15" Lcd Panel With Display Kits

■ Preliminary Specification

□ Approval Specification

Module	15" LCD Panel with Display Kits
Module Name	K150LGS-T01 Rev.0

Customer

_____

Approved by   **Date**

_____   _____

Notice: This Specification is subject to change without notice.

Approved By	Prepared By
Tony Chiu 2017/12/26	Ray Lin 2017/12/5

15" Lcd Panel With Display Kits

K150LGS-T01

Overview

- 15" a-si TFT LCD panel with resolution 1024 x 768
- Suitable for Military, Ruggedized PC, Kiosk, Advertising, POS, Marine, Transportation….etc.
- 15 Pin D-SUB VGA connector input
- DVI-D (Digital Video Input) connector input
- OSD(On-Screen-Display) control menu
- Audio input and Audio output
- Include following parts :
    1. 15" Panel
    2. ADBoard
    3. LVDS Cable
    4. B/L Cable
    5. OSD 4 key Board
    6. OSD 4 Key Cable
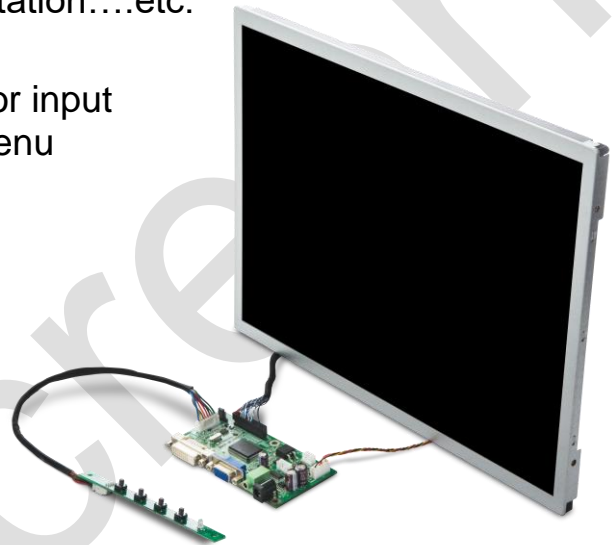
15" LCD Panel with Display Kits	
PANEL ITEM	**SPECIFICATION**
Module	15" Color TFT-LCD with LED Backlight (LVDS Interface)
Resolution (Pixels)	1024 x 768 (XGA)
White Luminance	420 cd/m2
Display Mode	TN Mode, Normally White
Contrast Ratio	800:1
Response Time	16ms (MAX 25ms)
View Angle	80/80/80/80 deg
Outline Dimension	326.5mm(H) x 253.5mm(V) x 12.5mm(T)
Weight	1200 g
Power Consumption	MAX 8.8Watt
LED Life Time	30,000 Hrs

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K150LGS-T01 Panel General Description

General Specifications

Item	Specification	Unit
Screen Size	15" diagonal	-
Driver Element	a-si TFT active matrix	-
Pixel Number	1024 x R.G.B. x 768	pixel
Pixel Pitch	0.2970(H) x 0.2970(V)	mm
Pixel Arrangement	RGB vertical stripe	-
Display Colors	16.2m Colors	color

Mechanical Specifications

Item		Type	Unit
Module Size	Horizontal(H)	326.5	mm
	Vertical(V)	253.5	mm
	Thickness(T)	12(MAX 12.5)	mm
Bezel Area	Horizontal	307.4	mm
	Vertical	231.3	mm
Active Area	Horizontal	304.12	mm
	Vertical	228.09	mm
Weight		(MAX 1200)	g

Absolute Rating of Environment

Item	Symbol	Value		Unit
		Min.	**Max.**	
Storage Temperature	T_{ST}	-20	+70	ºC
Operating Temperature	T_{OP}	-10	+65	ºC

Optical Specifications

Item		Symbol	Condition	Min.	Type	Max.	Unit
Color Chromaticity	Red	Rx	θx=0°, θY =0° Viewing Normal Angle	Typ – 0.03	0.625	Typ + 0.03	-
		Ry			0.352		-
	Green	Gx			0.315		-
		Gy			0.630		-
	Blue	Bx			0.149		-
		By			0.067		-
	White	Wx		0.255	0.305	0.355	-
		Wy		0.275	0.325	0.375	-
Viewing Angle	Horizontal	θx+	CR≥10	70	80	-	Deg.
		θx-		70	80	-	
	Vertical	θY+		70	80	-	
		θY−		60	80	-	

Panel Dimension

326.5±0.5(Outline)
307.4±0.3(Bezel Opening size)
304.128(Active Area)
163.25
9.55
11.19
12(Typcal)
5.5±0.3(2x)
5.5±0.3(2x)
14.75
224
126.75
228.096(Active Area)
231.3±0.3(Bezel Opening size)
253.5±0.5(Outline)
12.7
11.1
38.75
176
ACTIVE AREA CENTER
M3 USer Hole(2x)
Max depth 4.5mm
M3 User Hole(2x)
Max depth 4.5mm

64.99±1.0
65.27±1.0
pin 1   CN2
CN1   pin 1   134.4±1.0
195.47±1.0
BLU Label
LCM Label

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ADBoard & OSD Key General Function

A. TFT-LCD module drive board.

B. Resolution up to 1920 X 1080 @ 60 Hz.

C. 15 PIN D-SUB VGA connector input.

D. DVI-D (Digital Video Input) connector input

E. Dual port 8 bit LVDS interface output to panel.

F. OSD (On Screen Display) control menu.

G. Supporting HDCP protocol(optional)

H. Supporting DDC/CI protocol.

I. Supporting DCR function (optional)

J. Audio input and audio output 1.6w x 2 at 8ohm speaker

Specification

Model	AD-17RP
Panel interface	Single/Dual LVDS (10" to 27" panel)
Maximum Resolution	Up to WUXGA 1920x1080 8 bits per color, total 16.7M Colors
Vertical Refresh Rate	VGA 、 SVGA ,XGA AND UXGA VESA standard up to 75Hz WUXGA up to 60HZ
Input Source	VGA analog (15 pin D-Sub) ,DVI ,Audio in
Dot Clock Maximum (pixel clock)	165 MHz
Key Function	Power Menu Adjust－ Adjust＋ Auto
Board Dimension	110 mm x 56 mm
Voltage for LCD Panel	5V, 3.3V DC (Jump Select)
Storage Temperature Limits	Temperature –40C~70C
Operation Temperature Limits	Temperature 0C~40C Humidity：Less than 85%

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Support PC Timing

NO.	Description	H-Freq. (KHz)	V-Freq. (Hz)	
1.	VGA640×400	31.480	70	
2.	VGA640×480	31.649	60	
3.	VGA720×400	37.469	70	
4.	VESA 640×480	37.862	72.809	
5.	VESA 640×480	37.5	75	
6.	VESA 800×600	35.156	56.25	
7.	VESA 800×600	37.9	60	
8.	VESA 800×600	48.077	72.188	
9.	VESA 800×600	46.875	75	
10.	VESA 1024×768	48.363	60	
11.	VESA 1024×768	56.476	70	
12.	VESA 1024×768	60.023	75	
13.	VESA 1152×864	67.5	75	
14.	VESA 1280 x 768	47.8	60	
15.	VESA 1280 x 768	60.3	75	
16.	VESA 1280×960	60	60	
17.	VESA 1280×1024	63.981	60	
18.	VESA 1280×1024	79.977	75	
19.	VESA 1440x900	59.9	60	
20.	VESA 1440x900	75	75	
21.	VESA 1600x1200	75	60	
22.	VESA 1600x1200	81.3	65	Note1
23.	VESA 1600x1200	87.5	70	Note1
24.	VESA 1600x1200	93.8	75	Note1
25.	VESA 1680x1050	65.3	60	
26.	VESA 1680x1050	74.9	75	Note1
27.	VESA 1920x1080	56.25	50	
28.	VESA 1920x1080	67.5	60	

** Note1 : VGA input only

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Signal Input Connections
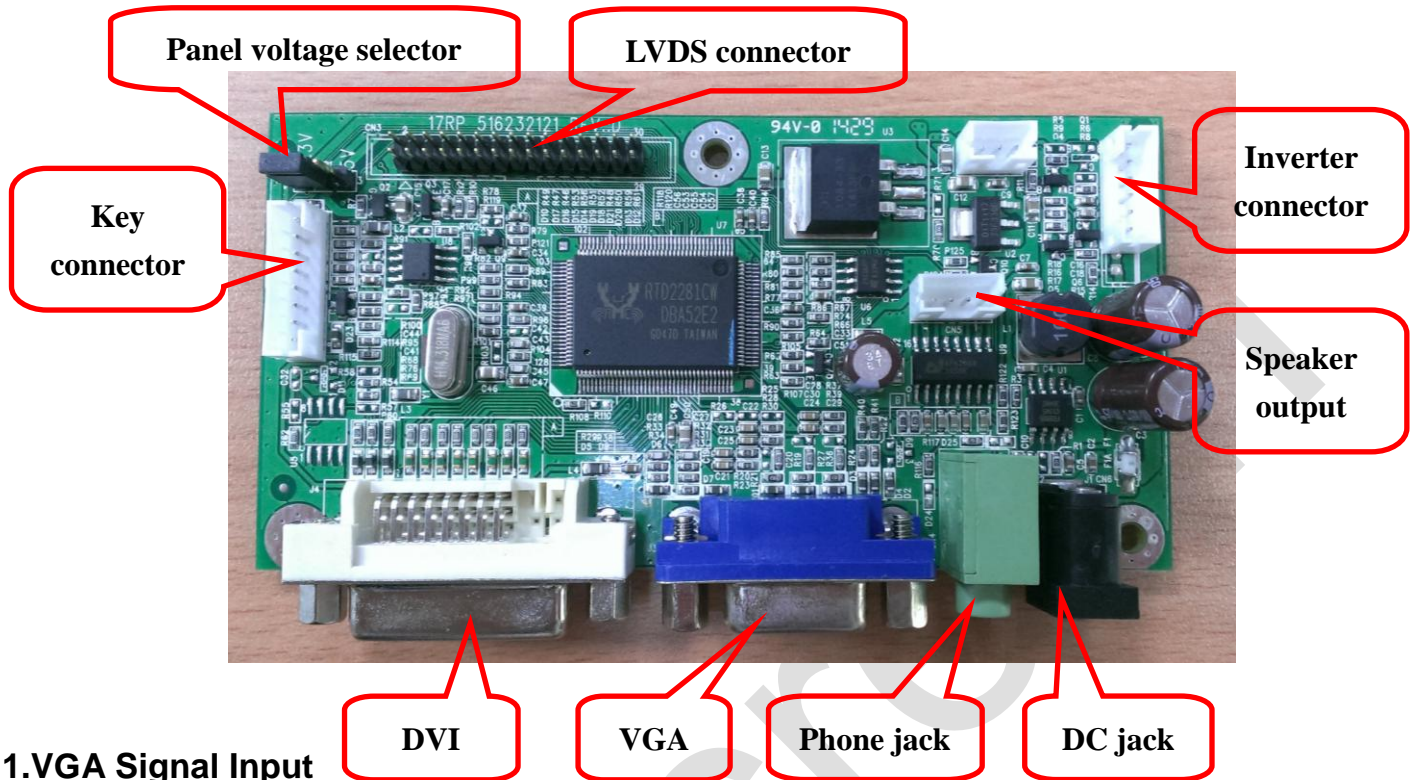
1.VGA Signal Input

Location J3 - 15 pin Hi-Density Female D-SUB

Pin Assign and Definition

Pin No.	SYMBOL	Pin No.	SYMBOL	Pin No.	SYMBOL
1	RED IN	6	R-GND	11	GND
2	GREEN IN	7	G-GND	12	SDA DDC
3	BLUE IN	8	B-GND	13	SYNC. H
4	GND	9	PC 5V	14	SYNC. V
5	GND	10	DET	15	SCL DDC

2.DVI Input

Location J4 - 30 Pin DVI Connector

Pin Assign and Definition

Pin No.	SYMBOL	Pin No.	SYMBOL	Pin No.	SYMBOL
1	DATA2-	11	GND	21	NC
2	DATA2+	12	NC	22	GND
3	GND	13	NC	23	CLKa+
4	NC	14	DDC 5V	24	CLKa-
5	NC	15	GND	25	NC
6	DVI_DDC_SCL	16	GND	26	NC

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7	DVI_DDC_SDA	17	DATA0-	27	NC
8	NC	18	DATA0+	28	NC
9	DATA1-	19	GND	29	GND
10	DATA1+	20	NC	30	NC

3.Power Input

Location – J1 : DC JACK DC=2.5mm OR DC=2.0mm
OR
Location - CN6 : 4 Pin wafer pitch 2.0mm 180D

Pin assign and definition

Pin No.	SYMBOL
1	+12V
2	+12V
3	GND
4	GND

4.Panel power select (JP1)

Pin1,Pin2 short panel power 3.3V

Pin2,Pin3 short panel power 5V

5.LVDS Output

Location – CN3 :2X15 PIN, pitch 2.0mm

Pin Assign and Definition

Pin No.	SYMBOL	Pin No.	SYMBOL	Pin No.	SYMBOL
1	VLCD for Panel	11	LVDS RXE_2-	21	LVDS RXO_1-
2	VLCD for Panel	12	LVDS RXE_2+	22	LVDS RXO_1+
3	VLCD For Panel	13	GND	23	LVDS RXO_2-
4	NC	14	GND	24	LVDS RXO_2+
5	GND	15	LVDS RXE_CLK-	25	GND
6	GND	16	LVDS RXE_CLK+	26	GND
7	LVDS RXE_0-	17	LVDS RXE_3-	27	LVDS RXO_CLK-
8	LVDS RXE_0+	18	LVDS RXE_3+	28	LVDS RXO_CLK+
9	LVDS RXE_1-	19	LVDS RXO_0-	29	LVDS RXO_3-
10	LVDS RXE_1+	20	LVDS RXO_0+	30	LVDS RXO_3+

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6.Key Output Connector

Location – CN2: 8PIN wafer pitch 2.0mm 180D
All Key Active Low Level., All LED Active HI Level , Output Current 10mA MAX

Pin assign and definition

Pin No.	SYMBOL	Pin No.	SYMBOL	Pin No.	SYMBOL
1	MENU KEY	4	UP KEY	7	LED_O
2	AUTO KEY	5	GND	8	POWER KEY
3	DOWN KEY	6	LED_G	---	----------------

7.Inverter Connector

Location – CN1: 6 PIN wafer pitch 2.0mm 180D
Pin assign and definition

Pin No.	SYMBOL	Pin No.	SYMBOL
1	GND	4	Back Light Enable
2	GND	5	+12V
3	Dimming control	6	+12V

A. Dimming: IF CCFL panel Range 0 (Inverter Current Max) to 5V (Inverter Current Min)

IF LED panel PWM Ratio 100%(LED Current Max) to PWM Ratio 20%(LED Current

Min)

B. Back light enable: 5V (ON) or 0V (OFF)

8.Audio Input – CN4, SCJ368R0NXS0G04G 3P Green or equiv.

Audio Input 1Vp-p Max.

9.Speaker Output – CN5, 4 PIN wafer pitch 2.0mm 180D

Audio Output 1.6W + 1.6W at 8 Ohm

Pin assign and definition

Pin	Signal
1	R+
2	R-
3	L-
4	L+

10.Other Connector: CN7, 3 PIN wafer pitch 2.0mm 180D

Pin assign and definition

Pin	Signal
1	GND
2	NC
3	+5V

PCB Dimension

MODEL : 17RP UNIT :mm

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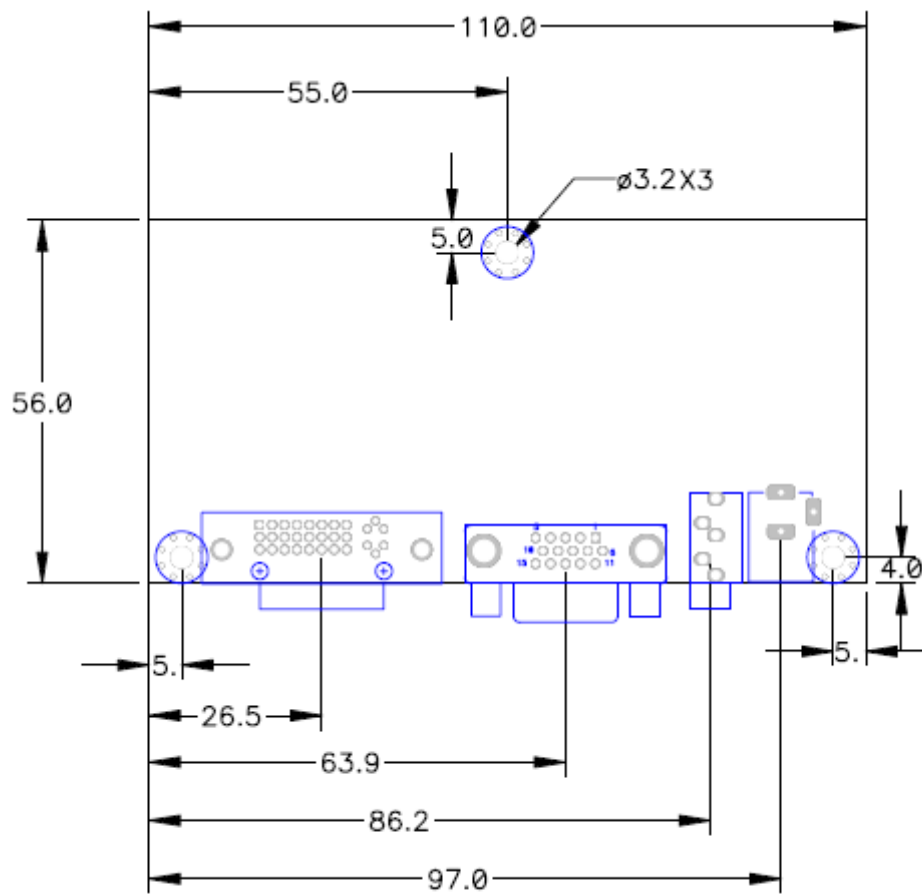
OSD Key PCB
1.OSD Key PCB Dimension & Layout Drawings
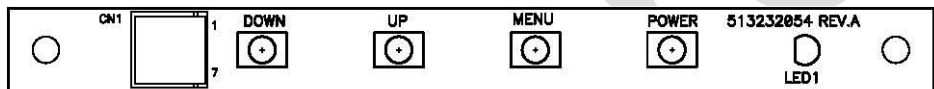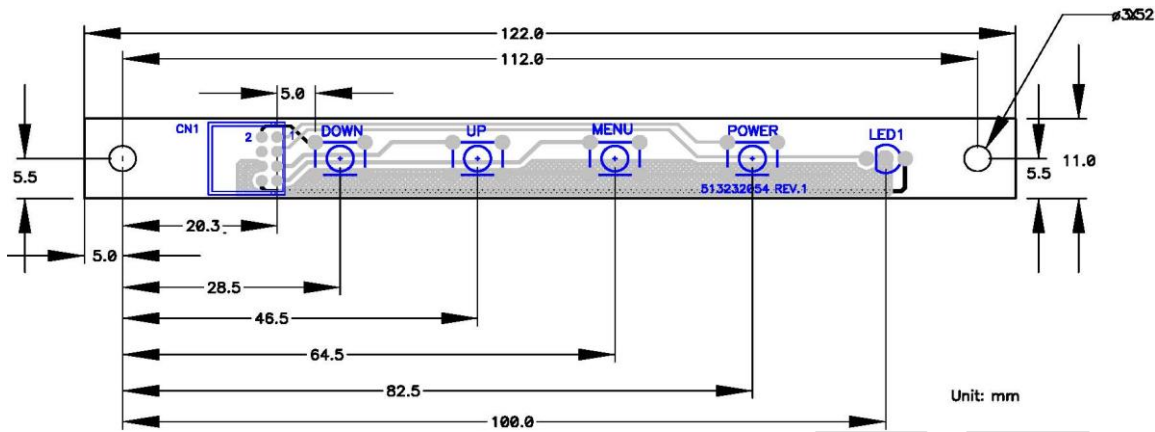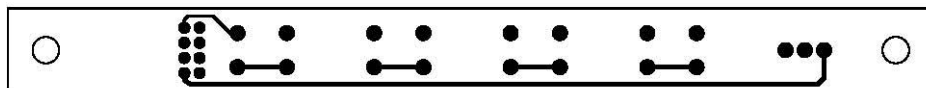
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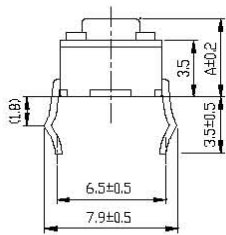12   *All specification and pohtos are subject to change without notice.

2.Output Connector

Location – CN1, Wafer PH 2.0mm 4x2 pin R/A, MD242154R or equiv.

Pin Assign and Definition

Pin No.	SYMBOL	Pin No.	SYMBOL
1	POWER	5	UP
2	DOWN	6	GND
3	LED_G	7	MENU
4	NC	8	LED_O

3.Tact Switch Spec

A = 7.0 mm

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