

VS DISPLAY TECHNOLOGY (HK) LTD

SPECIFICATION FOR LCD MODULE

Model No.: DRIVER BOARD: KYV-N2 V1
LCD PANEL: A104SN03

ORGANIZED BY	CHECKED BY	APPROVED BY
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1. MODIFY VERSION

VERSION	DATE	CONTENT	NEW VERSION
KYV-N2 V1			

2. DESCRIPTION

KYV-N2 V1 Driver Board is design for digital TFT-LCD. It can support TFT LCD A104SN03.

3. APPLICATION

It is widely use for Industrial Control, Video intercom, Instruments and meters, Medical Equipment, Security and protection Control, On-vehicle Display, Bank System, POS Machine etc.

4. FEATURES

- 4.1 The input signal canbe CVBS,VGA (648*480,800*480,800*600), S-Video Signal input.
 - 4.2 Input Voltage: DC +12V
 - 4.3 Multi function OSD Operation
-

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PICTURE

BRIGHTNESS: adjust the photo brightness

CONTRAST: adjust the photo contrast

COLOR: adjust the color in different

ENGLISH; select the language.

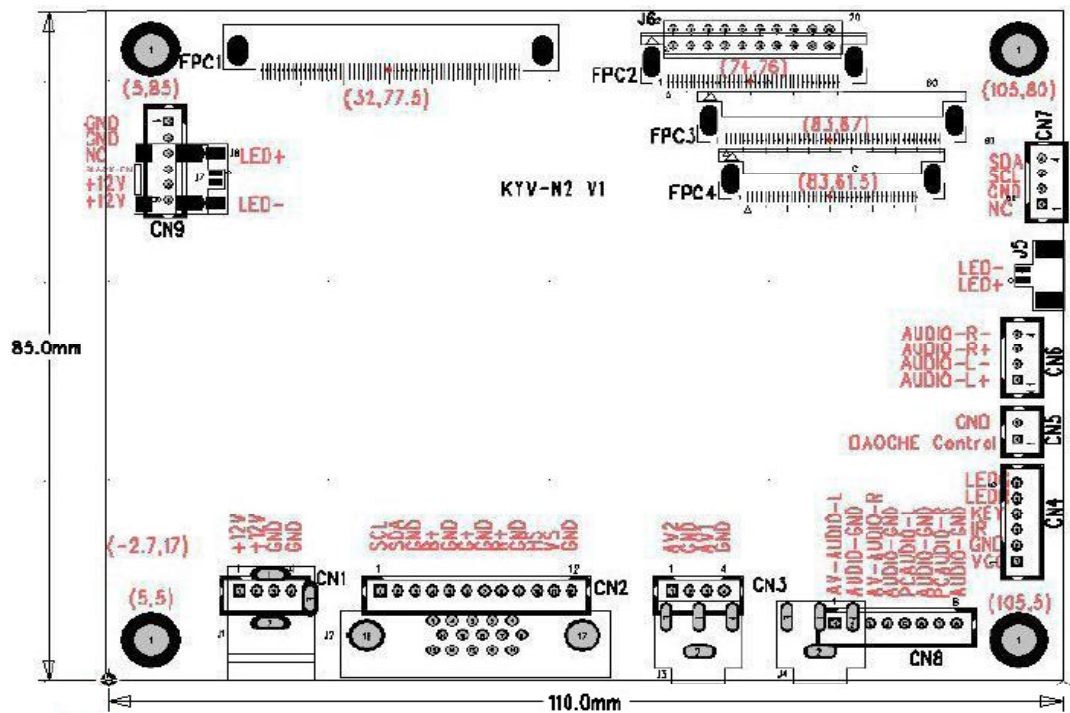
4.4 Remote control (option)

4.5 Power ON/OFF (Green--ON, Reg--OFF)

5. Outline Dimension

5. 1 Driver Board

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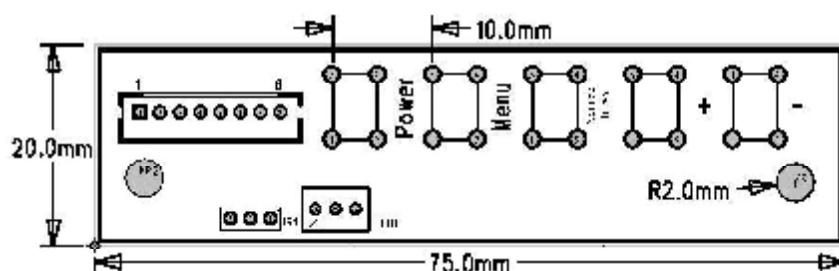


LENGTH: 110mm

WIDTH: 85mm

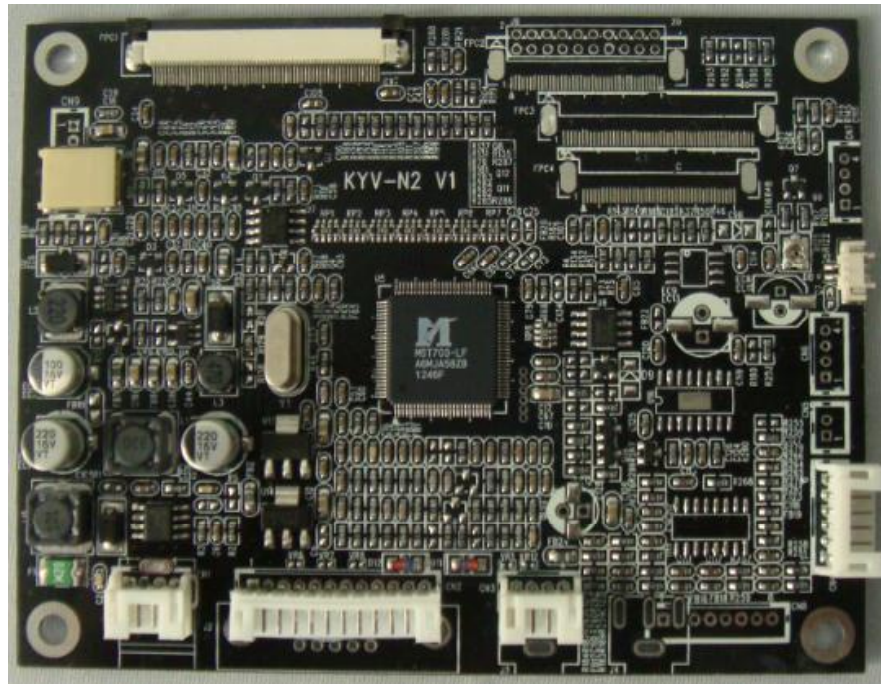
HEIGHT: 10mm (Include Component height+PCB thickness)

5. 2 KEYBOARD

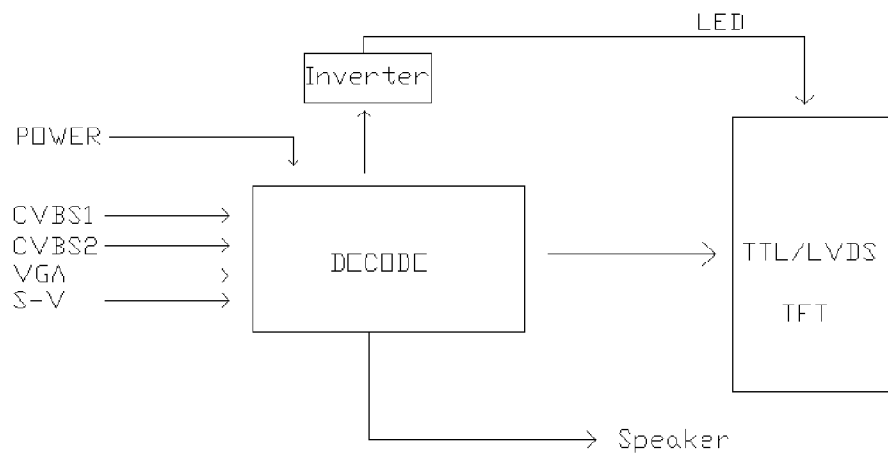


6. Product Picture

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7. Electric Loop



8. Interface Definition

POWER SUPPLY CN1

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Pin No	DEFINE	DESCRIPTION
1	+12V	POWER
2	+12V	POWER
3	GND	GROUND
4	GND	GROUND

VGA INTERFACE CN2

Pin No	DEFINE	DESCRIPTION
1	SCL	I2C
2	SDA	I2C
3	GND	GROUND
4	B+	BLUE SIGNAL +
5	GND	GROUND
6	G+	GREEN SIGNAL+
7	GND	GROUND
8	R+	RED SIGNAL+
9	GND	GROUND
10	HS	Hsync Signal Input
11	VS	Vsync Signal Input
12	GND	GROUND

INPUT SIGNAL CN4

Pin No	DEFINE	DESCRIPTION
1	VCC	+5V
2	GND	GROUND
3	IRINT	
4	SAR0	
5	LED RED	
6	LED GREEN	

KEYBOARD INTERFACE CN8

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Pin No	DEFINE	DESCRIPTION
1	VCC +5V	KEYBOARD POWER
2	GND	GROUND
3	IR INT	Infrared accept
4	LED GREEN	KEYBOARD LED
5	LED RED	KEYBOARD LED
6	GND	GROUND
7	SAR1	KEYBOARD AD INTERFACE
8	SAR0	KEYBOARD AD INTERFACE

External Control Signal Interface CN12 (APPLY TO REVERSE)

Pin No	DEFINE	DESCRIPTION
1	+12V	External Control Signal
2	+12V	External Control Signal
3	GND	GROUND
4	GND	GROUND

Debug CN7

Pin No	DEFINE	DESCRIPTION
1	+5V	Debugging Power
2	GND	GROUND
3	TX	Serial Output
4	RX	Serial Input

AUDIO INPUT CN21

Pin No	DEFINE	DESCRIPTION
1	CVBS AUDIO L	CVBS AUDIO L
2	GND	GROUND
3	CVBS AUDIO R	CVBS AUDIO R
4	GND	GROUND
5	PC-L	PC Input L
6	GND	GROUND
7	CVBS1	PC Input R
8	GND	GROUND

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AUDIO OUTPUT CN11

Pin No	DEFINE	DESCRIPTION
1	AUDIO L	L Channel
2	GND	GROUND
3	GND	GROUND
4	AUDIO R	R Channel

LCD DISPLAY INTERFACE CN10/CN11

Pin no	Symbol	I/O	Description	Remark
1	AGND	P	Analog Ground	
2	AVDD	P	Analog Power	
3	VCC	P	Digital Power	
4	R0	I	Data input (LSB)	
5	R1	I	Data input	
6	R2	I	Data input	
7	R3	I	Data input	
8	R4	I	Data input	
9	R5	I	Data input	
10	R6	I	Data input	
11	R7	I	Data input (MSB)	
12	G0	I	Data input (LSB)	
13	G1	I	Data input	
14	G2	I	Data input	
15	G3	I	Data input	
16	G4	I	Data input	
17	G5	I	Data input	
18	G6	I	Data input	
19	G7	I	Data input (MSB)	
20	B0	I	Data input (LSB)	
21	B1	I	Data input	
22	B2	I	Data input	
23	B3	I	Data input	
24	B4	I	Data input	

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25	B5	I	Data input	
26	B6	I	Data input	
27	B7	I	Data input (MSB)	
28	DCLK	I	Clock input	
29	DE	I	Data enable signal	
30	HSYNC	I	Horizontal sync input. Negative polarity	
31	VSYNC	I	Vertical sync input. Negative polarity	
32	SCL	I	Serial communication clock input	
33	SDA	I	Serial communication data input	
34	CSB	I	Serial communication chip select	
35	FBA	-	For test, do not connect (Please leave it open)	
36	VCC	P	Digital Power	
37	DRVA	-	For test, do not connect (Please leave it open)	
38	GND	P	Digital ground	
39	AGND	P	Analog ground	
40	AVDD	P	Analog Power	
41	VCOMin	I	For external VCOM DC input (Optional)	
42	DITH	I	Dithering setting DITH = "L" 6bit resolution(last 2 bits of input data truncated) DITH = "H" 8bit resolution(Default setting)	
43	NC	-	Not connect	
44	VCOM	O	connect a capacitor	
45	V10	P	Gamma correction voltage reference	
46	V9	P	Gamma correction voltage reference	
47	V8	P	Gamma correction voltage reference	
48	V7	P	Gamma correction voltage reference	
49	V6	P	Gamma correction voltage reference	
50	V5	P	Gamma correction voltage reference	
51	V4	P	Gamma correction voltage reference	
52	V3	P	Gamma correction voltage reference	
53	V2	P	Gamma correction voltage reference	
54	V1	P	Gamma correction voltage reference	
55	NC	-	Not connect	
56	VGH	P	Positive power for TFT	
57	VCC	P	Digital Power	
58	VGL	P	Negative power for TFT	
59	GND	P	Digital Ground	
60	CAP	C	Connected to a capacitor	

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9. Testing

TYPE	PROJECT	TEST CONDITIONS	TEST NO	STANDARD
Storage	High Temp Test	+70℃ 96Hr	2	Regular after normal Temp Test
Temp Test	Low Temp Test	-20℃ 96Hr	2	
Operate	High Temp Test	+60℃ 96Hr	2	Normal operation during the test
Temp Test	Low Temp Test	-70℃ 96Hr	2	
Cold Starting Test	Cold Starting Test	-20℃ $\xrightarrow{40\text{min}}$ ON $\xrightarrow{2\text{hours}}$ ON 4times $\xrightarrow{4\text{hours}}$ ON 4times $\xrightarrow{8\text{hours}}$ ON 1times	2	
Heat Cycle Test	Heat Cycle Test	-20℃ $\xrightarrow{30\text{min}}$ 25℃ $\xrightarrow{30\text{min}}$ 60℃ Continue working 30 cycles	2	
Constant temperature and humidity test		+60℃ 90%RH Continue working 96hours	2	
