

1. GENERAL DESCRIPTION

MSD309P V3.0 is a multi-purpose LCD controller, it is suitable European market.

MSD309P V3.0 can support DVB-T, TV, SCART, YPBPR, DVD (Option), VGA, HDMI, AV, USB signal input.

2. FEATURES

Below you will find the detailed feature

Video Input	TV	VIDEO SYSTEM	PAL、SECAM	
		SOUND SYSTEM	BG ,DK ,I ,L,L'	
		RECEIVE CHANNEL	ATV:100	
	DTV _{note1}	Modulation	COFDM 2K/8K, QPSK,16QAM, 64QAM	
		Video system	MPEG-2 MP@ML. H.264	
		Audio system	MPEG-1 ,MPEG-2 (Layer I / II)	
		RECEIVE CHANNEL	DTV:600	
	CVBS	1.0Vp-p +/-5%		
	YPbPr/YCbCr	480i、480p、576i、576p、720p、1080i,1080p		
	PC-RGB	Format	Up to 1920*1080@60HZ	
Color		16bit, 24bit, 32bit		
HDMI	480i、480p、576i、576p、720p、1080i,1080p			
SCART	FULL Scart			
Expansion function	USB	Multimedia ,PVR, software update		
	Inbuilt DVD	Option		
Audio input	YPBPR/CVBS	YES		
	PC-RGB	Pc: Earphone input		
Power	Build-in power supply(Optional)	5V,5VS,12V		
	Adaptor	12V		
	To panel	3.3V,5V,12V		
	Manage	Low power consumable mode: standby≤0.5w		
OSD Language	English,(French ,Spanish ,Polish, Portuguese, Russian Italian, German, Dutch)			
Key Functions	CH-,CH+,MENU,VOL-,VOL+,SOURCE,POWER			
Audio Output	2w*2@8 Ω, 3w*2@4 Ω ,8w*2@8 Ω(Optional)			
Comb Filter	3D	De-interlace	3D	
Weak signal enhancement	YES			
Nosier reduction	3D			

EPG		YES(DVB-T)	
NICAM/A2, TELETEXT		YES	
Panel Resolutions	Support up to 8-bit (10-bit Option) dual LVDS FULL HD panel interface		
Terminals	Input	TV Input	1 IEC 75 Ω
		PC-RGB Input	1D-SUB 15PIN terminal blue color
		PC-RGB Audio Input	1 earphone terminal black color
		CVBS Input	1RCA terminal yellow color
		CVBS Audio Input	2RCA terminal white color, red color
		YPbPr Audio Input	
		YPbPr Input	1 YPbPr terminal
		HDMI Input	2 HDMI terminal
		SCART	1 SCART terminal
	USB	2 USB terminal	
	Output	To Panel	LVDS 34PIN/2.0 jack
SPDIF Out		1 SPDIF terminal	

NOTE:

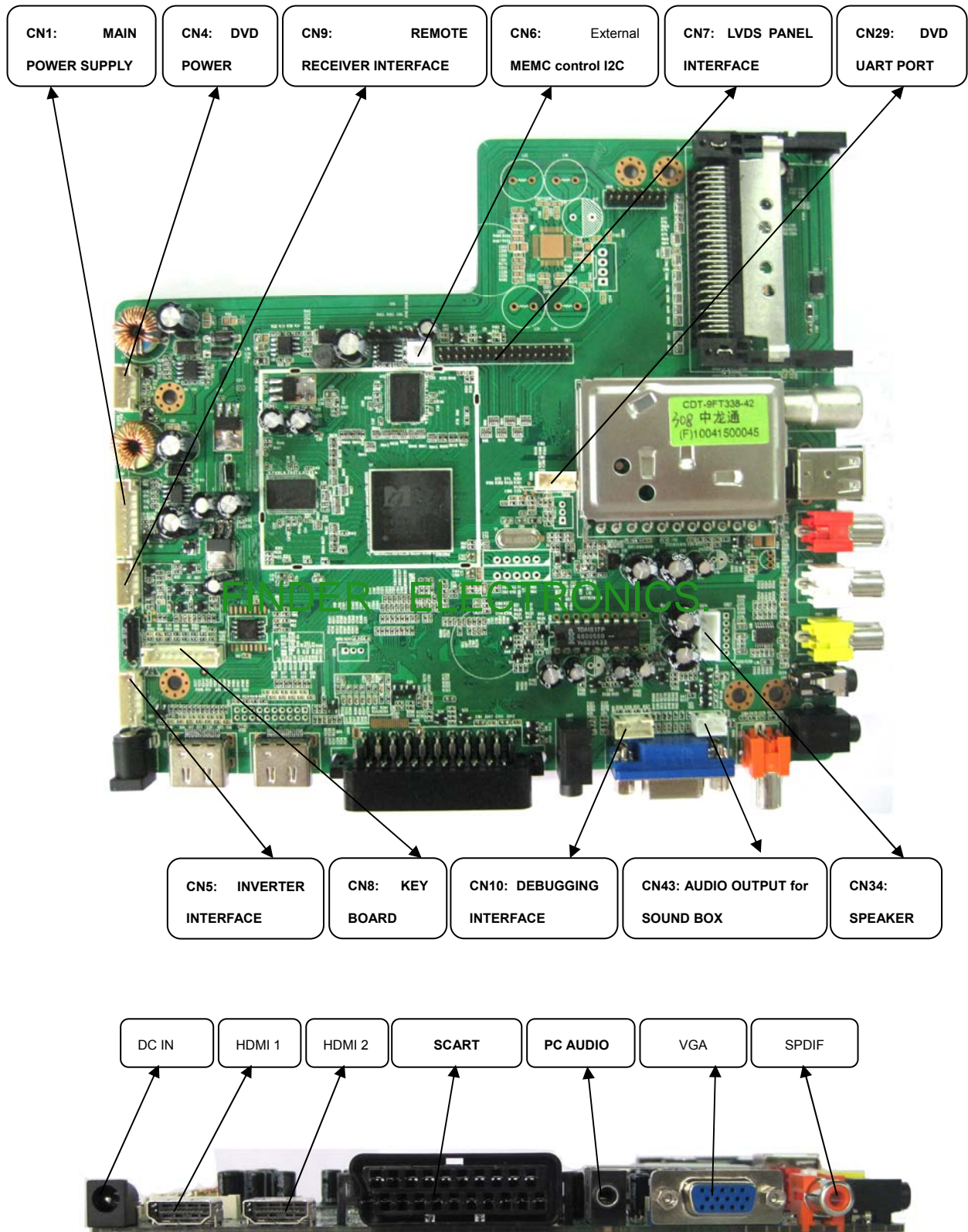
1. MSD309P V3.0 support chipset MSD309PT and MSD308PT. MSD309PT support DVBT, MSD308PT support DVBT+DVBC.

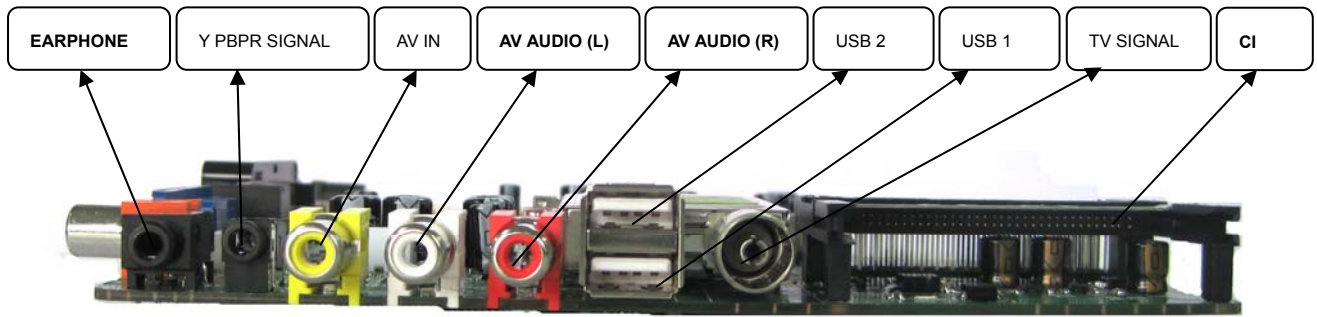
USB MULTIMEDIA PLAYBACK FORMAT

Media	File Extension	Code	
		Video	Audio
MOVIE	.avi	DivX,Xvid,MPEG-4	MP3,WMA,AAC
	.mpg	MPEG-1, MPEG-2	
	.dat	MPEG-1	
	.mov/.mkv	H.264	
MUSIC	.mp3	--	MP3
	.wma	--	WMA
	.m4a/.aac	--	AAC
PHOTO	.jpg/.jpeg	Progressive JPEG	
		Baseline JPEG	
	.bmp	BMP	
	.png	Non-Interlaced	
		Interlaced	

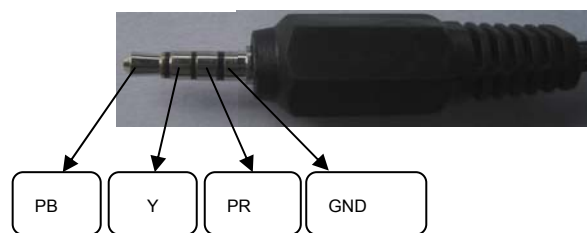
3 .FUNCTION LAYOUT

PICTURE OF LCD CONTROLLER





YPBPR wiring harness connect MSD309P V3.0 board part.



(The color of actual item may vary and the image is only for information)

INTERFACE DEFINITION

Below , please see the symbol and description from left to right pin

CN4 (5PIN/2.0) DVD POWER

NO.	SYMBOL	DESCRIPTION
1	12VA	DVD +12V DC Power supply
2	GND	Ground
3	GND	
4	5V_DVD	DVD +5V DC Power supply
5	5V_DVD	

CN1 (9PIN/2.0) MAIN POWER SUPPLY

NO.	SYMBOL	DESCRIPTION	ELECTRIC CHARACTER
1	12V	+12V DC Power supply	2A+Panel Electric Current +electric Current of extended module
2	12V		
3	GND	Ground	---
4	GND		
5	GND		
6	5VS	+5V DC Power standby	1A
7	ON/OFF	Power switch control	5V , 1K ohm output impedance
8	5VA	+5V DC Power supply	2A+Panel Electric Current +electric Current of extended module
9	5VA		

CN9 (5PIN/2.0) REMOTE RECEIVER INTERFACE

NO.	SYMBOL	DESCRIPTION
1	GND	Ground
2	IR_IN	Remote receiver
3	LED_G	Green indicator
4	LED_R	Red indicator
5	IR_VCC	+5V DC power supply

CN5 (6PIN/2.0) INVERTER INTERFACE

NO.	SYMBOL	DESCRIPTION	ELECTRIC CHARACTER
1	GND	Ground	---
2	GND		
3	ADJ	Brightness adjustment	0~5V adjustable
4	BKL	Black-light ON/OFF control	5V , 1K ohm output impedance
5	12V	+12V DC Power supply	INVERTER Power Supply
6	12V		

CN8 (9PIN/2.0) KEY BOARD

NO.	SYMBOL	DESCRIPTION
1	GND	Ground
2	CH-	CH- key
3	CH+	CH+ Key
4	MENU	MENU Key
5	VOL-	VOL- Key
6	VOL+	VOL+ Key
7	SOURCE	SOURCE Key
8	POWER	ON/OFF key
9	NC	NC

CN32 (3PIN/2.0) DVD YC SIGNAL

NO.	SYMBOL	DESCRIPTION
1	C	DVD C SIGNAL
2	GND	Ground
3	Y	DVD Y SIGNAL

CN6 (2PIN/2.0) External MEMC control I2C

NO.	SYMBOL	DESCRIPTION
1	SDA	I2C SDA
2	SCL	I2C SCL

CN7 (2*17PIN/2.0) LVDS PANEL INTERFACE

NO.	SYMBOL	DESCRIPTION
1	VDD	Power for panel
2	CT	LVDS Select
3	VDD	Power for panel
4	GND	Ground
5	GND	
6	GND	
7	RX00-	LVDS ODD 0- Signal
8	RX00+	LVDS ODD 0+ Signal
9	RX01-	LVDS ODD 1- Signal
10	RX01+	LVDS ODD 1+ Signal
11	RX02-	LVDS ODD 2- Signal
12	RX02+	LVDS ODD 2+ Signal
13	GND	Ground
14	GND	
15	RXOC-	LVDS ODD Clock- Signal
16	RXOC+	LVDS ODD Clock+ Signal
17	RX03-	LVDS ODD 3- Signal
18	RX03+	LVDS ODD 3+ Signal
19	RXE0-	LVDS EVEN 0- Signal
20	RXE0+	LVDS EVEN 0+ Signal
21	RXE1-	LVDS EVEN 1- Signal
22	RXE1+	LVDS EVEN 1+ Signal
23	RXE2-	LVDS EVEN 2- Signal
24	RXE2+	LVDS EVEN 2+ Signal
25	GND	Ground
26	GND	
27	RXEC-	LVDS EVEN Clock- Signal
28	RXEC+	LVDS EVEN Clock+ Signal
29	RXE3-	LVDS EVEN 3- Signal
30	RXE3+	LVDS EVEN 3+ Signal
31	RXE4-	LVDS EVEN 4- Signal
32	RXE4+	LVDS EVEN 4+ Signal
33	RX04-	LVDS ODD 4- Signal
34	RX04+	LVDS ODD 4+ Signal

CN29 (4PIN/2.0) DVD UART PORT

NO.	SYMBOL	DESCRIPTION
1	GND	Ground
2	DVD_TXD	DVD transmit data
3	DVD_RXD	DVD receive data
4	5VS/IR	5V Power supply / IR

CN30 (3PIN/2.0) DVD AUDIO

NO.	SYMBOL	DESCRIPTION
1	DVD_L	DVD YPBPR AUDIO (left)
2	GND	Ground
3	DVD_R	DVD YPBPR AUDIO (right)

CN34 (4PIN/2.54) SPEAKER

NO.	SYMBOL	DESCRIPTION
1	R	Right audio channel out
2	GND	Ground
3	GND	
4	L	Left audio channel out

CN27 (6PIN/2.0) DVD YPBPR SIGNAL

NO.	SYMBOL	DESCRIPTION
1	DVD_Y	DVD Y signal
2	GND	Ground
3	DVD_PB	DVD Pb signal
4	GND	Ground
5	DVD_PR	DVD Pr signal
6	GND	Ground

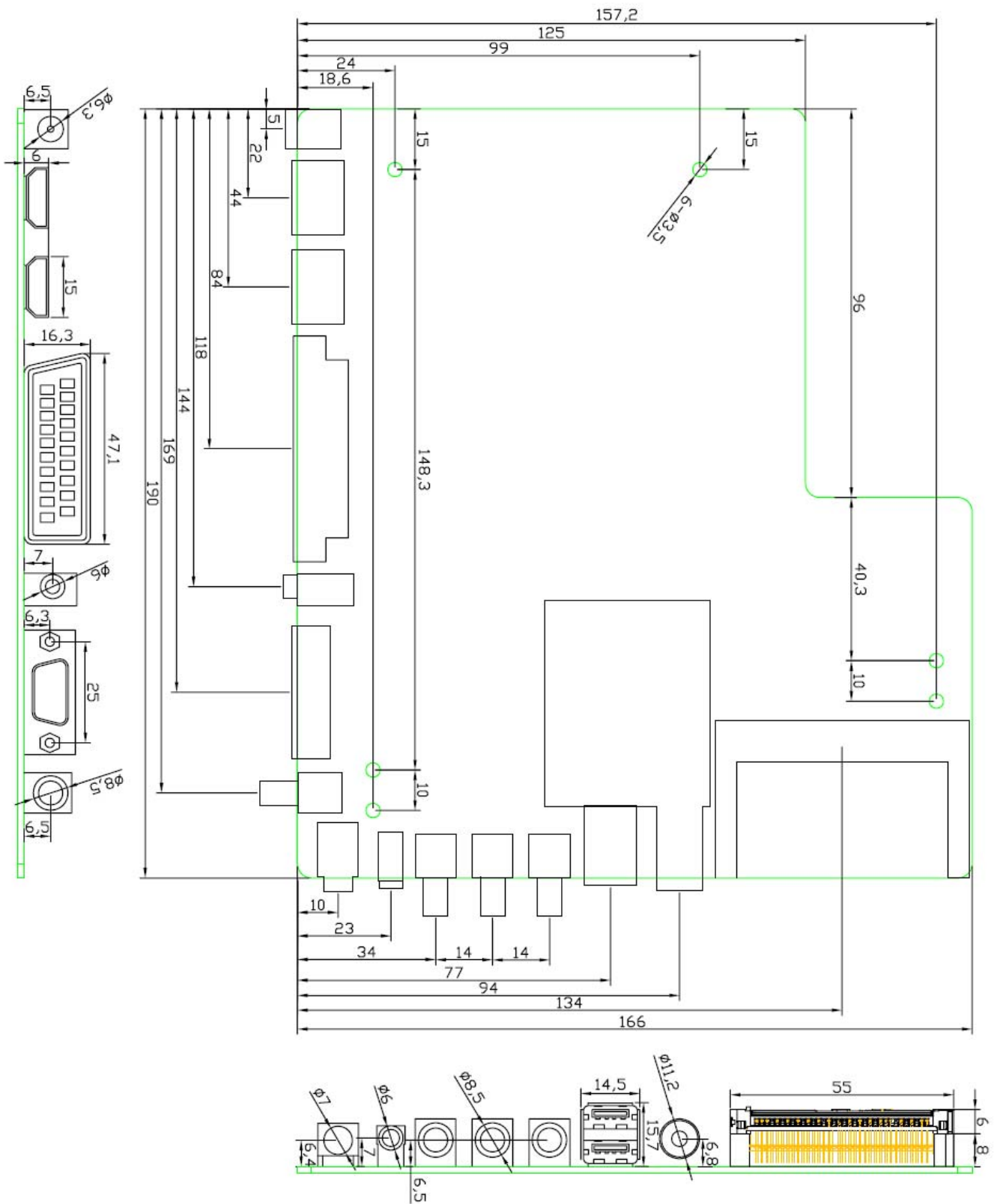
CN43 (3PIN/2.0) AUDIO OUTPUT for SOUND BOX

NO.	SYMBOL	DESCRIPTION
1	LINE_ROUT	AUDIO OUTPUT (R) for SOUND BOX
2	GND	Ground
3	LINE_LOUT	AUDIO OUTPUT(L) for SOUND BOX

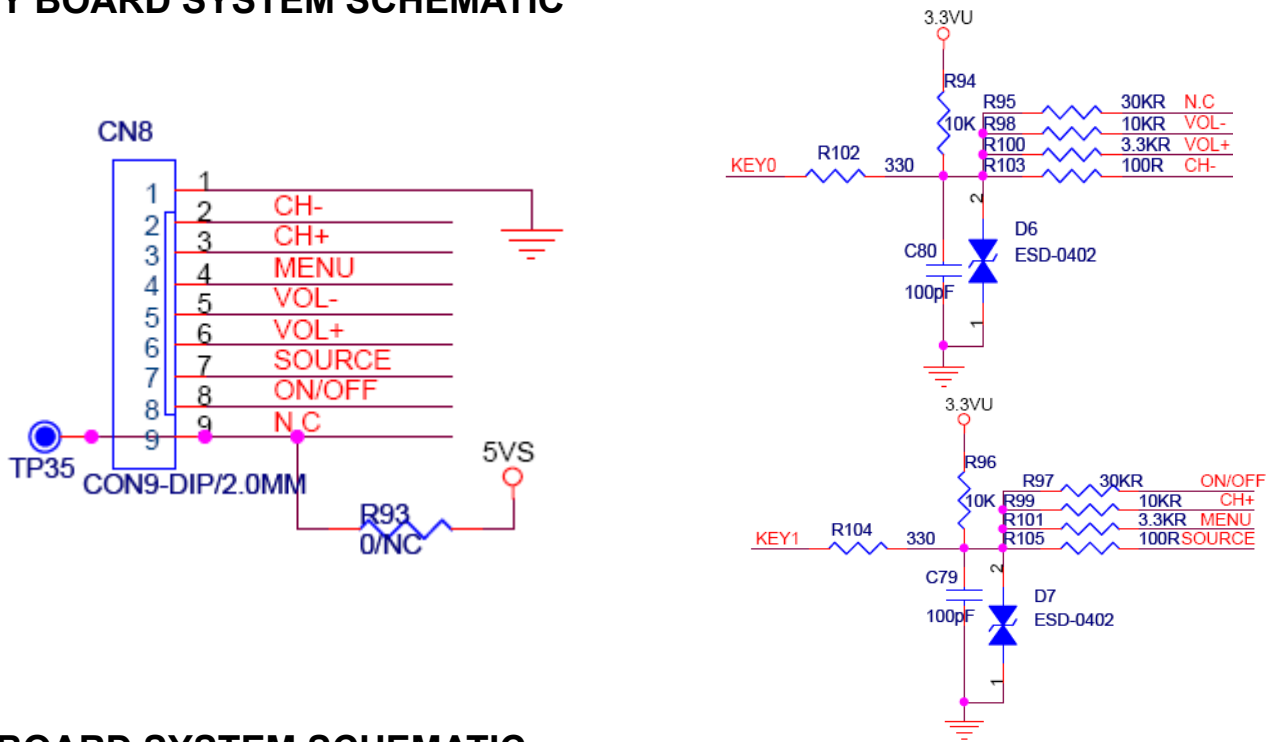
CN10 (4PIN/2.0) DEBUGGING INTERFACE

NO.	SYMBOL	DESCRIPTION
1	GND	Ground
2	ISP_TXD	Transmit data
3	ISP_RXD	Receive data
4	3.3VU	+3.3V DC Power supply

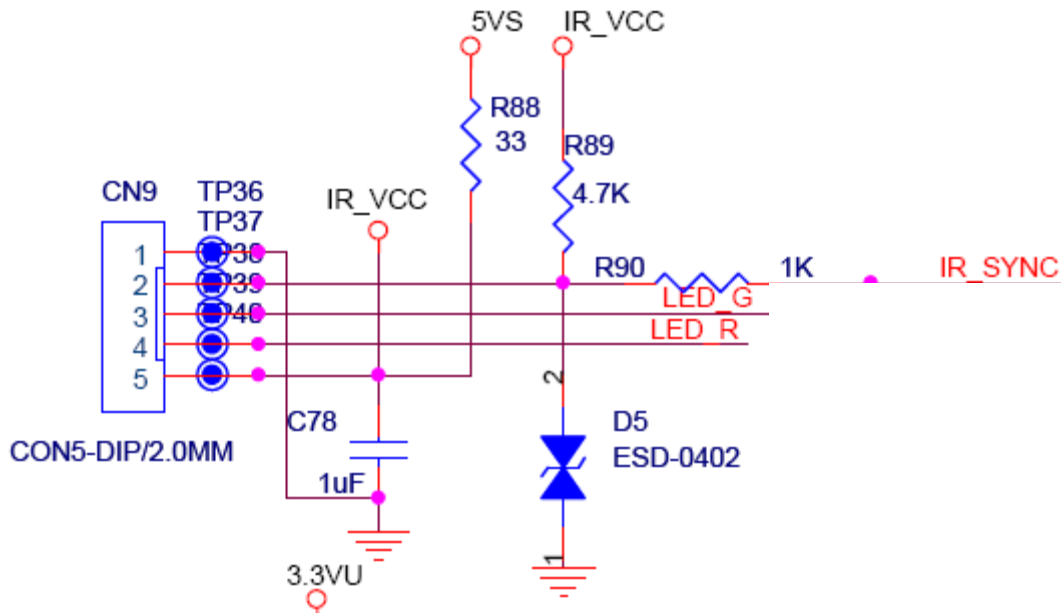
4. CONTROLLER DIMENSIONS



5. KEY BOARD SYSTEM SCHEMATIC



6. IR BOARD SYSTEM SCHEMATIC



7. OPERATION REQUIREMENT

- Do not pressed and distorted.
- Keep away from static and water.
- Relative humidity : $\leq 80\%$
- Storage temperature:-10~+60°C
- Operation temperature:0~+40°C