

MONITOR CONTROL BOARD SPECIFICATION

MODEL: M.NT68676.2A

Part Number:NT-13050927

Rev:A2

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CONTENT

ITEM	PAGE
1.GENERAL DESCRIPTION	2
2.FUNCTION LAYOUT	2
3.FEATURES	3
4.PCB DIMENSIONS	4
5.INTERFACE DEFINITION	5
6.CONFIGURATION & GENERAL PRECAUTIONS	8

REVISION HISTORY

VERSION	DATE	BOARD ID	PAGE	DESCRIPTION	AUTHOR
A0	2011.12.27	M.NT68676.2A 11486	All	First issued.	Linda
A1	2013.01.08	M.NT68676.2A 12516	2,3,5,	Modify the board picture in part2; Modify the Electrical Characteristics in part3; Modify the Schematic Of IR & KEY Board in part5; Modify the Interface Definition in part6;	Miki
A2	2013.05.09	M.NT68676.2A 12516	3	Modify the features in part 3	Lily

1. GENERAL DESCRIPTION

M.NT68676.2A is a monitor control board, which is suitable for Asia-Pacific market. It can support LED/LCD panels which resolution is up to 2048×1152.

M.NT68676.2A can synchronize with computer automatically. Synchronization requires the synchronous signal which horizontal and vertical sync are separated.

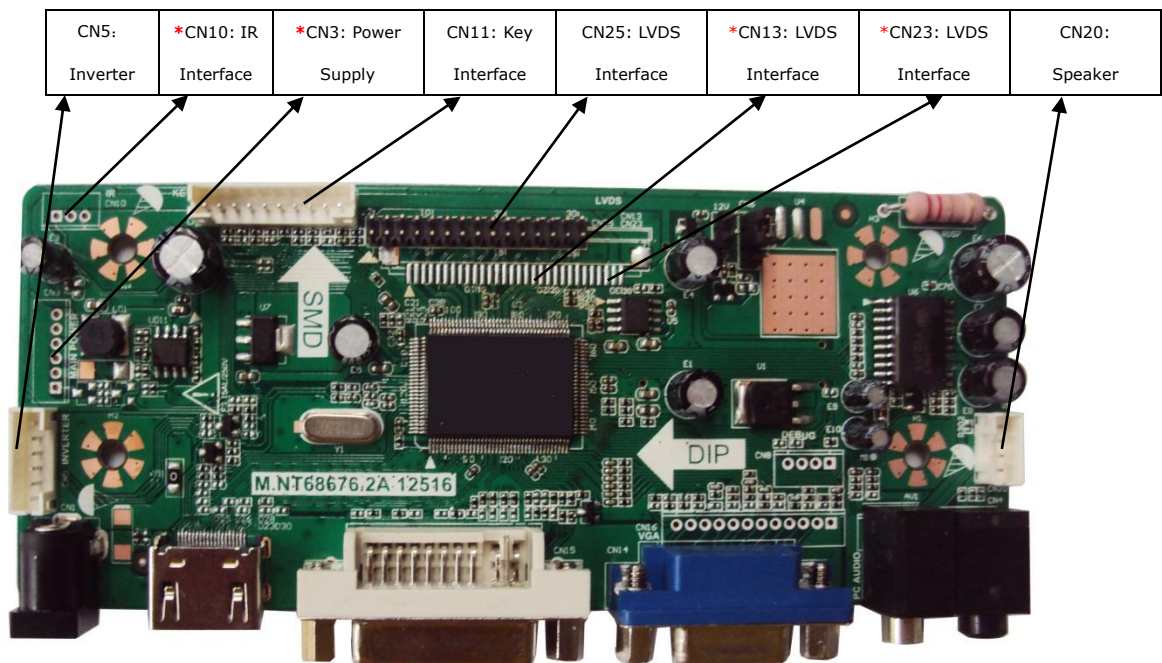
M.NT68676.2A can support dynamic contrast control, headphone input and Digital volume control simultaneously.

2. FUNCTION LAYOUT

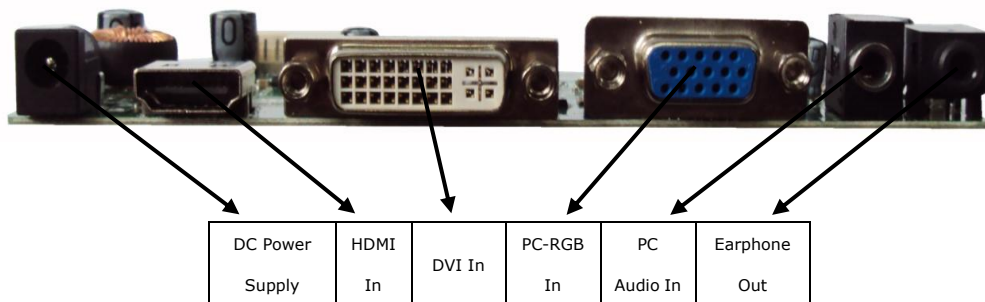
The picture is for a reference only, the actual item is the standard.

The optional connectors and terminals are marked with “*”.

TOP VIEW OF M.NT68676.2A



FRONT VIEW OF M.NT68676.2A



3. FEATURES

CHIPSET	NT68676(UFG)		
MARKET AREA	Asia-Pacific		
OSD LANGUAGE	Simplified Chinese, Traditional Chinese, English, French, German, Italian, Spanish, Portuguese, Japanese, Korean (optional)		
PANEL	Panel Type	LED/LCD	
	Interface	Single/Dual LVDS (8bit)	
	Max Resolution	2048×1152	
VIDEO INPUT	PC-RGB	Format	Up to 2048×1152@60Hz
	HDMI	480i, 480p, 720p, 1080i, 1080p	
	DVI	480i, 480p, 720p, 1080i, 1080p	
AUDIO INPUT	PC Audio	Earphone input	0.2 ~ 2.0 V _{RMS}
AUDIO OUTPUT	Frequency response	100Hz-15KHz @±3dB (1KHz 0dB reference signal)	
	Max Output power	2×1W(8Ω) THD+N<10%@1KHz Power Supply: 12V ,Audio Input: 0.5V _{RMS}	
POWER	Requirement	12V DC/12V(built)/12V,5V(built in)/12V,5V,5VSB(built in)	
	To Panel	3.3V/5V/12V	
	Management	Standby Power Consumption < 0.2W(Board Only)	
KEY FUNCTION	POWER,MENU,VOL+,VOL-,ADJUST/EXIT		
EXPANSIBLE FUNCTIONS	--		

Note: Licenses involved in specifications above are supposed to be obtained by customers themselves.

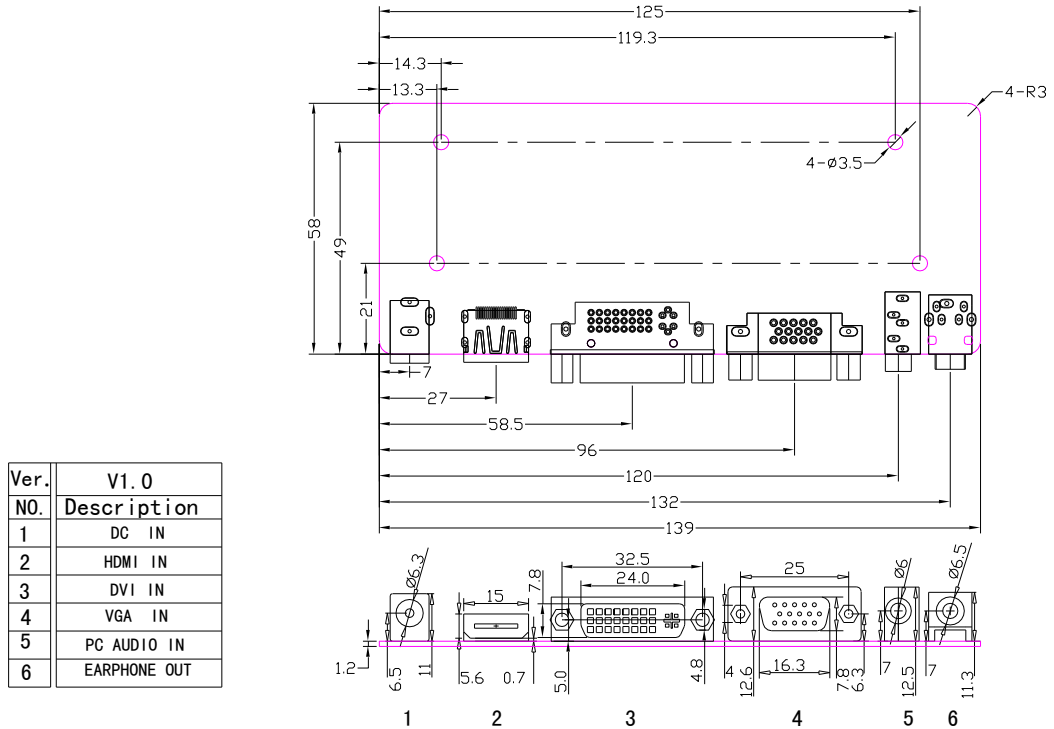
ELECTRICAL CHARACTERISTICS & REQUIREMENTS

Power Supply Mode	Symbol	Voltage Range	Max Current	Ripple Voltage@25°C	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
12V/5V/5VSB (Built-In)	12V	12V±0.6V	1300mA	120mV _{P-P}	≤100ms	≤50ms
	5V	5.1V±0.05V	1400mA	50mV _{P-P}	≤100ms	≤50ms
	5VSB	5.1V±0.05V	500mA	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.NT68676.2A is 139mm(L)*58mm(W)*17mm(H).



5. NTERFACE DEFINITION

The optional connectors are marked with "*".

◆ CN5(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(3PIN/2.0): IR INTERFACE CONNECTOR**

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

◆ ***CN3(6PIN/2.0): POWER SUPPLY CONNECTOR**

NO.	SYMBOL	DESCRIPTION
1	PWON	Power On/Off
2	5VSB	+5V DC Power Supply for Standby Mode
3	5V	+5V DC Power Supply
4	5V	
5	GND	Ground
6	GND	

◆ **CN11(10PIN/2.0): KEY INTERFACE 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

◆ **CN25(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	TX00-	LVDS ODD 0- Signal
8	TX00+	LVDS ODD 0+ Signal
9	TX01-	LVDS ODD 1- Signal
10	TX01+	LVDS ODD 1+ Signal
11	TX02-	LVDS ODD 2- Signal
12	TX02+	LVDS ODD 2+ Signal
13	GND	Ground
14	GND	

NO.	SYMBOL	DESCRIPTION
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

◆ *CN13(32PIN/0.5): LVDS INTERFACE CONNECTOR

NO.	SYMBOL	DESCRIPTION
1	RXO0-	LVDS ODD 0- Signal
2	RXO0+	LVDS ODD 0+ Signal
3	RXO1-	LVDS ODD 1- Signal
4	RXO1+	LVDS ODD 1+ Signal
5	RXO2-	LVDS ODD 2- Signal
6	RXO2+	LVDS ODD 2+ Signal
7	GND	Ground
8	RXOC-	LVDS ODD Clock- Signal
9	RXOC+	LVDS ODD Clock+ Signal
10	RXO3-	LVDS ODD 3- Signal
11	RXO3+	LVDS ODD 3+ Signal
12	RXE0-	LVDS EVEN 0- Signal
13	RXE0+	LVDS EVEN 0+ Signal
14	GND	Ground
15	RXE1-	LVDS EVEN 1- Signal
16	RXE1+	LVDS EVEN 1+ Signal
17	GND	Ground
18	RXE2-	LVDS EVEN 2- Signal
19	RXE2+	LVDS EVEN 2+ Signal
20	RXEC-	LVDS EVEN Clock- Signal
21	RXEC+	LVDS EVEN Clock+ Signal
22	RXE3-	LVDS EVEN 3- Signal
23	RXE3+	LVDS EVEN 3+ Signal

NO.	SYMBOL	DESCRIPTION
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	

◆ ***CN23(32PIN/0.5): LVDS INTERFACE CONNECTOR**

NO.	SYMBOL	DESCRIPTION
1	RX00-	LVDS ODD 0- Signal
2	RX00+	LVDS ODD 0+ Signal
3	RX01-	LVDS ODD 1- Signal
4	RX01+	LVDS ODD 1+ Signal
5	RX02-	LVDS ODD 2- Signal
6	RX02+	LVDS ODD 2+ Signal
7	GND	Ground
8	RXOC-	LVDS ODD Clock- Signal
9	RXOC+	LVDS ODD Clock+ Signal
10	RX03-	LVDS ODD 3- Signal
11	RX03+	LVDS ODD 3+ Signal
12	RXE0-	LVDS EVEN 0- Signal
13	RXE0+	LVDS EVEN 0+ Signal
14	GND	Ground
15	RXE1-	LVDS EVEN 1- Signal
16	RXE1+	LVDS EVEN 1+ Signal
17	GND	Ground
18	RXE2-	LVDS EVEN 2- Signal
19	RXE2+	LVDS EVEN 2+ Signal
20	RXEC-	LVDS EVEN Clock- Signal
21	RXEC+	LVDS EVEN Clock+ Signal
22	RXE3-	LVDS EVEN 3- Signal
23	RXE3+	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	

NO.	SYMBOL	DESCRIPTION
31	GND	Ground
32	GND	

◆ CN20 (4PIN/2.0): SPEAKER CONNECTOR

NO.	SYMBOL	DESCRIPTION
1	LO	Audio Left Channel Output
2	GND	Ground
3	GND	
4	RO	Audio Right Channel Output

6. CONFIGURATION & GENERAL PRECAUTIONS

- **Relative humidity: ≤ 80%.**
- **Storage temperature: -10~60°C.**
- **Operation temperature: 0~40°C.**
- **Protect the board from static electricity in case of damage to the IC.**
- **Keep the board away from conductor when it is working.**
- **Don't push or pull the connectors when the board is working.**
- **Don't press , distort or disassemble the board.**
- **Clean the board with soft dry cloth when it's dirty.**
- **Don't wire in the board to power supply before panel is correctly connected.**