input signal range	HDMIInput range	PC（VGA / HDMI)Highest1920×1200	
		VGA Input range	PC（VGA / HDMI)Highest1920×1200	
Supported input signal formats		Reference AppendixA,appendixB		
Supply voltage		Minimum:8V	Nominal:12V	maximum:24V
Working currentNote		Minimum:0.15A	Nominal:0.17A	maximum:0.25A
Standby power		<0.5W		
Display voltage		3.3V/5V/12V Jumper selectable		
Maximum display load capacity (normal temperature)		1.2A@3.3V,2.5A@5V,3.5A@12V（12V The screen is limited by the power supply capacity）		
User Interface		Visualization OSD User Interface		
Communication interface		Digital buttons, infraredIR		
Operating temperature range		- 20°C～70°C;－30°C～70°C (Except main chip)		
Operating humidity range		10~95%RH（40°C,95%RH）		
Storage temperature range		- 40°C～70°C		
Storage humidity range		10~100%RH		
Working environment atmospheric pressure range		70kPa~106kPa		
MTBF		> 100000Hour		

Note: (Motherboard only)

7.Display Adjustment

7.1Menu Structure

7.2Instructions

7.2.1Button Description:

Digital button description

K1（Source/EXIT）	Signal source input selection key/exit key
K2（MENU）	Main menu button, confirm button
K3（NC）	No function
K4（Left）	Decrease option value (-)/parameter adjustment button, hot key 1 (definable)
K5（Right）	Increase option value (+)/parameter adjustment button/confirmation button, hot key 2 (definable)
K6（Power）	Standby button

Infrared button instructions (optional remote control)

Menu	Main menu button, confirm button
← （Left）	Decrease option value (-)/parameter adjustment button, hot key 1 (definable)
→ （Right）	Increase option value (+)/parameter adjustment button/confirmation button, hot key 2 (definable)
Source	Exit key, signal source input selection key,VGA model AUTO key
Power	Standby button

7.2.2Indicator Light Description

After power on, no signal is displayed in red, normal operation is green, and shutdown is red. Note:

The standby indicator light caused by no signal is still orange.

7.2.3Menu operation method:

-according to"Menu”Press to bring up the main menu, then press Menukey to enter the submenu;

-according to"Left”/“Right”Key to switch between main menu information and submenu items;

-according to"Menu”Go to the Adjustment Options and selectLeft”/“Right”Adjust the parameters in each adjustment option.

7.2.4Power management and indicator light function description:

-When the signal is working properly, the keypad indicator light is green.D1is red,D2is green.

-When you pressPowerWhen the key is pressed, the system enters standby mode and the keypad indicator light turns red.D1normal,D2Not lit.

-When there is no signal, the keypad indicator light is red.D1is red,D2Not lit.

-When no signal lasts15sAfter that, the system will enter the power saving mode, and the keypad indicator light will be red.D1is red,D2 When there is a signal, the power saving mode will be exited and the normal working mode will be entered. At this time, the keypad indicator light will return to green.

7.2.5How to enter the aging mode of some models of boards (Burnin):

-After power on, there is no need to connect to the signal. Wait for the screen to display "NO SIGNAL”, pressMenu”Enter the menu by pressing theLeft”/“Right” Adjust toBurnin’ Option set to "NO”Then you can enter the aging mode. (Note: When operating the aging mode, you must be fast; the operation must be completed before the board enters the standby mode, because it will automatically enter the standby mode after a long period of no signal, and the menu will not be able to operate after entering the standby mode)

-Exit aging mode: Simply power off and then power on the board again to exit aging mode.

8.Fault analysis and troubleshooting

8.1Possible fault links

Generally, when the display system is abnormal, it is necessary to judge the following links. By checking them step by step, you can usually determine where the problem lies.

Controllers (such as jumpers,PCSignal settings);

Display (consider controller, signal cables, connections, display,PCSignal settings);

Backlight (related to the controller, cables, backlight tube);

Cables (such asHDMIWire);

Microcomputer system (display settings such as refresh rate, etc.);

8.2No display

If the connection is incorrect, or there is no power (such as no power input, the power switch is not turned on), orPCIf the output signal is out of the applicable range of this controller, it may result in no display.

8.3Image location

If passedOSDIf the image display position cannot be adjusted properly, it may be that the output timing of the graphics card does not meet the standard and the controller cannot adapt to it. You may try to replace another graphics card for testing. In addition, some video distributors may also have an impact.

8.4Abnormal image display

Abnormal display phenomena may include missing lines, jitter, flickering, shadows, etc.

Inconsistency between the graphics card's refresh rate, resolution setting, and scanning mode and the controller's requirements may result in abnormal image display size, image rolling, flickering, or even no display.

The quality of the cables connecting the display can also cause display anomalies.

The quality of the signal cable directly affects the quality of the input signal and the anti-interference ability of the input end. If there are shadows on the image, it is very likely caused by the poor quality of the signal cable.

If there is not an appropriate distance between the backlight and the display signal cable, it may affect the LCD screen's horizontal synchronization signal, and its impact can be seen directly in the display.

8.5Backlight

If the backlight is abnormal, you need to check the following aspects: power input, input switch signal, input regulation (the regulation signal not within the required range of the inverter may also be the reason why the backlight is not bright) and backlight tube, etc.

8.6Other faults

Improper use, such as inappropriate input power, circuit short circuit caused by wrong operation, incorrect cables, etc. may bring unpredictable adverse consequences.

appendixAsupportVGA,HDMI,DPInput signal mode list

model	Resolution	Field frequencyHz]	Line frequencykHz]	clock[MHz]	Synchronous mode	standard

E1_70	640×350	70	31.469	25.175		N/A
E2_70	640×400	70	31.469	25.175		N/A
T_70	720×400	70	31.469	28.322		N/A
V60	640×480	59.940	31.469	25.175		Industry Standard
V75		75.000	37.500	31.500		VESA Standard
SV60	800×600	60.317	37.879	40.000		VESA Standard
SV75		75.000	46.875	49.500		VESA Standard
X_60	1024×768	60.004	48.363	65.000		VESA Standard
X_70		70.069	56.476	75.000		VESA Standard
X_75		75.029	60.023	78.750		VESA Standard
SX_60	1280×1024	60.020	63.981	108.000		VESA Standard
SX_75		75.025	79.976	135.000		VESA Standard
UX_60	1600×1200	60.000	75.000	112.288		VESA Standard
F-HD_60	1920×1080	59.940	67.433	148.352		VESA Standard

Approval Records

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