MONITOR CONTROL BOARD SPECIFICATION

MODEL: M.RT2270C.3A

Part Number:14050403

REV: A0

AUTHOR:

CHECKED BY:

PUBLISHED DATE: 2014-05-04

The information in the specification is subject to change without notice.

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REVISION HISTORY

VERSION	DATE	BOARD ID	PAGE	DESCRIPTION	AUTHOR
A0	2014.05.04	M.RT2270C.3A 14125	All	First issued.	Cathy

1. GENERAL DESCRIPTION

M.RT2270C.3A is a LCD monitor control board，The resolution is up to 1680x1050@75HZ. Its color reach 24bit potentially. H-Frequency signal range from 30 to 80 KHz, V-Frequency signal 60 to 75 Hz.

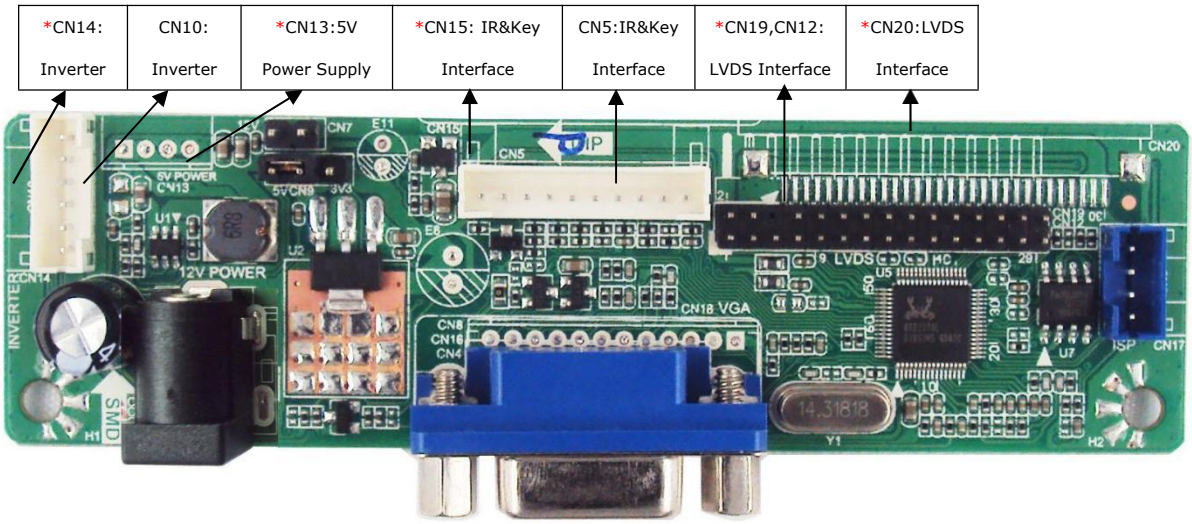
M.RT2270C.3A supports synchronize automatic detection and Dynamic Contrast Control, apply to Sync Separator for extracting Hsync and Vsync.

2. FUNCTION LAYOUT

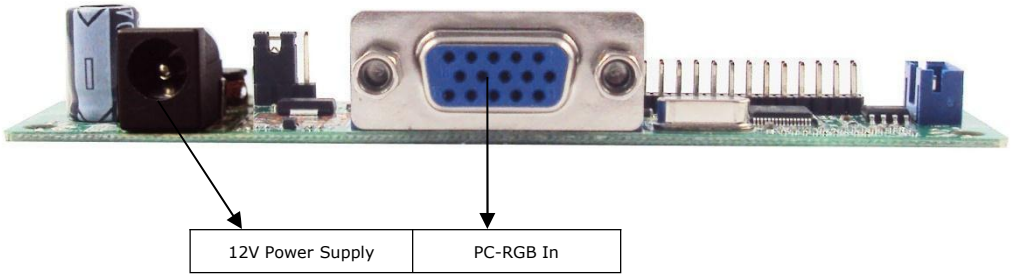
Pictures are for reference only, specific to prevail in kind.

The optional connectors and terminals are marked with "*".

TOP VIEW OF M.RT2270C.3A



SIDE VIEW OF M.RT2270C.3A



3. FEATURES

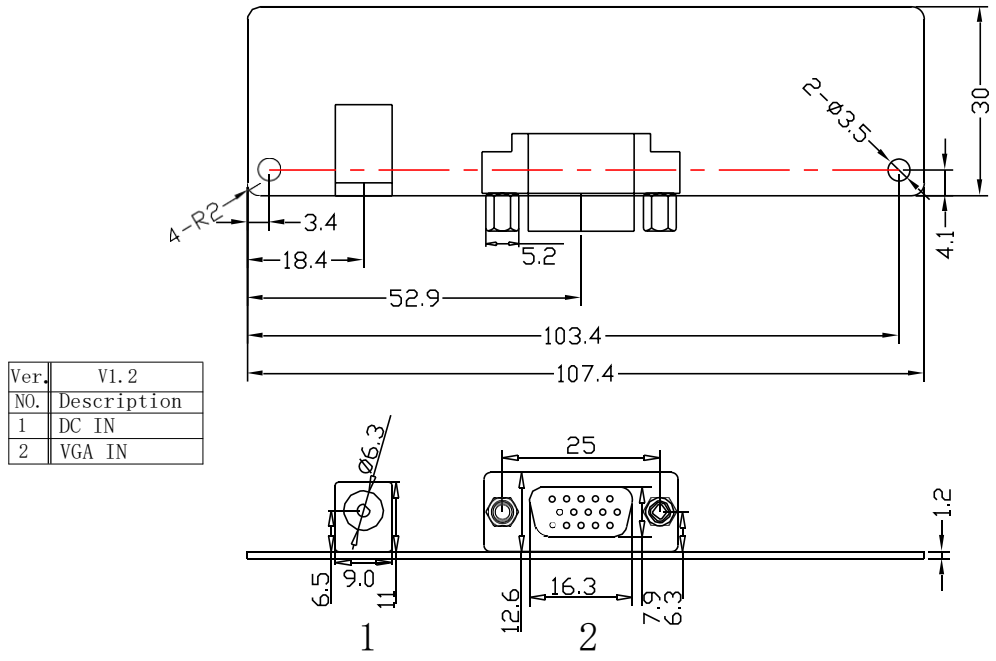
MAIN CHIP	RTD2270L-CG	
PANEL	Interface	Single/Dual LVDS
	Resolution	1680x1050@75HZ
POWER	Requirement	12V DC, 12V (Built in), 12V/5V (Built in)
	To Panel	3.3V, 5V,12V
	Management	Low power consumption mode, standby
	standby	<0.2W(Board only)
OSD LANGUAGE	Simplified Chinese, Traditional Chinese, English, French, German, Italian, Spanish, Portuguese, Japanese, Korean	
KEY FUNCTION	POWER,MENU,VOL+,VOL-,AUTO/EXIT	

ELECTRICAL CHARACTERISTICS & REQUIREMENTS

Power Supply Mode	Symbol	Voltage Range	Max Current	Ripple Voltage@25℃	Startup Time	Rise Time
12V (Ext.Adaptor)	12V	12V±0.6V	2000mA	120mV$_{P-P}$	--	≤50ms
12V(Built-In)	12V	12V±0.6V	2000mA	120mV$_{P-P}$	--	≤50ms
12V/5V(Built-In)	12V	12V±0.6V	1300mA	120mV$_{P-P}$	≤100ms	≤50ms
	5V	5.1V±0.05V	1500mA	50mV$_{P-P}$	--	≤50ms
Note: The current of panel, USB,inverter and extension modules are not included in max current.						

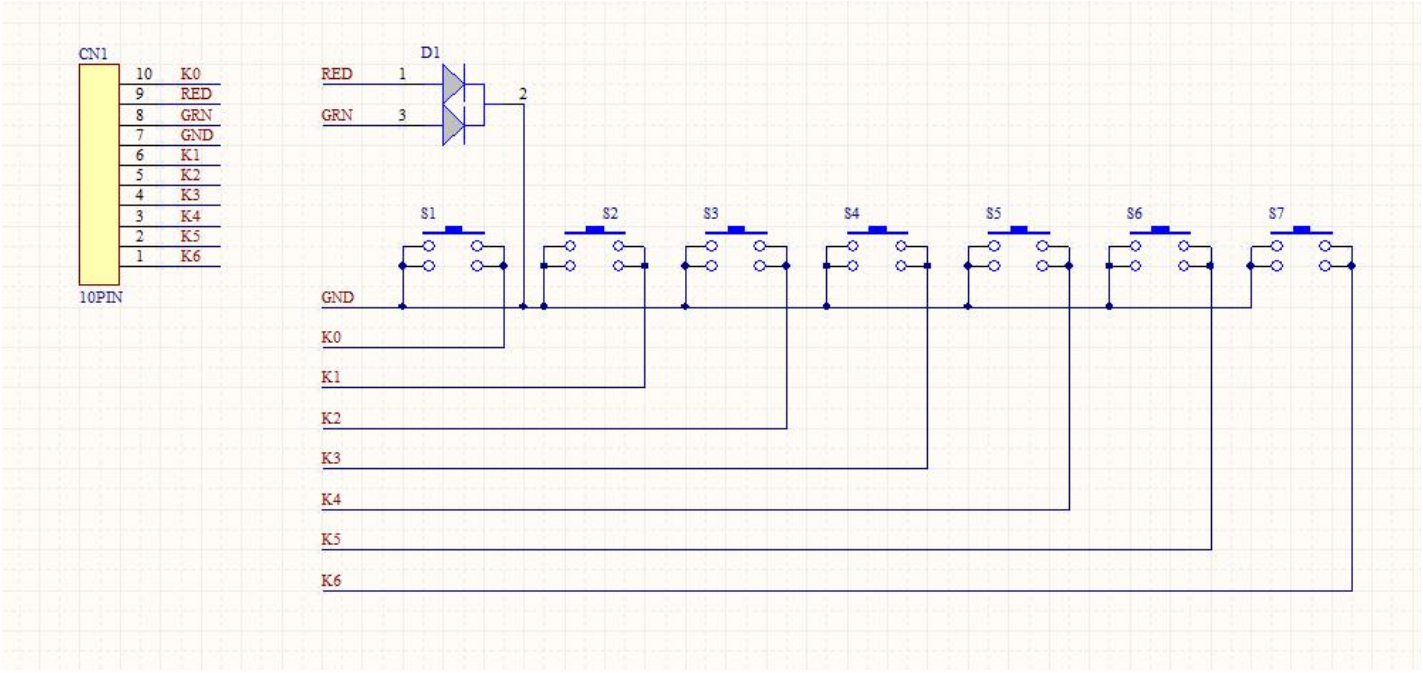
4. PCB DIMENSIONS

The size of M.RT2270C.3A is 107.4mm(L)*30mm(W)



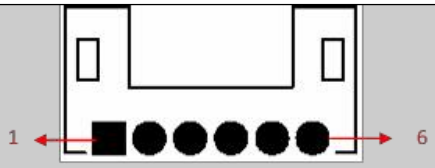
Ver.	V1.2
NO.	Description
1	DC IN
2	VGA IN

5. SCHEMATICS OF IR BOARD & KEY BOARD



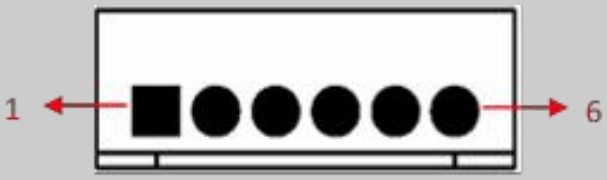
6. INTERFACE DEFINITION

◆ *CN14(6PIN/2.0): INVERTER CONNECTOR



NO.	SYMBOL	DESCRIPTION
1	12V	+12V DC Power Supply
2	12V	
3	BLO	Back-Light ON/OFF Control for Panel
4	ADJ	Brightness Adjustment for Panel
5	GND	Ground
6	GND	

◆ CN10(6PIN/2.0): INVERTER CONNECTOR

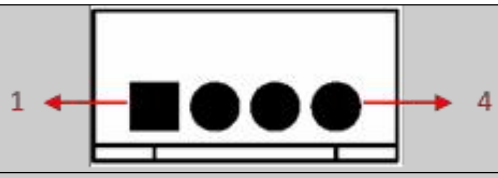


NO.	SYMBOL	DESCRIPTION
1	12V	+12V DC Power Supply
2	12V	

QR-ZZPJ-017

3	BLO	Back-Light ON/OFF Control for Panel
4	ADJ	Brightness Adjustment for Panel
5	GND	Ground
6	GND	

◆ ***CN13(4PIN/2.0): 5V POWER SUPPLY CONNECTOR**



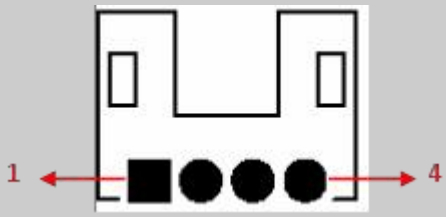
NO.	SYMBOL	DESCRIPTION
1	5V	+5V DC Power Supply
2	5V	
3	GND	Ground
4	GND	

◆ ***CN2(4PIN/2.0): 12V POWER SUPPLY CONNECTOR**



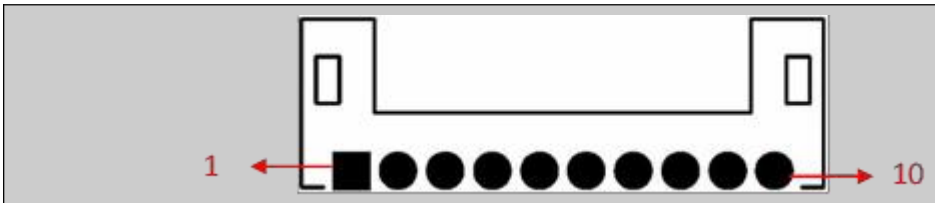
NO.	SYMBOL	DESCRIPTION
1	GND	Ground
2	GND	
3	12V	+12V DC Power Supply
4	12V	

◆ *** CN11(4PIN/2.0): 12V POWER SUPPLY CONNECTOR**



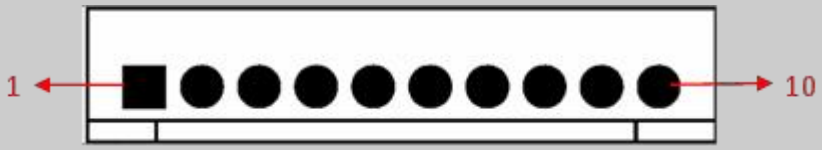
NO.	SYMBOL	DESCRIPTION
1	GND	Ground
2	GND	
3	12V	+12V DC Power Supply
4	12V	

◆ *CN15 (10PIN/2.0):IR& KEY CONNECTOR



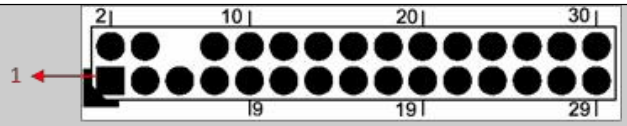
NO.	SYMBOL	DESCRIPTION
1	K0	Key0
2	RED	Red Indicator
3	GRN	Green Indicator
4	GND	Ground
5	K1	Key1
6	K2	Key2
7	K3	Key3
8	K4	Key4
9	K5	Key5
10	K6	Key6

◆ CN5(10PIN/2.0):IR& KEY CONNECTOR



NO.	SYMBOL	DESCRIPTION
1	K0	Key0
2	RED	Red Indicator
3	GRN	Green Indicator
4	GND	Ground
5	K1	Key1
6	K2	Key2
7	K3	Key3
8	K4	Key4
9	K5	Key5
10	K6	Key6

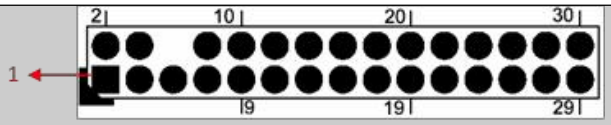
◆ CN12(2×15PIN/2.0): LVDS INTERFACE CONNECTOR



NO.	SYMBOL	DESCRIPTION
1	VSEL	Power Supply for Panel
2	VSEL	
3	VSEL	
4	GND	Ground

5	GND	
6	NC	No Connection
7	TXO0-	LVDS ODD 0- Signal
8	TXO0+	LVDS ODD 0+ Signal
9	TXO1-	LVDS ODD 1- Signal
10	TXO1+	LVDS ODD 1+ Signal
11	TXO2-	LVDS ODD 2- Signal
12	TXO2+	LVDS ODD 2+ Signal
13	GND	Ground
14	GND	
15	TXOC-	LVDS ODD Clock- Signal
16	TXOC+	LVDS ODD Clock+ Signal
17	TXO3-	LVDS ODD 3- Signal
18	TXO3+	LVDS ODD 3+ Signal
19	TXE0-	LVDS EVEN 0- Signal
20	TXE0+	LVDS EVEN 0+ Signal
21	TXE1-	LVDS EVEN 1- Signal
22	TXE1+	LVDS EVEN 1+ Signal
23	TXE2-	LVDS EVEN 2- Signal
24	TXE2+	LVDS EVEN 2+ Signal
25	GND	Ground
26	GND	
27	TXEC-	LVDS EVEN Clock- Signal
28	TXEC+	LVDS EVEN Clock+ Signal
29	TXE3-	LVDS EVEN 3- Signal
30	TXE3+	LVDS EVEN 3+ Signal

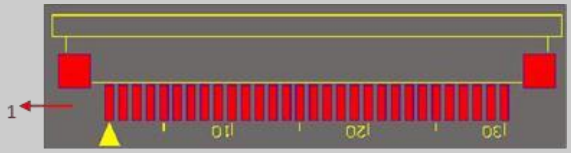
◆ *CN19(2×15PIN/2.0): LVDS INTERFACE CONNECTOR



NO.	SYMBOL	DESCRIPTION
1	VSEL	Power Supply for Panel
2	VSEL	
3	VSEL	
4	GND	Ground
5	GND	
6	GND	
7	TXO0-	LVDS ODD 0- Signal
8	TXO0+	LVDS ODD 0+ Signal
9	TXO1-	LVDS ODD 1- Signal
10	TXO1+	LVDS ODD 1+ Signal
11	TXO2-	LVDS ODD 2- Signal

12	TXO2+	LVDS ODD 2+ Signal
13	GND	Ground
14	GND	
15	TXOC-	LVDS ODD Clock- Signal
16	TXOC+	LVDS ODD Clock+ Signal
17	TXO3-	LVDS ODD 3- Signal
18	TXO3+	LVDS ODD 3+ Signal
19	TXE0-	LVDS EVEN 0- Signal
20	TXE0+	LVDS EVEN 0+ Signal
21	TXE1-	LVDS EVEN 1- Signal
22	TXE1+	LVDS EVEN 1+ Signal
23	TXE2-	LVDS EVEN 2- Signal
24	TXE2+	LVDS EVEN 2+ Signal
25	GND	Ground
26	GND	
27	TXOC-	LVDS EVEN Clock- Signal
28	TXOC+	LVDS EVEN Clock+ Signal
29	TXE3-	LVDS EVEN 3- Signal
30	TXE3+	LVDS EVEN 3+ Signal

◆ *CN20(2×16PIN/0.5): LVDS INTERFACE CONNECTOR



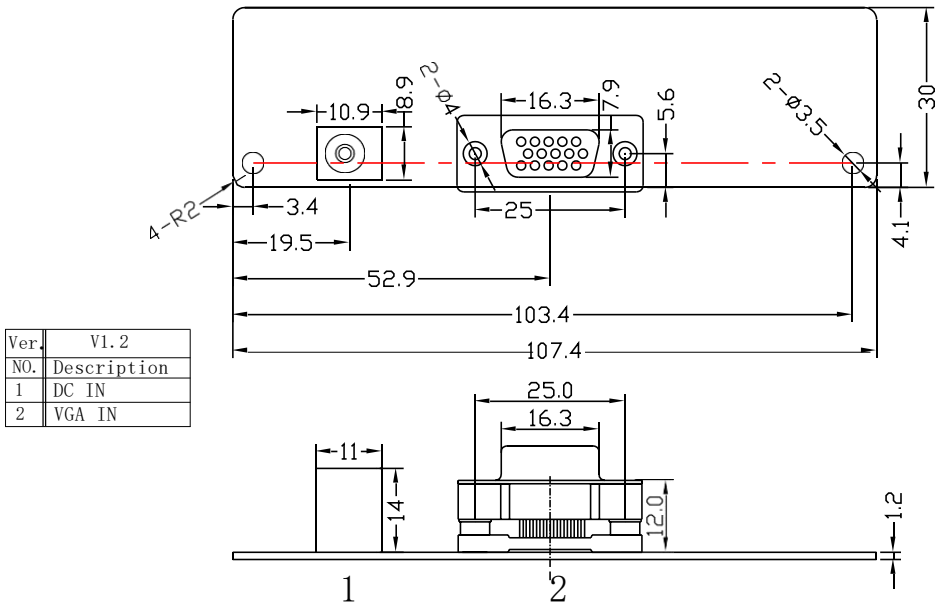
NO.	SYMBOL	DESCRIPTION
1	TXO0-	LVDS ODD 0- Signal
2	TXO0+	LVDS ODD 0+ Signal
3	TXO1-	LVDS ODD 1- Signal
4	TXO1+	LVDS ODD 1+ Signal
5	TXO2-	LVDS ODD 2- Signal
6	TXO2+	LVDS ODD 2+ Signal
7	GND	Ground
8	TXOC-	LVDS ODD Clock- Signal
9	TXOC+	LVDS ODD Clock+ Signal
10	TXO3-	LVDS ODD 3- Signal
11	TXO3+	LVDS ODD 3+ Signal
12	TXE0-	LVDS EVEN 0- Signal
13	TXE0+	LVDS EVEN 0+ Signal
14	GND	Ground
15	TXE1-	LVDS EVEN 1- Signal
16	TXE1+	LVDS EVEN 1+ Signal
17	GND	Ground

18	TXE2-	LVDS EVEN 2- Signal
19	TXE2+	LVDS EVEN 2+ Signal
20	TXEC-	LVDS EVEN Clock- Signal
21	TXEC+	LVDS EVEN Clock+ Signal
22	TXE3-	LVDS EVEN 3- Signal
23	TXE3+	LVDS EVEN 3+ Signal
24	GND	Ground
25	NC	No Connection
26	NC	
27	NC	
28	VSEL	Power Supply for Panel
29	VSEL	
30	VSEL	
31	GND	Ground
32	GND	

7. CONFIGURATION & GENERAL PRECAUTIONS

- **Relative humidity: ≤ 80%.**
- **Storage temperature: -10~60°C.**
- **Operation temperature: 0~40°C.**
- **Protect the control board from static; it may cause damage to the IC.**
- **Disconnect the TV before the power supply of panel is connected correctly.**
- **Do not drop any metal on the control board when it is working.**
- **Do not push or pull the connector when the control board is working.**
- **Do not disassemble the module.**
- **If the surface or the control board is dirty, clean it with soft dry cloth.**

ANOTWER STRUCTURE:



Ver.	V1.2
NO.	Description
1	DC IN
2	VGA IN