



# Display A/D Board

## Product of Specification

Customer		
Part No.	<b>UL 370-B1</b>	
Customer NO.		
Product type	4K2K@60Hz Display	
Signature by Customer:		
Checked By	Rechecked By	Approved By
San Shen	<b>ERIC HUANG</b>	<i>HANSOM</i>
NOTE	ROHS	

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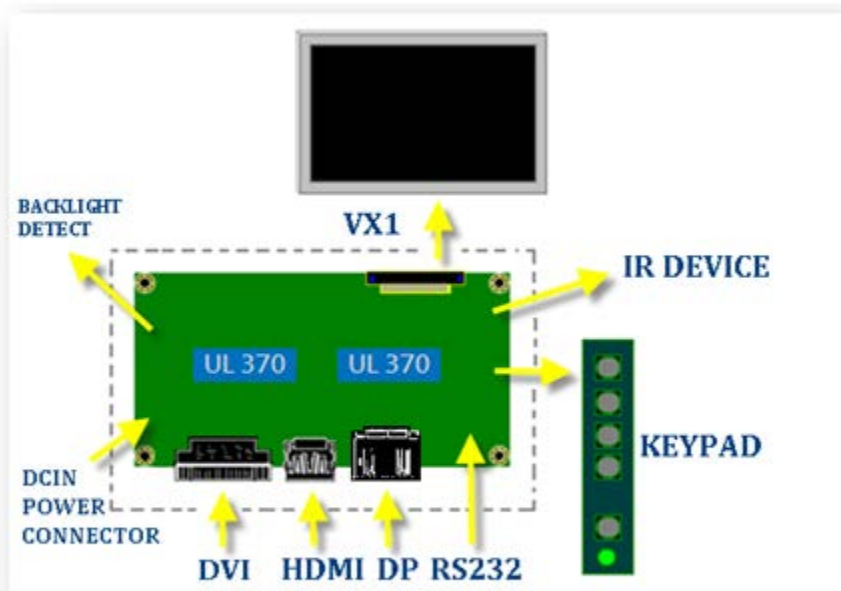
## Revision history

Version	Change of Content	Change of time
Ver . A	The first edition	

## I. Function and specification

### 1.General description:

- ◆Power supply
  - Adaptor IN:24V
- ◆Support 5key keypad and 2 LED
- ◆Support IR Device and 2 LED
- ◆Support RS232
- ◆Input:
  - DVI(OPTION),HDMI,DP,VGA(OPTION) support
  - Support 2560x1600@60Hz in DVI Dual Link
  - Support HDMI 1.4a 4Kx2K@30Hz Video Mode
  - Support Displayport V1.2 4Kx2K@60Hz
  - Support RGB 2048x1152@60Hz
- ◆Output
  - Vx1,LVDS(OPTION),eDP(OPTION) Support
  - Support V-by-one Display resolution output 4Kx2K@60Hz





# I. Function and specification

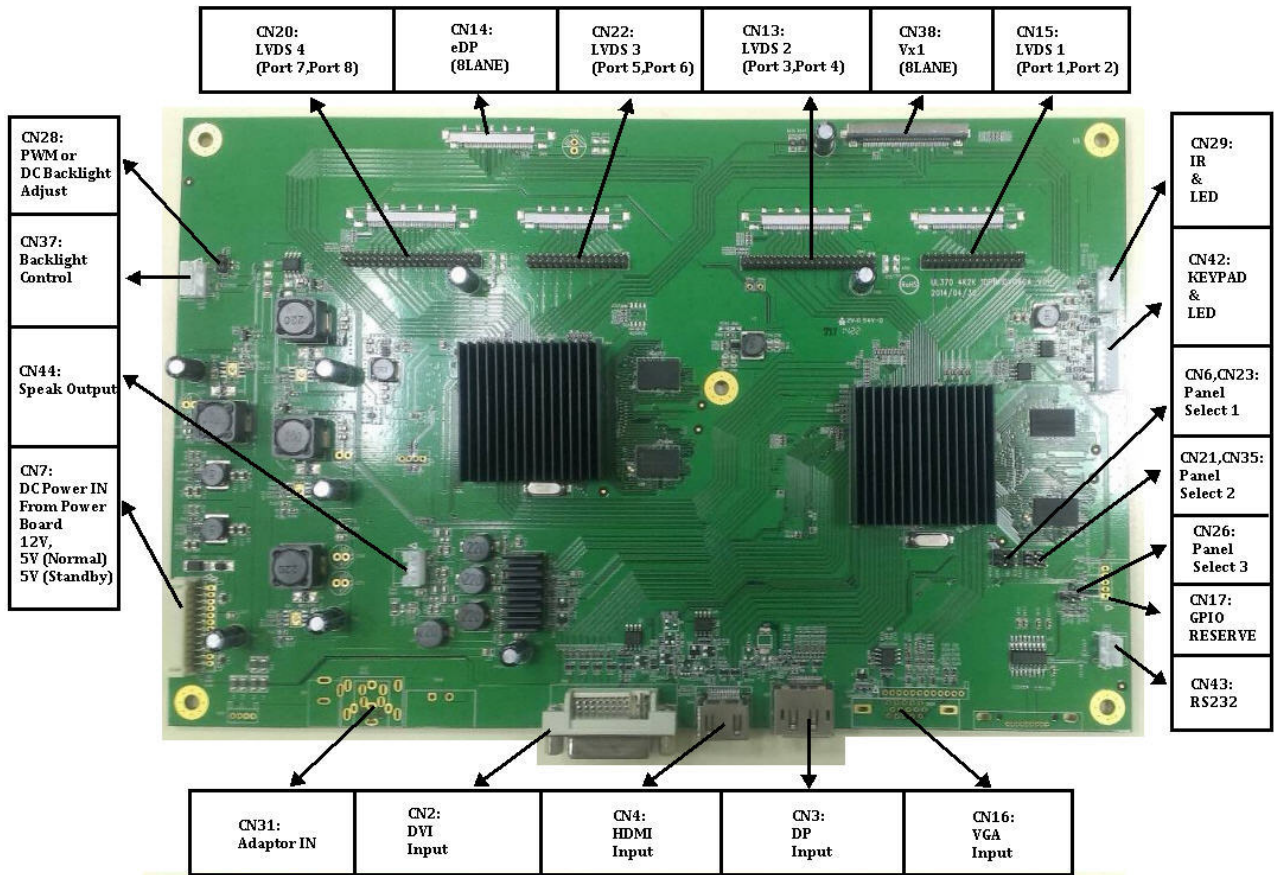
## 3.Features

Board of Thickness:1.6 mm ; The board of Four Layers ; The two side of Parts on board

Power Supply	DCIN 24V,5V(NORMAL),5V(STANDBY),12 PIN Connector			
Panel function	Vx1(8LANE)up to 4K2K@60Hz			
	Power Supply	24V		
Back light	Back Light On/Off	By F/W support		
	Brightness	H/W Jumper to switch PWM or DC		
Input function	HDMI	Yes	4Kx2K@30Hz	1.4a
	DP	Yes	4Kx2K@60Hz	V1.2
Other Function	Panel Select	Yes	Eighteen selection	
	Speaker	Yes	2x8W(8Ω),Power supply:12V	
KeyPad	Support the five of Key Input ,the two of LED Output			
OPTION	1. Adaptor IN :24V 2. LVDS OUTPUT: up to 4K2K@60Hz 3. eDP OUTPUT: up to 4K2K@60Hz 4. VGA INPUT: RGB 2048x1152@60Hz 5. DVI INPUT: 2560x1600@60Hz in DVI Dual Link 6. CEC FUCTION 7. GPIO RESERVE			

## II. Board and terminal of statement

### 1. Each terminal of position



## II. Board and terminal of statement

### 2. Each socket of statement

(1) . **CN7(M242612/2.0)** : DC Power IN : 24V, 5V (Normal),5V (Standby)



PIN1	PIN2	PIN3	PIN4	PIN5	PIN6	PIN7	PIN8	PIN9	PIN10	PIN11	PIN12
GND	GND	5V(SB)	5V(SB)	VLED	VLED	VLED	VLED	PWR ON	5V(NORMAL)	5V(NORMAL)	GND

(2) . **CN43 (M24263/2.0)** : RS232



PIN1	PIN2	PIN3
TX	RX	GND

(3) . **CN42(M24268/2.0)** : KeyPAD control connector



PIN No.	PIN 1	PIN 2	PIN 3	PIN 4	PIN 5	PIN 6	PIN 7	PIN 8
Sch Name	GND	LED R	LED G	Key 1	Key 2	Key 3	Key 4	Key 5
function	GND	Red Led	Green Led	On/Off	Up	Menu	Down	Auto/Exit

(3) . **CN29(M24265/2.0)** : IR BOARD DEVICE



PIN1	PIN2	PIN3	PIN4	PIN5
5V	IR DATA	GND	LED-G	LED-R



(4) . CN9(MSAKS24020P51J/1.0) : VX1



PIN 2	PIN 4	PIN 6	PIN 8	PIN 10	PIN 12	PIN 14	PIN 16	PIN 18	PIN 20	PIN 22	PIN 24	PIN 26	PIN 28	PIN 30
VX_7P	GND	VX_6N	VX_5P	GND	VX_4N	VX_3P	GND	VX_2N	VX_1P	GND	VX_0N	VX_LKN	GND	NC
PIN 1	PIN 3	PIN 5	PIN 7	PIN 9	PIN 11	PIN 13	PIN 15	PIN 17	PIN 19	PIN 21	PIN 23	PIN 25	PIN 27	PIN 29
GND	VX_7N	VX_6P	GND	VX_5N	VX_4P	GND	VX_3N	VX_2P	GND	VX_1N	VX_0P	GND	HPDN	NC

PIN 32	PIN 34	PIN 36	PIN3 8	PIN 40	PIN 42	PIN 44	PIN 46	PIN 48	PIN50	
NC	P_SCL	NC	GND	GND	GND	VDD	VDD	VDD	VDD	
PIN31	PIN 33	PIN 35	PIN 37	PIN 39	PIN 41	PIN 43	PIN 45	PIN 47	PIN 49	PIN 51
NC	P_SDA	NC	NC	GND	GND	NC	VDD	VDD	VDD	VDD

(5) CN37(M24264/2.0): Backlight Detect



PIN1	PIN2	PIN3	PIN4
GND	BALT-VBRI	BALT-EN	BL_DET

(6)CN44(M24264/2.0): Audio Output



PIN1	PIN2	PIN3	PIN4
R_B	R_A	L_B	L_A

### III. The board of setting

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**Notes:**

- (1) The panel of power must be right
- (2) The panel of select must be right
- (3) The backlight of control (PWM/Adj) must be right  
You can connect your Panel if all function switch is right

#### 1. Jumper function



Jumper is not connected

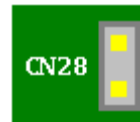


Jumper is connected

#### 2. CN28 : BackLight Brightness function


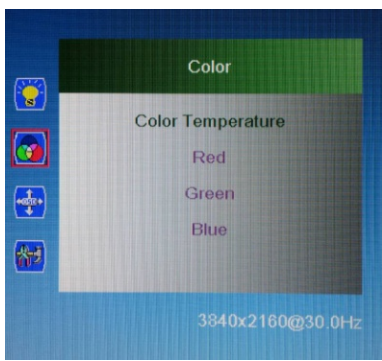

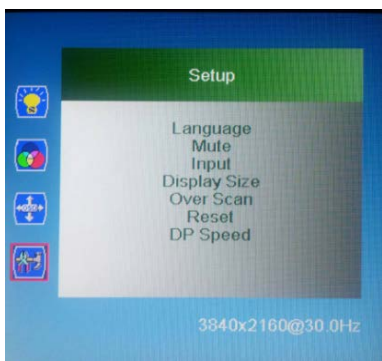


ADJ Brightness



PWM Brightness

## IV. The OSD function list of statement

F U N C T I O N  O F S E L E C T I O N	<b>Luminance</b> 	Brightness	0~100
		Contrast	0~100
		Gamma	ON OFF
	<b>Color</b> 	Color Temperature	5000K;6500K;7500K;8200K;9300K 11500K;sRGB;User Define
		Red	0~100(User Define)
		Green	0~100(User Define)
		Blue	0~100(User Define)
	<b>OSD Setting</b> 	Transparency	0~4
		OSD Time Out	0~60
		OSD Position	OSD Position1; OSD Position2, OSD Position3; OSD Position4
	<b>Setup</b> 	Language	The language of eight country
		Mute	ON OFF
	Input	DVI; HDMI1; DP	
	Display Size	Full Screen; Smart Fit; 4:3; Smart 4:3	
	Over Scan	ON OFF	
	Reset	ON OFF	
	DP Speed	2.7G; 5.4G	