

SPECIFICATION FOR APPROVAL

MODEL: **ADCB200A**

BASE MODEL :

Customer's Confirmation

Approved by:

Reviewed by:

Prepared by:

Supplier's Confirmation

Approved by:

Reviewed by:

Prepared by:

Please return 1 copy for our confirmation with your signature and comments.

1/12



Product Specification

CONTENTS

Cover	01
Contents	02
Record of Revision	03
1. General Description	04
2. Order Information	05
3. Reference Data	06
4. Block Diagram	07
5. Mechanical Characteristic	08
6. Interface List	09
6.1 Definition of main interface	10
7. Photo	14
8. Setup for Operation	15
8.1 Definition of main interface	16

Product Specification

Record of Revision

Version & Date	Page	Old Description	New Description	Remark
0.1 2011/09/13	All	First Edition for Customer		

1. General Description

The **ADCB200A** 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. The ADCB200A 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.

- . State of the art high performance picture quality and low cost designed.
- . Optional input combination, e.g., TV with PC Monitor.
- . Panel signal can supply TTL&LVDS.
- . **Inverter can supply PWM or Digital Brightness control.**
- . **Small form factor: 90x70 mm.**
- . Full CRT multi-sync monitor compatibility.
- . Expand DOS, VGA and SVGA to full screen display
- . Multi-sync capability , compatible standard DOS,VGA, SVGA, XGA, SXGA, WSXGA, WSXGA+, UXGA and WUXGA VESA timing.
- . True color (16.7M) data processing and display driving.
- . Single control operated On-Screen-Display(hereafter“OSD”)user interface.
- . Multi language support (7 Language).
- . Full control of all relevant display and interface parameter via OSD.
- . VESA DDC 1/2B compliant.
- . Compatible with VESA DPMS power saving modes.
- . Multi-standard color (PAL/Secam/NTSC).
- . Low power consumption: operating 40W(PC Only).

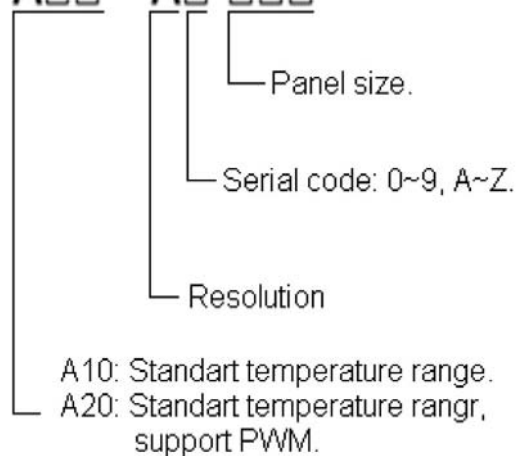
Product Specification

2. Order Information

Model No.			Pixels	(H x V)	Memo
ADCB200-	A10 -	A	VGA	640*480	
		B	SVGA	800*600	
		C	XGA	1024*768	
		D	SXGA	1280*1024	5:4
		E	WSXGA	1400*900	16:10
		F	WSXGA+	1680*1050	
		G	UXGA	1600*1200	
		H	HD 1080	1920*1080	
	A20 - (Note1)	A	VGA	640*480	
		B	SVGA	800*600	
		C	XGA	1024*768	
		D	SXGA	1280*1024	5:4
		E	WSXGA	1400*900	16:10
		F	WSXGA+	1680*1050	
		G	UXGA	1600*1200	
		H	HD 1080	1920*1080	

Note: 1) "A20" series is support PWM.

ADCB200 - A□□ - A□ □□□



Product Specification

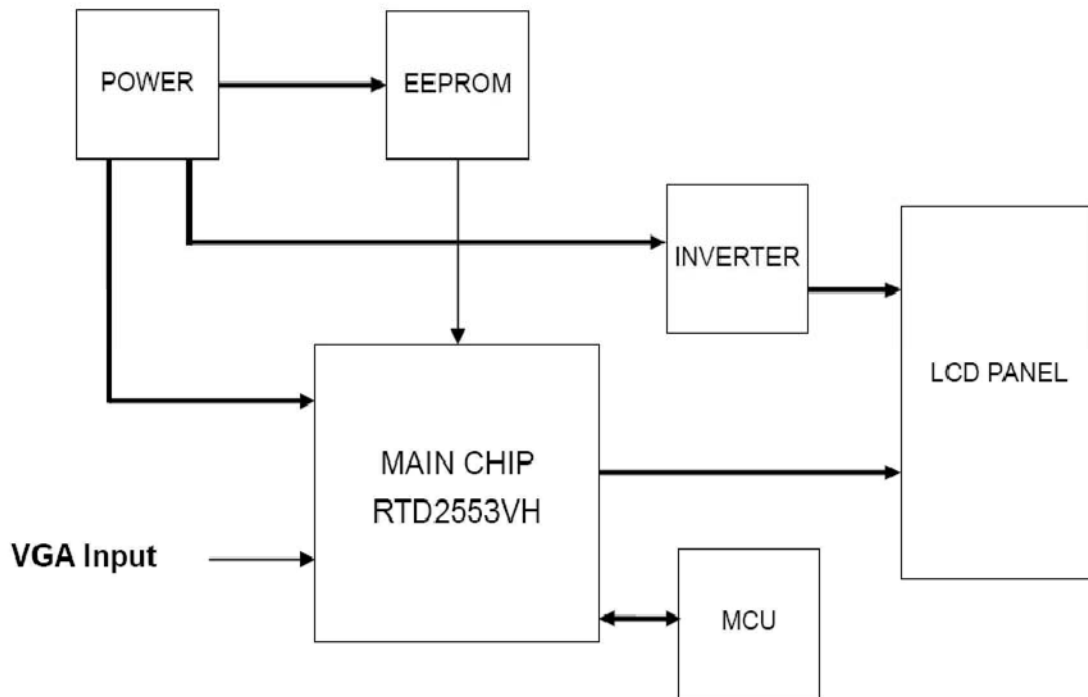
3. Reference Data

Parameter		MIN	TYP	MAX	Unit
Power Requirement	+12V DC (*Note1)	10.8	12	13.2	V
	Input Current (*Note1)	-	3.5	4.0	A
	Panel Power	Supports 3.3V, 5V, 12V Panels			
Frequency	Horizontal sync	30	-	60	KHz
	Vertical sync	56	-	75	
Environmental	Storage Temperature	-20 ~ +70			° C
	Operating Temperature	-0 ~ +50			
Overall dimensions	Length	90			mm
	Width	70			
	Depth (from PCB bottom)	14			
Max. output resolution		1920 x 1200			pixel
Max. number of colors		16.7M			colors

Note 1: Power Input.

Product Specification

4. Block Diagram



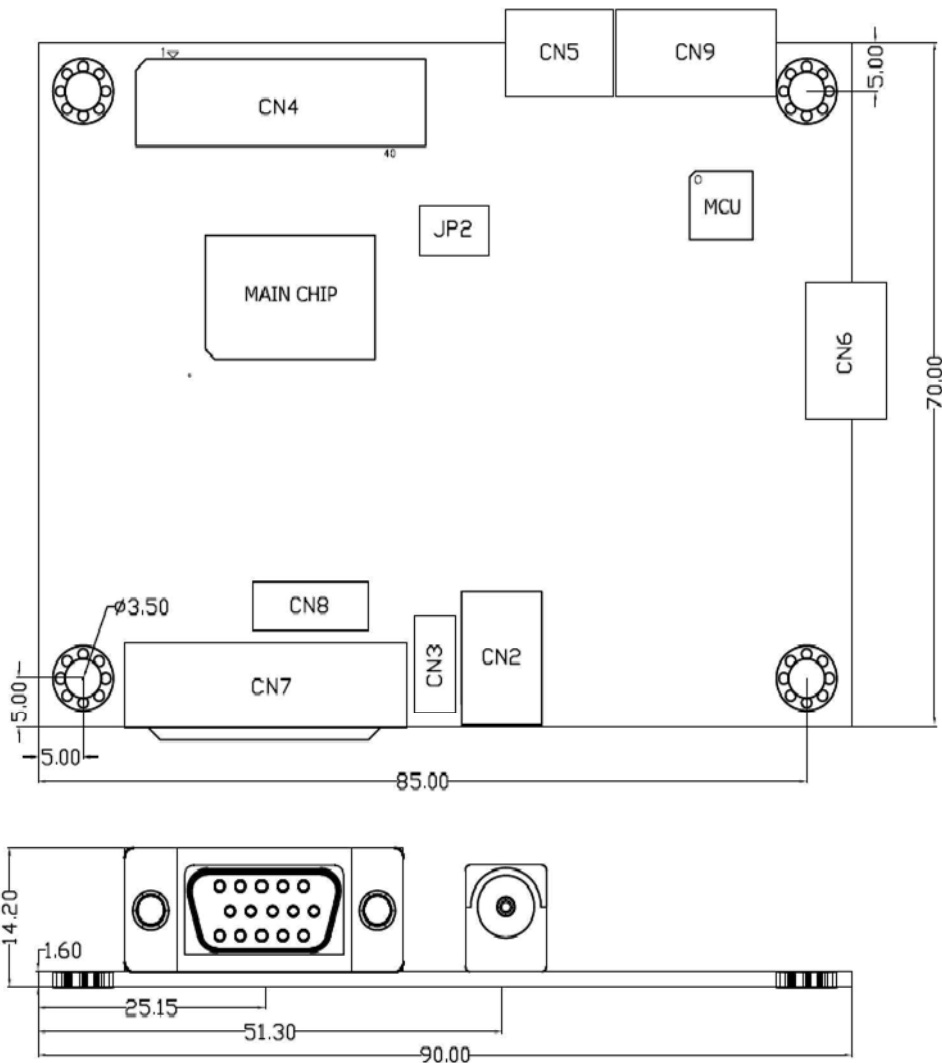
Product Specification

5. Mechanical Structure

PCB Length: 90mm

PCB Width: 70mm

PCB Depth + the height of the highest part 14.2mm



Product Specification

6. Interface List

Sequence Number	Description of function	
CN2	Power Jack	
CN3	Power Input	(Wafer)
CN4	Signal Connector	
CN5	Inverter Connector	
CN6	Power Output	(Max. 500mA)
CN7	Analogue R.G.B input	
CN8	Analogue R.G.B input	(Pin header)
CN9	OSD Control Connector	
JP2	Panel Vcc Select	

Product Specification

6.1 Definition of main interface

CN3 JST B4B-PH-K-S or compatible.

Pin #	Defintion	Description
1	GND	Ground
2	GND	Ground
3	VDD	+12V
4	VDD	+12V

CN5 JST S5B-PH-K-S or compatible.

Pin #	Defintion	Description
1	VDD	+12V(note) (Max. current 1.5A)
2	GND	Ground
3	ADJ	Adjust Digital Brightness Control / PWM
4	GND	Ground
5	ON/OFF	ON/OFF control ON=5V ; OFF=0V

Note: Use CN3 VDD, when current is more than 1.5A.

CN6 JST S6B-PH-K-S or compatible.

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

Product Specification

CN8 Pin header Pitch 2.54mm / 2*5PIN

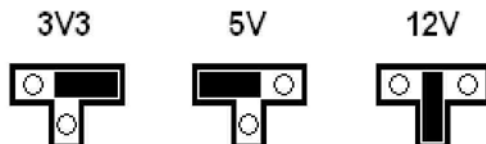
Pin #	Defintion	Description
1	DDC_SCL	DDC serial clock
2	D-sub 5V	Power 5V
3	VS	V-SYNC
4	GND	Ground
5	HS	H-SYNC
6	Bin	Analog blue input
7	DDC_SDA	DDC serial data
8	Gin	Analog green input
9	GND	Ground
10	Rin	Analog red input

Note: CN7 is D-SUB 15Pin.

CN9 JST S8B-PH-K-S or compatible.

Pin #	Defintion	Description
1	KEY1	DOWN_KEY
2	KEY2	UP_KEY
3	KEY3	POWER_KEY
4	KEY4	MENU_KEY
5	KEY5	AUTO_KEY
6	ACTIVE LED	GREEN
7	STANDBY LED	RED
8	GND	Ground

JP2 Panel Vcc Select



Product Specification

CN4 HRS DF13-40DS-1.25V or compatible. (LVDS Signal)

Description	Defintion	Pin #		Defintion	Description
First Channel Pair 0	RX00-	2	1	VCC	Power supply
	RX00+	4	3	VCC	Power supply
First Channel Pair 1	RX01-	6	5	DE	Data Enable
	RX01+	8	7	GND	Ground
First Channel Pair 2	RX02-	10	9	Vsync	Vertical sync signal
	RX02+	12	11	GND	Ground
First Clock Channel Pair	RXOC-	14	13	DOT_CLK	Clock signal
	RXOC+	16	15	GND	Ground
First Channel Pair 3	RX03-	18	17	Hsync	Horizontal sync signal
	RX03+	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

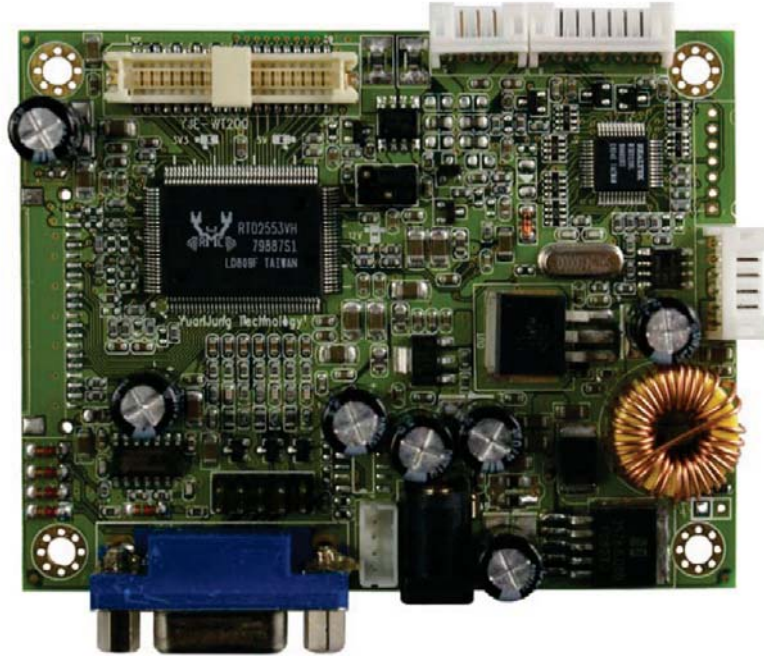
CN4 HRS DF13-40DS-1.25V or compatible. (TTL Signal)

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 (RO) (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 (GO) (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

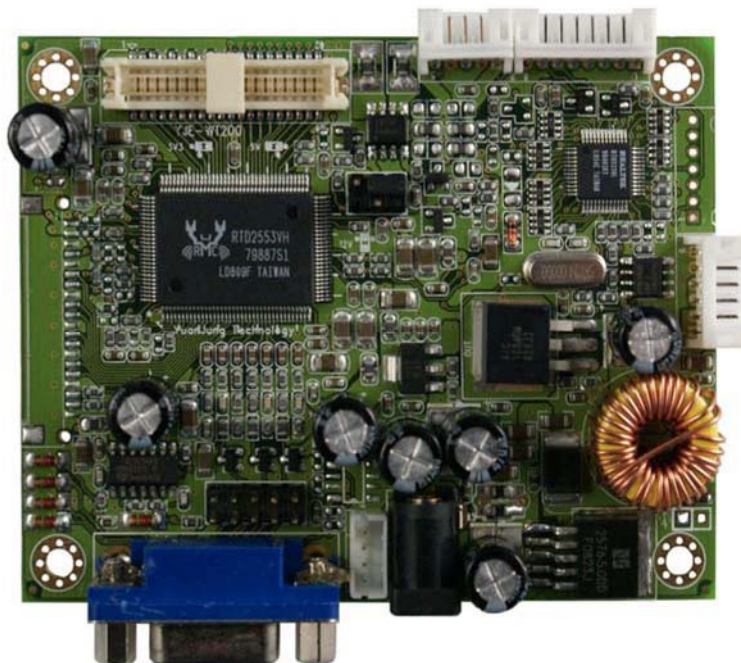
Product Specification

7. Photo

ADCB200A10



ADCB200A20



Product Specification

8. Setup for Operation

The OSD (On Screen Display) menu enables user to manipulate the image and settings OSD Main menu consists of source:

OSD MENU		Description
Auto Adjustment		Automatically adjust the Horizontal position, Vertical position, Horizontal size, and Phase Windows's background or characters should display on your Full screen after proceed this function.
Color	Contrast	Adjust the contrast of the screen.
	Brightness	Adjust the brightness of the screen.
	Color Adjust	Choose "User color" can use to set value of Red/Green/Blue.
	Color Temp	Set color to 9300 , 6500 , 5500 , sRGB, User Color .
Image Setting	Clock	Adjust frequency to fill display.
	Phase	Adjust the phase control of the image.
	Gamma	Adjust the value of GAMMA.
	Sharpness	This functuon allows the user to optimize the sharpness of the image.
Position	H. Position	Adjust the horizontal position of the screen's image.
	V. Position	Adjust the vertical position of the screen's image.
OSD Menu	OSD H. Pos.	Factory preset, OSD Horizontal Position.
	OSD V. Pos.	Factory preset, OSD Vertical Position.
	OSD Timer	It can adjust OSD display time.
Language		Select one of the 7 languages. (English, Français, Deutsch, Español, Japanese, Chinese Tradition, Chinese Simple)
Misc.	Signal Source	The setting of signal input channel.
	Reset	Return to factory original setting.

OSD Signal	Description
Green	Power on
Red	No Signal (when no signal shows on the panel)
Orange	Power off

Product Specification

8.1 OSD Menu

[Color]

Press "+" to increase or "-" to decrease the brightness, contrast or color adjust. or color temp.



- **Contrast**

Adjust the contrast of the screen.

- **Brightness**

Adjust the brightness of the screen.

- **Color Adjust**

(notice: please do color temp setting first.

After finish color temp, then do color adjust.)

Choose "USER" option can set value of Red/Green/Blue.

- **Color Temp**

Set color to 9300 , 6500 , 5500 , sRGB, USER .

You can select the screen's color level of the white color field from the default color temperature settings.

Also, you can fine tune the color temperature by USER option if necessary.



Product Specification

[Image Setting]

You can adjust the value of screen quality automatically.



- **Clock**

Adjust frequency to fill display.

- **Phase**

Adjust the phase control of the image.

- **Gamma**

Adjust the value of GAMMA.

- **Sharpness**

This function allows the user to optimize the sharpness of the image.



Product Specification

[Position]

You can adjust the screen's position by horizontal and vertical manually.



- **H. Position**

Adjust the horizontal position of the screen's image.

- **V. Position**

Adjust the vertical position of the screen's image.



Product Specification

[OSD Menu]

You can adjust the OSD Menu screen's position by horizontal and vertical manually.



- **OSD H. Pos.**

Adjust the horizontal position of OSD Menu screen's image.

- **OSD V. Pos.**

Adjust the vertical position of the OSD Menu screen's image.

- **OSD Timer**

Adjust OSD display time.



Product Specification

[Language]

Select one of the 7 languages.



Product Specification

[Misc.]

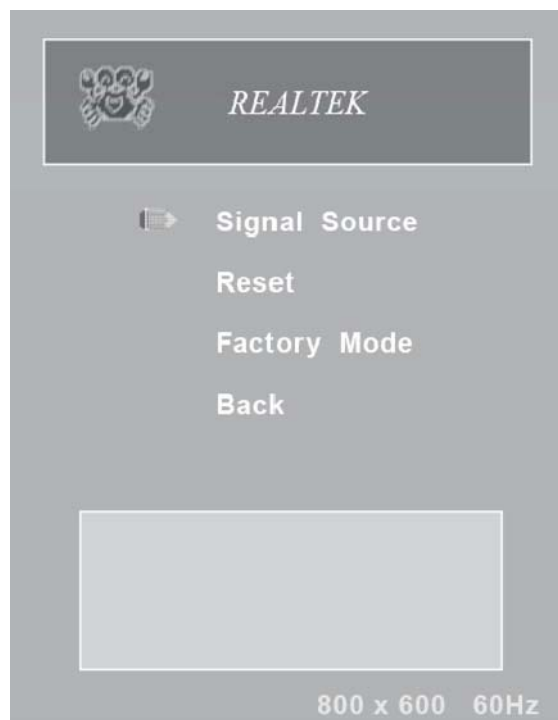


- **Signal Source**

The setting of signal input channel.

- **Reset**

Return to factory original setting.



Product Specification

[Exit]

Exit the OSD Menu.



Summary

Color	Contrast Brightness Color Adjust	Language	English Français Deutsch Español 繁體中文 简体中文 日本語
Image Setting	Clock Phase Gamma Sharpness		Signal Source Reset
Position	H. Position V. Position	Misc	
OSD Menu	OSD H. Pos. OSD V. Pos. OSD Timer		