

Service Manual

R-Series LCD Monitor

Model

- R329DP*

Table of Contents

CHAPTER 1- PRECAUTIONS & SAFETY NOTICES	3
1. SAFETY PRECAUTIONS.....	3
2. PRODUCT SAFETY NOTICE	3
3. SERVICE NOTES	3
CHAPTER 2- SERVICE TOOLS & EQUIPMENT REQUIRED	4
CHAPTER 3- CIRCUIT THEORY	5
1. BLOCK DIAGRAM	5
2. GENERAL INFORMATION.....	오류! 책갈피가 정의되어 있지 않습니다.
3. HDMI PIN DESCRIPTION	오류! 책갈피가 정의되어 있지 않습니다.
4. DISPLAY PORT PIN DESCRIPTION	6
5. FFC CABLE PIN ASSIGNMENT.....	7
6. KEY PAD PIN ASSIGNMENT.....	7
7. FACTORY PRESET TIMMING	7
8. INTERFACE	8
8-1. SIGNAL INTERFACE.....	8
8-2. KEY PAD INTERFACE.....	9
8-3. CIRCUIT DIAGRAM.....	10
8-4 .PCB DRAWING	14
CHAPTER 4- DISASSEMBLY & ASSEMBLY	15
1. PRECAUTION	15
2. DISASSEMBLE AND ASSEMBLE	16
3. UNPACKING	18
4. DISASSEMBLE PRODUCT	19
CHAPTER 5- MAINTENANCE	20
1. FW UPGRADE	20
2. BOM LIST.....	23
CHAPTER 6- TROUBLE SHOOTING.....	29
1.NO POWER TROUBLE SHOOTING.....	29
2. NO VIDEO TROUBLE SHOOTING	30
CHAPTER 7- SERVICE PROCESS GUIDE.....	31

Chapter 1- PRECAUTIONS & SAFETY NOTICES

Service Manual

1. SAFETY PRECAUTIONS

This monitor is manufactured and tested on a ground principle that a user's safety comes first. However, improper use or installation may cause damage to the monitor as well as to the user.

WARNINGS:

- This monitor should be operated only at the correct power sources indicated on the label on the rear of the monitor. If you're unsure of the power supply in your residence, consult your local dealer or Power Company.
- Do not try to repair the monitor by yourself, as it contains no user-serviceable parts. This monitor should only be repaired by a qualified technician.
- Do not remove the monitor Cabinet. There are high-voltage parts inside that may cause electric shock to human bodies.
- Stop using the monitor if the cabinet is damaged. Have it checked by a service technician.
- Put your monitor only in a lean, cool, dry environment. If it gets wet, unplug the power cable immediately and consult your closed dealer.
- Always unplug the monitor before cleaning it. Clean the cabinet with a clean, dry cloth. Apply non-ammonia based cleaner onto the cloth, not directly onto the class screen.
- Do not place heavy objects on the monitor or power cord.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety visual inspections and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Before replacing any of these components read the parts list in this manual carefully. The use of substitute replacement parts, which do not have the same safety characteristics as specified in the parts list, may create shock, fire, or other hazards.

3. SERVICE NOTES

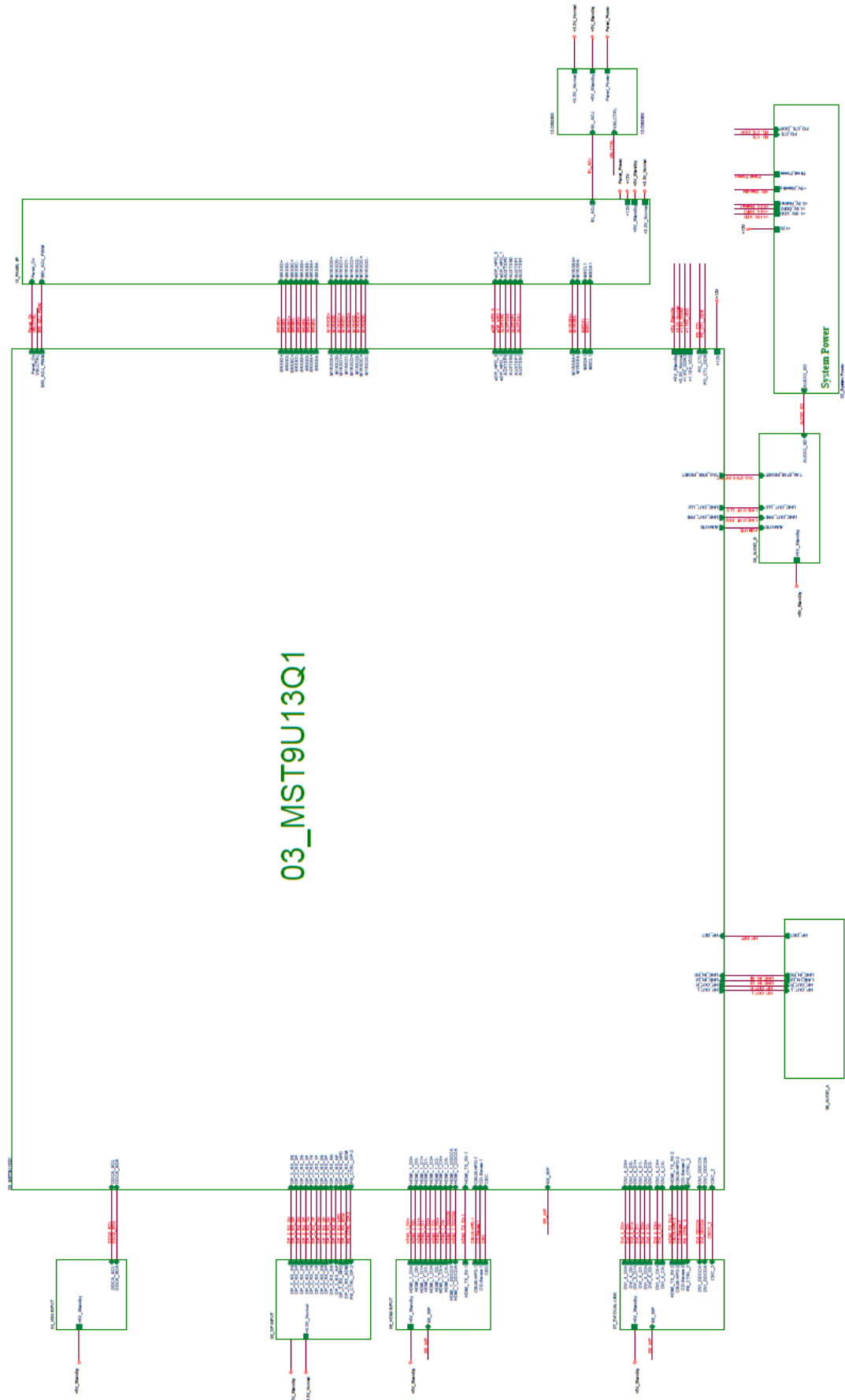
- When replacing parts or circuit boards, clamp the lead wires around terminals before soldering.
- Keep wires away from high voltage, high temperature components and sharp edges.
- Keep wires in their original position so as to reduce interference.
- Adjustment of this product please refers to the user's manual.

Chapter 2- SERVICE TOOLS & EQUIPMENT REQUIRED

1. VIDEO TEST SIGNAL GENERATOR
2. AUDIO TEST SIGNAL GENERATOR
3. MULTIMETER
4. SCREW DRIVER
5. OSCILLOSCOPE
6. IRON
7. SOLDER
8. DP Cable and HDMI Cable and VGA CABLE (15PINS POINT TO POINT)
9. AUDIO CABLE
10. COLOR ANALYZER
11. ISP BOARD

Chapter 3- CIRCUIT THEORY

1. Block Diagram



Service Manual

2. General Information

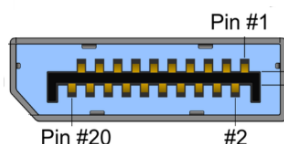
IC		MST9U13Q1
Signal	Resolution	3840*2160@60
	Colors	8BIT
	Hsync	31.5K Hz-133KHz
	Vsync	55Hz-75Hz
Port	Input	HDMI1
		HDMI2
		DISPLAY PORT
		USB HUB
	Output	Panel Interface : V BY ONE
		Audio Output : 2*1.5W
Power	Power Input	AC 110~220V
	Power Output	Panel_VCC : 12V
	Low-power	<0.5W。
Key Board	5 Five key	The number of key could be change
	Led Indicator	Blue single , Can be set to double colors by design。

3. HDMI Connector Pin Assignment



Pin	Symbol	Pin	Symbol	Pin	Symbol
1	HDMI_RX2+	9	HDMI_RX0-	17	GND
2	GND	10	HDMI_RXC+	18	+5V
3	HDMI_RX2-	11	DET_CABLE_HDMI	19	HPDHDMI_CTRL
4	HDMI_RX1+	12	HDMI_RXC-		
5	GND	13	NC		
6	HDMI_RX1-	14	NC		
7	HDMI_RX0+	15	SCL_HDMI		
8	GND	16	SDA_HDMI		

4. DISPLAY Port Connector Pin Assignment

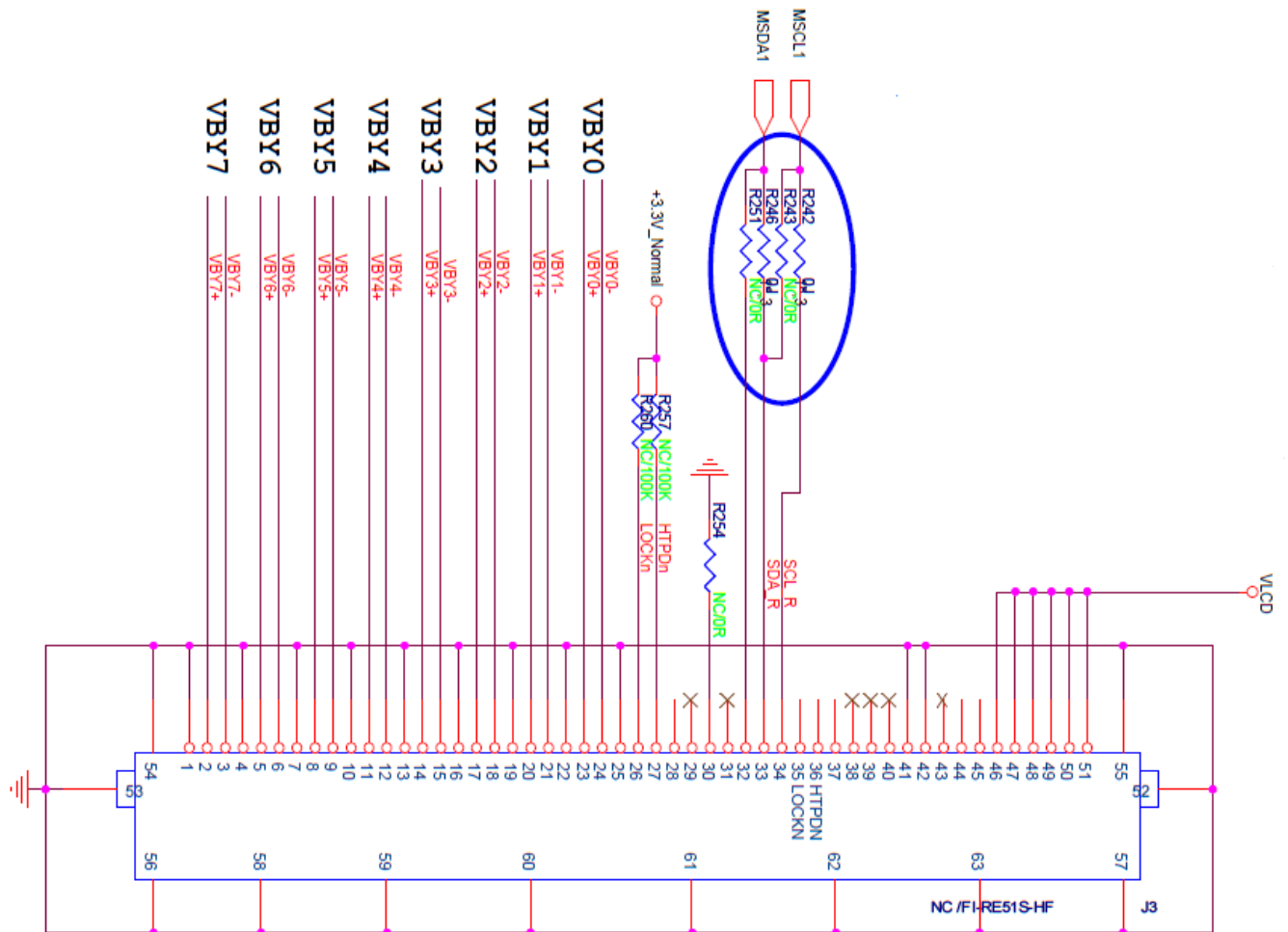


Pin	Symbol	Pin	Symbol	Pin	Symbol
1	Lane 0+	9	Lane 2-	17	AUX-
2	GND	10	Lane 3+	18	HOT PLUG
3	Lane 0-	11	GND	19	Return
4	Lane 1+	12	Lane 3-	20	DP_PWR(5V)
5	GND	13	GND		
6	Lane 1-	14	GND		
7	Lane 2+	15	AUX +		

Service Manual

8	GND	16	GND		
---	-----	----	-----	--	--

5. V by ONE



6. FACTORY PRESET TIMING

- HDMI

RESOLUTION	H-Freq (kHz)	V-Freq (Hz)	비고
640 x 480	31.47	59.94	
640 x 480	37.5	75	
640 x 480	37.861	72.809	
720 x 400	31.47	70.08	
800 x 600	37.88	60.32	
800 x 600	46.88	75	
800 x 600	48.077	72.188	
800 x 600	35.156	56.25	
1024 x 768	48.36	60	
1024 x 768	56.476	70.069	
1280x 1024	63.98	60.02	
1360 x 768	47.7	60.01	
1440 x 900	55.469	59.901	
1680x 1050	65.29	59.95	
1920x 1080	67.5	60	
2560x 1440	88.787	60	
3840x 2160	67.5	30	HDMI 1.4
3840x 2160	133.32	30	HDMI 2.0

Service Manual

- DISPLAY PORT

RESOLUTION	H-Freq (kHz)	V-Freq (Hz)	비고
640 x 480	31.47	59.94	
640 x 480	37.5	75	
640 x 480	37.861	72.809	
720 x 400	31.47	70.08	
800 x 600	37.88	60.32	
800 x 600	46.88	75	
800 x 600	48.077	72.188	
800 x 600	35.156	56.25	
1024 x 768	48.36	60	
1024 x 768	56.476	70.069	
1280x 1024	63.98	60.02	
1360 x 768	47.7	60.01	
1440 x 900	55.469	59.901	
1680x 1050	65.29	59.95	
1920x 1080	67.5	60	
2560x 1440	88.787	60	
3840x 2160	133.32	30	

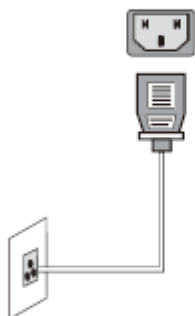
7. Interface

7.1 Signal Interface

III. Connect the Monitor to Your PC



Before connecting the monitor to your PC, be sure to power off the PC and the monitor.



Model with internal power supply

* WARNING:

Please use the power cord and adapter as a standard configuration.

(The picture is for reference only, subject to the actual product)

1 HDMI port

Connect the HDMI cable to the HDMI IN port on the back of the monitor (It is required to support by the monitor)



2 HDMI port

Connect the HDMI cable to the HDMI IN port on the back of the monitor (It is required to support by the monitor)



3 DP port

Connect the DP cable to the DP IN port on the back of the monitor (It is required to support by the monitor)



Service Manual

7 USB OUT port

Connect the USB cable to the USB OUT port on the back of the monitor (It is required to support by the monitor)



4 AUDIO port

Connect the AUDIO cable to the AUDIO OUT port on the back of the monitor (It is required to support by the monitor)



8 USB IN port

Connect the USB cable to the USB IN port on the back of the monitor (It is required to support by the monitor)



5 Power plug

Connect the power cord to the power port on the back of the monitor.



6 USB OUT port

Connect the USB cable to the USB OUT port on the back of the monitor (It is required to support by the monitor)

↩

9-2. Key Pad Interface

1. Diagram of buttons

M  1

▲  2

▼  3

E  4

⏻  5

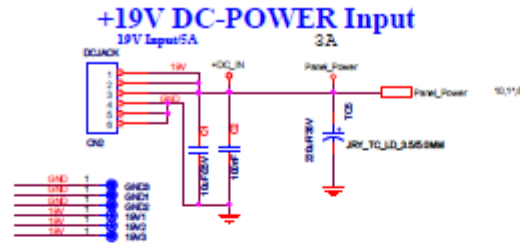
2. Description of button functions

1.	"M"	Pop up the main menu/go back to the previous menu (exit the entire menu when in the main menu).
2.	"▲"	When menu is opened, it can be used as the Up/Right functional selection button and to increase the value of the progress bar progressively; When menu is closed, it can be used as the designated shortcut hotkey.
3.	"▼"	When menu is opened, it can be used as the Down/Left functional selection button, to decrease the value of the progress bar progressively; When menu is closed, it can be used as the designated shortcut hotkey.
4.	"E"	If menu is activated, press this button to select this function; When menu is deactivated, press this button to enter the automatic adjustment function that automatically set horizontal position, vertical position, clock and focus (applying to VGA signals only).
5.	"⏻"	Power switch: Press this button to power on/off the monitor.
6.	LED indicator	Constant on: Normal power-on state. Blinking: Eco standby state.

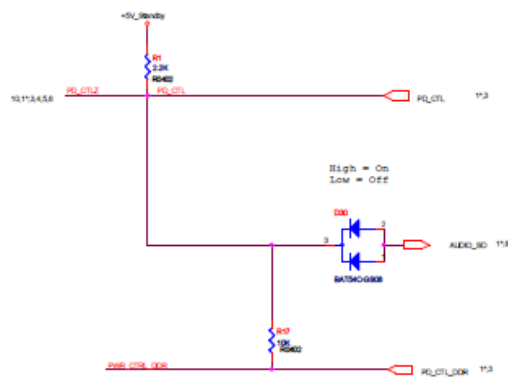
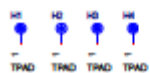
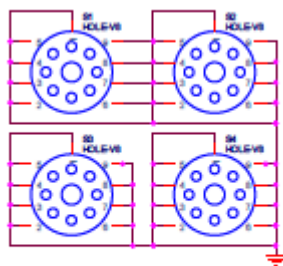
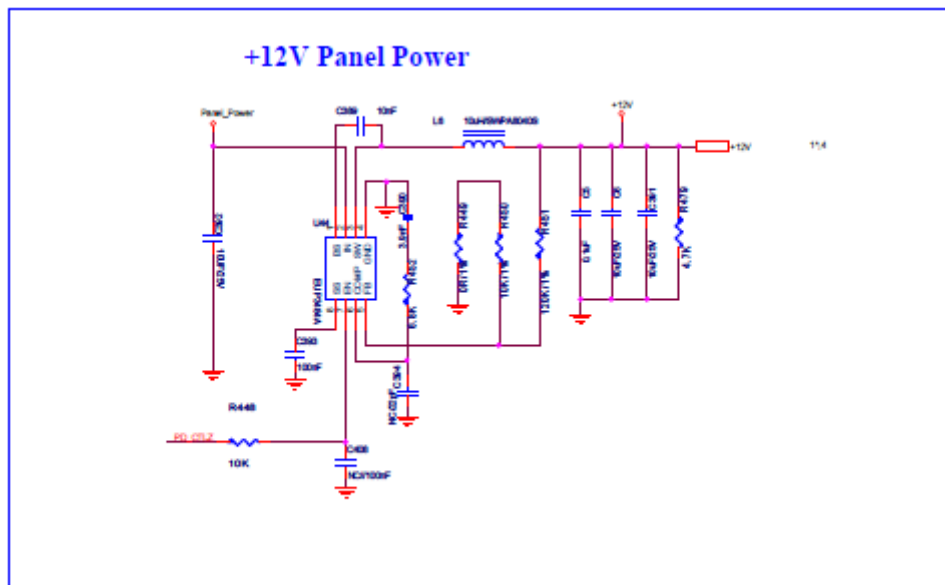
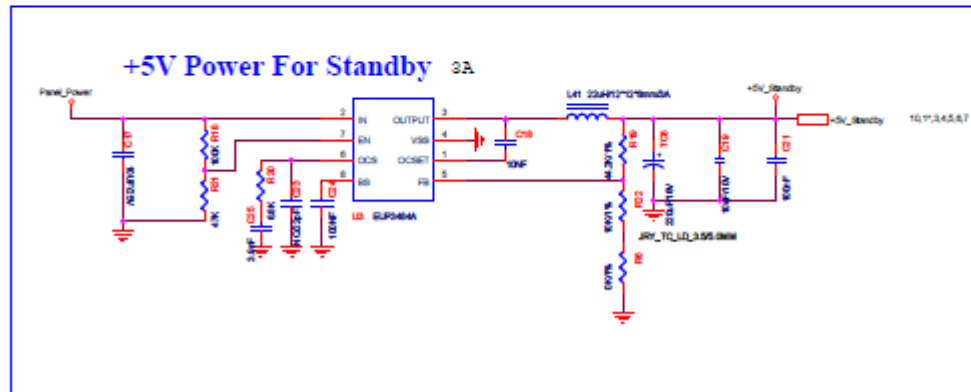
Caution: Specific buttons are subject to the actual model.

Service Manual

9-3. Circuit Diagram

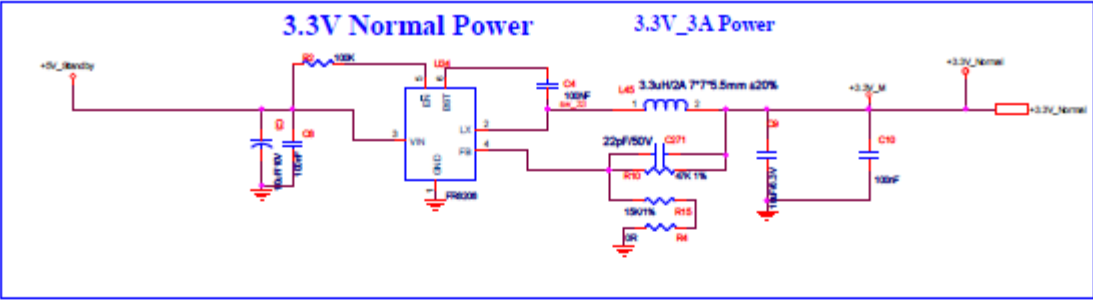


+5V Power For Standby

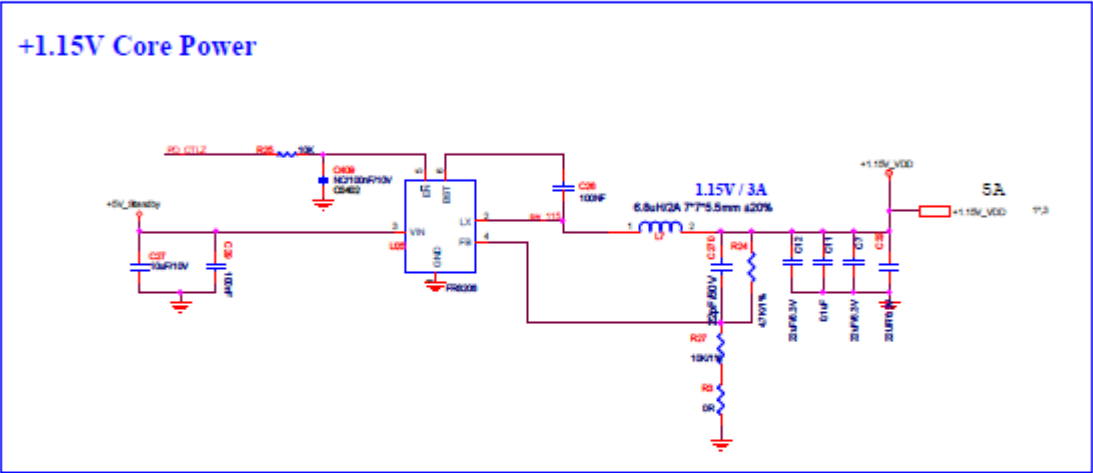


Service Manual

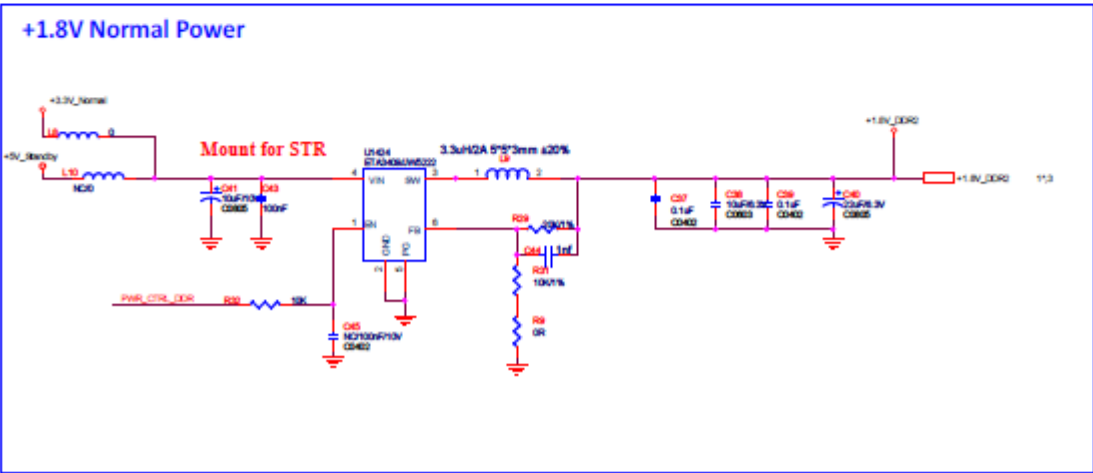
3.3V Normal Power



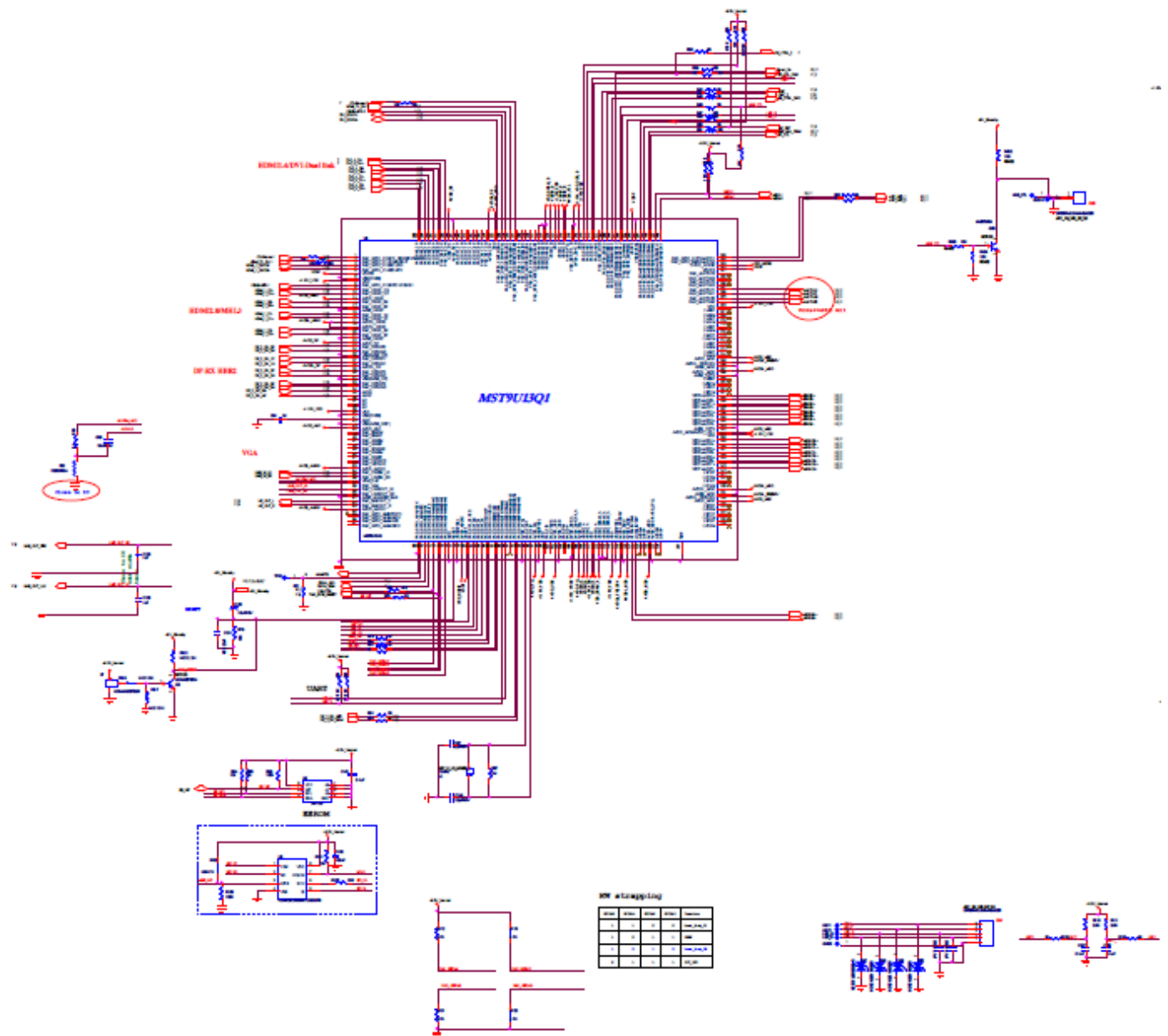
+1.15V Core Power



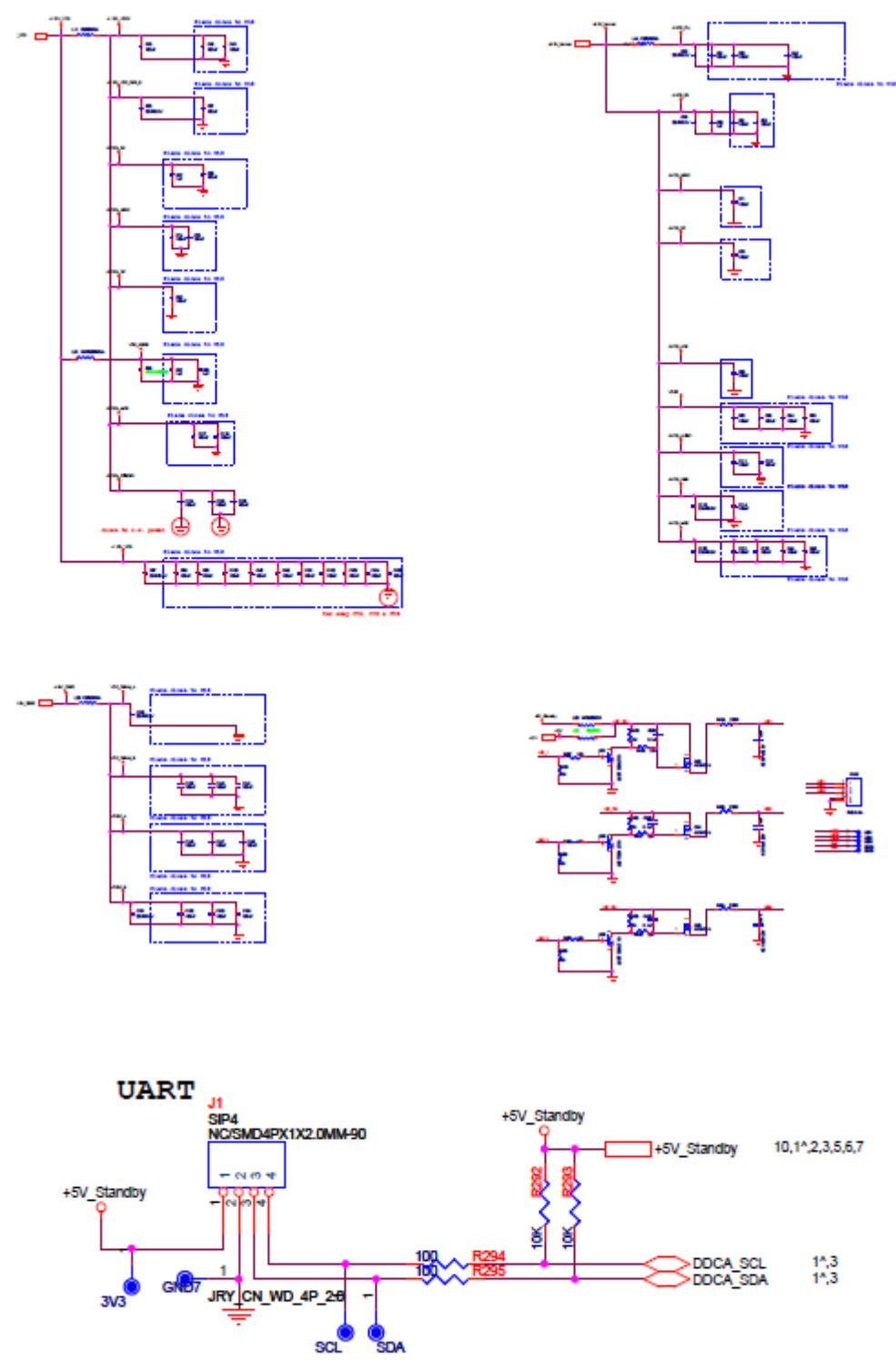
+1.8V Normal Power



Service Manual

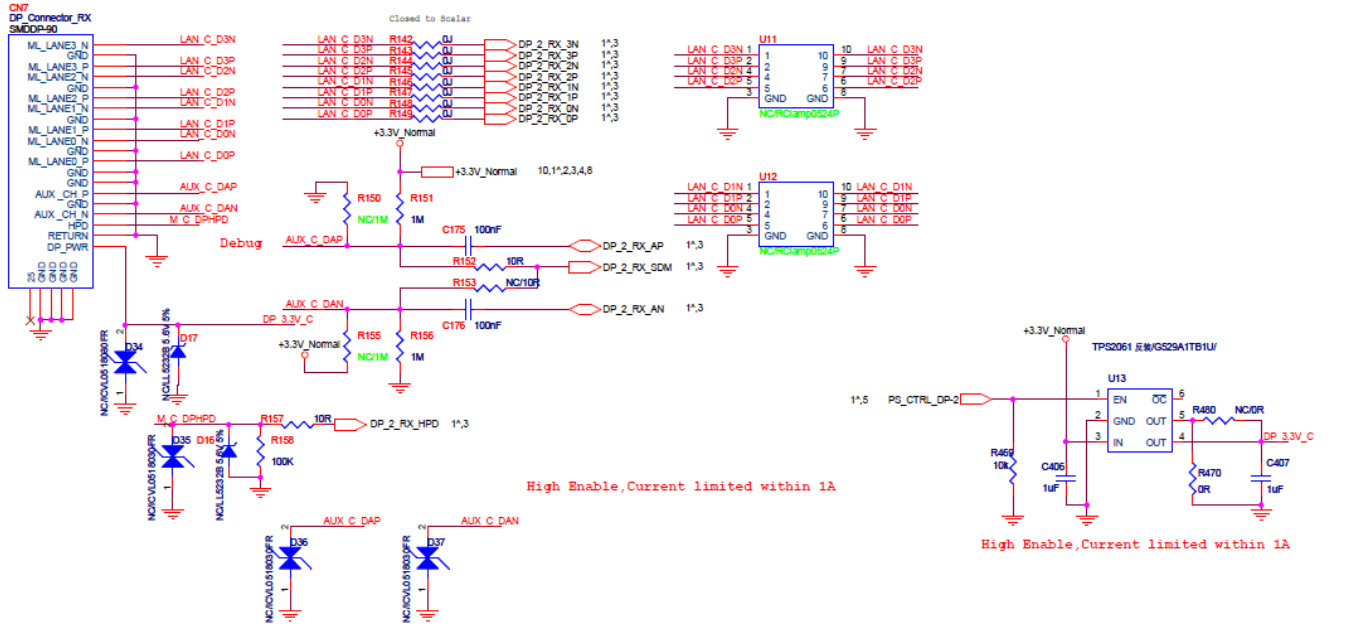


Service Manual

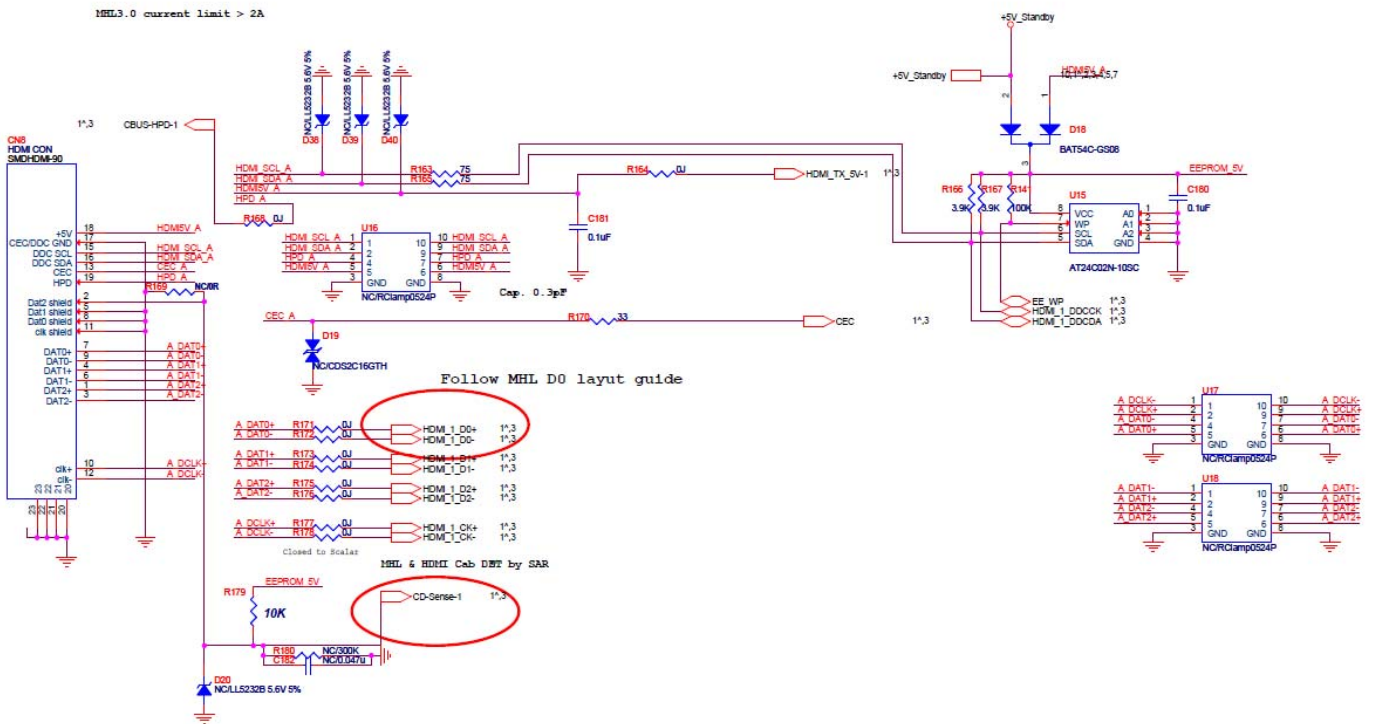


Service Manual

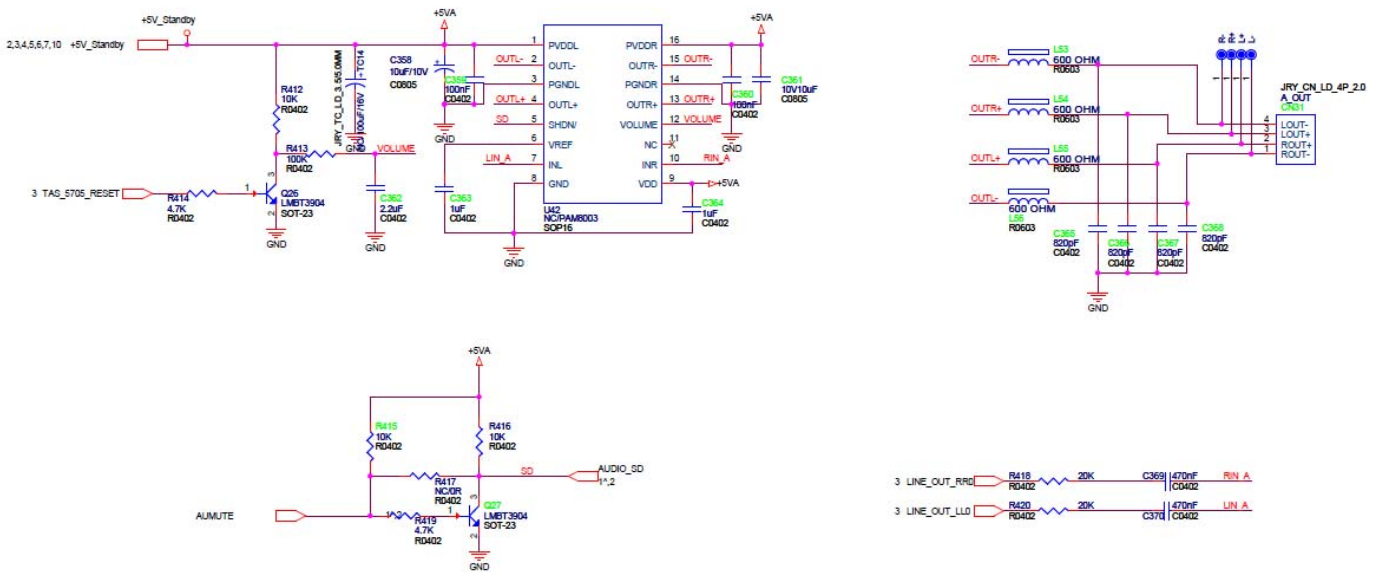
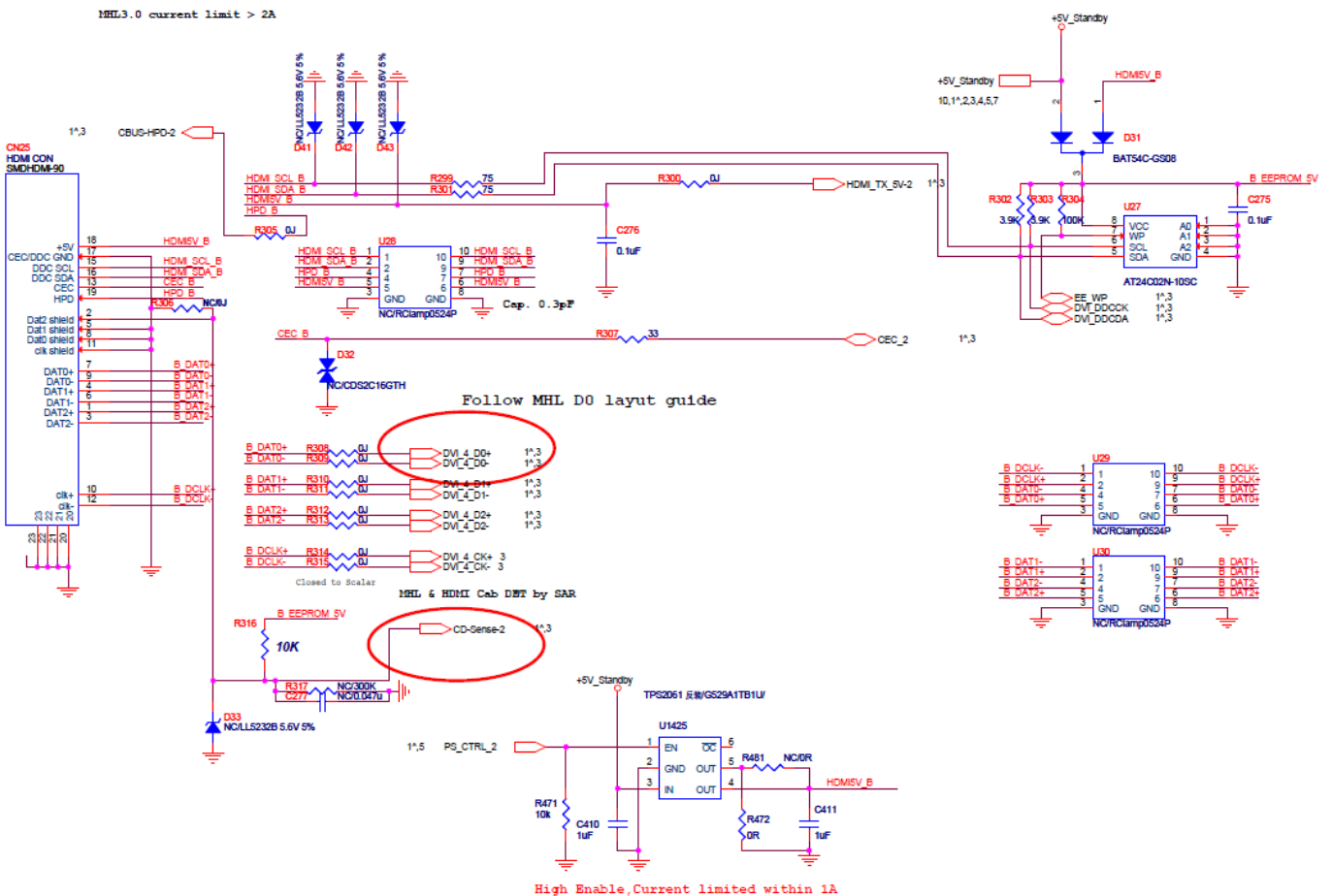
Display Port Input (RX)



```
MHL3.0 current limit > 2A
```



Service Manual



Service Manual

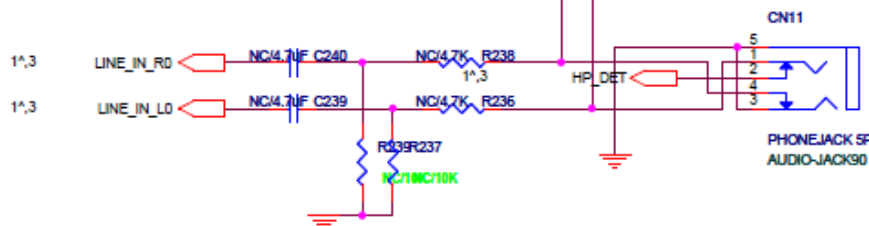
L1281,L1282 Default use Resistor_0ohm

Analog Earphone Output

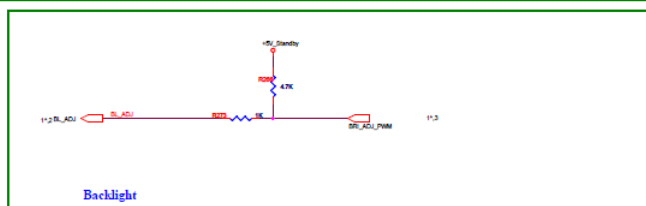
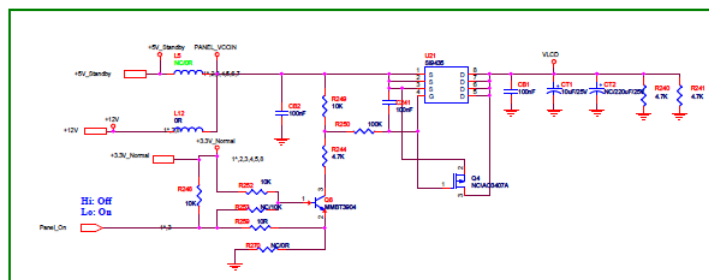


AUDIO LINE INPUT

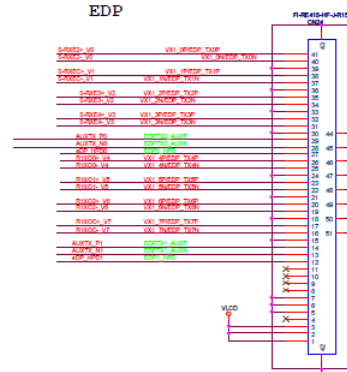
L381,L382,R383,R384,C381,C382,R381 & R382 are reserved for Line-out be GPIO.



Panel Power

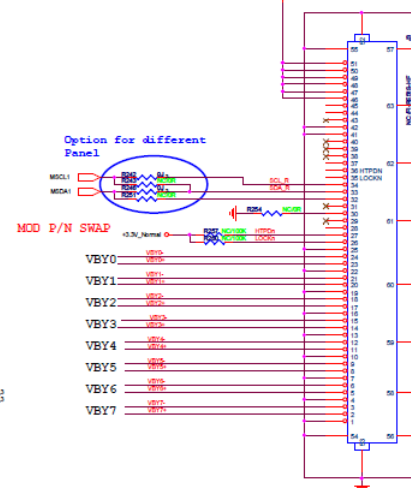
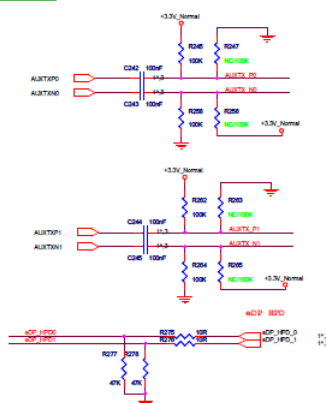
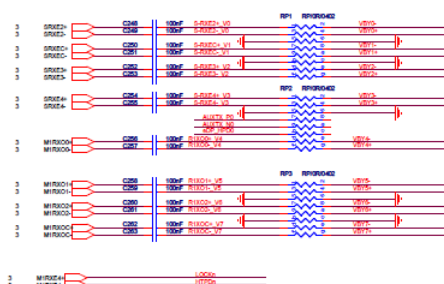


EDP

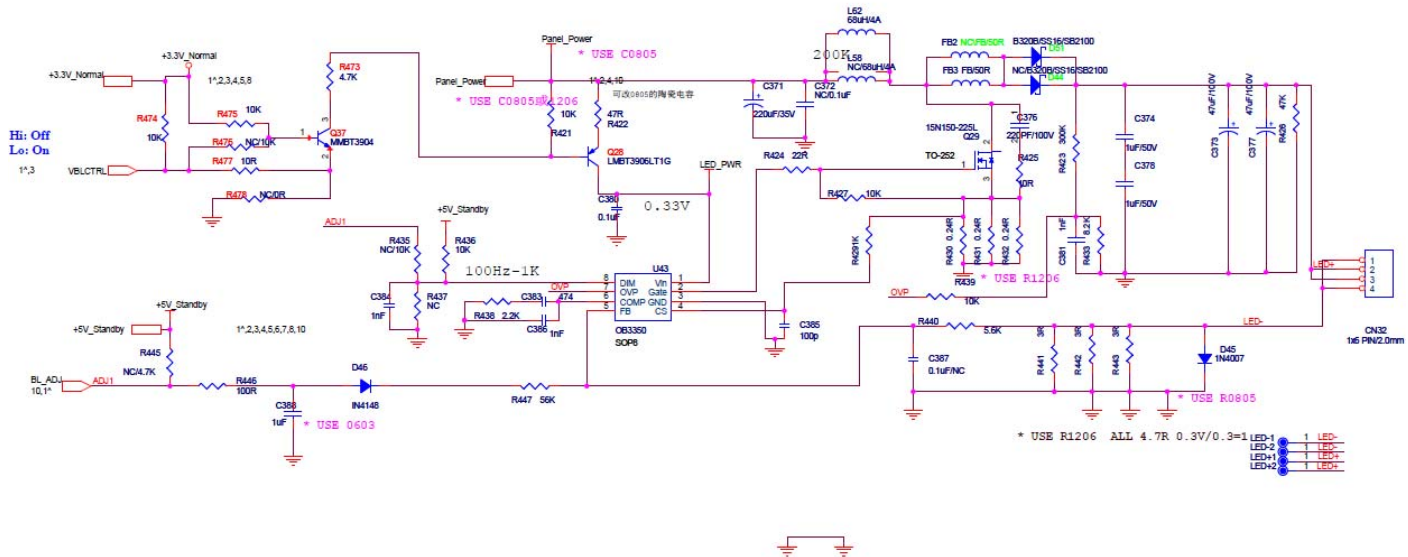


4k/2k V BY One(Innolux Panel)

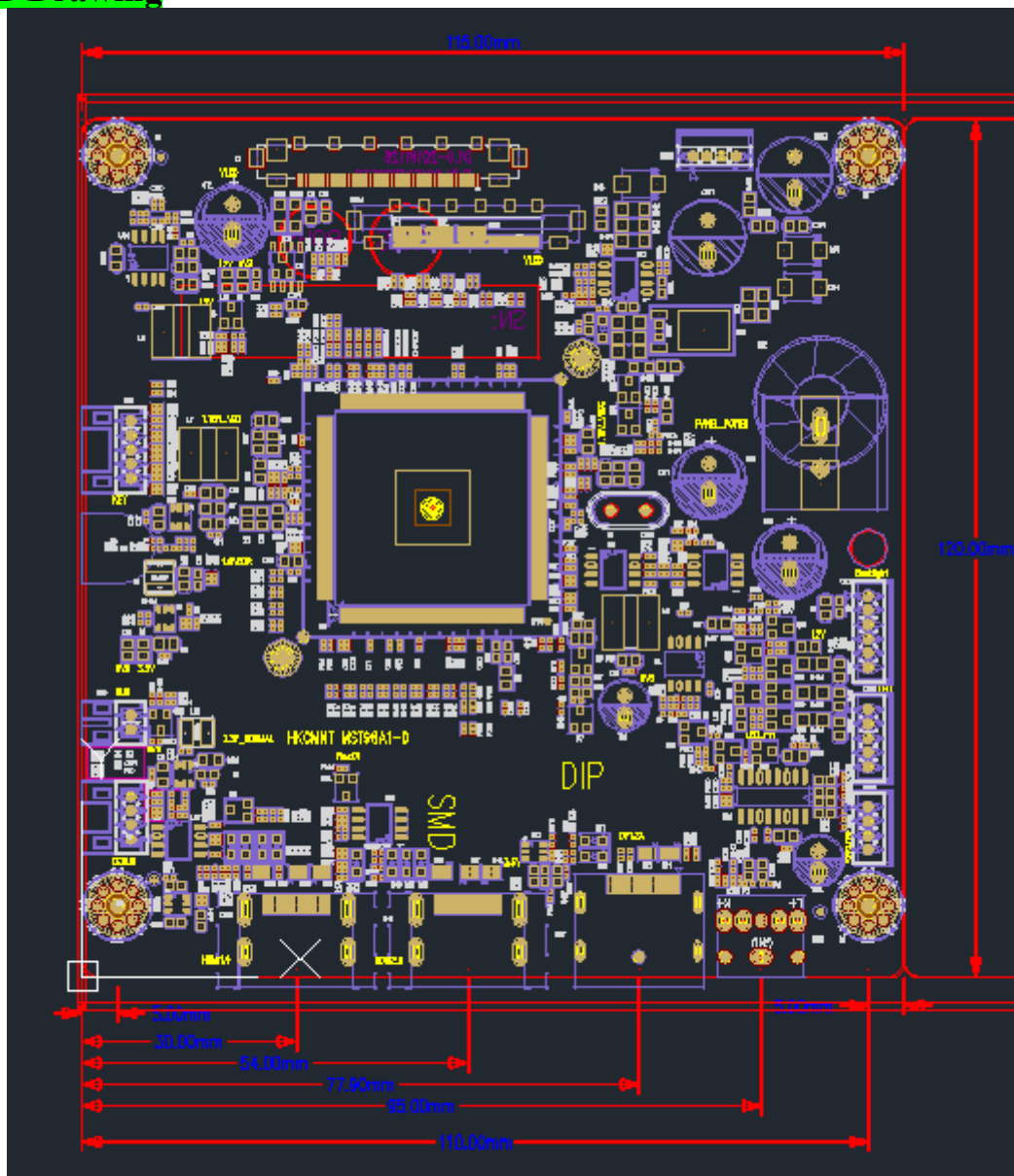
Scaler pin材 通



Service Manual



9-4. PCB Drawing



This is a detailed architectural floor plan of a large, complex building, likely a university or government facility. The plan features numerous rooms, corridors, and large circular spaces. The layout is highly organized, with a central corridor system connecting various sections. The drawing is in black and white, with orange highlights on certain areas.

1. Precaution**Product Category: Monitors and Displays****Marketing Name / Model****[List multiple model if applicable]**

LCD Monitor / R247DP*

Tools Required

List the type and size of the tools that would typically be used to disassemble the product to a point where components and materials requiring selective treatment can be removed.

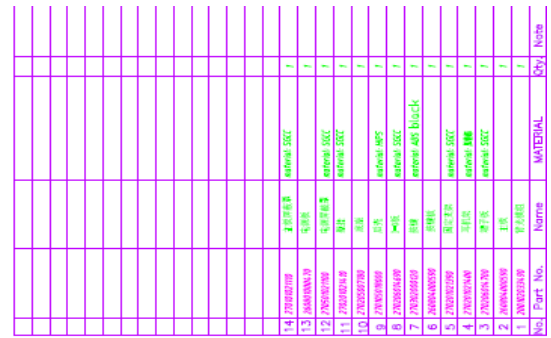
Tool Description	Tool Size (if applicable)
Scewdrivers	

Product Disassembly Process

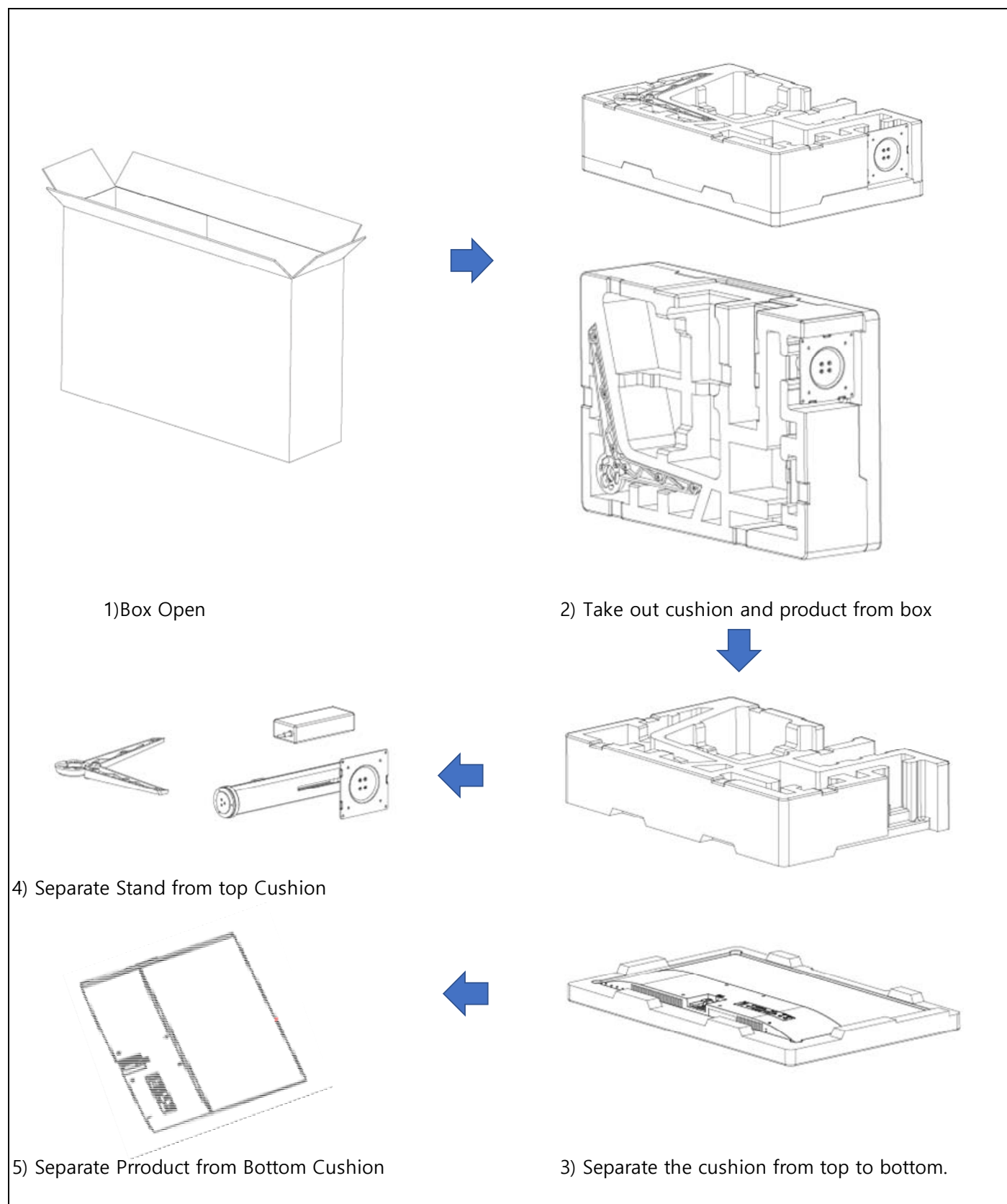
List the basic steps that should typically be followed to remove components and materials requiring selective tratement:

1. With the aid of a screwdriver, loosen the four screws of stand.
2. Loosen the two screws of rear cover with screwdriver and then disassemble the rear cover from set.
3. Disconnect the backlight wire from the panel.
4. Loosen the three screws of driver board with screwdriver then disassemble driver board from set.
5. Loosen the six screws of mainboard cover with screwdriver then disassemble mainboard cover from set.
6. Loosen the four screws of mainboard with screwdriver then disassemble mainboard from set.
7. Loosen the four screws of speakers with screwdriver then disassemble speakers from set.
8. Disconnect the LVDS cable from the panel.
9. Loosen the five screws of front frame with screwdriver.
10. Loosen the six screws of Middle frame with screwdriver then disassemble middle frame from set.

2. Disassemble and Assemble



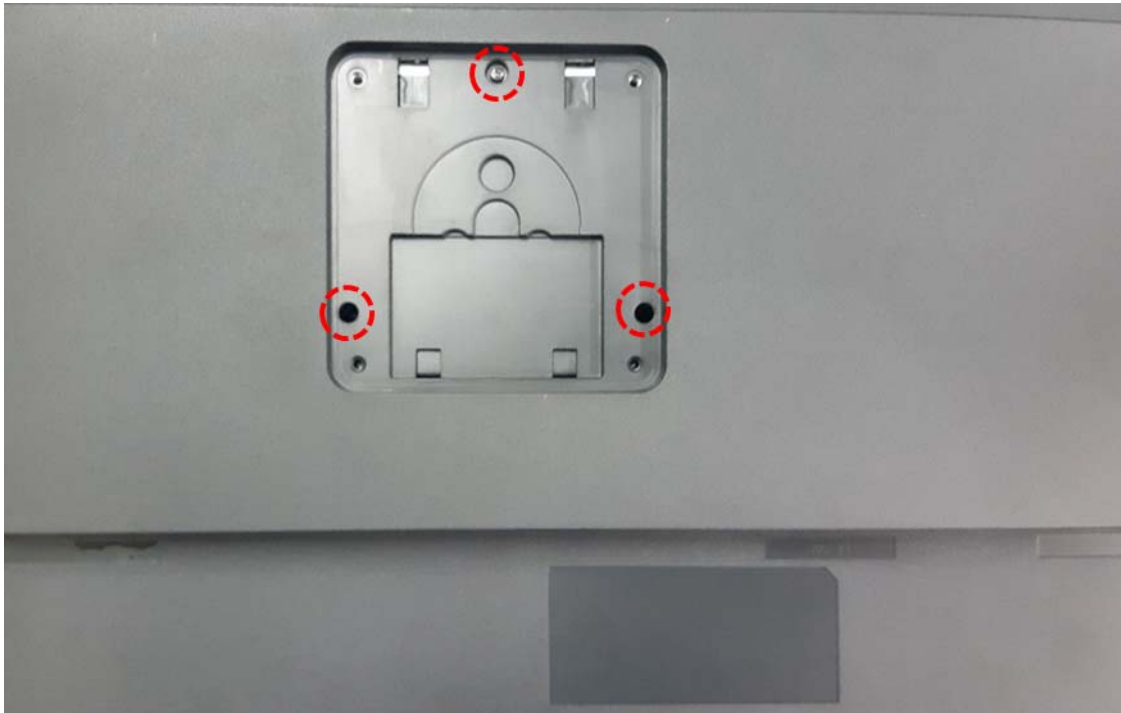
3. Unpacking Drawing



Service Manual

4. Disassemble Product

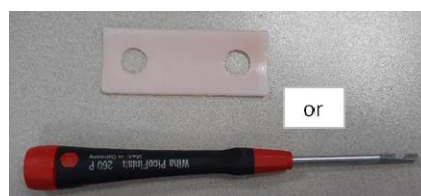
1. Unscrew the 3 points screw on Cover stand assembly using a screwdriver



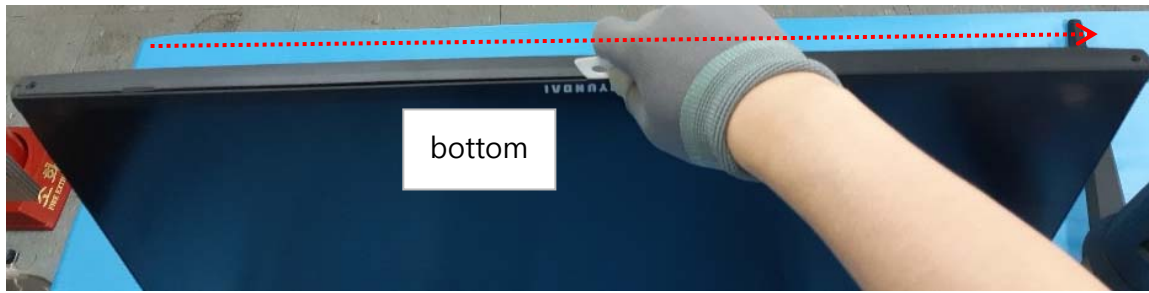
2. unscrew the 3 points screw under Front cover



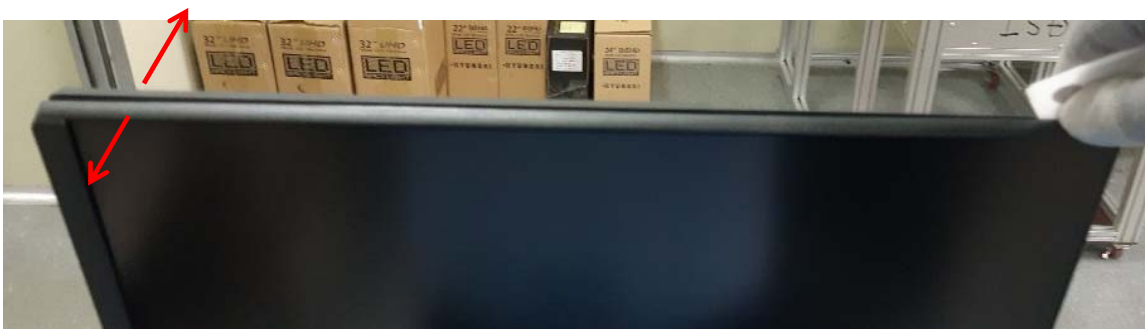
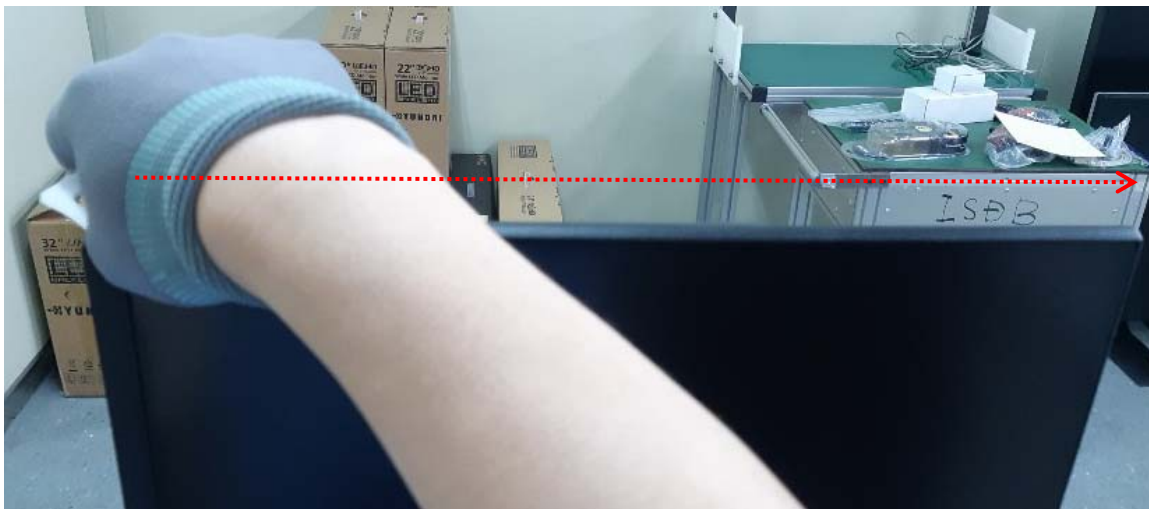
3. Remove the cover from the bottom of monitor by using the jig or “-“driver.



Service Manual

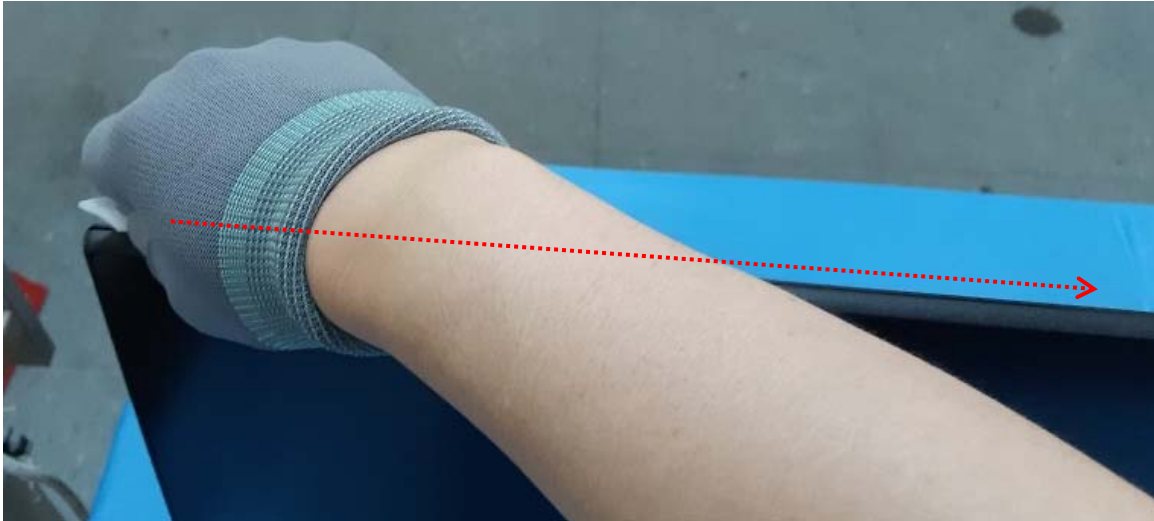


4. disassemble from left side of monitor

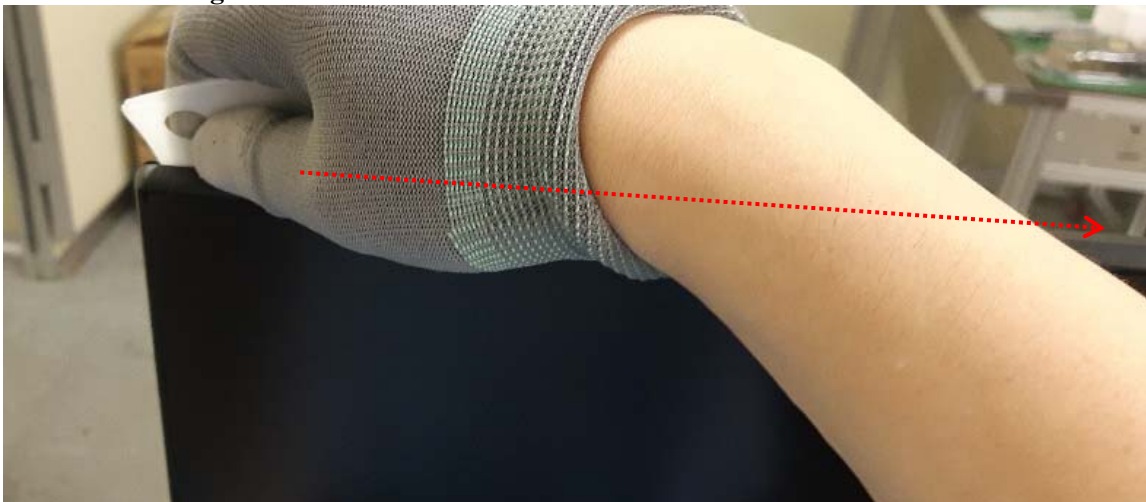


Service Manual

5. disassemble top side of monitor

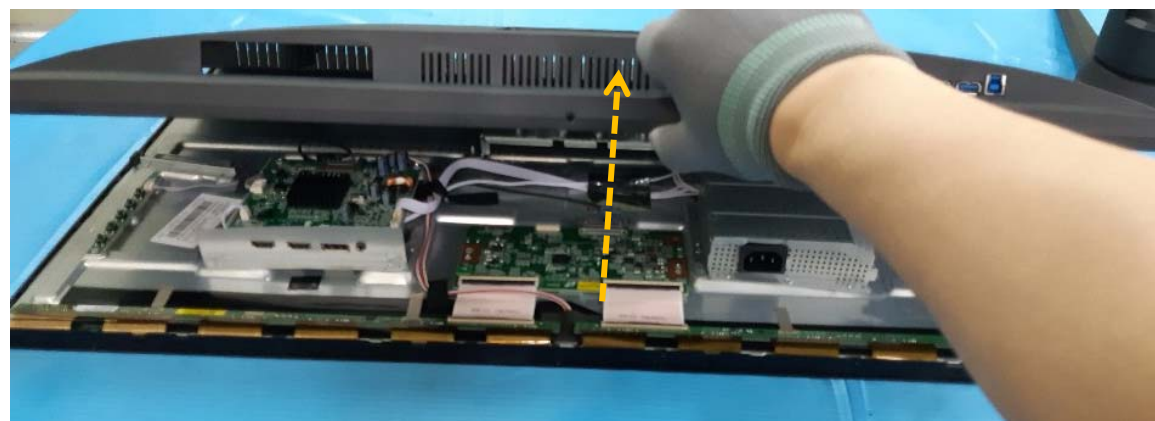


6. disassemble right side of monitor



Service Manual

7. Place the monitor as shown in the figure, hold the bottom of the rear cover and remove the rear cover.



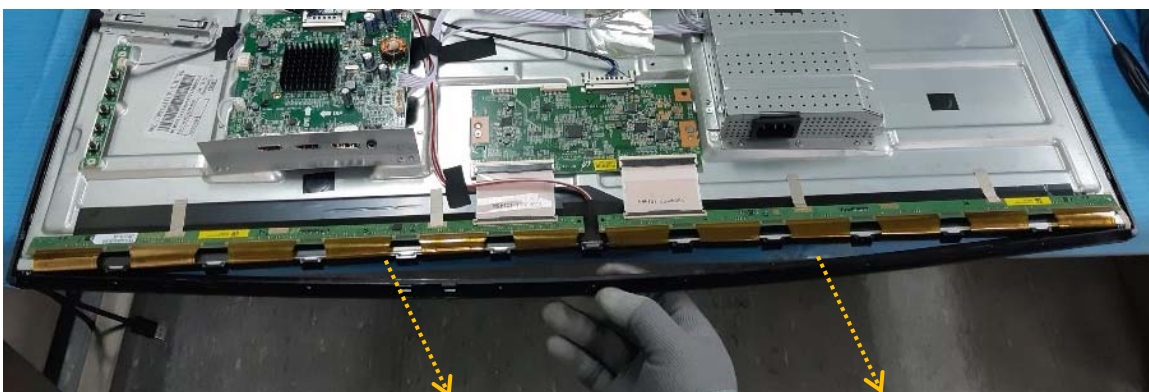
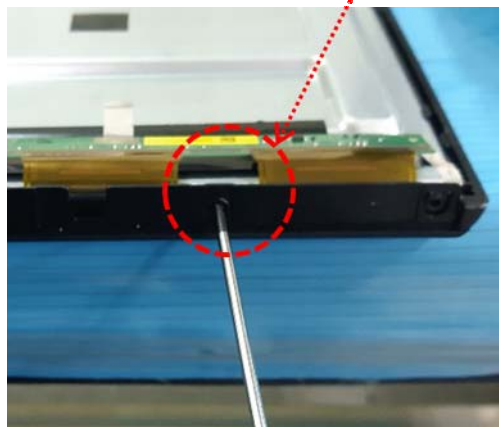
8. Disconnect the usb extension cable.



Service Manual

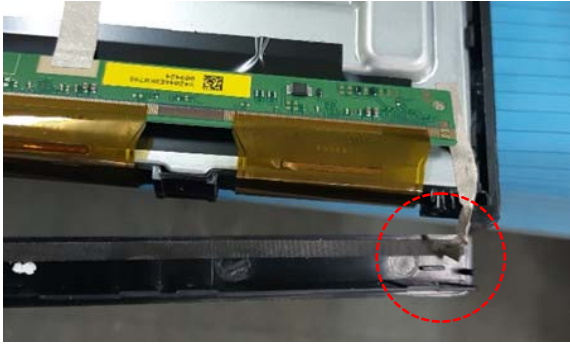


9. Unscrew the screws 6 points to remove the front cover.

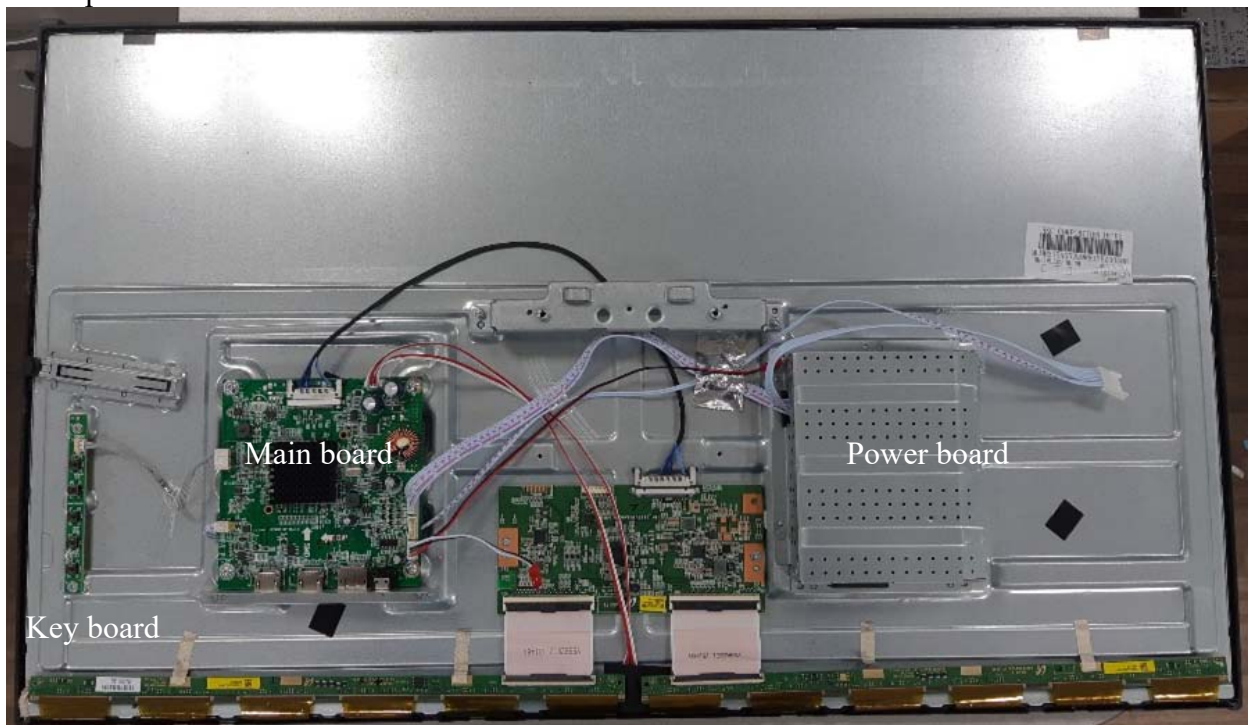


Service Manual

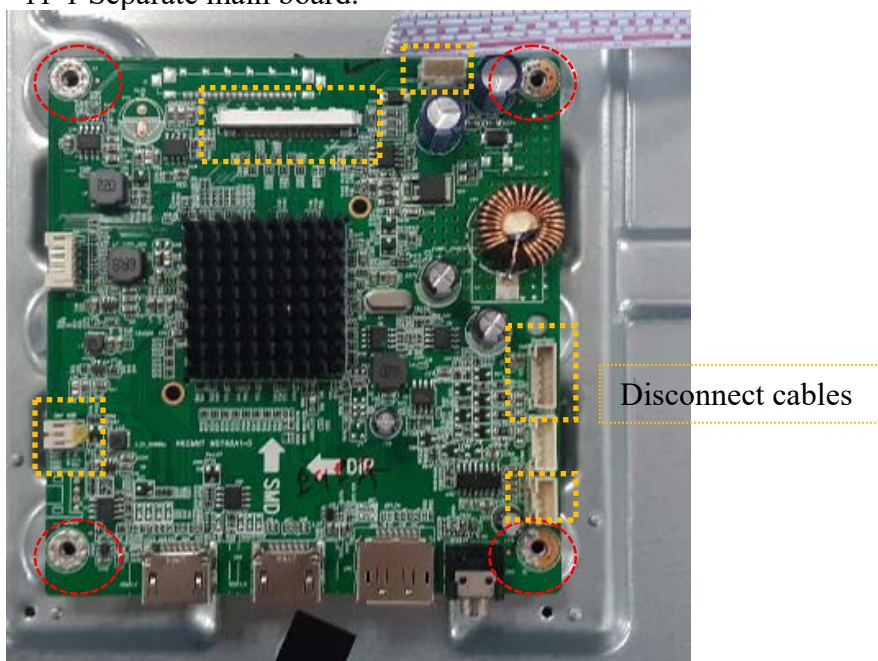
10. tape separation



11. Separate Boards



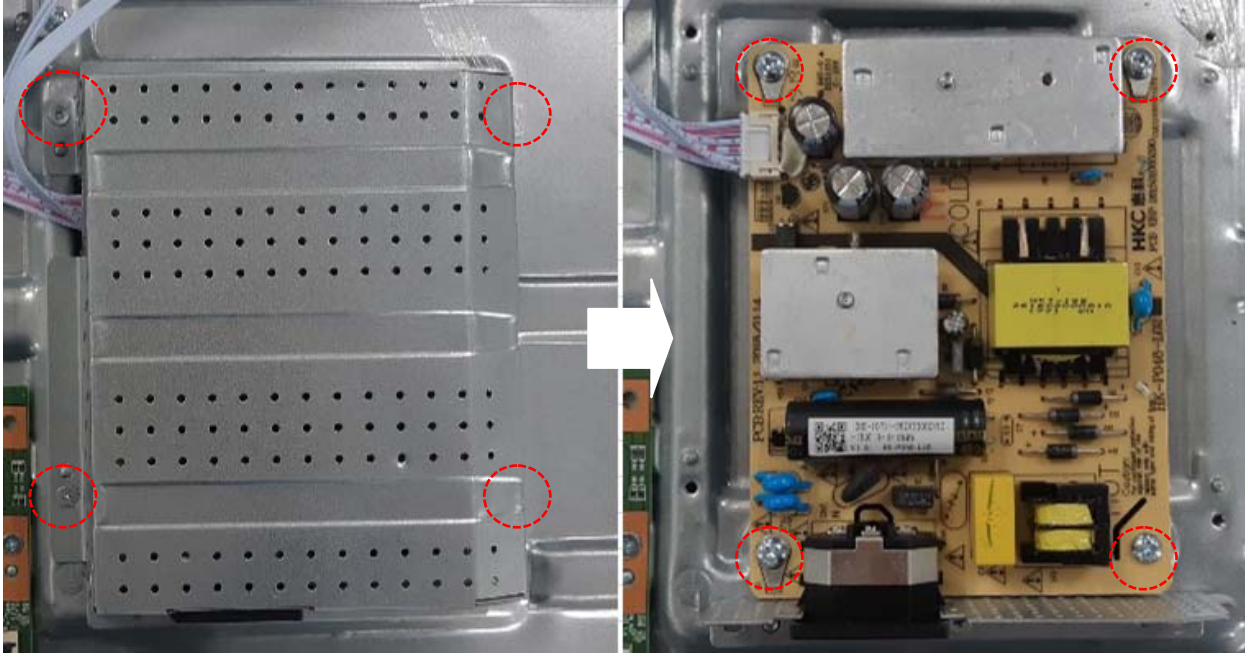
11-1 Separate main board.



Unscrew 4 points with screw driver and disconnect cables. (LVDS/Inverter/Speakers/OSD/Power)

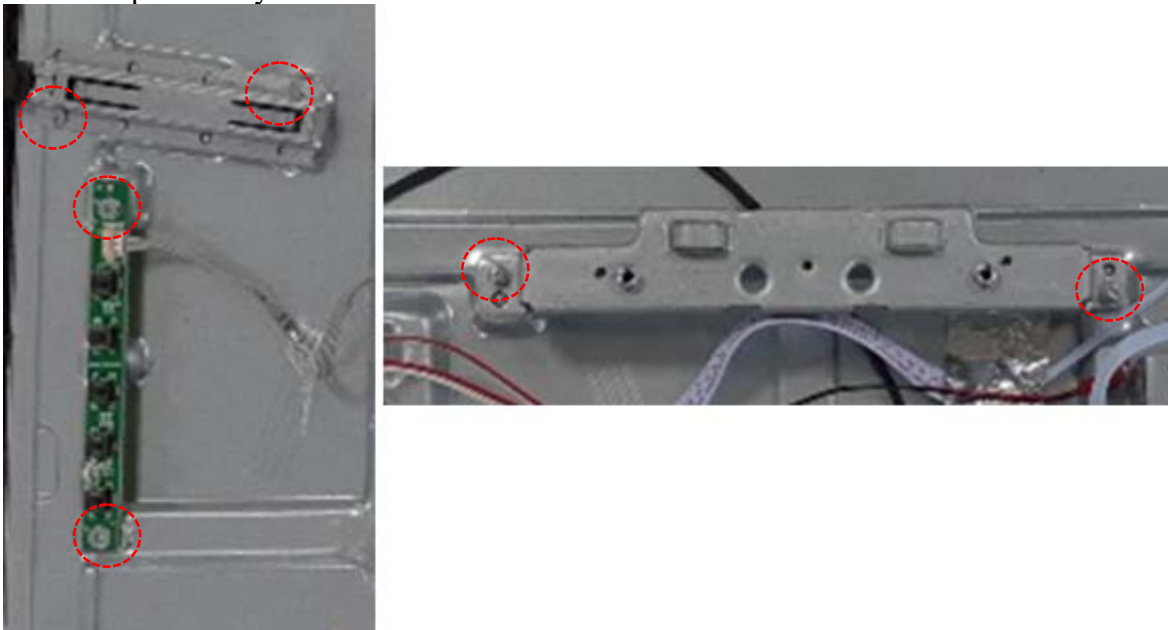
11-2 Separate Power board.

Service Manual

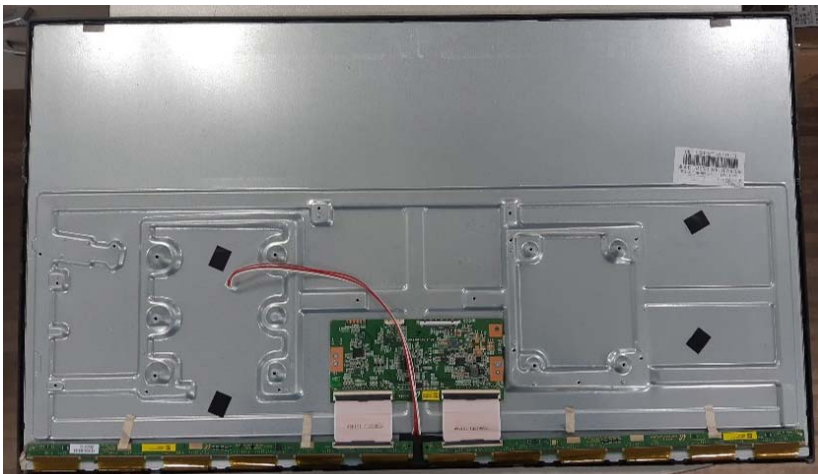


Unscrew 4points with screw driver and separate the shield cover.
After separate the shield cover, unscrew 4points on the power board.

11-3 Separate Key board and others.



Unscrew 6points with screw driver and remove each parts.





Service Manual

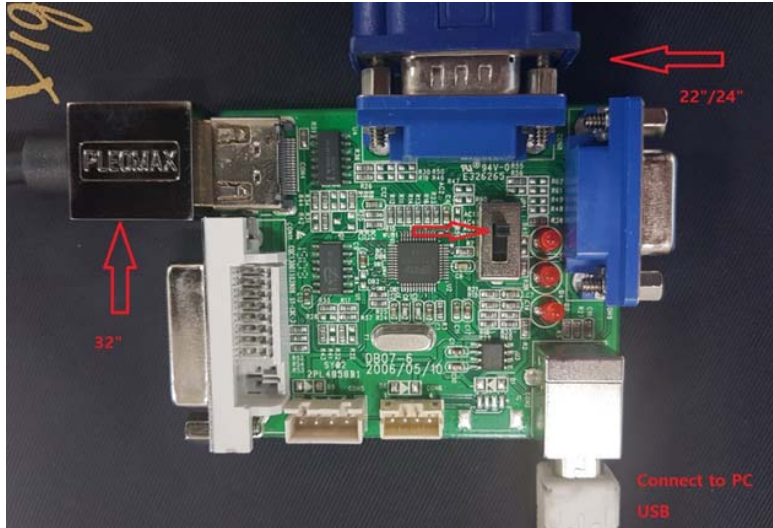
1. FW Upgrade

Software upgrade approach

Option one :

Mstar serial port tools are needed to upgrade BIN file and primary

<Jig Board>



<Program>

- Mstar serial tool driver: FTC100103(Mstar) →



FTC100103(MSTAR).zip

- Mstar ISP Program →

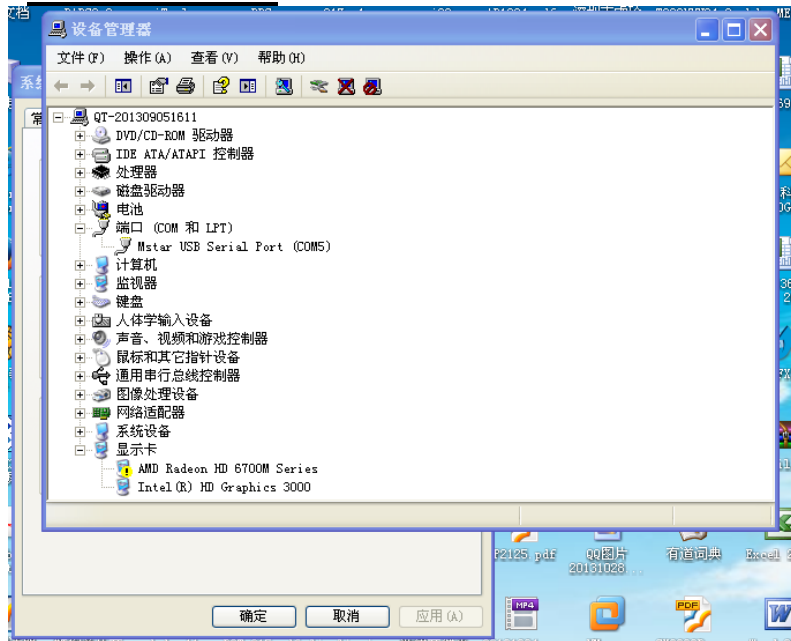


ISP_Tool_V4.5.2.3.zip

<<Installation method>>

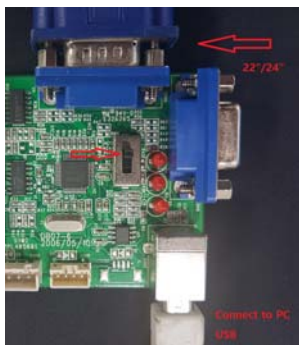
1. Insert the serial port into the computer USB port.
2. The computer will recognize the USB hardware and prompt you to install it. Select the custom driver path as FTC100103(MSTAR) folder.
3. After successful installation, it can be seen in the port in the device manager of the computer.
(COM ports vary from computer to computer)

Service Manual



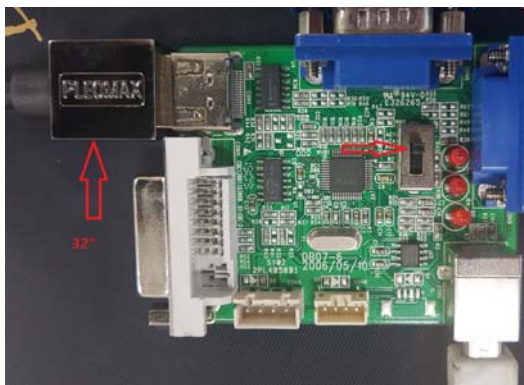
<<Cable Connection method>>

1) 22" / 24"



⇒ It is possible to update by Dsub cable.

2) 32"

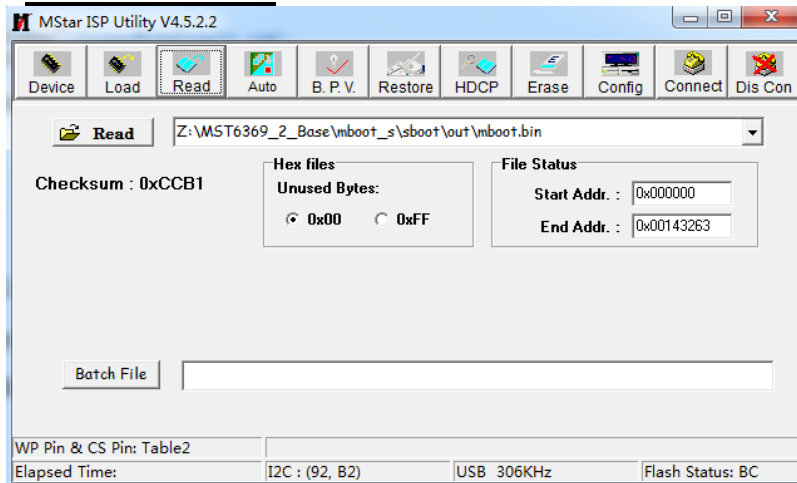


⇒ It is possible to update by HDMI Cable.

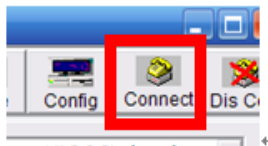
<<Upgrade BIN method>>

1. Connect the computer and board CARDS with serial port tools. (4Pin wire is connected to main board J105 (above optical fiber), or VGA wire is directly connected to VGA interface)
2. Open isp_tool_4522.exe
3. Click to  **Read** select the boot.bin file

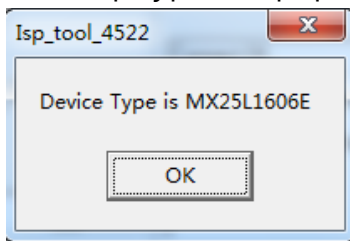
Service Manual



1. After AC is powered on, click Connect.

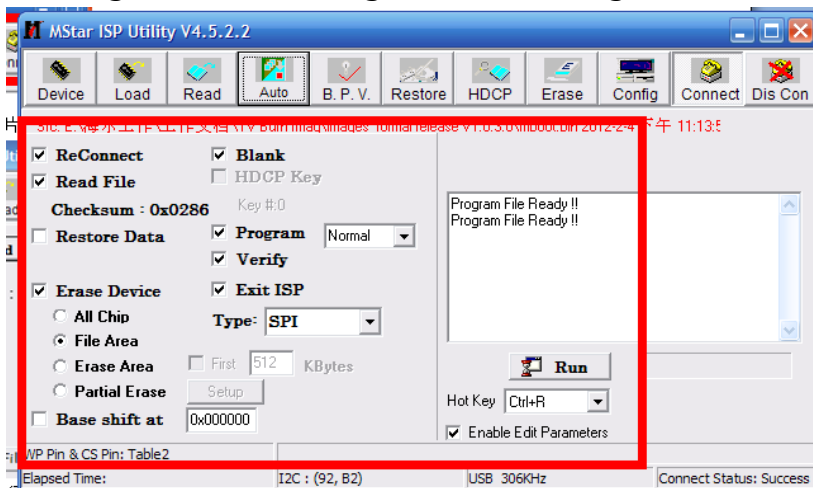


2. The chip type will pop up after success. (the name shown below is for reference only)



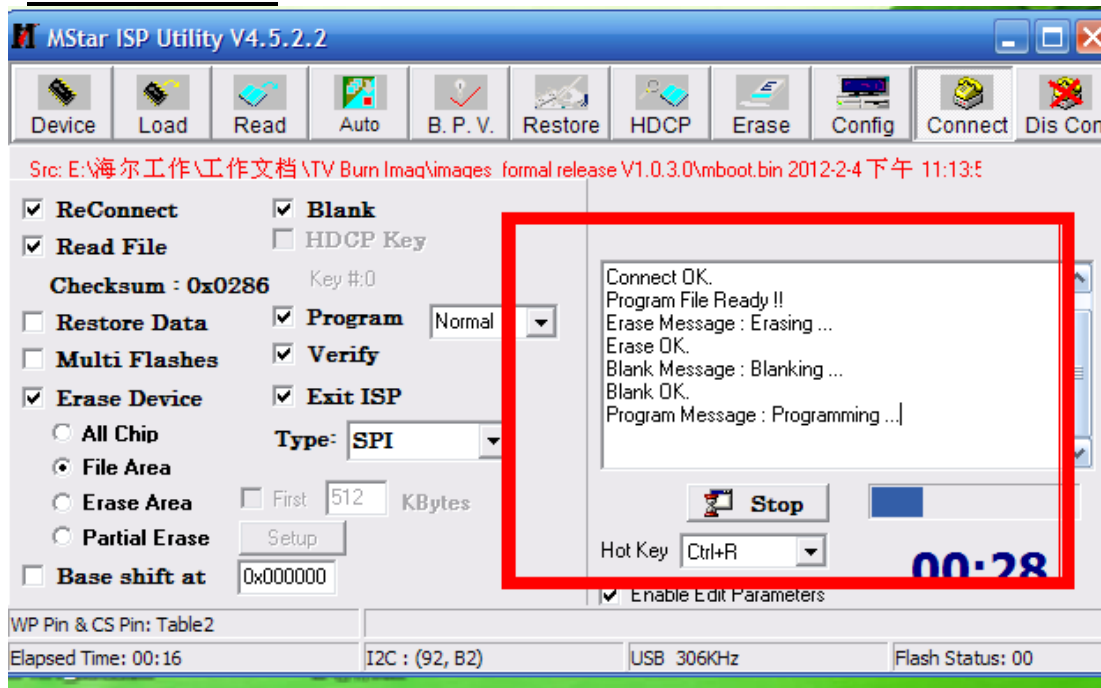
If the connection fails, please re-power AC and reconnect.

1. Configuration according to the following Parameters.

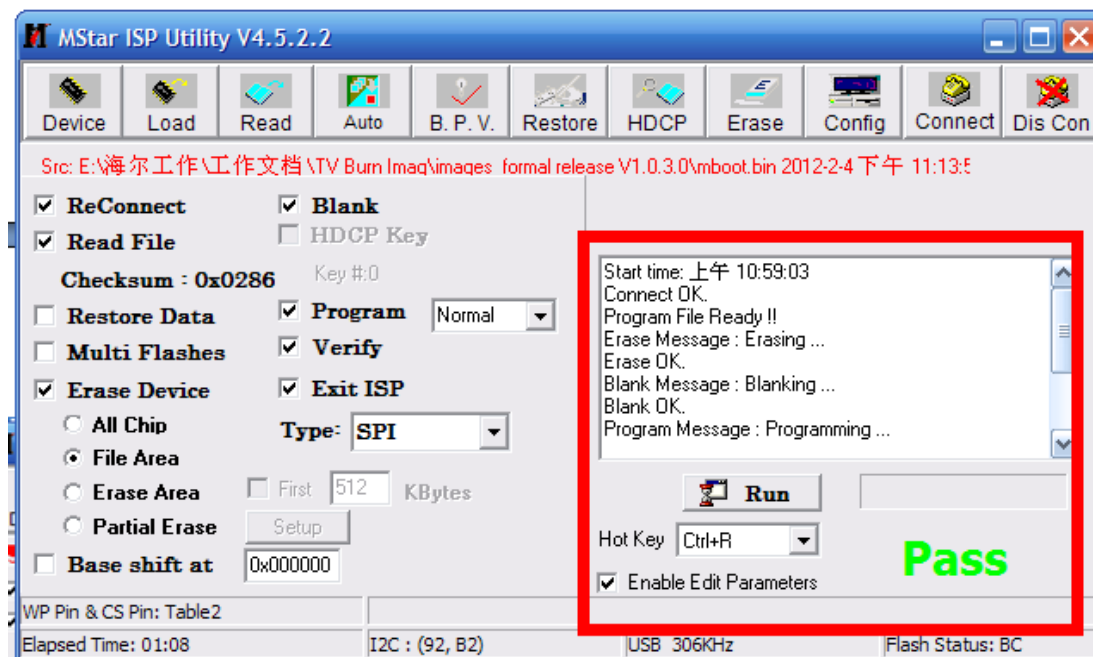


2. Click on the  **Run**, burin in the mboot.bin
The implementation process is as follows.

Service Manual



3. BIN file burning is completed.



*** Tip for Pass when you're Update F/W.

if the wrong software is burned, the WP foot of FLASH is locked and cannot write data into FLASH, the FLASH component should be manually welded down and burned separately with offline burning tool.

2. BOM LIST

NO	Component Code	Description	QT	Remark
	100101018970	MNT 31.5" HKC MB32A1U CHINA T329U Black SVA H+DP+USB+AOUT		

Service Manual

		LSM315FP01		
10	200102046130	screen MB32A1U LSM315FP01 250 HKC 600mA 33V 85%NTSC inversion HK315WLED	1	Panel
10	220001008570	OC 31.5 LSM315FP01 2.4% 3840x2160 SVA SAMSUNGinversion	1	
280	230101015050	light bar MB32A1U 14S4P 4014LED 349.33x6mm right	1	
290	230101015060	light bar MB32A1U 14S4P 4014LED 349.33x6mm left	1	
300	230102002460	light guide plate MG32A1 2T 703.15x401.5 MS thermocompression	1	
50	230105004990	White the MB32A1U 704.2X402.5MM highlight	1	
120	230107003830	complex film MG32A1F D4-400 0 703.15x399.06mm DBEF	1	
60	230107003840	complex film MG32A1F CP10S 90 703.2x399.1mm	1	
70	230107003850	complex film MG32A1F CP10S 0 703.2x399.1mm	1	
20	260160003030	TCONboard SAMSUNG LSM315FP01	1	
140	260502016600	Electronic wiring UL10368 PH2.0 4PIN NH1.0 4PIN L=300 mm	1	
310	270101036510	surface frame MB32A1U ABS black microgroove Silver printingHKC 270101036500 Atype	1	
330	270103006840	mullion MB32A1U PC black corrosion of fine lines 12COF/FR01 279101000700	1	
170	270104006960	backboard MG32A1F 12COF SGCC 0.7T natural color /FR01OC	1	
350	270203000800	dead shore/L MG32A2 PC 8600 black	1	
340	270203000810	dead shore/R MG32A2 PC 8600 black	1	
320	270702002430	screw CM3X3 mild steel Blue zinc plating Φ5.5/0.6	2	
220	270702004880	screw CM3X5 6/0.9 MG32A1F	6	
90	280805000870	Barcode stickers coated paper 65.00X35.00 CN	1	
180	290101006620	silicone pad MG32A1F black 15X2.2X0.5 single-sided adhesive	2	
270	290102004070	high-density foam EVA 40X32X0.5	1	
230	290102005200	high-density foam EVA 30X10X3.5 30X10	6	
240	290102008780	high-density foam MG32A2 PORON black 702X3.5X0.8 702X3.5	1	
250	290102008800	high-density foam MG32A2 PORON black 706.5X3.5X0.6 706.5X3.5	2	
260	290104001210	PET black 15X20X0.075	2	
190	290106003420	Dual Side Sticker MG32A1F STM8628 black 708.0x3.5x0.86	1	
200	290106003430	Dual Side Sticker MG32A1F STM8628 black 395.0x3.5x0.86	2	
100	290113001330	EMI GASKET M32G5Q PORON black 710X3.5X0.5	1	
130	290114000200	conductive fabric 30X8	4	
110	290114000220	conductive fabric 2176 50X5	1	
350	260112003740	Signal switching board GL3523 1B2A D A10	1	Main board
10	260155001060	pinboardSMT GL3523 1B2A D A10	1	
30	260801000320	power supplyIC EUP3484A SOP8EUTECH braid	1	
10	260804000010	mainboard controlIC GL3523 QFN-76	1	
20	260805000070	flash IC (4M)KH25L4006EM11-12G SOP8 MX	1	
310	260901000770	Chip Fixed Resistor 0805 4.7K ±1% braid	1	
180	260901001800	Chip Fixed Resistor 0402 10K ±5% braid	8	
220	260901001820	Chip Fixed Resistor 0402 100K ±5% braid	3	
230	260901001830	Chip Fixed Resistor 0402 1M ±5% braid	1	
190	260901001920	Chip Fixed Resistor 0402 20K ±5% braid	1	
200	260901002100	Chip Fixed Resistor 0402 39K ±5% braid	1	
170	260901002250	Chip Fixed Resistor 0402 6.8K ±5% braid	1	
210	260901002610	Chip Fixed Resistor 0402 44.2K ±1% braid	1	
160	260901002630	Chip Fixed Resistor 0402 5.1K 0.01 braid	1	
140	261001000190	chip capacitor 0805 10uF 25V ±10% X5R	5	
110	261001000640	chip capacitor 0402 0.1uF 50V ±10% X7R	1	
90	261001000680	chip capacitor 0402 10nF 50V ±10% X7R	1	
100	261001000700	chip capacitor 0402 0.1uF 16V -20%+80% Y5V	29	
120	261001000720	chip capacitor 0402 1uF 10V -20%+80% Y5V	2	

Service Manual

70	261001000770	chip capacitor 0402 22pF 50V ±5% NPO	2
80	261001000920	chip capacitor 0402 4.7nF 50V ±10% X7R	1
130	261001001080	chip capacitor 0603 10uF 6.3V ±20% X5R	4
150	261001001600	chip capacitor 1206 4.7uF 50V ±10% X5R	1
50	261101000130	Schottky barrier diode SS34 40V 3A DO-214AC braid fuchuang	1
60	261201000050	NPN audion 3904 40V 0.2A SOT-23 braid	1
40	261204000070	Pchannel MOS NCE3407 30V 4.1A SOT-23braid	2
260	261301000060	Patch fuse PSMD110 5V 1.1A 0805	2
300	261502008750	double-sided board FR-4 60x70x1.2mm OSP USB3.0 HUB	1
280	261701000390	chip inductor 8.0x7.5 22uH/2.6A braid 5.0	1
270	261701000710	chip inductor 4.0x4.0x3.0 2.2uH/2.95A braid 5.7	1
250	261704000140	Ferrite bead 0805 120Ω/3A	2
290	261901000010	patch crystals 25MHz±20ppm 15.4x6.8mm SMD braid	1
50	260602001270	Signal socket USB3.0-B 9pin H=12.2mm DIP	1
60	260602002650	Signal socket USB3.0-A 9P H=7.5 DIP	2
30	260603000550	connector socket PH H=4.7mm 8 P white DIP	1
20	261002001350	CD Aluminum Capacitors 6.3x11x2.5mm 220uF 16V ±20%KF 420mA 3000H/3mm	2
450	260113002880	M2 M98A1 HHPA eDP DC D10 12V DC 9435 OVP75V 600mA USB HUB	1
10	260111005400	MS M98A1 HHPA eDP DC D10 12V DC 9435 OVP75V 600mA USB HUB	1
10	260602000130	Signal socket DP socket 20p W=14.2 9 SMT braid	1
20	260602000290	Signal socket HDMI socket 19pin W=12mm SMT braid	2
30	260602000320	Signal socket LVDS socket 0.5 41pin SMT braid	1
40	260801000270	power source IC ETA3409B SOT23-5 ETA braid	1
50	260801000320	power source IC EUP3484A SOP8 EUTECH braid	2
60	260801000470	power supply IC JW5033S SOT23-6 braid	2
70	260803000010	LED Driver IC OB3350SO-8 SOP8 OB braid	1
80	260804000040	mainboard control IC MST98A1 QFP-256P MST	1
90	260805000020	flash IC EEPROM 24C02 SOP8 braid ROHM	2
100	260805000030	flash IC 24C128 SOP8 braid	1
110	260805000050	flash IC FLASHMX25L8006E(8M) SOP8 MXIC	1
120	260808000010	USB switch IC TPS2061C SOT23-5(DBV) braid TI	2
130	260901000010	Chip Fixed Resistor 0805 0Ω ±1% braid	6
140	260901000030	Chip Fixed Resistor 0805 10Ω ±5% braid	1
150	260901000180	Chip Fixed Resistor 0805 47Ω ±5% braid	1
160	260901000770	Chip Fixed Resistor 0805 4.7K ±1% braid	1
170	260901000780	Chip Fixed Resistor 0805 47K ±1% braid	1
180	260901000970	Chip Fixed Resistor 1206 0Ω ±1% braid	1
190	260901001030	Chip Fixed Resistor 1206 100Ω ±5% braid	3
200	260901001170	Chip Fixed Resistor 1206 2K ±5% braid	2
210	260901001510	Chip Fixed Resistor 1206 1.4Ω ±1% braid	3
220	260901001710	Chip Fixed Resistor 1206 0.24Ω ±1% braid	3
230	260901001750	Chip Fixed Resistor 0402 0Ω ±1% braid	43
240	260901001760	Chip Fixed Resistor 0402 10Ω ±5% braid	7
250	260901001770	Chip Fixed Resistor 0402 100Ω ±5% braid	11
260	260901001820	Chip Fixed Resistor 0402 100K ±5% braid	12
270	260901001830	Chip Fixed Resistor 0402 1M ±5% braid	3
280	260901001970	Chip Fixed Resistor 0402 2.2K ±5% braid	2
290	260901001980	Chip Fixed Resistor 0402 22K ±5% braid	3
300	260901002040	Chip Fixed Resistor 0402 33Ω ±5% braid	12
310	260901002090	Chip Fixed Resistor 0402 3.9K ±5% braid	6
320	260901002140	Chip Fixed Resistor 0402 4.7K ±5% braid	8
330	260901002160	Chip Fixed Resistor 0402 470K ±5% braid	1

USB HUB
board

Service Manual

340	260901002200	Chip Fixed Resistor 0402 56K $\pm 5\%$ braid	1
350	260901002250	Chip Fixed Resistor 0402 6.8K $\pm 5\%$ braid	2
360	260901002260	Chip Fixed Resistor 0402 75 Ω $\pm 1\%$ braid	4
370	260901002290	Chip Fixed Resistor 0402 8.2K $\pm 5\%$ braid	1
380	260901002320	Chip Fixed Resistor 0402 1K $\pm 1\%$ braid	4
390	260901002330	Chip Fixed Resistor 0402 10K $\pm 1\%$ braid	42
400	260901002390	Chip Fixed Resistor 0402 120K $\pm 1\%$ braid	1
410	260901002400	Chip Fixed Resistor 0402 15K $\pm 1\%$ braid	1
420	260901002440	Chip Fixed Resistor 0402 20K $\pm 1\%$ braid	1
430	260901002610	Chip Fixed Resistor 0402 44.2K $\pm 1\%$ braid	1
440	260901002650	Chip Fixed Resistor 0402 5.6K $\pm 1\%$ braid	1
450	260901002710	Chip Fixed Resistor 0603 0 Ω $\pm 1\%$ braid	1
460	260901002880	Chip Fixed Resistor 0603 22 Ω $\pm 5\%$ braid	1
470	260901003220	Chip Fixed Resistor 0603 10K $\pm 1\%$ braid	3
480	260901009700	Chip Fixed Resistor 0402 47K $\pm 1\%$ braid	4
490	260901010070	Chip Fixed Resistor 0805 300K $\pm 5\%$ braid	1
500	261001000100	chip capacitor 0805 0.1 μ F 50V -20%+80% Y5V	2
510	261001000160	chip capacitor 0805 10 μ F 10V $\pm 10\%$ X5R	5
520	261001000190	chip capacitor 0805 10 μ F 25V $\pm 10\%$ X5R	6
530	261001000660	chip capacitor 0402 100pF 50V $\pm 5\%$ NPO	1
540	261001000670	chip capacitor 0402 1nF 50V $\pm 10\%$ X7R	6
550	261001000680	chip capacitor 0402 10nF 50V $\pm 10\%$ X7R	2
560	261001000700	chip capacitor 0402 0.1 μ F 16V -20%+80% Y5V	99
570	261001000720	chip capacitor 0402 1 μ F 10V -20%+80% Y5V	4
580	261001000770	chip capacitor 0402 22pF 50V $\pm 5\%$ NPO	4
590	261001000920	chip capacitor 0402 4.7nF 50V $\pm 10\%$ X7R	2
600	261001000940	chip capacitor 0402 0.47 μ F 16V -20%+80% Y5V	1
610	261001001030	chip capacitor 0603 0.1 μ F 50V -20%+80% Y5V	4
800	261001001070	chip capacitor 0603 1 μ F 25V $\pm 10\%$ X7R	1
620	261001003700	chip capacitor 0805 220PF 100V $\pm 10\%$ X7R	1
630	261001003920	chip capacitor 0603 1 μ F 16V -20%+80% Y5V	5
640	261001003940	chip capacitor 0603 10 μ F 10V $\pm 10\%$ X5R braid	5
650	261001003950	chip capacitor 0805 22 μ F 6.3V $\pm 10\%$ X5R	12
660	261101000410	Schottky diode SS310 100V 3A DO-214AA braid	1
670	261107000010	switching diode 1N4007 1000V 1A DO-214AC braid	1
680	261107000180	switching diode BAT54C 30V 0.2A SOT-23 braid	2
690	261107000220	switching diode 1N4148 75V 0.2A SOD-323 braid	1
700	261201000050	NPN audion 3904 40V 0.2A SOT-23 braid	6
710	261202000040	PNP audion 3906 40V 0.2A SOT-23 braid	1
720	261203000680	N-MOS pipe NCE1520K 150V 20A TO-252 braid	1
730	261204000070	P-MOS pipe NCE3407 30V 4.1A SOT-23 braid	3
740	261204000080	P-MOS pipe ME9435 75V 1A SOP8 braid	1
750	261503000530	sandwich plate FR-4 115X120X1.2MM OSP MST98A1 D1.0	1
760	261701000380	chip inductor 8x8x4 6.8 μ H/5.1A 5.7	1
770	261701000390	chip inductor 8.0x7.5 22 μ H/2.6A 5.0	2
780	261701000410	chip inductor 4.5x4.5x2.5 4.7 μ H/2.5A 5.7	2
790	261704000140	magnetic bead 0805 120 Ω /3A	1
20	260602001090	Signal socket Audio socket 5Pin 15x12x13.8mm DIP	1
30	260603000340	connector socket PH 2.0space between 4pin H=4.7mm Upright gray DIP bulk cargo	1
50	260603000380	connector socket PH 2.0space between 5pin H=4.7mm Upright white DIP bulk cargo	1
60	260603000400	connector socket PH 2.0space between 6pin H=4.7mm Upright white DIP bulk	1

Service Manual

		cargo	
70	260603000450	connector socket PH 2.0space between 5pin H=4.7mm horizontal type white DIP bulk cargo	1
40	260603000510	connector socket PH H=4.7mm 2 P white DIP	1
80	261002000530	CDAluminum Capacitors 10x12x5mm 47uF 100V ±20%REbraid 315mA3000H/3mm	2
90	261002001350	CDAluminum Capacitors 6.3x11x2.5mm 220uF 16V ±20%KFUpright 420mA3000H 3mm in bulk	1
100	261002001730	CDAluminum Capacitors 8x9x3.5mm 220uF 35V ±20%Upright 550mA3000H Lead foot type3m m/59035022700080	2
110	261701000150	Booster inductor magnetic ring HKL-069 80uH horizontal type 7mm	1
120	261902000010	Plug-in crystals 12M L=5mm	1
130	270507000140	270507 cooling fin Aluminum profiles 35x35x10mm	1
140	290316002530	Thermal Conductive Adhesive Flame resistant fast hardening hard type SX720B old material number95020000001210	0.0015
40	260133000150	power panel HK-P048-L02 19VW2.5A 48W	1
10	260131001750	power panelSMTsemi-finished product HK-P048-L02 19V 2.5A 48W	1
330	260801000390	power sourceIC OB2273C SOT-23-6 braid	1
190	260802000040	Linear regulatorIC TL431 (1%) TO-92 braid	1
40	260901000110	Chip Fixed Resistor 0805 22Ω ±5% braid	2
50	260901000180	Chip Fixed Resistor 0805 47Ω ±5% braid	1
60	260901000330	Chip Fixed Resistor 0805 1K ±1% braid	1
20	260901000340	Chip Fixed Resistor 0805 10K ±1% braid	3
70	260901000390	Chip Fixed Resistor 0805 12K ±1% braid	1
80	260901000820	Chip Fixed Resistor 0805 51K ±1% braid	1
90	260901000840	Chip Fixed Resistor 0805 56K ±1% braid	1
30	260901000920	Chip Fixed Resistor 0805 820Ω ±1% braid	1
250	260901001000	Chip Fixed Resistor 1206 3Ω ±1% braid	2
260	260901001030	Chip Fixed Resistor 1206 100Ω ±5% braid	5
270	260901001080	Chip Fixed Resistor 1206 1.2M ±5% braid	2
100	260901001200	Chip Fixed Resistor 1206 2M ±5% braid	4
120	260901001210	Chip Fixed Resistor 1206 22Ω ±5% braid	2
240	260901001440	Chip Fixed Resistor 1206 68K ±5% braid	4
110	260901001520	Chip Fixed Resistor 1206 1.5Ω ±1% braid	5
290	261001000050	chip capacitor 0805 1nF 50V ±10% X7R	1
300	261001000230	chip capacitor 0805 220PF 50V ±10% X7R	1
280	261001000300	chip capacitor 0805 220nF 50V ±10% X7R	1
310	261001000420	chip capacitor 0805 47nF 50V ±10% X7R	1
230	261002001030	ceramic dielectric capacitor 100pF 1KV 0.1/5mmUpright songtian	1
200	261002001040	ceramic dielectric capacitor 1000pF 1KV 0.1/5mmUpright xinyuyue	1
170	261002001090	CL21Metal polyester film capacitor (in common use) 4.7nF 450V ±5% 5mm rijing	1
180	261002002390	Plug-in electrolytic capacitor 5x11x2.5mm 10uF 50V GH5000Hbraid	1
210	261002002520	Plug-in electrolytic capacitor 10x17x5mm 680uF 35V GFbraid 1210mA 3000H	2
220	261002002530	Plug-in electrolytic capacitor 10x12x5mm 220uF 35V GFbraid 870mA 3000H	1
370	261101000080	rectifier diode RL207 1000V 2A DO-15 braid	4
140	261107000060	fast recovery diode FR104 400V 1A150nS DO-41 braid	1
130	261107000070	fast recovery diode FR207 1000V 2A300nS DO-15 braid	1
320	261107000200	switching diode 1N4148 75V 0.2A SOD-123 braid	1
160	261302000050	MSTminiature 250V 3.15A 5.08mm braid Europe and the United States rules	1
10	261501005290	single sided board CEM-1 120X90X1.6MM OSP MWKV1.0 BHK-P048-L02	1
360	261704000020	Lead magnetic beads 3.5x3.2x0.8 braid	1

Power
board

Service Manual

150	261704000030	Lead magnetic beads 3.5x6x0.8 braid	1	
340	261801000030	wire jumper iron wire diameter 0.6 10mm process	1	
350	261801000060	wire jumper iron wire diameter 0.6 7.5mm process	1	
190	260601000440	ACsocket LH-14 suffix is tasted card slot 1.1mm	1	
100	260603000460	connector socket PH 2.0 6pin H=4.7mm white DIP bulk cargo	1	
20	260906000060	NTCNegative temperature resistance 5D-11 4A 5Ω ±5%	1	
50	261002002500	Plug-in electrolytic capacitor 12.5x40x5mm 68uF 450V RN 640mA3000HS	1	
30	261003000060	Safety gauge X anti-interference capacitor 0.47uF ±10% 275V/15mm X2 18x14.5x8.5 yellow songtian	1	
80	261003000090	Ampere Y ceramic dielectric capacity 1000pF ±20% 400V/10mm/ Y1Y5V 6.3x4.5 Blue xinyuyue	1	
70	261003000160	Ampere Y ceramic dielectric capacity 680PF ±10% 400V/10mm/ Y5U xinyuyue	2	
110	261101000710	Schottky diode MBR10150 150V 10A TO-220F piping outfitting	1	
180	261203000850	N-MOS tube IRF7N65 650V 7A TO-220F in bulk	1	
90	261402000040	Triode output optocoupler PC817B B DIP-4	1	
60	261602000810	high-frequency transformer EQ26 26 HKT-166 500uH	1	
40	261702000180	common mode choke UU10.5 Manganese zinc R10k HKL-063 Min29mH 10mm	1	
150	270203000710	Power support column 3.5MM overall length 8.4MM 94V0 white	3	
170	270503000010	Ground plate iron tin Silvery white 6.5X11X0.5	3	
120	270507000430	cooling fin aluminium profile 37X27.5X2MM 3215G HKL-320205	1	
130	270507001500	cooling fin HK-P048-L02 aluminum sheet Silvery white 59X25X2 2threaded hole	1	
160	270705000050	screw PM3X8 Stiffen mild steel Blue zinc plating Shrapnel spacer	2	
140	290104006370	PC HK-P048-L02 black 90X120X0.43	1	
30	260153001260	KB HKC-KEYBOARD 4P1.25 5key white A10	1	Key board
10	260151001570	keyboard plate SMT A1A2-KEY white	1	
50	260501001840	ACpower line H05VVF10.75mm2x3 L=1500mm china(CCC)	1	
70	260502016610	Electronic wiring UL2651 PH2.0 5PIN 1.25 4PIN L=120 mm	1	
80	260502016760	Combination line UL2468#26 2.0 6P 2.0 6P 300mm	1	
90	260502016870	Mainboard power line UL2468#26 2.0 8P 2.0 8P 150mm	1	
460	260503001660	HDMI2.0signal line UL20276black line body HDMI L=1.5m	1	
60	260505001050	Electronic screen line coaxial cable 头 FI41P FI-51P L=350mm shield 70mm	1	
130	270105001110	back cover MB32A1U HIPS black Texture Silver printingHKC 270105018040	1	
150	270201021390	fixed support MG32A1F SGCC T=0.5 natural color	1	
140	270201021400	Earphone rack MG32A1F Aluminum black crazing	1	
190	270201021410	Hanging bracket MG32A1F SGCC 1.6T natural color	1	
500	270201021420	Stand components MG32A1F metals+plastic black+red Lift model	1	Stand body
170	270205007170	Base left component MG32A1F Die casting aluminum alloy Aluminum plastic bag black	1	Base L
180	270205007180	Base right component MG32A2F Die casting aluminum alloy Aluminum plastic bag black	1	Base R
200	270206014890	Terminal board MG32A1F SGCC 0.5T natural color H+H+DP+A	1	
520	270206037000	power supply panel MG32A1 SGCC 1.0T natural color To die	1	
210	270302000120	Key set MG32A1F ABS black etching	1	
440	2703030004060	light pipe MG32A1F lucency ABS original 279101000820	1	
510	270501022590	Power shield MG32A1 SGCC 0.5T natural color To die	1	
250	270701004500	screw MG32A1F mild steel wire zinc plating-black CB3X6MM 6.0MM, 0.9MM	6	
310	270702001060	screw TM3X6 Stiffen mild steel Green blue zinc plating	8	
330	270702004670	screw CM3X3 Stiffen mild steel Fall resistant blue zinc plating Φ5.5,0.6	11	
270	270702004680	screw PM3X6 Stiffen mild steel Resistant black nickel plating Φ5.5,2	3	
260	270702004870	screw CM3X6.6-6-0.9 soft steel zinc plating-blackMG32A1F	1	
340	270705000040	screw PM3X6 soft steel Blue zinc plating shrapnel spacer	2	
490	280103038890	Cattle card box MB32A1U HKC T329U 280106008230 go up and down	1	Box

Service Manual

380	280202017440	Instruction (black and white)MB32A1U HKC 140x210 CN T329U	1
400	280805001230	Blank stickers coated paper 112x85 CN 85x85	1
410	280805015280	Blue dot paste coated paper 13x13 CN	1
420	280805018540	Carton stickers coated paper HKC 70x90 CN Mobile qr code	1
390	280805030220	energy efficiency label coated paper MB32A1U HKC 45x66 CN T329U	1
320	290104001210	PET black 15X20X0.075 Single back 3M adhesive	4
110	290109000070	acetate braid black 35X15 single-sided adhesive	6
480	290111000280	Conductive aluminum foil 30X60 Double conductive one side adhesive	1
470	290113000650	EMI Gasket 20X10X20 One - sided conductive adhesive	2
290	290202000300	effect of bag EPE white 800(open)X600X0.5 warning /Environmental protection logo Install the machine	1
280	290203000930	PE bag lucency 300X165X0.03 Warning sign in black type	1
430	290205006440	POLYLON MG32A1 large particles EPS Nature of the material 780x193x483mm Top/Bottom	1
120	990004001080	List of production accessories MNT A1A2 series of special	1

Cushion

Chapter 6- TROUBLE SHOOTING GUIDE

Service Manual

Problem	Possible solution
The power indicator does not light up	"Check whether the device is powered on "Check whether the power cord is connected
The power indicator does not light up	Check whether your PC matches the plug-and-play function Check whether the VGA card matches the plug-and-play function Check whether the 15-pin D-type connector of signal cable is bent
Image looks dim	* Adjust the brightness and contrast
Image jitters or mura appears	* Electrical appliances causing electronic interference may surround the product
Power indicator lights up (blinks), but the monitor does not display any image	Check whether your PC has been powered on Check whether the VGA card of your PC has been properly inserted Check whether the signal cable of the monitor has been properly connected to your PC Check the signal cable plug of the monitor, and confirm no pin is bent Observe the indicator light by pressing "Caps Lock" on the keyboard, and confirm whether the PC is working
Color missing (red, green, blue)	* Check the signal cable of the monitor, and confirm no pin is bent
Image is not in the middle or the size 'S inappropriate	* Hotkey (AUTO)
Color deviation exists in the interface (white color looks not white)	* Adjust the RGB color or reselect the color temperature
Fuzzy font on image under VGA signal	* Select the "E" hotkey for automatic image adjustment
Inaccurate display color under VGA signal	" Select "Auto Color Adjustment" from OSD options in the white output interface to perform correction

Chapter 7-SERVICE PROCESS GUIDE

Service Manual

HIT Authorized Service Center Locations

AVC Tech

777 Mark St., Wood Dale, IL 60191

Tel : 800-568-0080 or 630-595-0123

Fax : 630-595-2345

Email : service@hyundaimonitor.com

Web site : www.Hyundaimonitor.com

GOVERNMENT ADVANCED EXCHANGE WARRANTY PROGRAM INSTRUCTIONS (Government Purchasers only)

COMPUTER MONITORS	
Brand New Exchange Unit (DOA)	Repair Service (NON-DOA)
Under 30 Days of purchase date.	36 Months (3 Years) Warranty of Monitor
Freight Term: Hyundai Service Center will pay both ways. (Except Alaska & Hawaii)	Freight Term: Hyundai Service Center will pay both ways. (Except Alaska & Hawaii)

How to get the warranty service:

To obtain warranty service, please contact Hyundai IT (ImageQuest) via www.hyundaimonitor.com Customer Support for a Return

Instructions for Government customers:

Go to: www.hyundaimonitor.com

Click: Section titled customer service

→Next Click section titled: **US GOVERNMENT CUSTOMERS**

- Next select agency or contract monitor was purchased through (if no present select section titled other)
- Next agree to terms and conditions
- Next fill out requested information including serial numbers
- Select request for advanced unit or repair service based on chart above
- Last click submit
- RMA will be processed within 48 hours and you will receive instructions for processing the service of the unit.

To obtain an Authorization Number (RMA). You will be required to provide:

- Agency and/or Company name.
- Your name.
- Your address & Phone number, email address
- The model number & serial number of the product
- A description of the problem.

NOTE: Hyundai is not responsible for any returned product without an Assigned RMA number.