LIFECYCLE EXTENSION GUIDE

acer

Contents

Table of Contents

Safety Notice

Any person attempting to service this chassis must familiarize with the chassis and be aware
of the necessary safety precautions to be used when serving electronic equipment containing
high voltage

acer

Important Safety Notice

Product Announcement:

This product is certificated to meet RoHS Directive and Lead-Free produced definition. Using approved critical components only is recommended when the situation to replace defective parts. Vender assumes no liability express or implied, arising out of any unauthorized modification of design or replacing non-RoHS parts. Service providers assume all liability.

Qualified Repairability:

Proper service and repair is important to the safe, reliable operation of all series products. The service providers recommended by vender should being aware of notices listed in this service manual in order to minimize the risk of personal injury when perform service procedures. Furthermore, the possible existed improper repairing method may damage equipment or products. It is recommended that service engineers should have repairing knowledge, experience, as well as appropriate product training per new model before performing the service procedures.

NOTICE:

! To avoid electrical shocks, the products should be connect to an authorized power cord, and turn off the master power switch each time before removing the AC power cord.

! To prevent the product away from water or explosed in extremely high humility environment.

! To ensure the continued reliability of this product, use only original manufacturer's specified parts.

! To ensure following safety repairing behavior, put the replaced part on the components side of PWBA, not solder side.

! To ensure using a proper screwdriver, follow the torque and force listed in assembly and disassembly procedures to screw and unscrew screws.

! Using Lead-Free solder to well mounted the parts.

! The fusion point of Lead-Free solder requested in the degree of 220°C.

239.7

614.7

368.6

457.1

63.2

335.7

127

257.4

100

100

acer
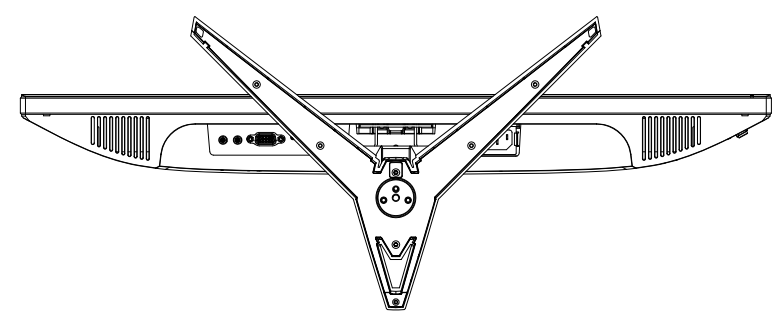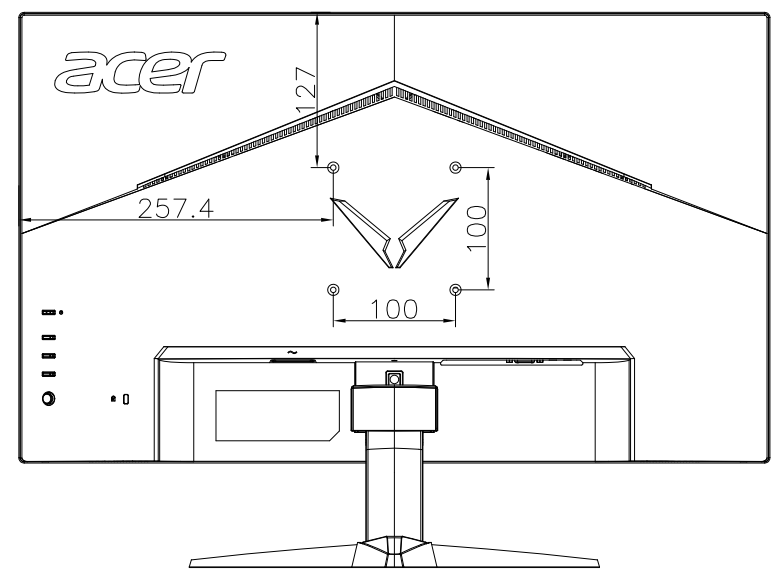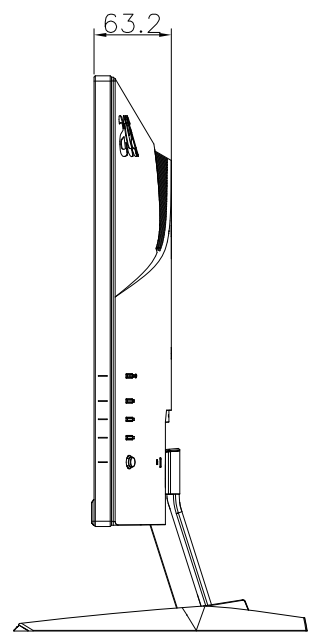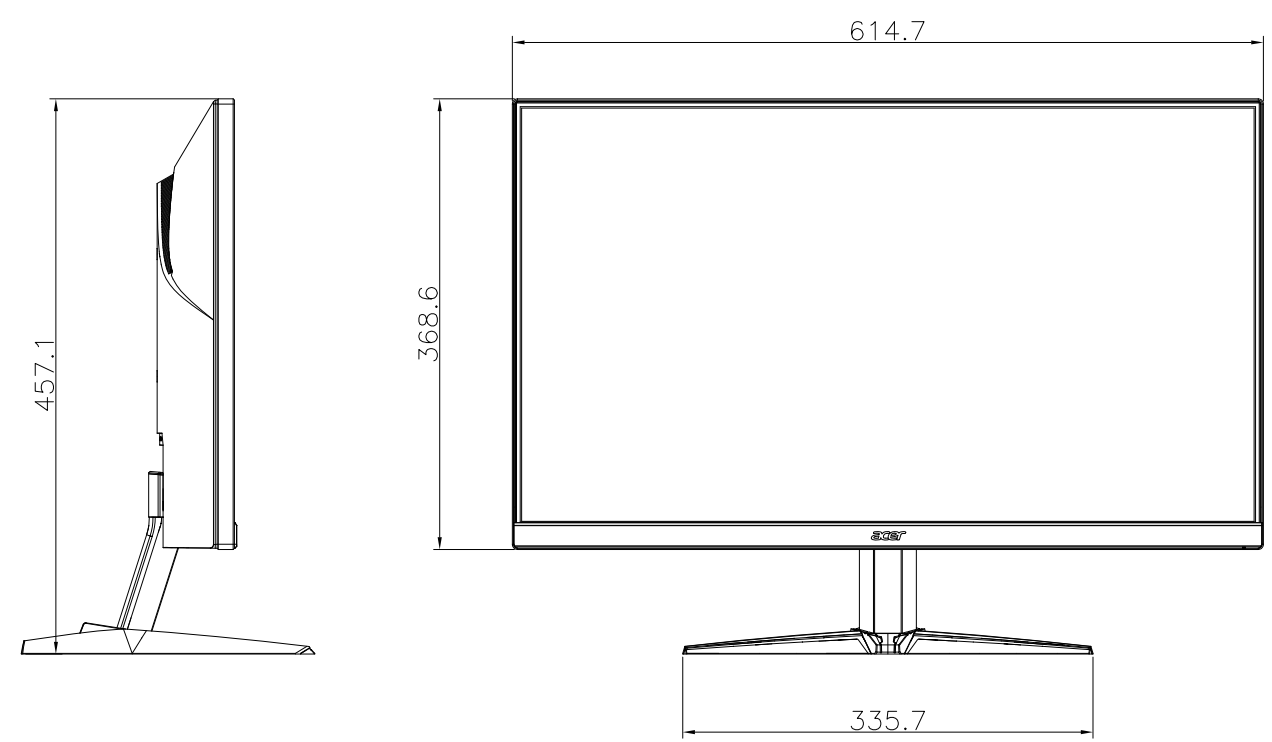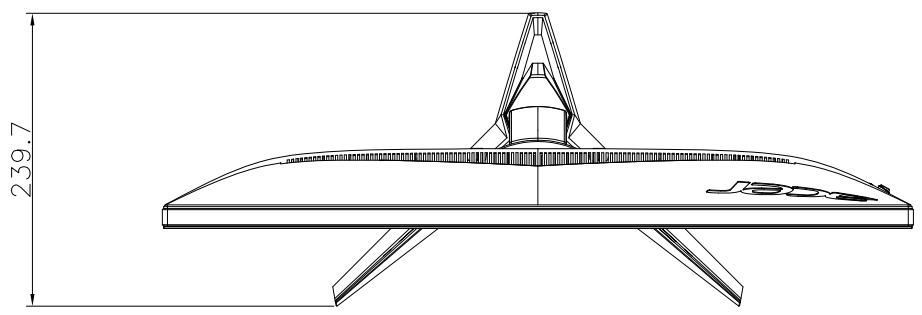
Weight		
Model	Net Weight W/O packaging(kg.)	Gross Weight with packaging(kg.)
QG271	5.1	5.7

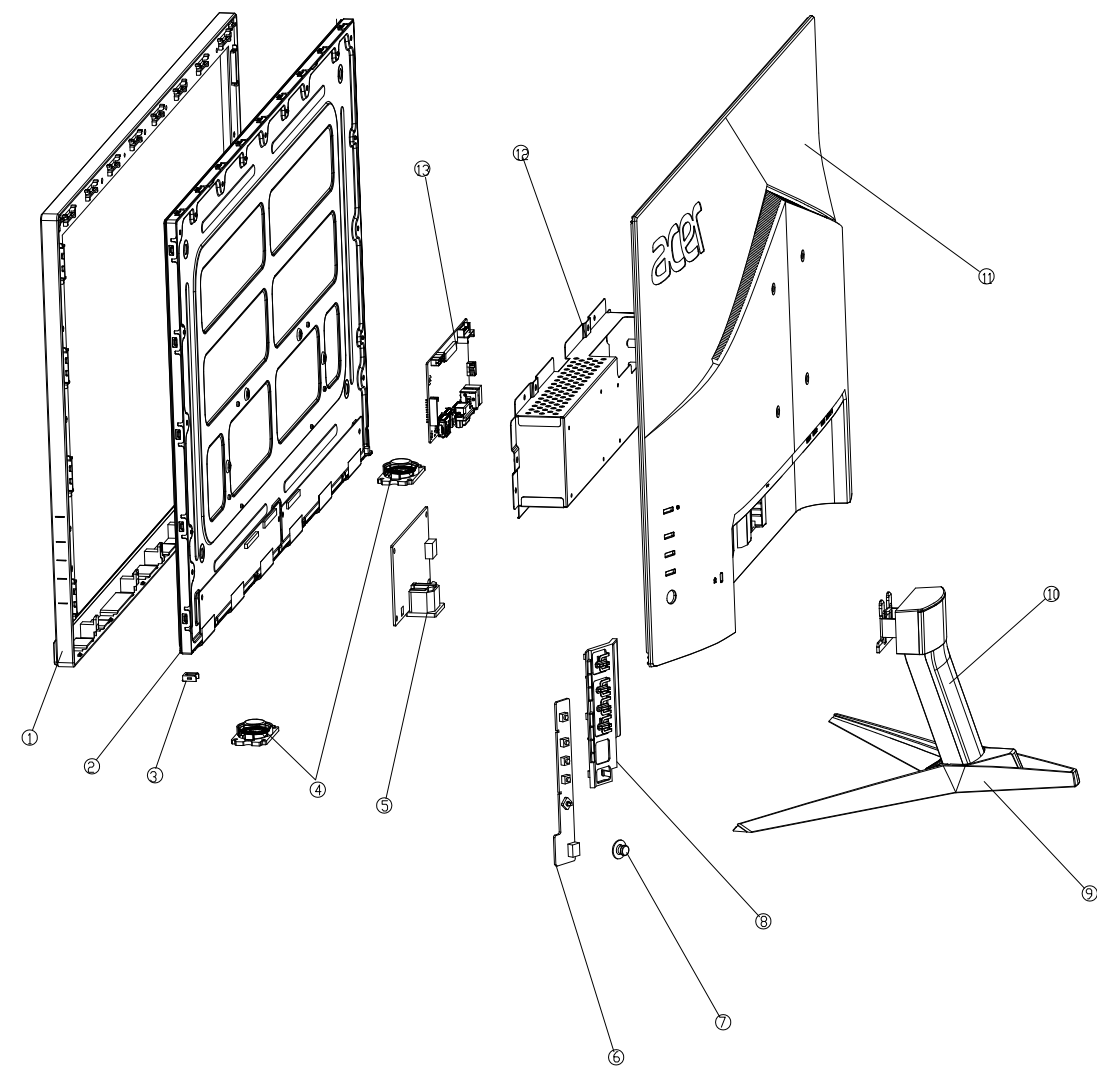| REV	DC/EC NUMBER	DESCRIPTION	DATE
V1.0		Initial version release	2019.09.30

No.	Description.	Code No.	Material	Qty's	Remark
				1	
				1	
				1	
				1	
				1	
13	Main PCB			1	
12	PCB Cover			1	
11	Back Cover			1	
10	Stand support			1	
9	Stand base			1	
8	key			1	
7	switch key			1	
6	Key PCB			1	
5	power PCB			1	
4	Horn			2	
3	Lens			1	
2	Module			1	
1	Cabinet			1	

PART NUMBER		APPROVED		DATE	
PART DESCRIPTION		CHECKED		DATE	
EXPLODE-DRAWING					
MODEL NAME		DESIGNED		DATE	
					2019-09-30

UNIT	SCALE	PROJECT		SIZE	SHEET NUMBER	REVISION
MM	1:1			A4	1 OF 1	V1.0

QG271 9C

REV	DC/EC NUMBER	DESCRIPTION	DATE
01		首版发行	2020.01.01

NO.			
1			
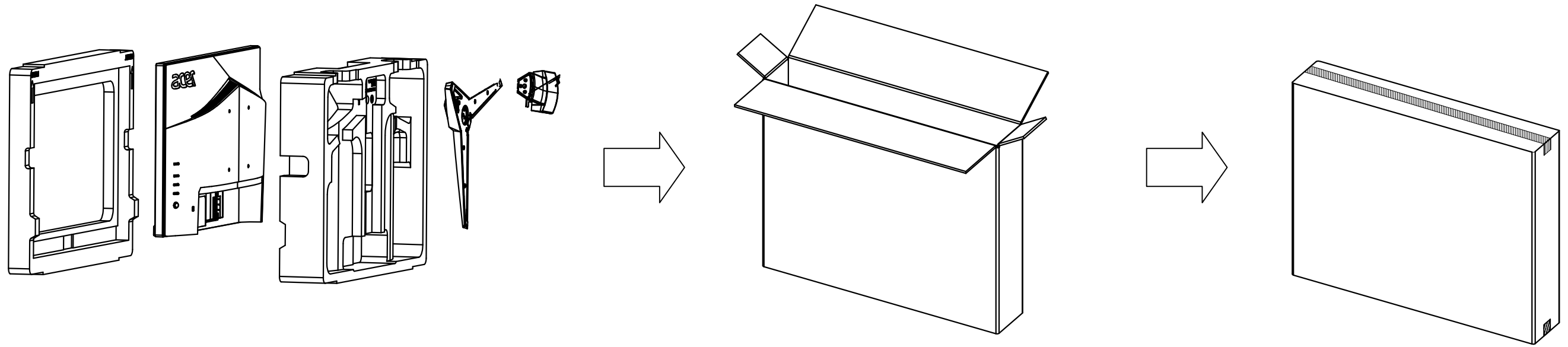
GENERAL LINEAR TOLERANCE				
STEP	1	2	3	
0~25	0.05	0.1	0.2	SELECT LECEL
25~100	0.1	0.15	0.2	
100~200	0.15	0.2	0.4	
200~400	0.2	0.3	0.6	
400~700	0.3	0.4	1.0	
700~1000	0.4	0.4	1.2	参考技术要求
1000~	0.5	0.6	1.5	
ANGLE 90°	±0.5°	±1.0°	±1.5°	

UNIT	SCALE	PROJECT	SIZE	SHEET NUMBER	REVISION
MM	1:1		A4	1 OF 1	V1.0

2. Wiring connectivity diagram

Power supply wire for screen   Connct the main board and   Connect the horn wire
                                    screen FFC wire
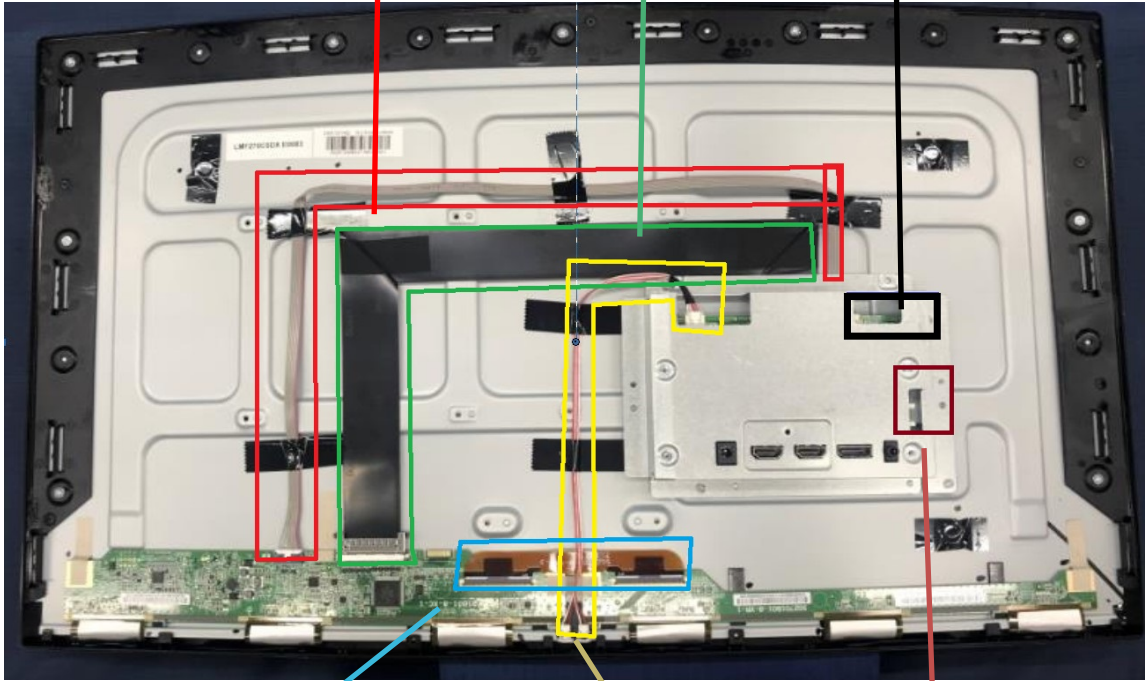
FFC wire   light bar power supply wire   Connect the key board wire

3. Mechanical Instruction

Tools Required
List the type and size of the tools that would typically can be used to disassemble the product to a point where components and materials requiring selective treatment can be removed.
Tool Description:
- working table
- Screw-driver
- Knife
- glove
- cleaning cloth
- ESD protection

4. Assembly and Disassembly SOP

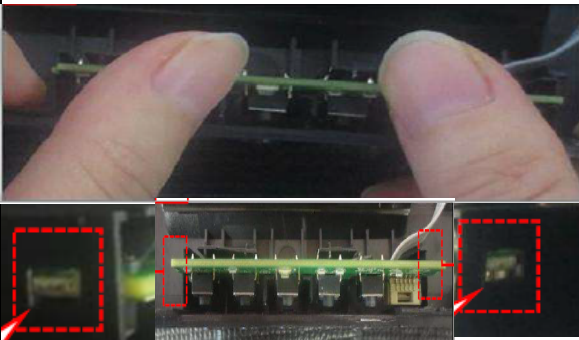| 4.1 Disassembly Procedures	

Preparation before disassemble
1.Clean the room for disassemble
2.Identify the area for monitor
3.Check the position that the monitors be placed and the quantity of the monitor ;prepare the area for material flow; according to the actual condition plan the disassemble layout
4.Prepare the implement, equipment, materials as bellow:
  1) working table
  2) Screw-driver
  3) knife
  4) glove
  5) cleaning cloth
  6) ESD protection	

S1	Prepare the worktable and remove the screws of the backcover
S2	Disassemble the backcover and disassemble the key connector.

S3	Disassemble thetapesand speakers screws
S4	Disassemblethekey IRLenscomponents
PICTURE 1	PICTURE 2	PICTURE 3
S5	Disassembletheconnecttedlines.
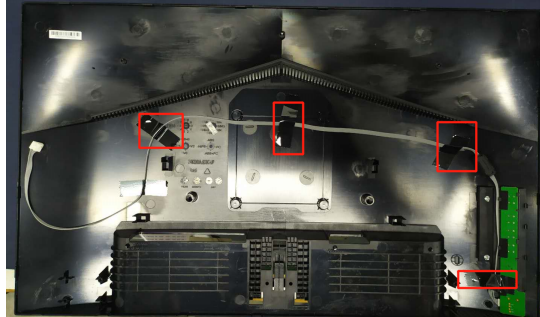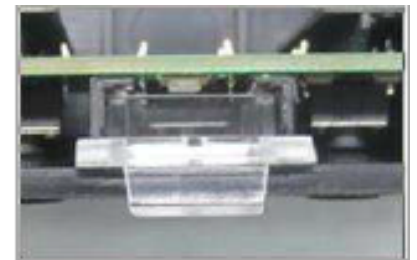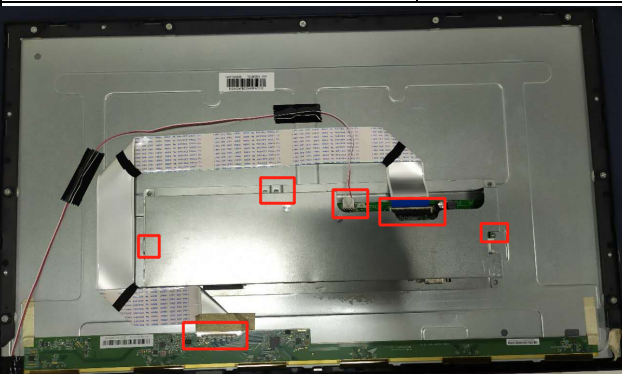
S6	Remove themainboard
S7	Remove the main board components
PICTURE 1 PICTURE 2	
S8	You will see the module
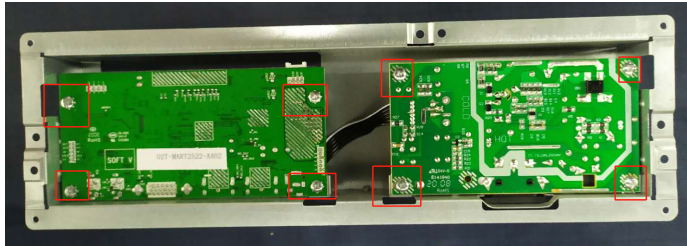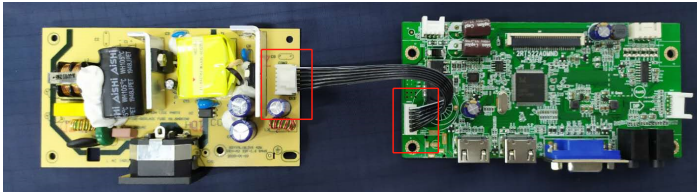
NOTE:

Circuit boards >10 cm² has been highlighted with the yellow rectangle as above image shows.

Please detach the Circuit boards and follow local regulations for disposal.

4.2 Assembly Procedures

Preparation before assemble:
1.Clean the room for work
2.Identify the area for material
3.Prepare the implement, equipment, materials as bellow：
   1)   working table
   2)   Screw-driver
   3)   Knife
   4)   glove
   5)   cleaning cloth
   6)   ESD protection

S1 ,	- Insert connect lines,put themoduleon the worktable.Install the main board to the bracket .
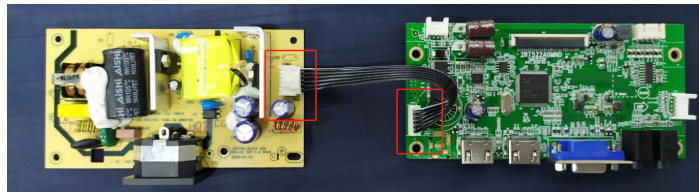
S2 .	Take the Panel on the sponge cushion.

PICTURE 1
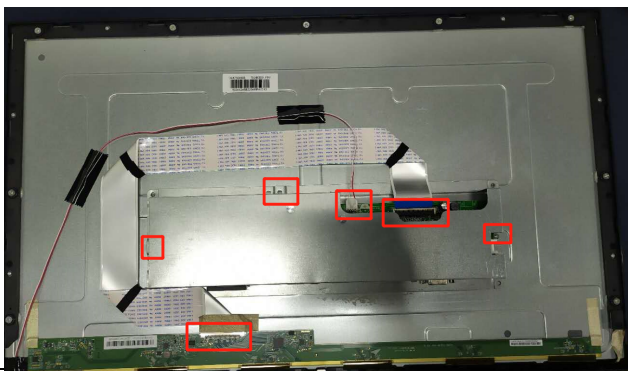
PICTURE 2
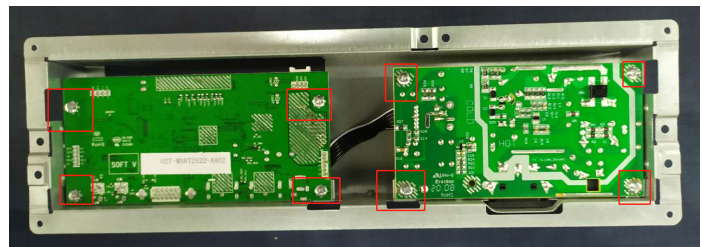
S3	Insert connect lines and check
S4	Install speakers screws and paste the black tapes
S5	Process and install key IRand lenscomponents.
	PICTURE 1 PICTURE 2 PICTURE 3
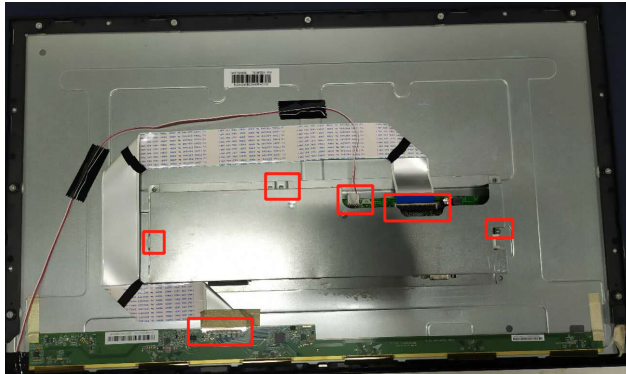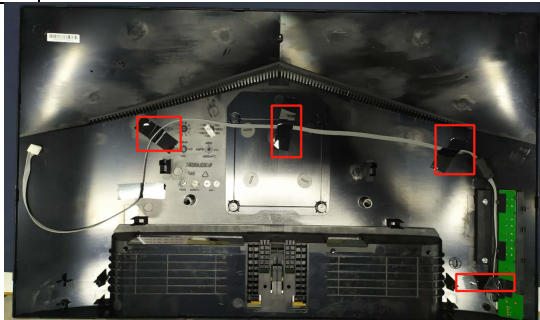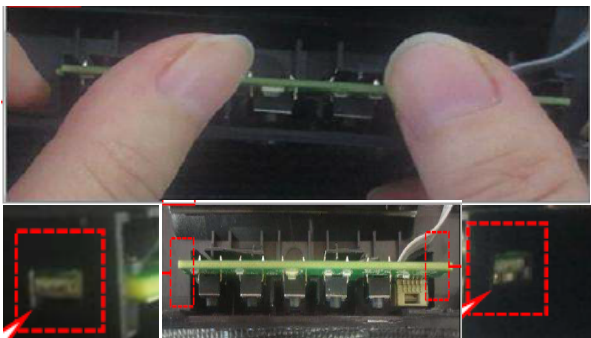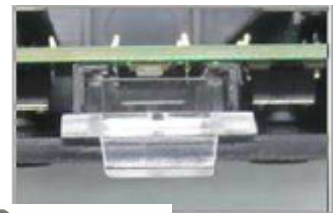
S6	Place the rear housing on the module without fastening

S7	IInsert the key IRand speakerslines. Install the rear housing to the module and fix it with the lock screw
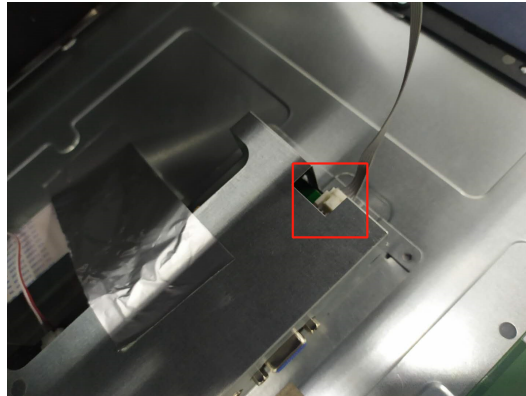
S8	Check the appearence

HDMI line

接板卡

接电脑

FW Upgrade SOP

1. Unzip the RTDCustomerTool_V3.9Beta4.rar

📁 Comm
📁 DefaultDebugMsgFile
📁 PlugIn
📁 RTDScaler
📄 Comm.dll
📄 RSGrid.ocx
📄 RTDTool.exe

2. Run the RTDTool.exe
Follow the prompt steps to install the TRDTool

3. FW Upgrade Process

Note that the monitor needs to be powered on before upgrading;;
Setp up1: Choose Access method as RealtekUSB
Step up2: Confirm that the USB upgrade board is connected to OK;
Setp up3: Double-click to select the ISP column;
Step up4: Check the first line 0 and place the box;
Step up5: Click to select and import the bin file path of the software to be upgraded;
Setp up6: Click to start;

Start the upgrade process
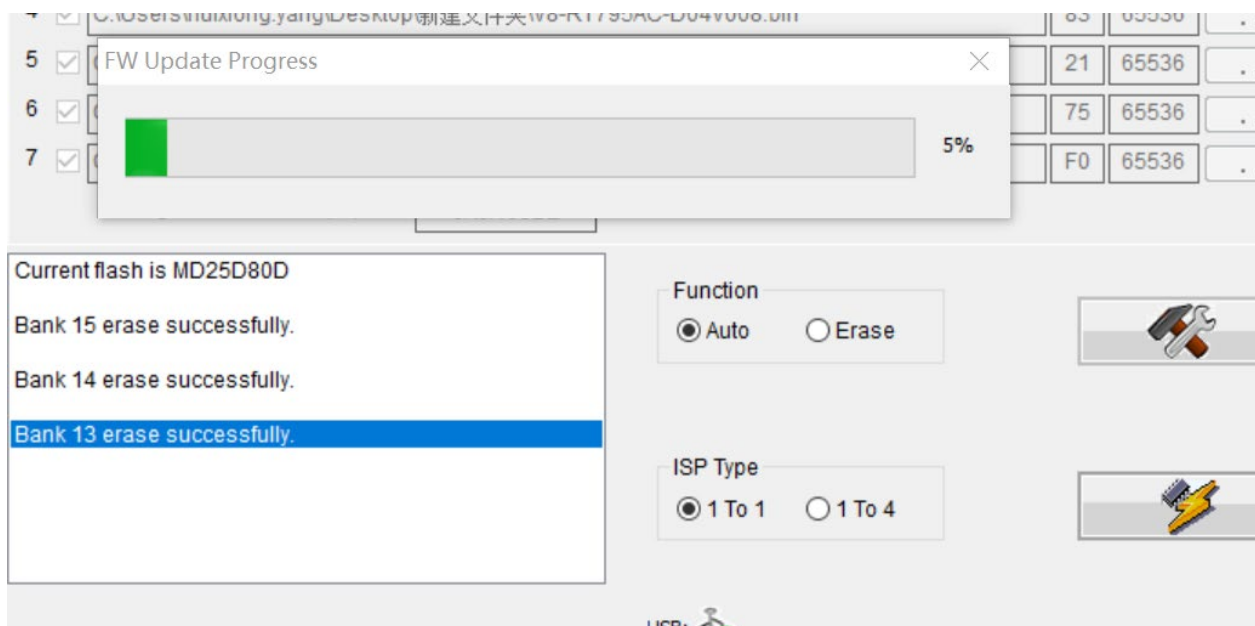
Upgrade OK prompt
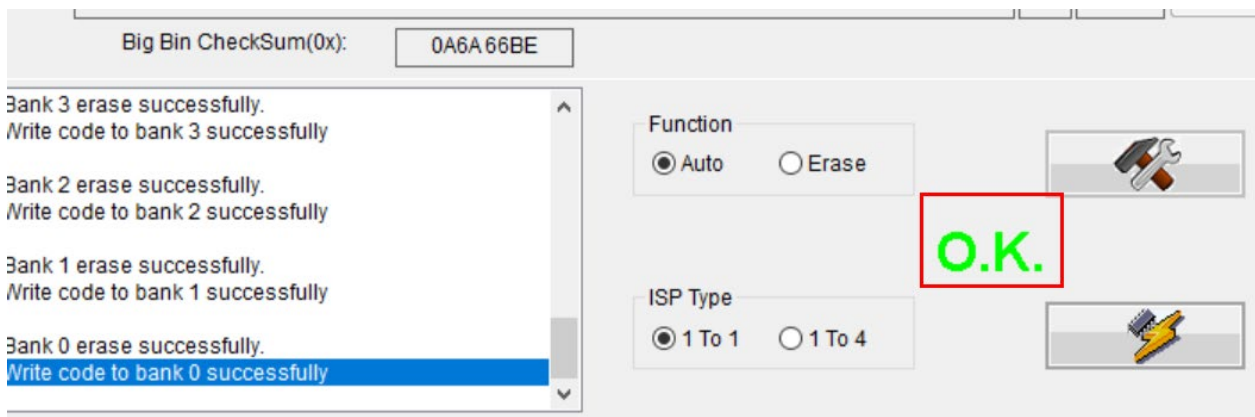
3.Check FW Version and precautions through Factory Menu

1. Enter factory mode

We have 2 different way can enter to Factory mode, shown as below:

The first way: after the burning software is completed, it defaults to the power on state and will automatically enter the factory mode, At the same time, it also enters the aging mode. At this time, if there is no signal input, it starts to age and the soft shutdown exits.

The second way: when the display is powered on and off, press the menu key all the time and power up at the same time
Until the display is normal, enter factory mode and aging mode at the same time,
At this time, if there is no signal input, aging will start, and soft shutdown will exit aging and exit factory mode.
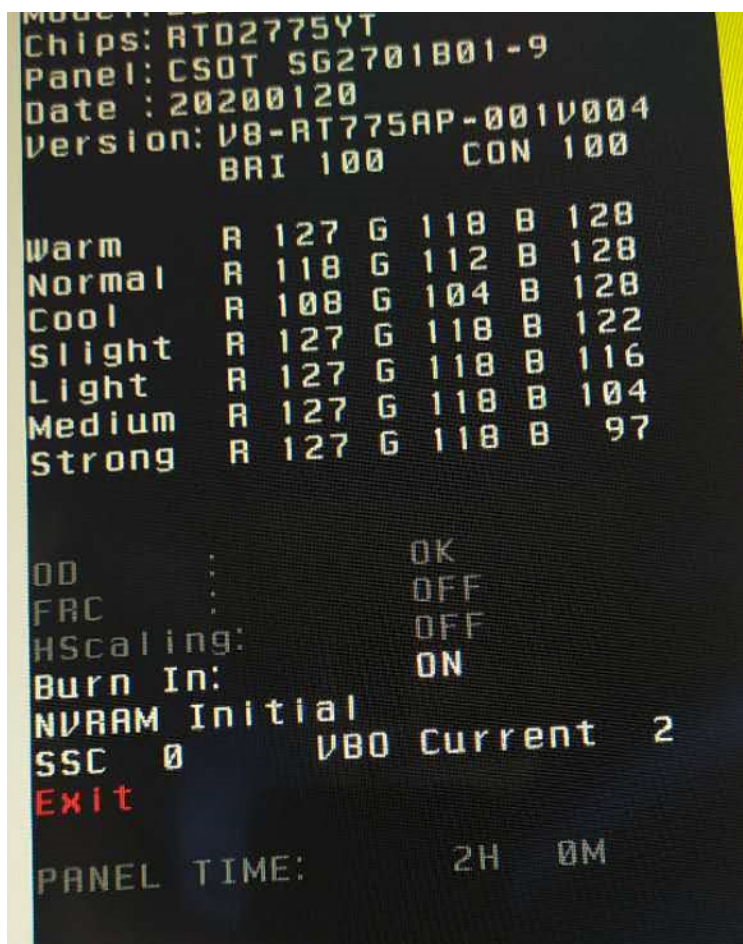
2. Exit factory menu mode press the key left and right keys to select "exit", and then press the key to exit; ⊘
Key function description: key ⊘ is confirm key, key ⮌ ▤
selection or adjustment,Key ⧀ has no function, key ⏻ is power key
(long press for 3S to shut down, power on and press once.

Another point to note: power off in factory mode does not exit from factory mode. You need to press the long key ⏻ for 3S before you exit from factory mode.

5. Troubleshooting

5.1 No Display or display is unstable on analog or digital port:

```
┌─────────────────────────────────────────────────────────────┐
│ No picture or picture unstable on analog port and digital port │
└─────────────────────────────────────────────────────────────┘
```

Decision	Answer	Action
Power off	Yes	Turn on power
Does cable plugs in Connector?	No	Plug the cable then turn on power again.
Does power stable?	No	Check Power Board DC-DC circuit and regulator
Is Power LED light Green or Amber?	No	Check Key BD and Key BD cable
Is Power LED status normal?	No	Replace IF BD
Does crystal work correctly?	No	Check crystal CKT or replace it (Y1)
Is Interface BD normal?	No	Replace interface BD
Is LVDS cable connect OK?	No	Plug LVDS cable again or replace it
Replace Panel		

Power off — No → Does cable plugs in Connector? — Yes → Does power stable? — Yes → Is Power LED light Green or Amber? — Yes → Is Power LED status normal? — Yes → Does crystal work correctly? — Yes → Is Interface BD normal? — Yes → Is LVDS cable connect OK? — Yes → Replace Panel

5.2 Button function

```
┌─────────────────────────┐
│   OSD is not working    │
└─────────────────────────┘
             │
            Yes
             │
             ▼
┌─────────────────────────┐        No      ⎛                              ⎞
│  Is control BD connecting? │───────────▶ ⎝   Plug control BD then retry  ⎠
└─────────────────────────┘
             │
            Yes
             │
             ▼
┌─────────────────────────┐        Yes     ⎛                              ⎞
│   Is button key normally? │───────────▶ ⎝  Replace control BD then retry ⎠
└─────────────────────────┘
             │
            No
             │
             ▼
┌─────────────────────────┐
│   Replace Control BD    │
│                         │
│    Is OSD working??     │
└─────────────────────────┘
             │
            No
             │
             ▼
┌─────────────────────────┐
│   Check Interface BD    │
└─────────────────────────┘
```

5.3 OSD function

```
        ⎛                  ⎞
        ⎝  OSD doesn't work ⎠
                 │
                 │
                 ▼
┌─────────────────────────┐    No    ┌──────────────────────┐
│  Is control BD working?  │───────▶ │  Replace control BD  │
└─────────────────────────┘          └──────────────────────┘
                 │
                 │
                 ▼
        ⎛                  ⎞
        ⎝ Check interface BD ⎠
```

5.4 L E D l i g h t

On: Blue light is always on
No Sigal: Blue light is flashing
Standby: Blue light do not work

```
                    ┌──────────────────┐
                    │  Blue light is on │
                    └──────────────────┘
                              │
                              ▼            NO                      YES
                    ┌──────────────────┐        ┌──────────────────┐
                    │Blue light is flashing│───▶ │    Power on       │
                    └──────────────────┘        └──────────────────┘
                              │ YES                      │ NO
                              ▼            NO             ▼            YES
                    ┌──────────────────┐        ┌──────────────────┐
                    │    Power on       │        │ With source input │
                    └──────────────────┘        └──────────────────┘
                              │ YES                      │ NO
                              ▼            YES
                    ┌──────────────────┐
                    │ With source input │
                    └──────────────────┘
                              │ NO
                              ▼
                    (  Normal  )        ( Replace the key board )
```

Blue light is on → Blue light is flashing (NO → Power on)

Power on (YES → With source input) / (NO → Replace the key board)

With source input (YES → Replace the key board) / (NO → Replace the key board)

Blue light is flashing (YES → Power on)

Power on (YES → With source input) / (NO → Replace the key board)

With source input (YES → Normal) / (NO → Replace the key board)

```
                    ┌──────────────────┐
                    │Blue light do not work│
                    └──────────────────┘
                              │
                              ▼              YES
                    ┌──────────────────┐        ┌──────────────────────┐
                    │    Power on       │──────▶ ( Replace the key board )
                    └──────────────────┘        └──────────────────────┘
                              │ NO
                              ▼
                        (  Normal  )
```

CATEGORY	CATEGORY	ODM PART NO.	ACER DESCRIPTION	ODM DESCRIPTION	ACER PART NO.	UM.HQ1EE.001	
						H3-27M200D1-	X3-27M200D1-EUS0AU
LCD		S8-27M2000-LPBX2	LED LCD Panel TCL	PANEL MODULE LMF27	KL.2700T.015		
MAINBOARD		02-MART2522-AA19M	MAIN BOARD 1A2H	1A2H 2AMT-52AR-BH5	55.TKRMD.004		√
MAINBOARD		S8-MART2522-AA19M	MAIN BOARD 1A2H	1A2H 2AMT-52AR-BH53	55.TKRMD.001	√	
BOARD		81-PWE027-Y1235U	POWER BOARD	PSU / SOYYML191219 42W-3.5A	55.TKVMD.001		
BOARD		T8-24M20D1-FB1	FUNCTION KEY BOARD	ASS'Y - FRONT CONTROL BOARD	55.TKUMD.002		
CABLE		46-LB0400-04PSW8G	CABLE 2PIN 400MM - LIGHT BAR TO MAIN	WIRE L/B WIRE 400MM 2PIN SH PH 2MM UL103	50.TKVMD.001		
CABLE		46-DC0100-PP06S4	CABLE 6PIN 100MM - MAIN BOARD TO POWER BOARD	WIRE DC CONNECTING LINE 100MM 6PIN PHD	50.TKVMD.002		
CABLE		46-FM085L-05V03G	CABLE 5PIN 850MM - FUNCTION KEY BOARD TO MAIN BAORD	WIRE IR WIRE 850MM 5PIN PH(LOCK) GH 2.0/	50.TKVMD.003		
CABLE		46-FZ0468-30DA40G	FFC CABLE 30PIN 468MM - PANEL TO MAIN BOARD	WIRE FFC WIRE 468MM 30PIN FFC1.0 FI-E	50.TKVMD.004		
CABLE		41-HDM150-C19A1GB	HDMI CABLE 7.1MM 1500MM W/ MAGNET	WIRE 7.1MM 1500MM BLACK HDMI-19P HDMI-19 (magnet ring)	50.TM3MD.001		
CABLE		41-VGA150-C15UC1GB	VGA CABLE 1500MM	WIRE-BARE BARE WIRE 5.8MM 5-AW1386	50.TKPMD.001		
POWER CORD		51-FCB150-C3U07TPB	POWER CORD 1500MM EU	POWER CORD 1500MM 5-GPE0329 2 5-GPE0329	27.TKPMD.001		
CASE/COVER/BRACKET ASSEMBLY		68-M77180-100Z1	BASE ASSY	RAW STAND BASE BK 00 00 00 27M2000A R=Y	60.TKRMD.001		
CASE/COVER/BRACKET ASSEMBLY		68-M77180-000Z1	NECK ASSY	RAW STAND NECK BK 00 00 00 27M2000A R=Y	60.TKRMD.002		
CASE/COVER/BRACKET ASSEMBLY		S8-771810-0HQZ1G	FRONT BEZEL ASSY	RAW FC(FRONT CABINET) WITH LOGO 27M2000A -- 00 00	60.TKVMD.003		
CASE/COVER/BRACKET ASSEMBLY		56-772250-0HHZ1G	LIGHT-GUIDING PLATE	RAW LEN -- 00 00 00 R=Y	60.TKTMD.004		
CASE/COVER/BRACKET ASSEMBLY		55-771780-1HQ6RG	BACK COVER ASSY	RAW BC(BACK CABINET) 27M2000A -	60.TKRMD.003		
CASE/COVER/BRACKET ASSEMBLY		67-S77235-1G0	MAIN SHIELDING	RAW SHIELDING COVER -- 00 00 01	33.TKRMD.001		
CASE/COVER/BRACKET ASSEMBLY		56-772240-0HA6RG	FUNCTION KEY BRACKET	RAW FUNCTION KEY HOLDER -- 00 00 00 R=Y	60.TKTMD.006		
CASE/COVER/BRACKET ASSEMBLY		56-772280-0HA6RG	FUNCTION KEY PAD	RAW BUTTON -- 00 00 00 R=Y	60.TKTMD.007		