MONITOR CONTROL BOARD SPECIFICATION

MODEL: M.NT68676.3A

Part Number: NT-21112559

CONTENT

REVISION HISTORY

VERSION	DATE	BOARD ID	PAGE	DESCRIPTION	AUTHOR
V1.0	2021.12.27	M.NT68676.2A 11486	All	First issued.	Linda

1. GENERAL DESCRIPTION

M.NT68676.3A 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.NT68676.3A can synchronize with computer automatically. Synchronization requires the synchronous signal which horizontal and vertical sync are separated.

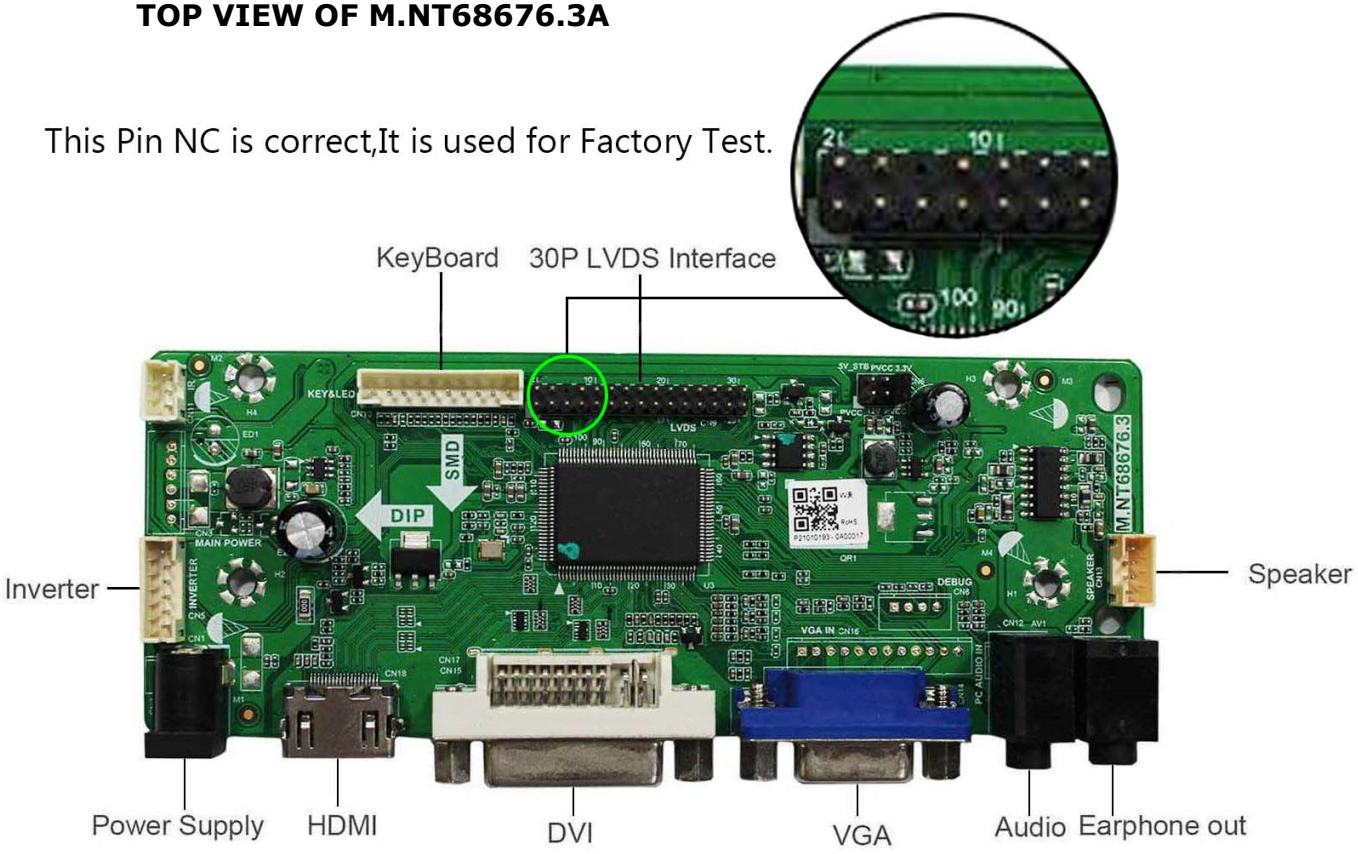
M.NT68676.3A can support dynamic contrast control, headphone input and Digital volume control simultaneously.

2. FUNCTION LAYOUT

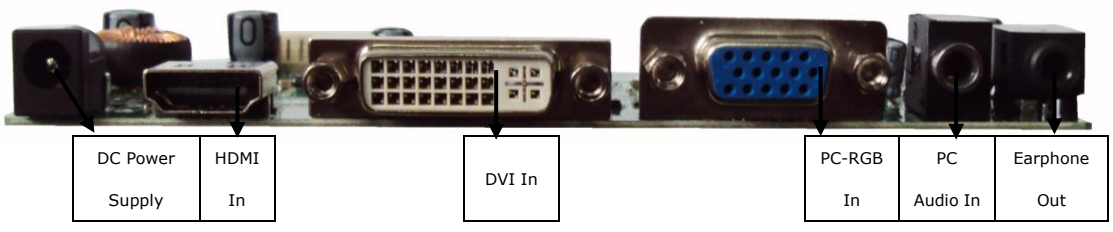
The picture is for a reference only, the actual item is the standard.

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

TOP VIEW OF M.NT68676.3A



FRONT VIEW OF M.NT68676.3A



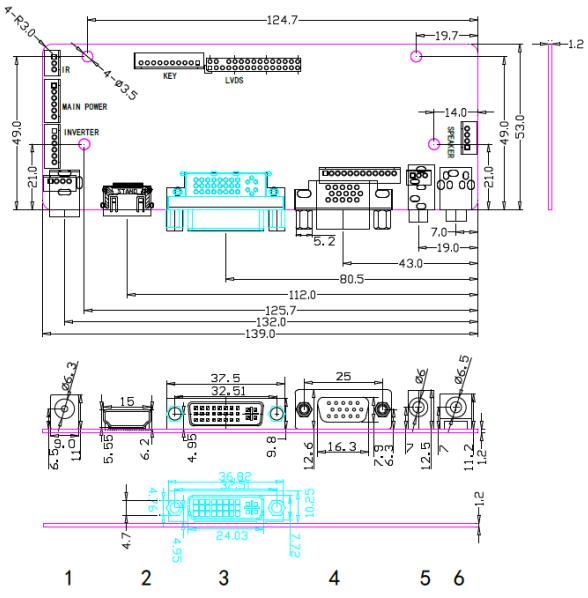
3. FEATURES

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, 576i, 576p, 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 < 0.5W(Board Only)	
KEY FUNCTION	POWER,MENU,VOL+,VOL-,ADJUST/EXIT		

4. PCB DIMENSIONS

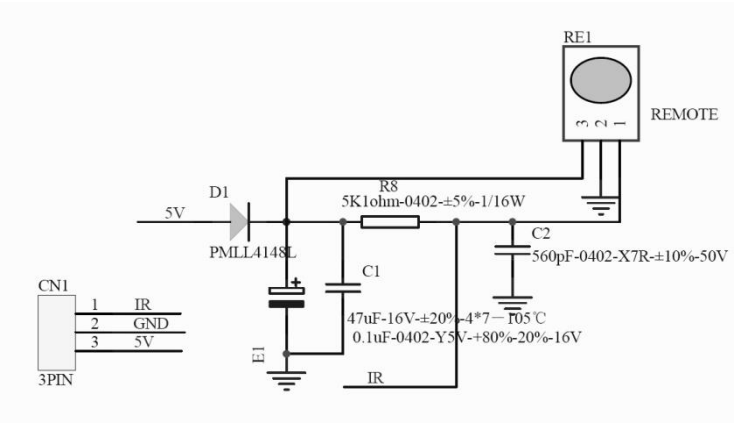
The size of M.NT68676.2A is 139mm(L)*53mm(W)*17mm(H).

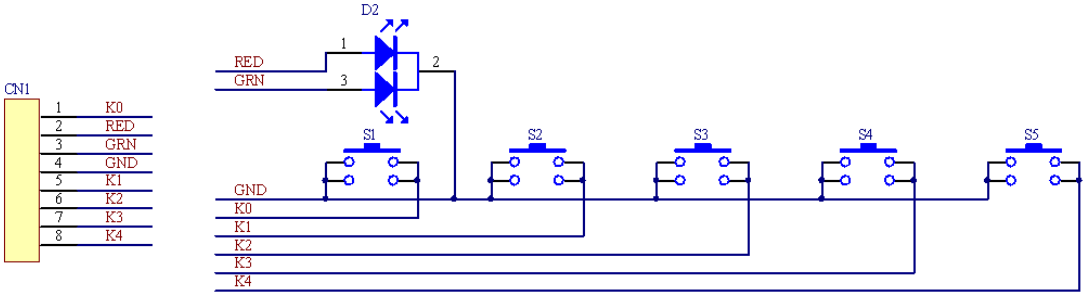
配置1【3_A1】	
Ver.	A0
NO.	Description
1	DC IN
2	HDMI IN
3	DVI IN
4	VGA IN
5	PC AUDIO IN
6	EARPHONE OUT



PCB Tolerance			Connector Tolerance
PCB size	±0.15mm		(Unless Otherwise Stated)
PCB thickness	≤1.0mm	±0.1mm	±0.3mm
	>1.0mm	±10%	

5. SCHEMATICS OF IR BOARD & KEY BOARD





6. INTERFACE 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

◆ 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	+5V DC Power Supply
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

◆ 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

◆ 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	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

NO.	SYMBOL	DESCRIPTION
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

◆ 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

7. 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.**