NEXT VISION DISPLAY

SPECIFICATION

CUSTOMER : _____

MODULE NO.: **NVB202**

Version	1.3
Engineering	
Date	2019/03/20

Web: www.nextvisiondisplay.com

Info: technical@nextvisiondisplay.com

Product Specification

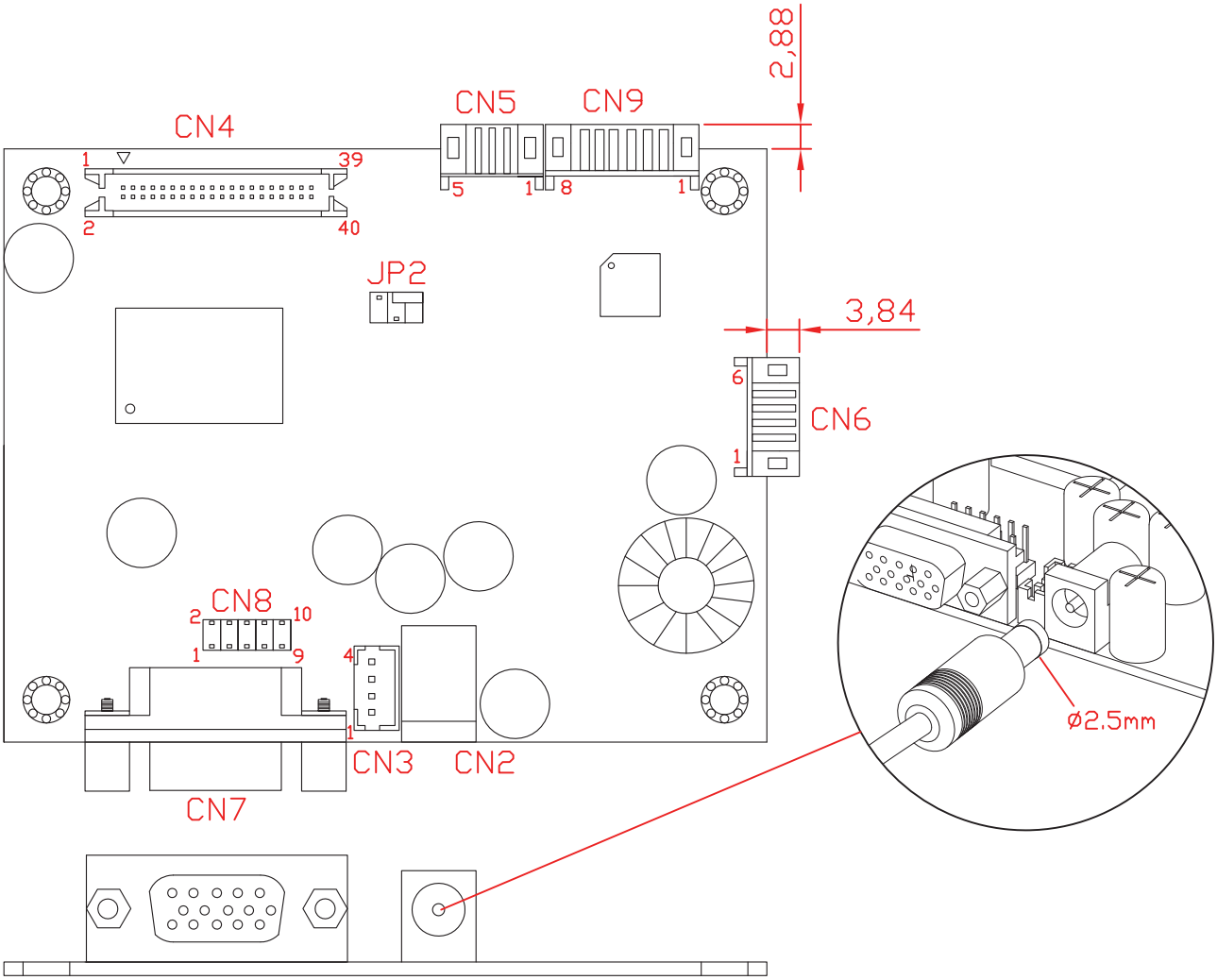
1. General Description

NVB202 LCD controller board can generate all the necessary control signals and the panel's data. On-Screen-Display Menu layouts are possible to be redesigned according to customer's request. NVB202 provides analog and digital connection for wide range of TFT LCD monitor / flat panel display from VGA (640x480) to WUXGA(1920x1200). The design of dimensions are simplify,smaller and especially suitable for small-sized monitors.

2. Specifications

Panel compatibility	Compatible with 1920x1200, 1280x1024, 1024x768, 800x600 & 640x480 resolutions of TFT LCD panels.	
Panel power	DC 3.3V, 5V, 12V	
Panel signal	single LVDS / dual LVDS, 18 / 24-bit, TTL	
Singal input	PC-RGB	VGA, SVGA, XGA, SXGA, WUXGA
		horizontal sync: 30~60KHz
		vertical sync: 50~75Hz
Functions display	On screen display (OSD) of functions	
OSD menu functions	Image controls: Panel brightness/contrast, color temperature, position, clock, phase ; OSD position, language, duration, halftone, etc.	
OSD menu controls avaiable	Power On/Off OSD Menu/OSD select down Setting - Setting + Exit	
Controller dimensions	90.0 x 70.0 x 14.2 mm (LxWxH)	
Power consumption	-	
Input voltage	DC 12V ± 5%	
Storage temperature limits	-20°C ~ +70°C	
Operating temperature limits	0°C ~ +50°C	

3. Connectors, pinouts & jumpers



Ref	Description of function
CN2	Power input DC12V (DC Jack Ø2.5mm)
CN3	Power input DC12V (Wafer)
CN4	Panel signal
CN5	Backlight control
CN6	Power output (Max. 500mA)
CN7	Analog RGB input
CN8	Analog RGB input (Pin header)
CN9	OSD controls
JP2	Panel Vcc Select

Product Specification

CN3 Power input (wafer) JST B4B-PH-K-S Matching type: PHR-4

Pin	Defintion	Description
1	GND	Ground
2	GND	Ground
3	12V	DC 12V
4	12V	DC 12V

CN5 Backlight inverter JST B5B-PH-K-S Matching type: PHR-5

Pin	Defintion	Description
1	INV 12V	DC 12V* (Max. current 1.5A)
2	GND	Ground
3	PWM	Adjust digital brightness control / PWM
4	GND	Ground
5	ON/OFF	ON/OFF control ON=5V ; OFF=0V

*Use CN3 DC input, when current is more than 1.5A

CN6 Power output JST B6B-PH-K-S Matching type: PHR-6

Pin	Defintion	Description
1	Vout	LCD control board continuously supplies 5V when OSD's power off
2	Vout	
3	12V	LCD control board cut 12V when OSD's power off.
4	12V	
5	GND	Ground
6	GND	Ground

CN9 OSD controls JST B8B-PH-K-S Matching type: PHR-8

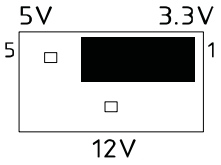
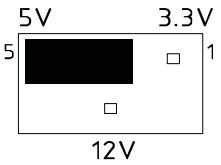
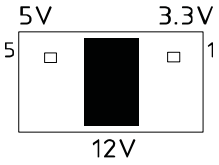
Pin	Defintion	Description
1	KEY1	Down_Key
2	KEY2	Up_Keyp
3	KEY3	Power_Key
4	KEY4	Menu_Key
5	KEY5	Auto_Key
6	Red LED	Standby LED
7	Green LED	Active LED
8	GND	Ground

Product Specification

CN8 Analog RGB input (wafer) Pin header pitch 2.54mm

Pin	Defintion	Description
1	DDC_SCL	DDC serial clock
2	D-SUB 5V	Power 5V
3	VS	V-SYNC
4	GND	Ground
5	HS	H-SYNC
6	BIN	Analog blue input
7	DDC_SDA	DDC serial data
8	GIN	Analog green input
9	GND	Ground
10	RIN	Analog red input

Panel voltage setting: (Input voltage via JP2)

Panel voltage	JP2	Jumper on board
3.3V	1-3	
5V	3-5	
12V	3-4	

Product Specification

CN4 Panel signal for LVDS panel (LVDS signal) HRS DF13-40DP-1.25H or compatible Matching type: DF13-40DS-1.25C or compatible

Description	Defintion	Pin #		Defintion	Description
First Channel Pair 0	RXO0-	2	1	VCC	Power supply
	RXO0+	4	3	VCC	Power supply
First Channel Pair 1	RXO1-	6	5	DE	Data Enable
	RXO1+	8	7	GND	Ground
First Channel Pair 2	RXO2-	10	9	Vsync	Vertical sync signal
	RXO2+	12	11	GND	Ground
First Clock Channel Pair	RXOC-	14	13	DOT_CLK	Clock signal
	RXOC+	16	15	GND	Ground
First Channel Pair 3	RXO3-	18	17	Hsync	Horizontal sync signal
	RXO3+	20	19	GND	Ground
Second Channel Pair 0	RXE0-	22	21	NC	NC
	RXE0+	24	23	NC	NC
Second Channel Pair 1	RXE1-	26	25	NC	NC
	RXE1+	28	27	NC	NC
Second Channel Pair 2	RXE2-	30	29	NC	NC
	RXE2+	32	31	NC	NC
Second Clock Channel Pair	RXEC-	34	33	NC	NC
	RXEC+	36	35	NC	NC
Second Channel Pair 3	RXE3-	38	37	NC	NC
	RXE3+	40	39	NC	NC

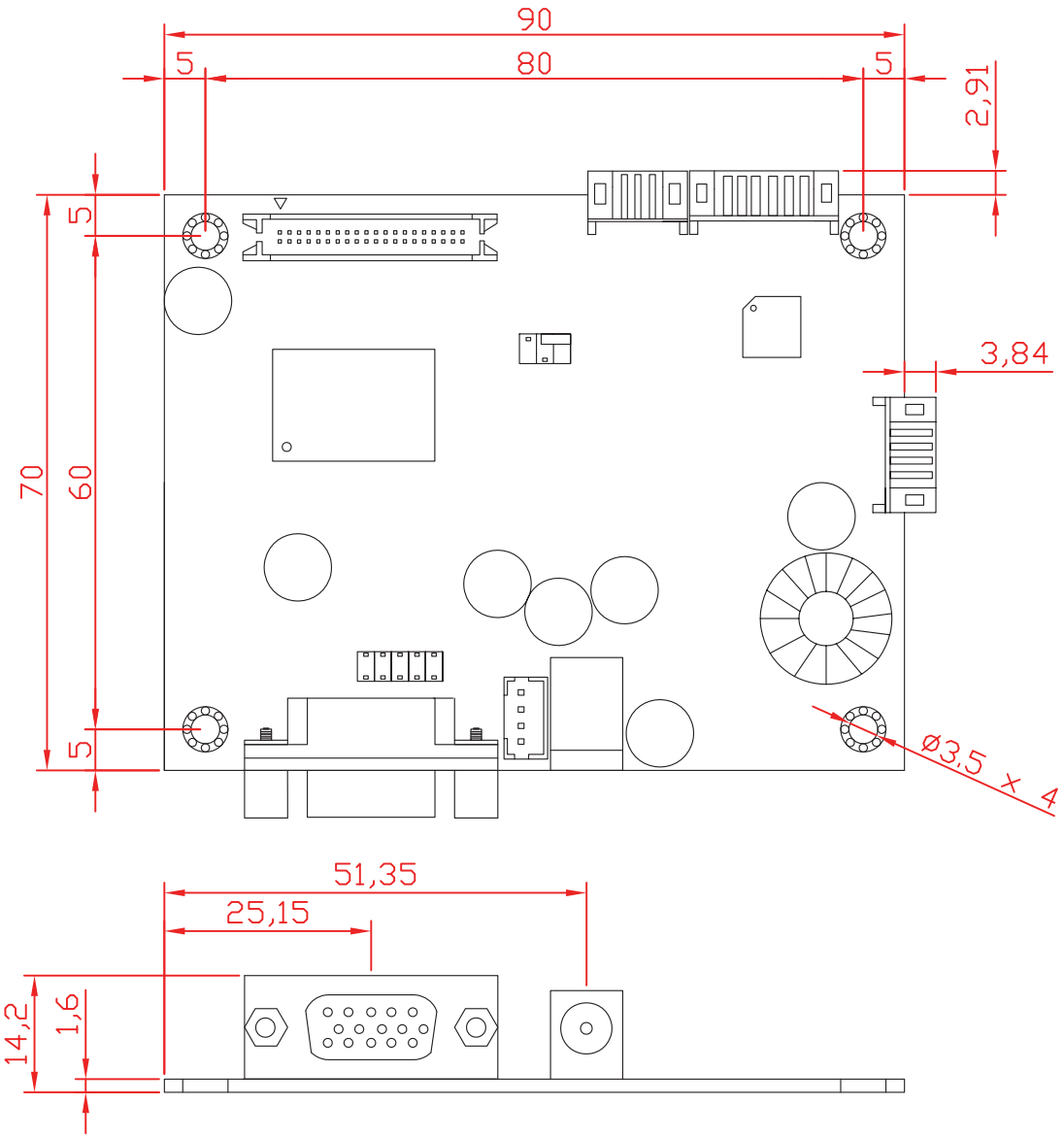
Product Specification

CN4 Panel signal for LVDS panel (TTL signal) HRS DF13-40DP-1.25H or compatible Matching type: DF13-40DS-1.25C or compatible

Description	Defintion	Pin #		Defintion	Description
Green data signal	(G4) P14	2	1	VCC	Power supply
Green data signal	(MSB) (G5) P15	4	3	VCC	Power supply
NC	NC	6	5	DE	Data Enable
NC	NC	8	7	GND	Ground
Blue data signal	(LSB) (B0) P2	10	9	Vsync	Vertical sync signal
Blue data signal	(B1) P3	12	11	GND	Ground
Blue data signal	(B2) P4	14	13	DOT_CLK	Clock signal
Blue data signal	(B3) P5	16	15	GND	Ground
Blue data signal	(B4) P6	18	17	Hsync	Horizontal sync signal
Blue data signal	(MSB) (B5) P7	20	19	GND	Ground
NC	NC	22	21	P18 (R0) (LSB)	Red data signal
NC	NC	24	23	P19 (R1)	Red data signal
NC	NC	26	25	P20 (R2)	Red data signal
NC	NC	28	27	P21 (R3)	Red data signal
NC	NC	30	29	P22 (R4)	Red data signal
NC	NC	32	31	P23 (R5) (MSB)	Red data signal
NC	NC	34	33	P10 (G0) (LSB)	Green data signal
NC	NC	36	35	P11 (G1)	Green data signal
NC	NC	38	37	P12 (G2)	Green data signal
NC	NC	40	39	P13 (G3)	Green data signal

5. Mechanical Characteristic

The contects provide general mechanical characteristics. In addition the figures in the next page are detailed mechanical drawing of the LCD.



Outline Dimension	Horizontal	90.0	mm
	Vertical	70.0	mm
	Depth	14.2	mm
Weight	57.6 g (Typ.)		