Service
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Acer Monitor VG270

LIFECYCLE EXTENSION GUIDE

Contents

Important Safety Notice

Proper service and repair is important to the safe, reliable operation of all ACER Company Equipment. The service procedures recommended by ACER and described in this service manual are effective methods of performing service operations. Some of these service operations require the use of tools specially designed for the purpose. The special tools should be used when and as recommended.

It is important to note that this manual contains various CAUTIONS and NOTICES which should be carefully read in order to minimize the risk of personal injury to service personnel. The possibility exists that improper service methods may damage the equipment. It is also important to understand that these CAUTIONS and NOTICES ARE NOT EXHAUSTIVE. ACER could not possibly know, evaluate and advise the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each way. Consequently, ACER has not undertaken any such broad evaluation. Accordingly, a servicer who uses a service procedure or tool which is not recommended by ACER must first satisfy himself thoroughly that neither his safety nor the safe operation of the equipment will be jeopardized by the service method selected.
Hereafter throughout this manual, ACER Company will be referred to as ACER.

WARNING

Use of substitute replacement parts, which do not have the same, specified safety characteristics may create shock, fire, or other hazards.

Under no circumstances should the original design be modified or altered without written permission from ACER. ACER assumes no liability, express or implied, arising out of any unauthorized modification of design.

Servicer assumes all liability.

FOR PRODUCTS CONTAINING LASER:
DANGER-Invisible laser radiation when open. AVOID DIRECT EXPOSURE TO BEAM.
CAUTION-Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
CAUTION -The use of optical instruments with this product will increase eye hazard.

TO ENSURE THE CONTINUED RELIABILITY OF THIS PRODUCT, USE ONLY ORIGINAL MANUFACTURER'S REPLACEMENT PARTS, WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THIS SERVICE MANUAL.

Take care during handling the LCD module with backlight unit
-Must mount the module using mounting holes arranged in four corners.
-Do not press on the panel, edge of the frame strongly or electric shock as this will result in damage to the screen.
-Do not scratch or press on the panel with any sharp objects, such as pencil or pen as this may result in damage to the panel.
-Protect the module from the ESD as it may damage the electronic circuit (C-MOS).
-Make certain that treatment person's body is grounded through wristband.
-Do not leave the module in high temperature and in areas of high humidity for a long time.
-Avoid contact with water as it may a short circuit within the module.
-If the surface of panel becomes dirty, please wipe it off with a soft material. (Cleaning with a dirty or rough cloth may damage the panel.)1.

1. Exploded view diagram with list of items
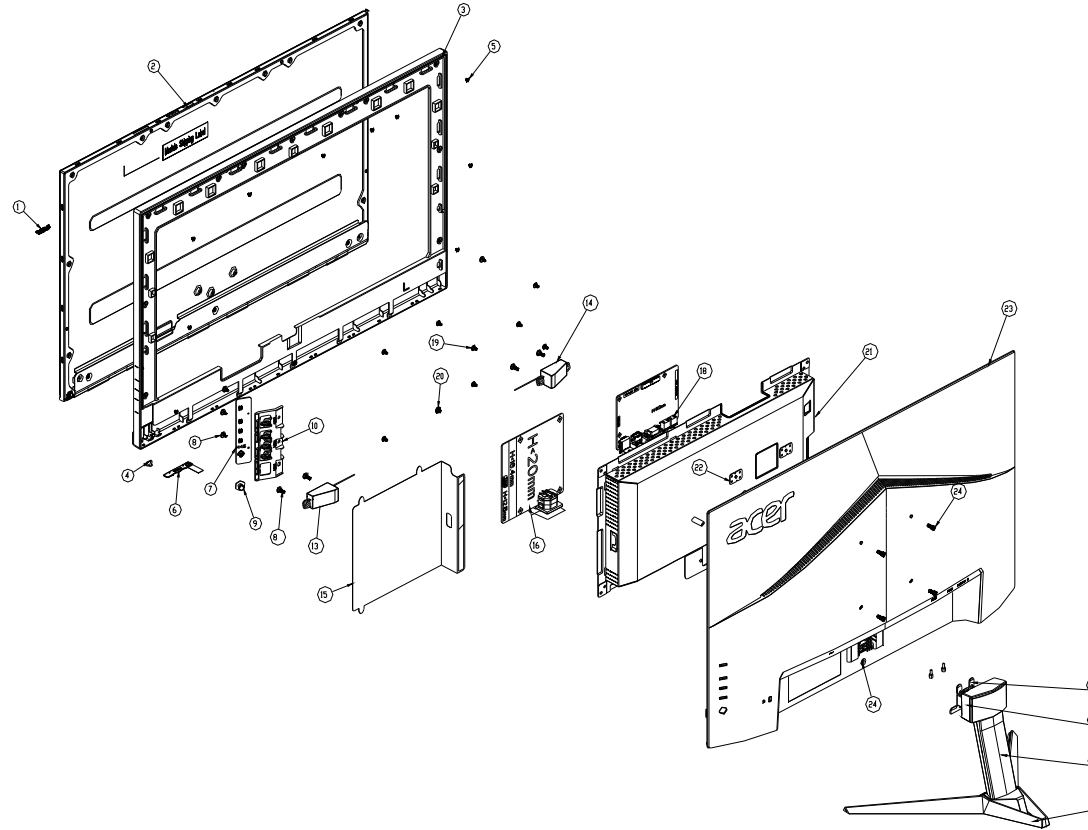
Item	Description	TPV Part No.	ACER Part No.
6	LED BOARD	LEPCLQA2	55.TCCM2.004
7	KEY BOARD	KEPCLQA6	55.TCCM2.003
16	ADAPTER BOARD G9541-P0A-X-000-0010	PLPCHD541KVG7	NA
18	MAIN BOARD	CBPRITMC0Q6	NA
	CABLE 30P-30P 450MM(MB TO PANEL)	395G179X30B8820000	NA

2. 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:

- Screwdriver (Phillip-head, Hexagonal head)

- Penknife

2.1 Disassembly Procedures:

S1. Push the button to remove the stand –base ASS'Y and unscrew the screw on rear cover.

S2. Remove the rear cover. Use a tool (like picture using) to open all latches. (Be careful the position of the key board.)

S3. Disconnect the cables (main board to Key board / LED board, main board to speakers) and remove the screws to remove the key board from the rear cover.
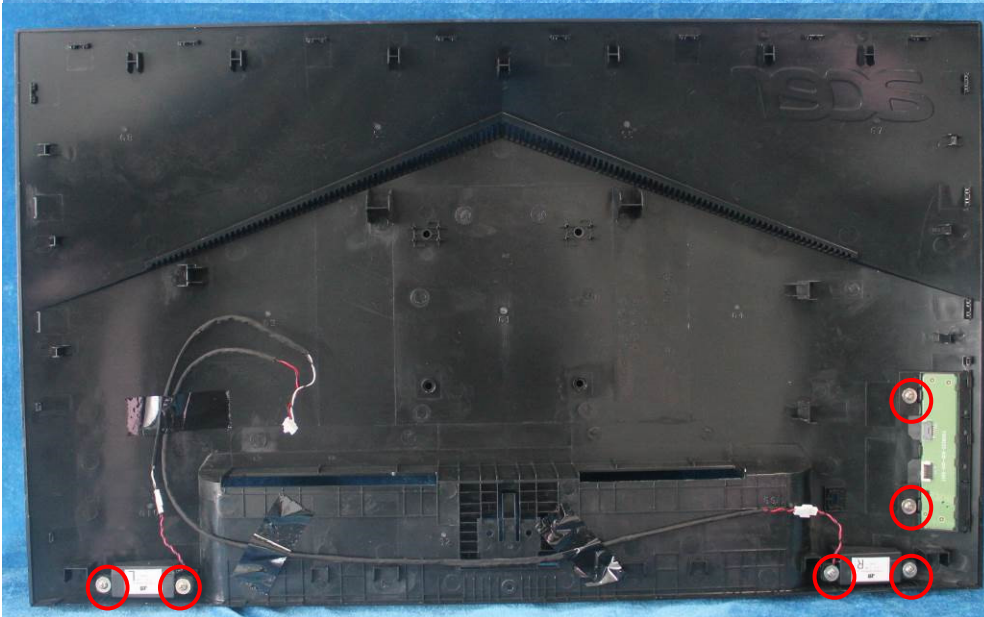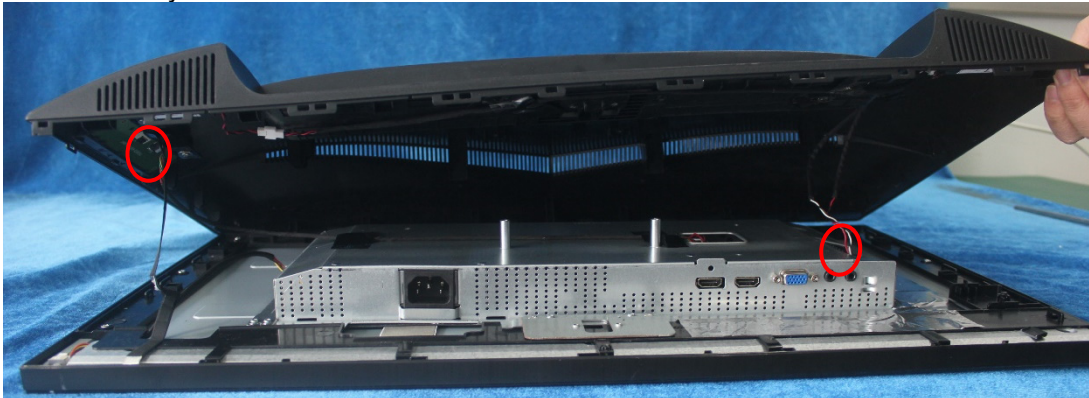
S4. Tear up all tapes and disconnect the FFC cable (main board to panel), the cables (power board to panel). Remove the LED board and unscrew the screws.
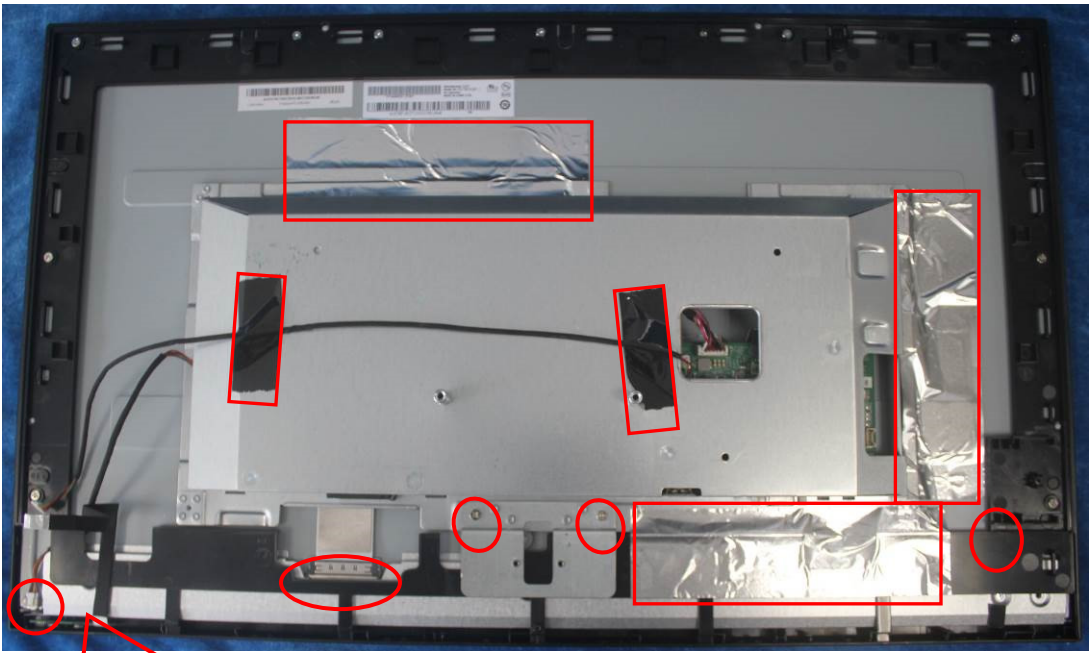
S5. Remove the screws to separate the panel and the Middle Frame.

S6. Unscrew the screws of the main board remove the mylar. Then unscrew the screws of the power board and main board to remove them from mainframe.
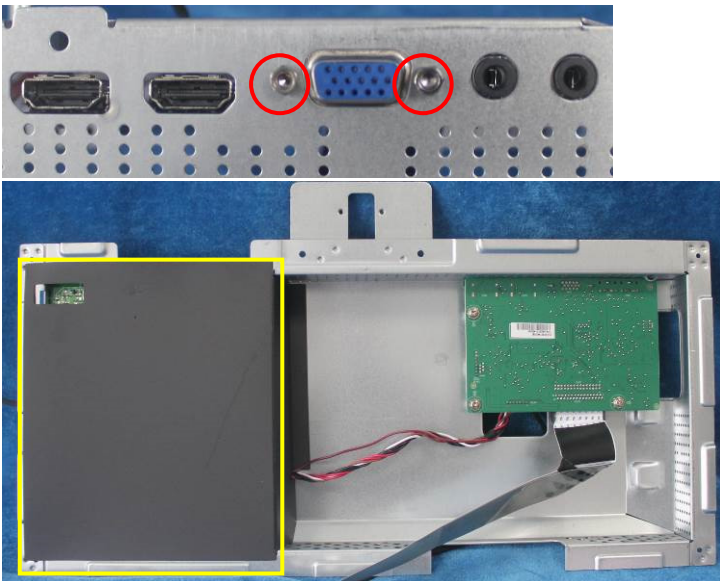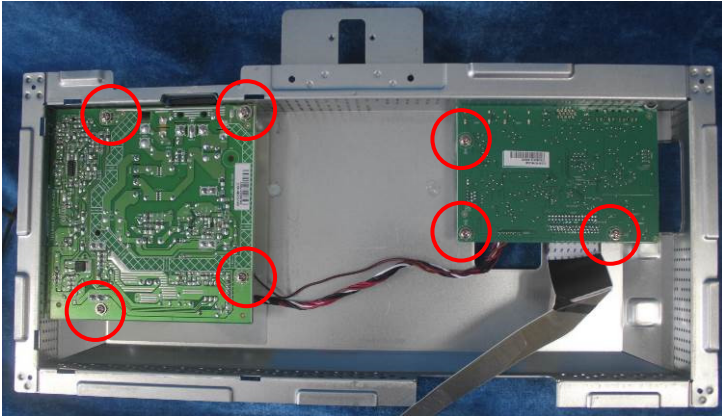
S7. Remove the main board and power board. Disconnect the cables.
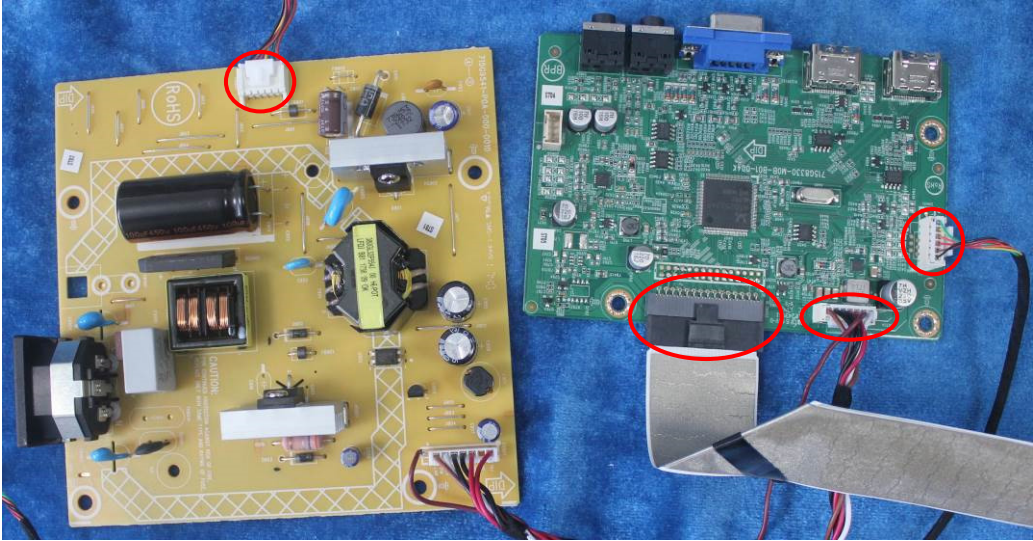
2.2 Assembly Procedures:

S1 Prepare a main board, a power board and some essential cables. Connect every cable as the below picture.
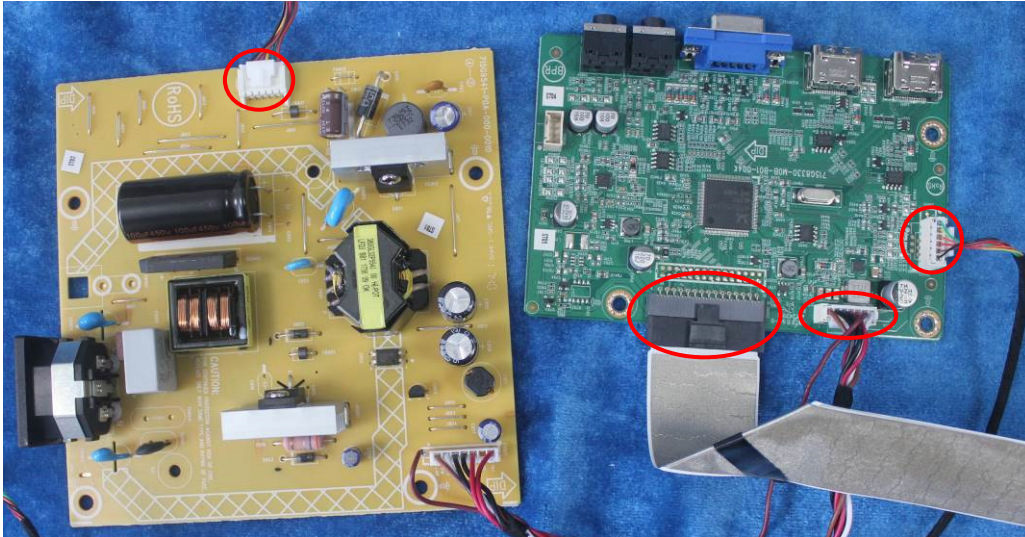
S2. Use a Philips-head screwdriver to tighten the screws till the power board and main board with shield are firmly attached. Tape the Mylar. And use a Hex-head screwdriver to tighten the screws for locking the connectors.
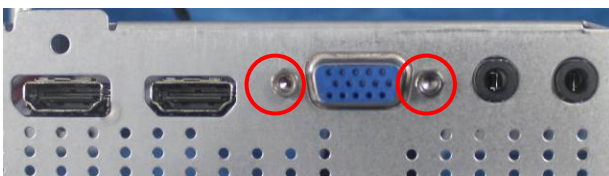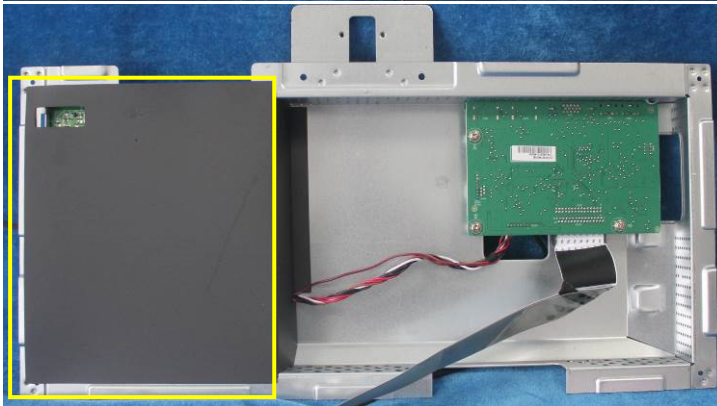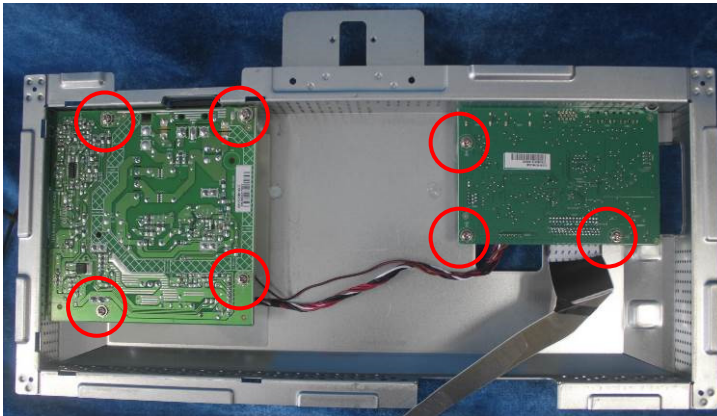
S3. Assemble the MIDDLE FRAME and the panel. Use a screwdriver to tighten the screws.

S4. Connect cables (mainboard to panel and the power board to panel). Assemble the LED board and screw the two screws and paste the tapes.
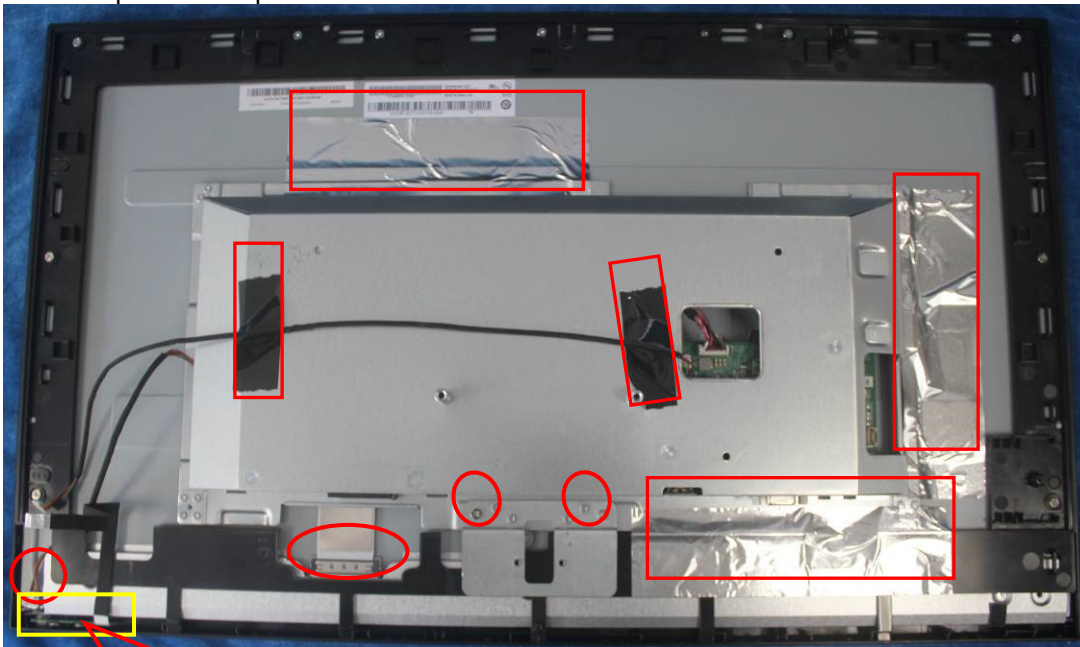
S6. Prepare a rear cover, a key board and speakers and use the screws to lock the key board and speakers.
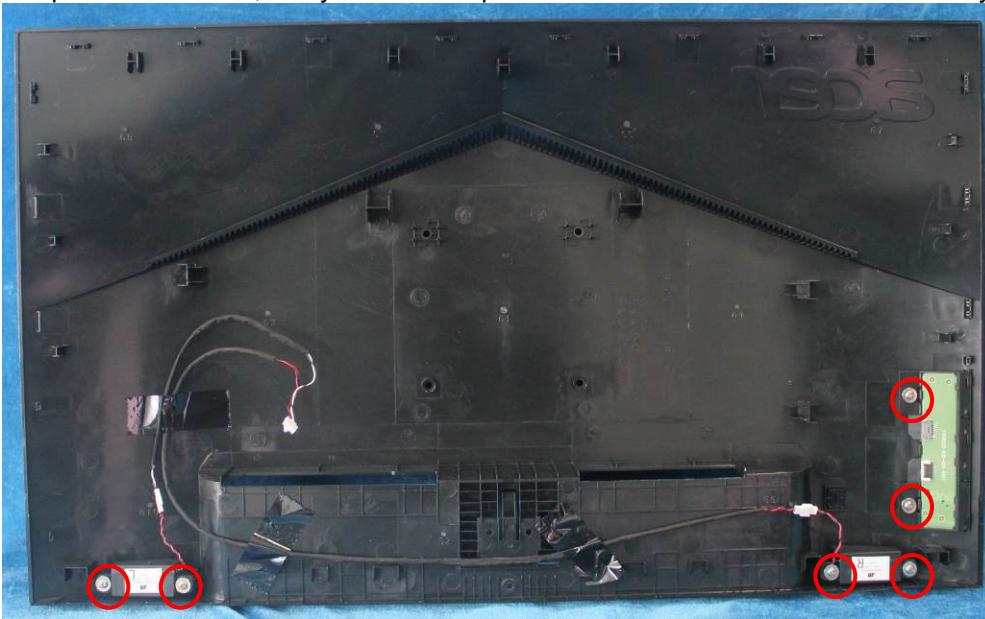
S7. Connect the pin (LED board / Key board) and the pin (mainboard to speakers). Use the screws to lock the rear cover.
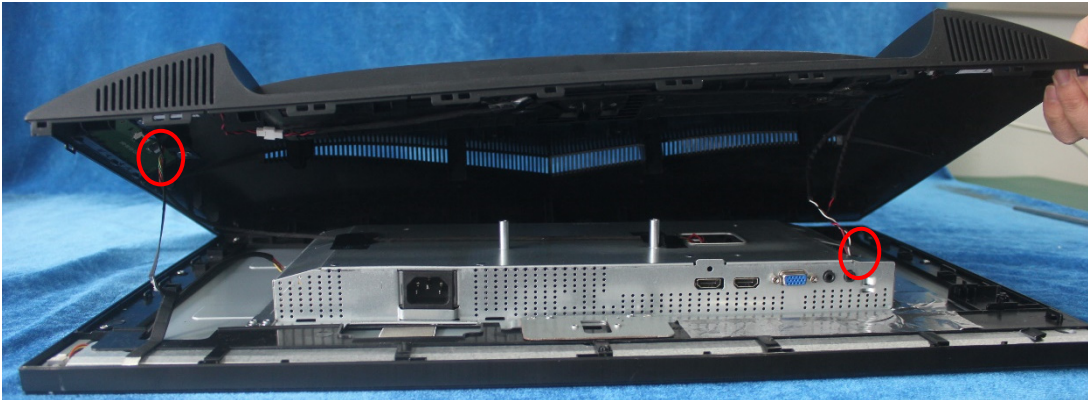
S8. Assemble the stand and base ASS'Y.

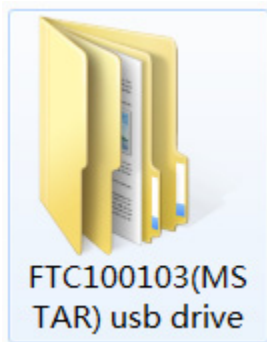# 3. Firmware Upgrade Process

1. Materials

ISP JIG: 715GT089-C

VGA cable
TPV P/N: 089G728 GAA DB
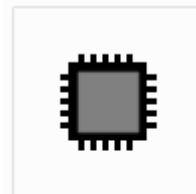

PC
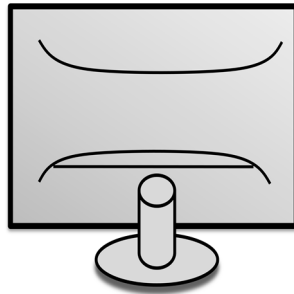
Monitor

USB cable
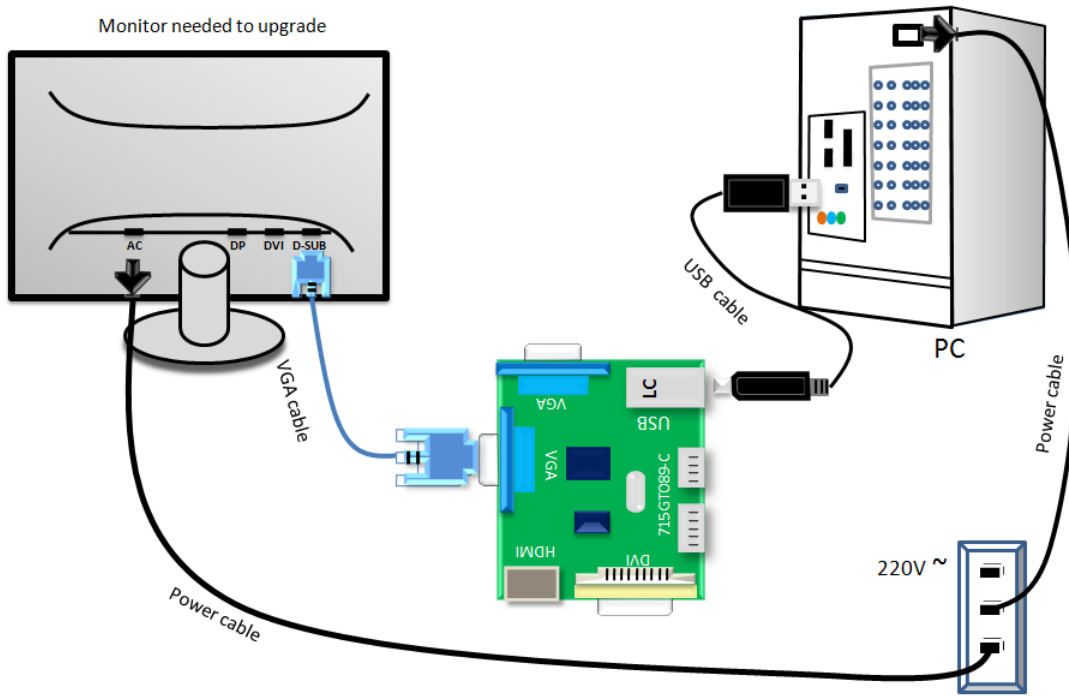TPV P/N: 089G1758 X

FTC100103(MS TAR) usb drive
USB port driver

RTDTool.exe
ISP tool:

ACER_VG270_R T2522AR_A2H_A UO_M270HAN0 1 VSL 201712...
New F/W

2.Connection

Monitor needed to upgrade

PC

3.Install USB driver.

3.1. When insert the USB cable to PC USB port, will pop up a Hardware Wizard to help you install the USB driver if you use this ISP board first time.it can auto install success by itself

Remark: The USB driver files path: D:\FTC100103(Mstar)\FTCUSB.INF

After installation the USB serial port driver, please check the port. Look the properties of "my Computer"
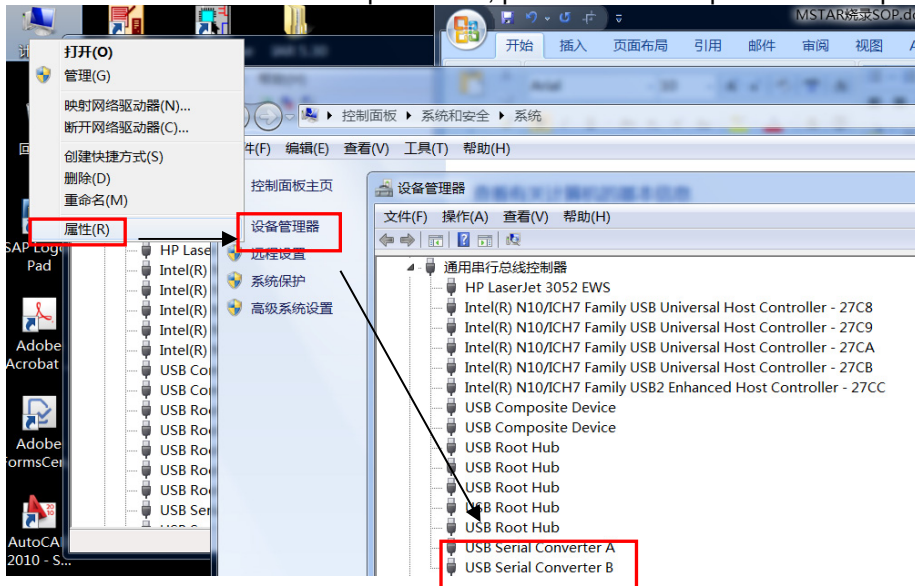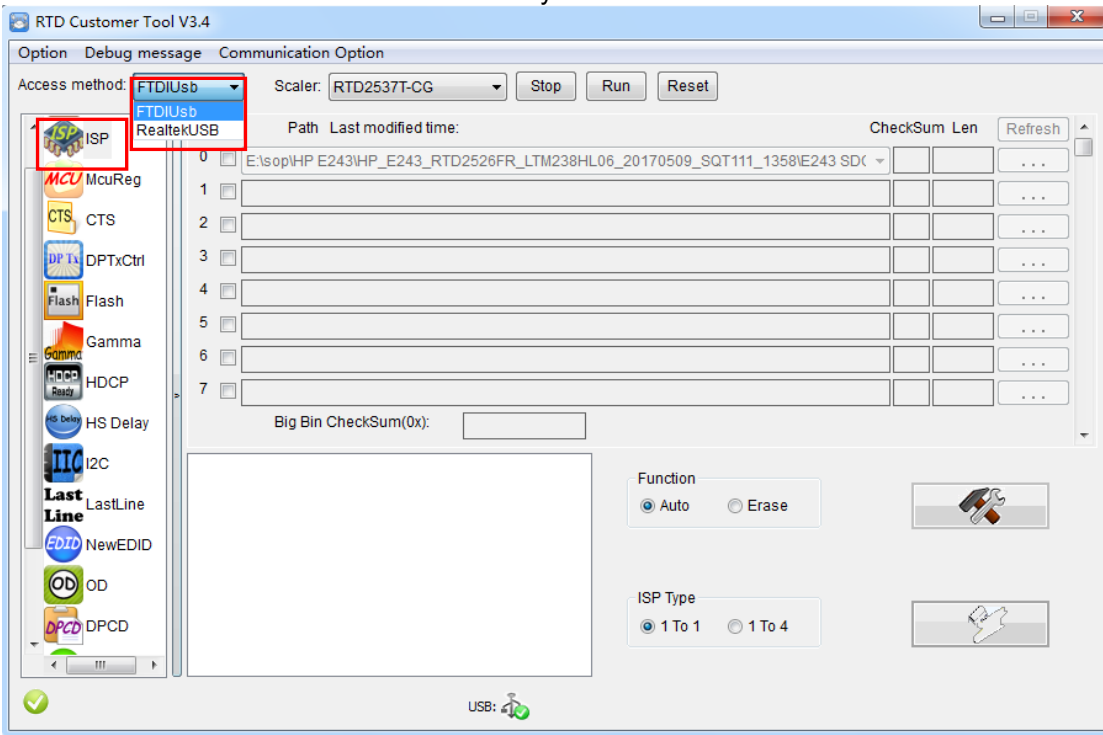

4. Install RTD tool.

Note: If the F/W Upgrade use the same ISP tool as the EDID writing, you must close the EDID writing tool before running the F/W Upgrade tool.
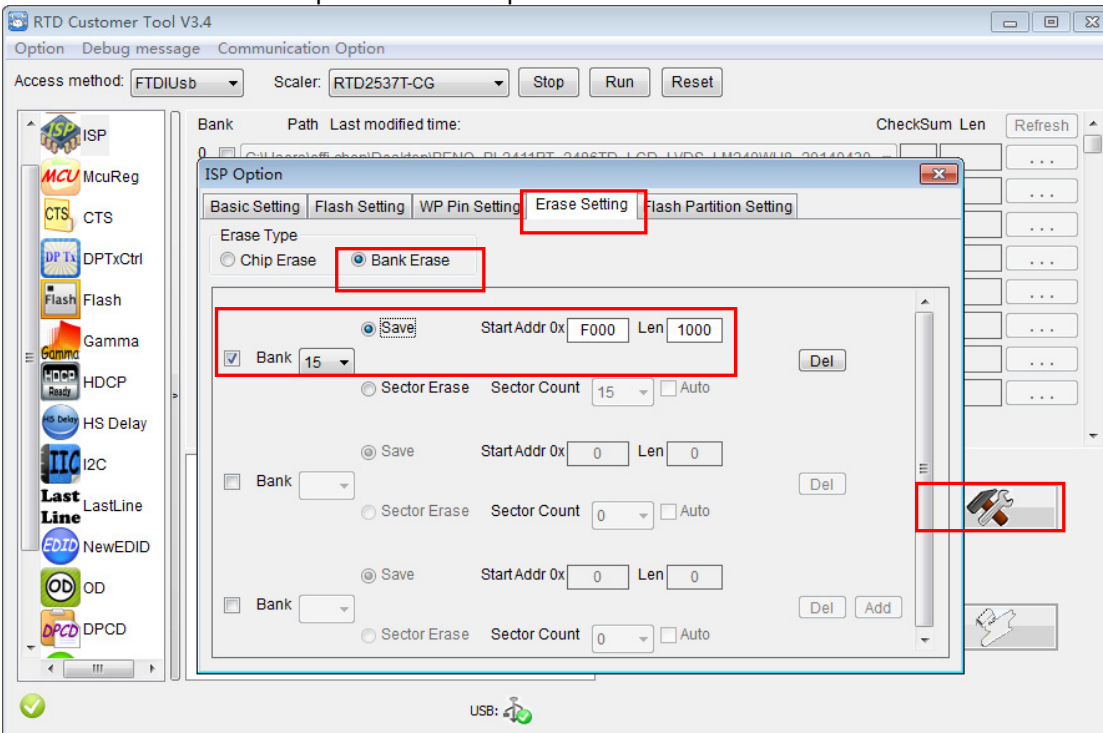

4.1. `RTDTool.exe` double- clicks the icon to run it.
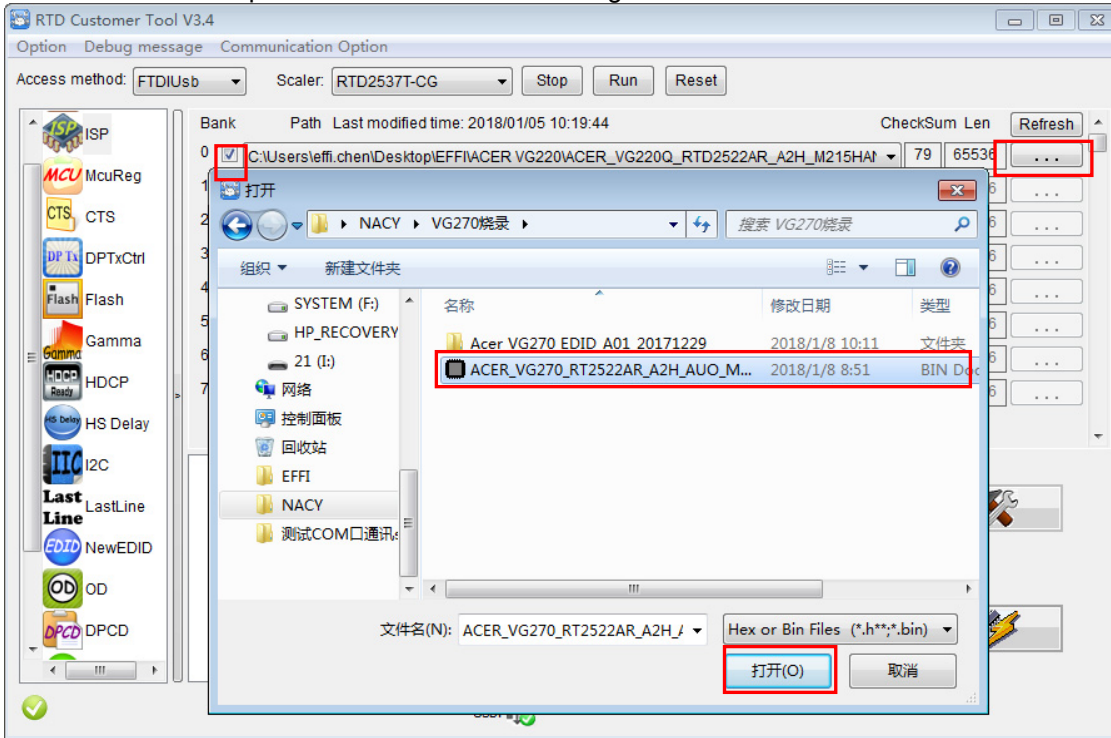
Note: Must to install driver firstly

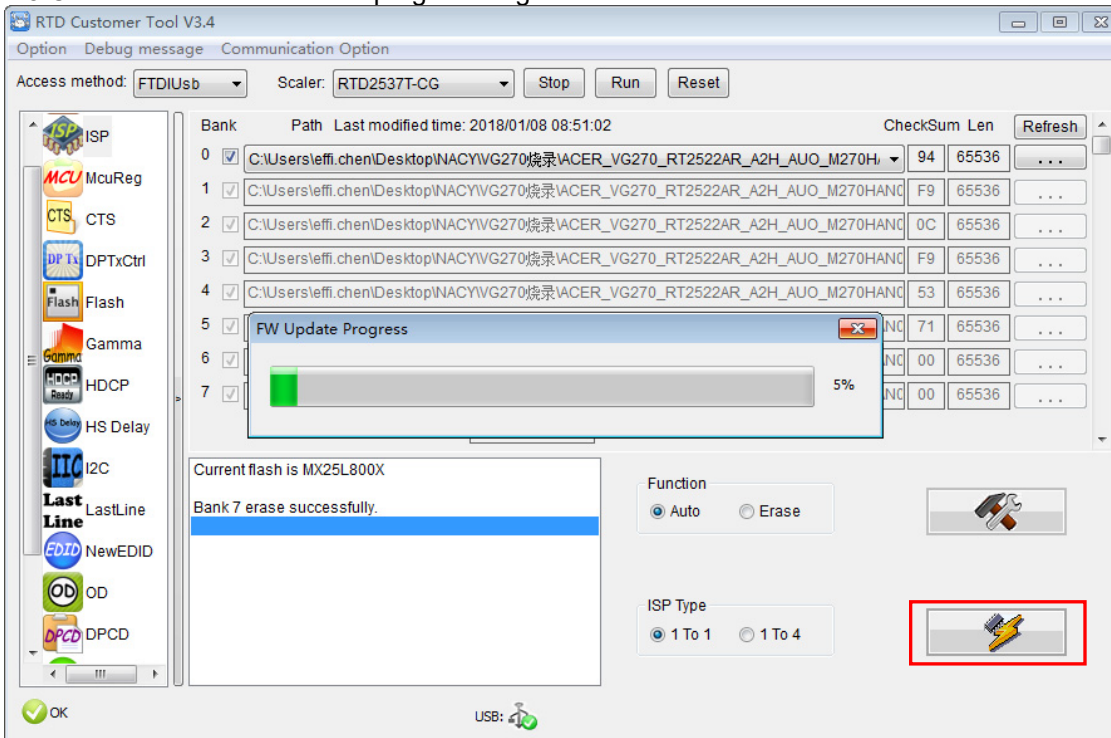## 4.2. Choose the FTDIUSB communication way.

4.3 Click "ISP" and "ISP Option" to set the parameter.
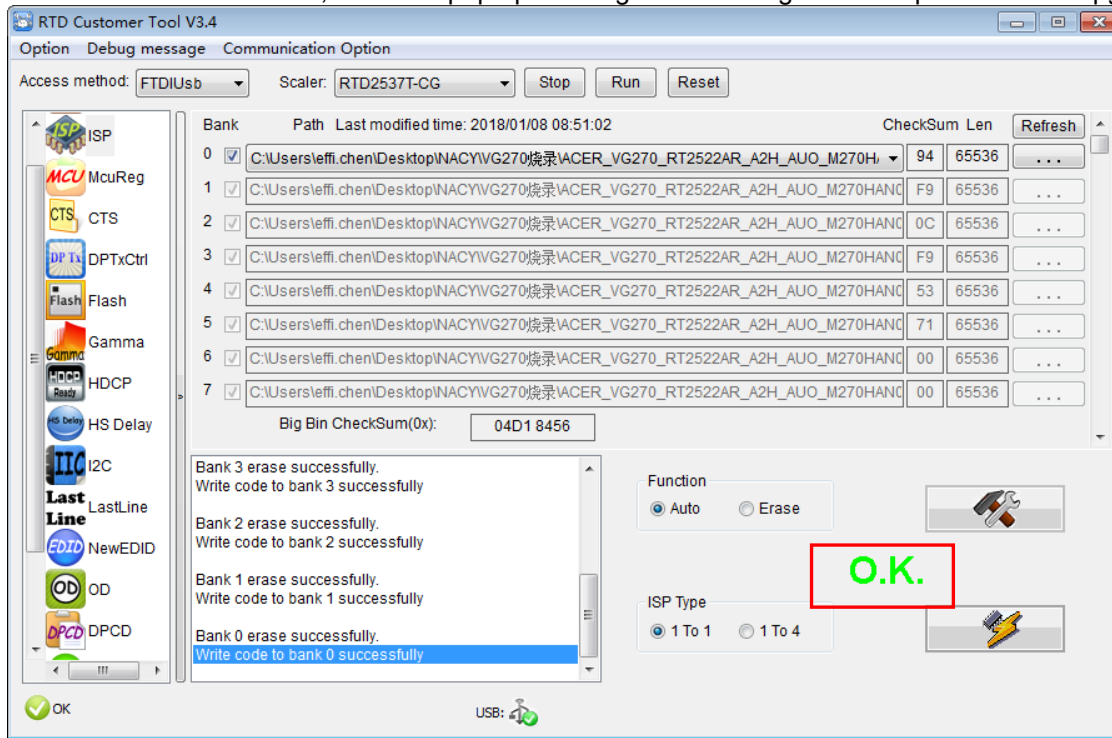
4.4 Close the "ISP Option" window and click the "BigBin" to load the correct F/W.

4.5 Click to start programming.

4.6 After about 20 minutes, there will pop up message as below figure which promotes the upgrade successful.

5. Check the FW version after upgrade.

5.1. The way to open factory menu.

(1) Connect VGA source to monitor and turn it on.

(2) The way to factory menu: Pressing the hot key button and DC on, when the screen lights, release the key and press the left botton again to open the menu with "F" and select "F" to open factory menu.

Check this F/W version.

```
Model:VG270
Chips:RTD2522AR
Panel:AUO M270HAN01.1
Date :20171229 Version:0.03

AutoColor
Gain    R 165 G 167 B 156
Offset  R 112 G 108 B 110

        BRI 100   CON  50

Warm    R 128 G 128 B 128
Normal  R 125 G 122 B 128
Cool    R 111 G 110 B 128
Slight  R 128 G 128 B 115
Light   R 128 G 128 B 109
Medium  R 128 G 128 B  99
Strong  R 128 G 128 B  91


DFM    :         OFF
Burn In:         OFF
NVRAM Initial
Force Logo Off OFF
HW AutoColor    FAIL
SSC  8     LVDS Current  2
Exit
```

(3)Do "Auto Color" in factory mode.

```
Model:VG270
Chips:RTD2522AR
Panel:AUO M270HAN01.1
Date :20171229 Version:0.03

AutoColor       PASS
Gain    R 158 G 168 B 150
Offset  R 112 G 108 B 110

        BRI 100   CON  50

Warm    R 128 G 128 B 128
Normal  R 125 G 122 B 128
Cool    R 111 G 110 B 128
Slight  R 128 G 128 B 115
Light   R 128 G 128 B 109
Medium  R 128 G 128 B  99
Strong  R 128 G 128 B  91


DFM    :         OFF
Burn In:         OFF
NVRAM Initial
Force Logo Off OFF
HW AutoColor    FAIL
SSC  8     LVDS Current  2
Exit
```

5.2. Do factory reset in user menu.
    (1)Restart the monitor after open factory menu. And then open the user menu.
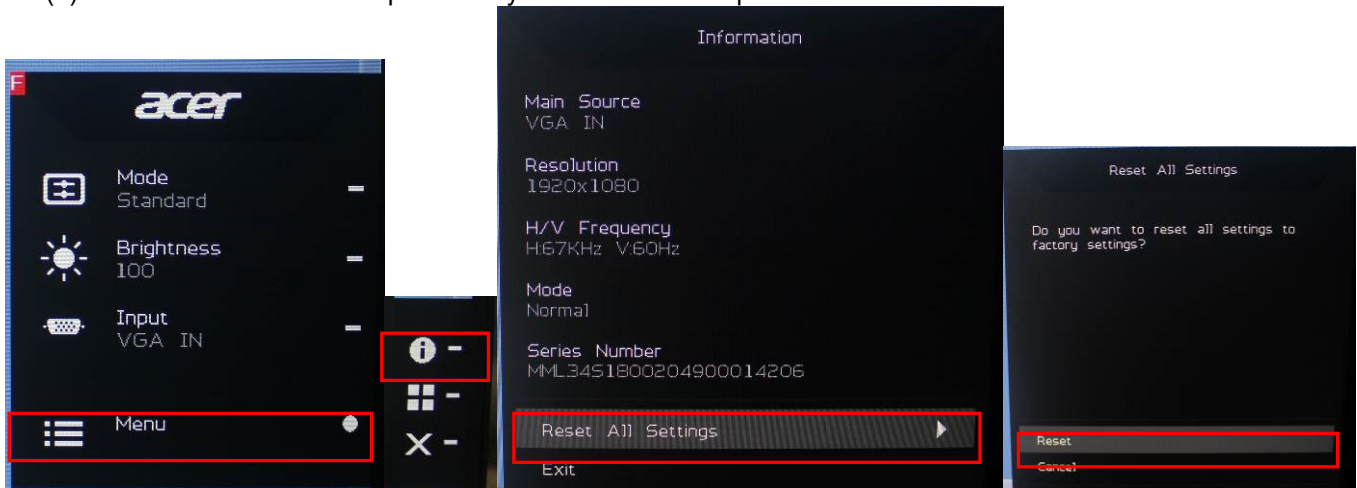
    (2)Factory reset will turn off "Burn in" mode which screen color switches among red, green, blue and black.
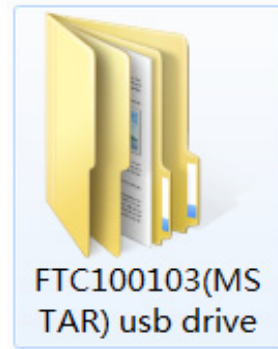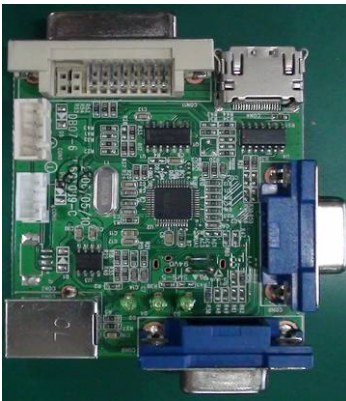
4. Writing EDID Process

1. Materials list

VGA cable
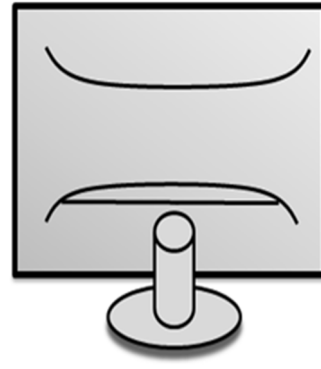TPV P/N: 089G728 GAA DB

USB cable
TPV P/N: 089G1758 X

FTC100103(MS TAR) usb drive

USB port driver

ISP JIG: 715GT089-B

PC

Monitor

TPVDDC_V066_20170512.exe
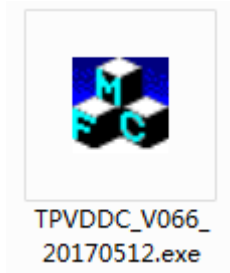
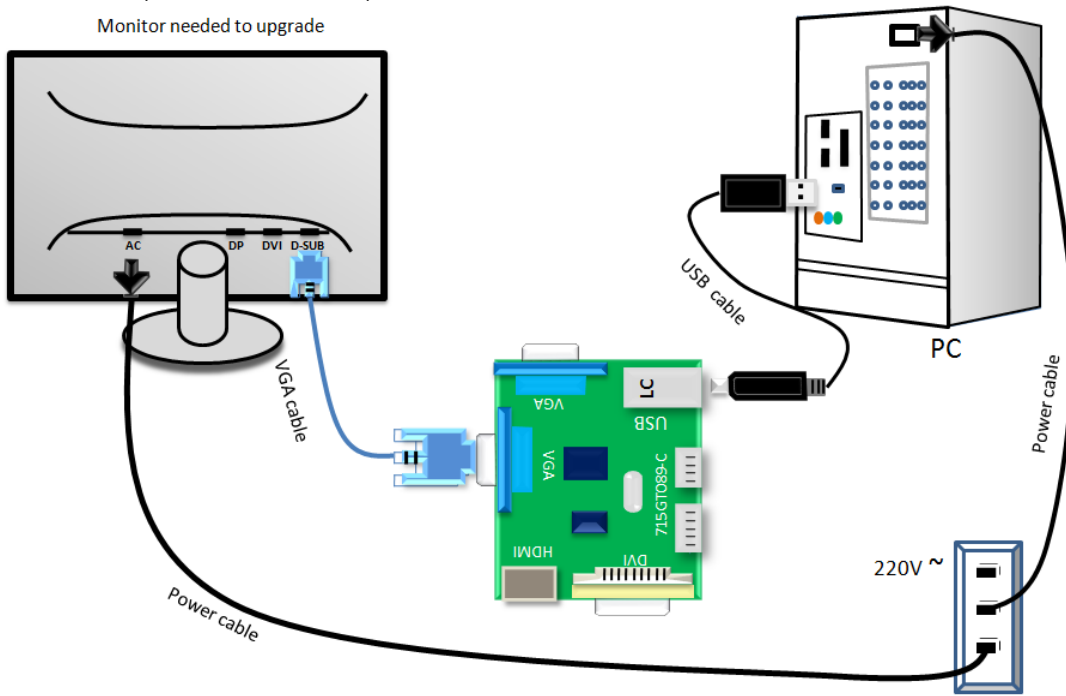ISP tool
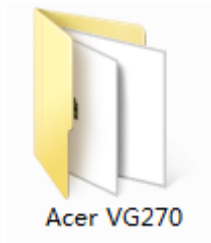
Acer VG270

EDID

2. Connection(DC on the monitor)
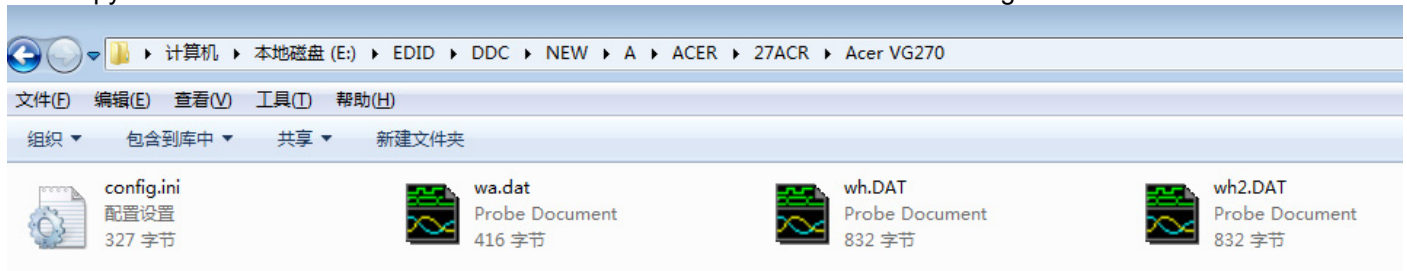
Monitor needed to upgrade

3. Install USB driver.

4. Prepare the EDID written.

4.1. Change the EDID files name as below rule.

Analog EDID ⟶ WA.dat   HDMI EDID ⟶ WH.dat

HDMI2 EDID ⟶ WH2.dat

4.2. Copy these files to one folder named as Acer VG270 which must contains "config.ini" file.

4.3. Copy Acer VG270 to DDC folder and put DDC and ISP tool together.

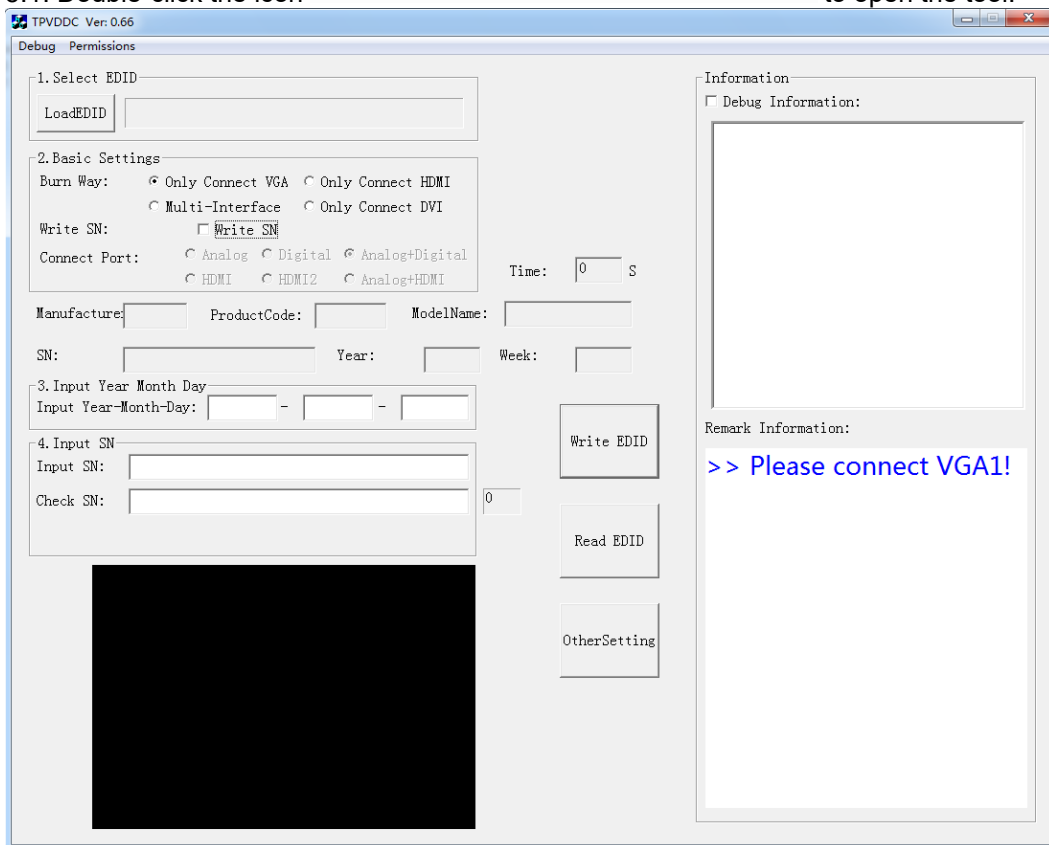4.4 Setting the Config as below.

5. Run the ISP tool

Note: If the F/W Upgrade use the same ISP tool as the EDID writing, you must close the F/W Upgrade tool before running the EDID writing tool.
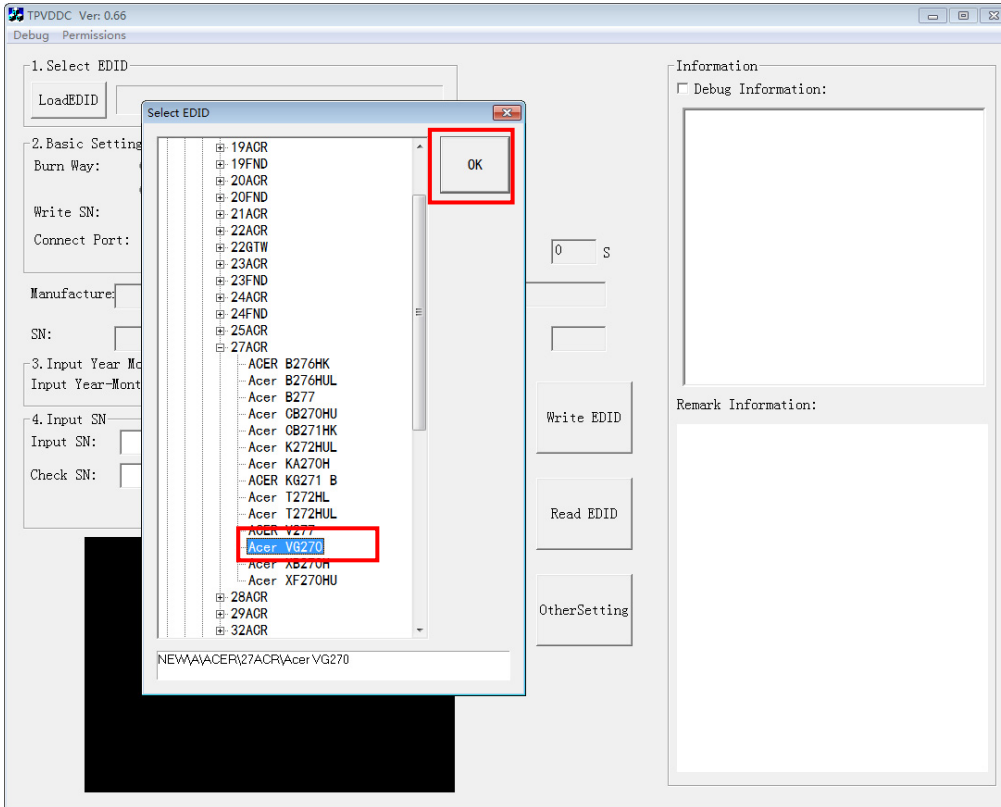

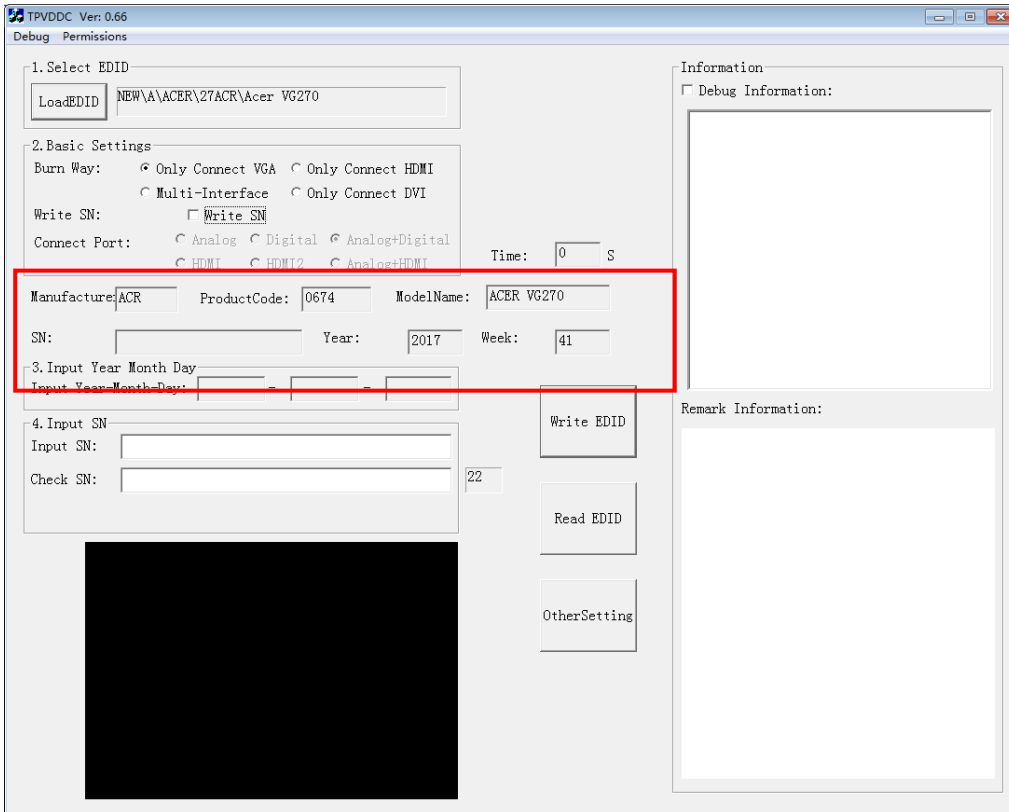5.1. Double-click the icon   to open the tool.
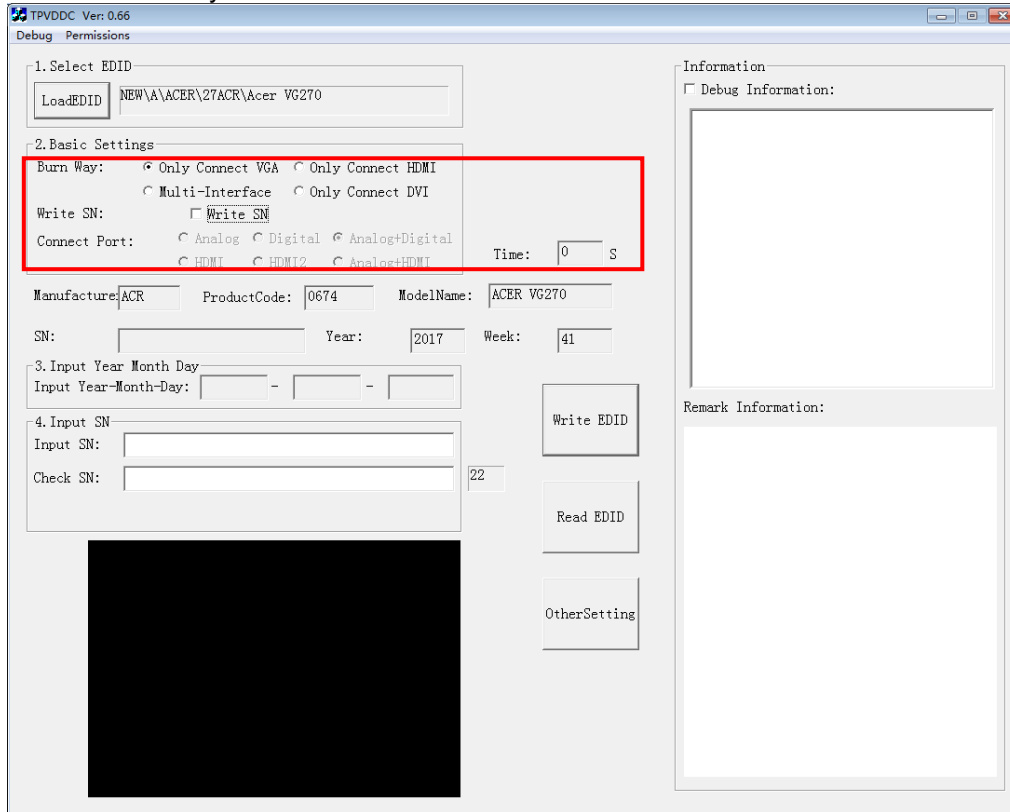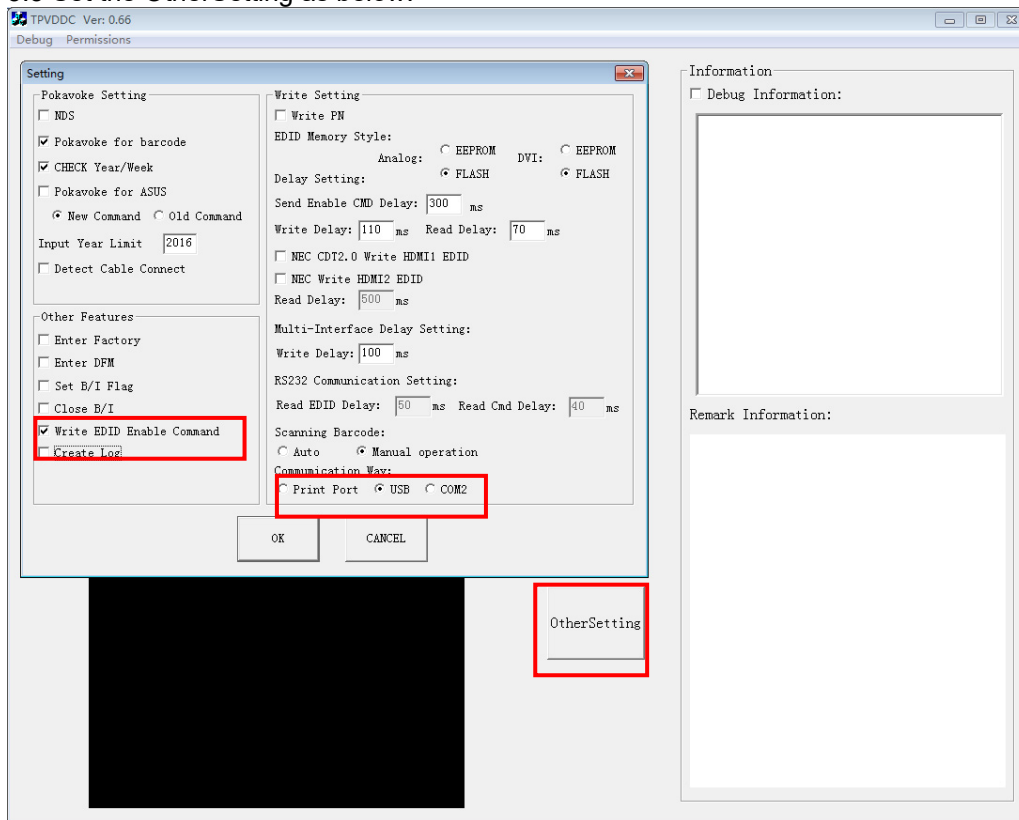
5.2. Select the EDID folder.

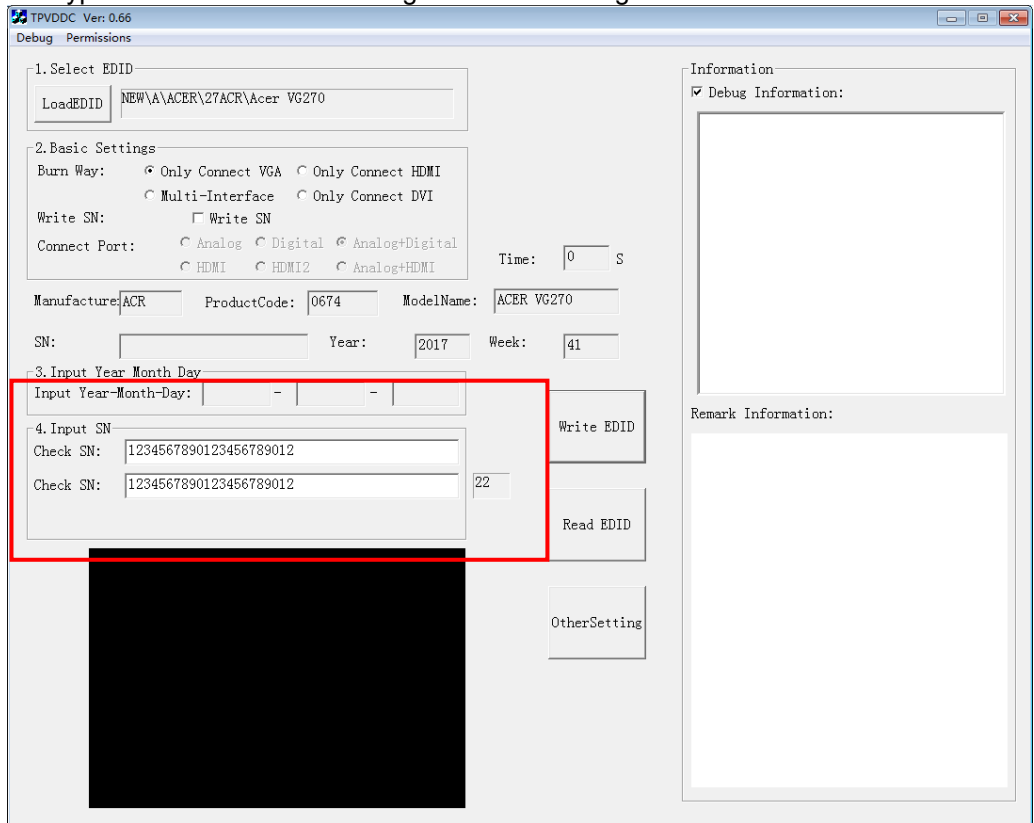## 5.3. Load EDID successful.

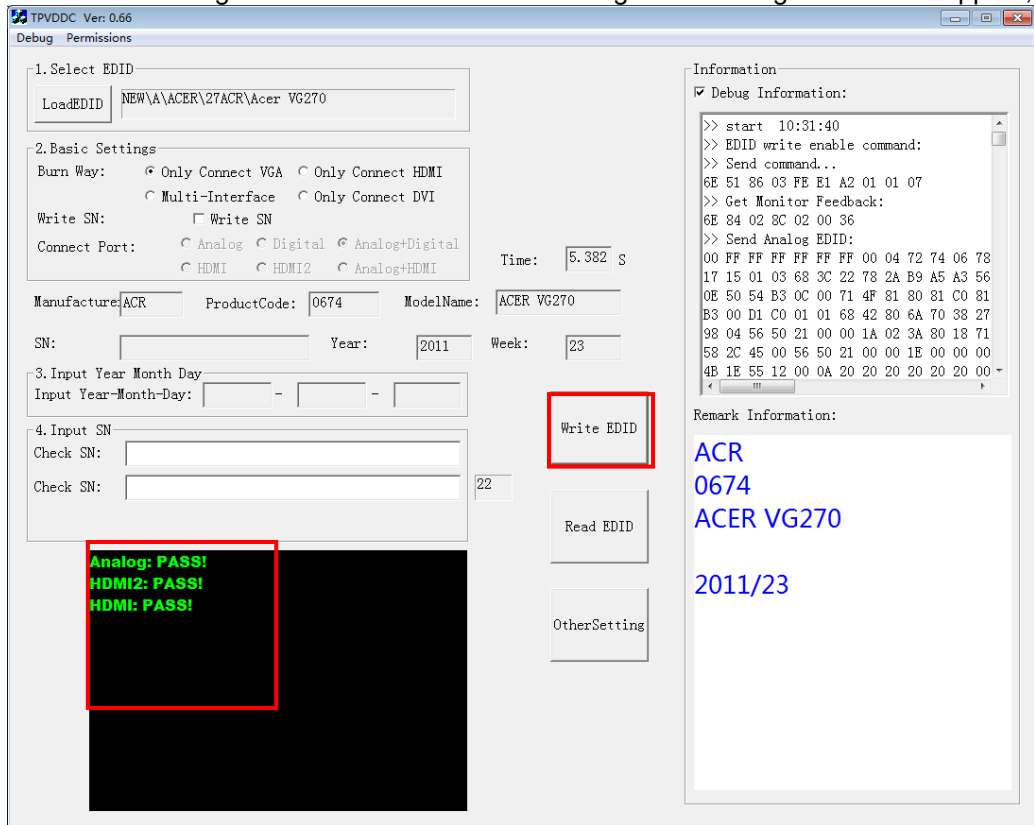## 5.4 Tick the "Only connect VGA".

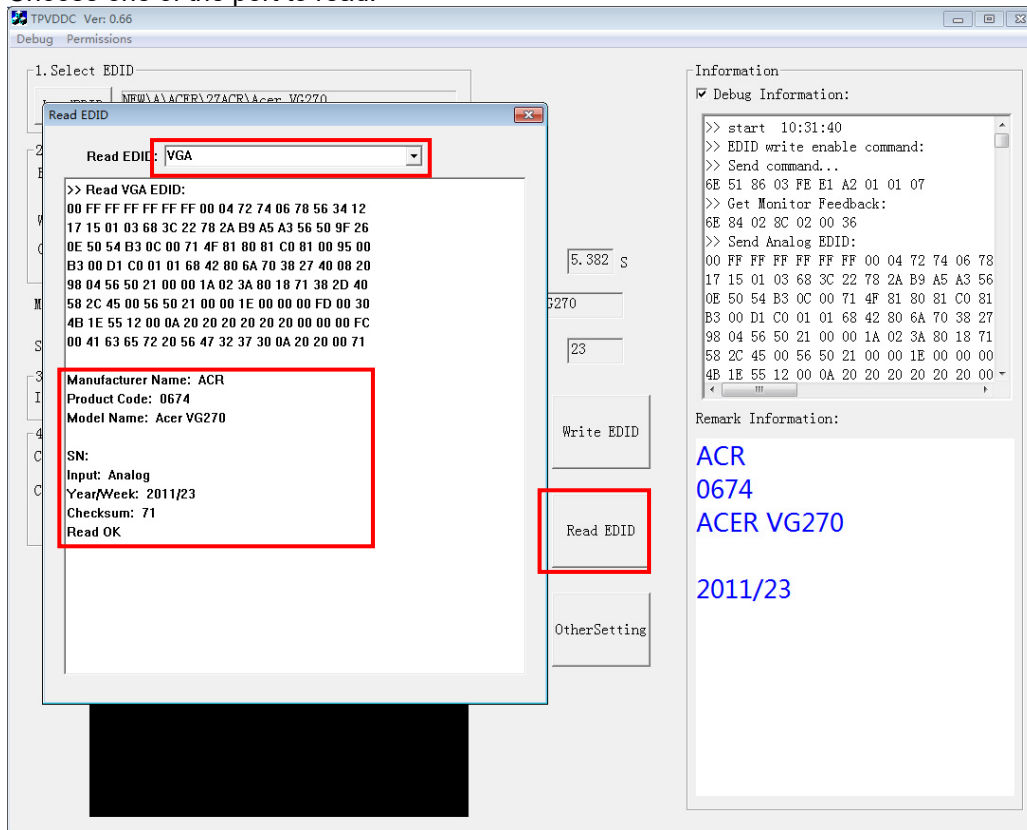## 5.5 Set the OtherSetting as below.

5.6 Type in the date and the 22 digit S/N and "Debug Information".

5.7. Start to writing. Click "write EDID" to start writing. When The green "PASS" appear, the process is finished.

5.8 After writing the EDID pass, you must read the EDID to ensure the EDID data had been write into the monitor. Choose one of the port to read.

1. If it appears all "00" when read the EDID data,you need reconnect the ISP tool or install the the driver of the ISP tool again.

Note: While reading the DP EDID data, you must light up the monitor or connect a signal to the monitor. If after doing this setp the EDID still shows all "00", but others port can show the EDID data, the EDID data of DP uaually include in FW,can't read out it.

2. If it appears all "FF", it shows that the EDID data of the Main board is empty, you must writing the EDID again.
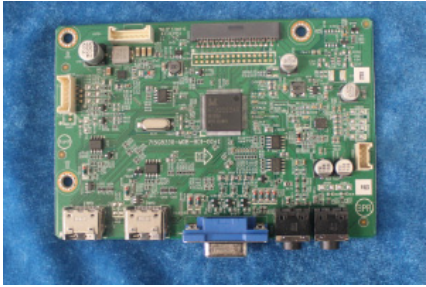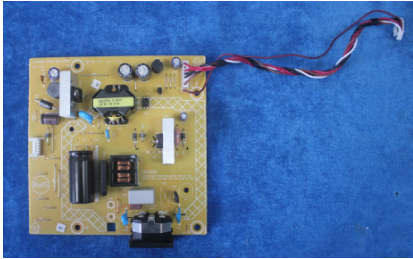
6. Troubleshooting.
6.1. Can't write!
   (1) AC on the monitor and turn on it.(Restart the monitor)
   (2)Take apart the monitor and connect the 7pin of EEPROM to GND to diable write protection then write EDID one by one.
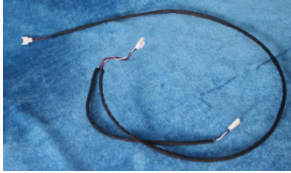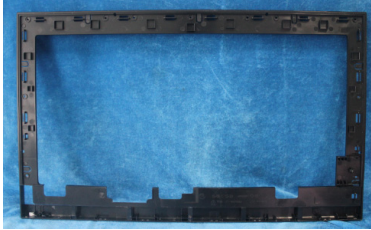   (3) Set the Burn in on last to try again.

5. FRU (Field Replaceable Unit) List

This chapter gives you the FRU (Field Replaceable Unit) listing in global configurations of ACER VG270 Refer to this chapter whenever ordering for parts to repair or for RMA (Return Merchandise Authorization).

Please note that WHEN ORDERING FRU PARTS, you should check the most up-to-date information available on your regional web or channel. For whatever reasons a part number change is made, it will not be noted on the printed Service Guide. For ACER AUTHORIZED SERVICE PROVIDERS, your ACER office may have a DIFFERENT part number code from those given in the FRU list of this printed Service Guide. You MUST use the local FRU list provided by your regional ACER office to order FRU parts for repair and service of customer machines.

NOTE: To scrap or to return the defective parts, you should follow the local government ordinance or regulations on how to dispose it properly, or follow the rules set by your regional ACER office on how to return it.

Picture	Description	TPV Part No.	ACER Part No.
	MAIN BOARD	756GQHCB0BA158000Q	NA
	POWER BOARD	PLPCHD541KVG7	NA
	KEY BOARD	KEPCLQA6	55.TCCM2.003
	LED BOARD	LEPCLQA2	55.TCCM2.004
	SPEAKER LEFT 4-OHM-2.5W-63x22mm-50mm-BOX	378G0025689CLA	23.TCCM2.001
	SPEAKER RIGHT 4-OHM-2.5W-63x22mm-50mm-BOX	378G0025689CRA	23.TCCM2.002

	CABLE 30P-30P 450MM(MB TO PANEL)	395G179X30B8820000	NA
	CABLE 4P-2P+2P 650/220MM(MB TO SPEAKER)	395GH20004WM148000	50.TCCM2.002
	CABLE 6P-6P 450MM(MB TO KEY BOARD)	395GH20006XM208000	50.TCCM2.003
	CABLE 6P-6P 200MM(PB TO PANEL)	395GH20006GM209000	50.TCCM2.004
	MIDDLE FRAME ASSY W LOGO	705GQHCS034447	60.TBLM2.001
	REAR COVER	A34G4569AEM07S0130	NA
	Joystick BUTTON	A33G2238AEM01L0100	60.TCCM2.007

	FUNCTION KEY	A33G2236AEM01L0100	60.TBLM2.003
	STAND HINGE ASSY	705GQHCS034504	NA
	BASE ASSY	705GQHCS034497	NA
	INSULATING-SHEET(BLACK)	Q52G18016090HF0AJY	47.TBLM2.002
	MAINFRAME	Q15G320010130100ZA	NA
	D-SUB CABLE 1800	089G 728CAA 2A	50.LZJM2.003
	HDMI CABLE 1800	389G1848GAA502	50.T27M2.010

	AC POWER CORD 1800 for Europe	389G404A18NISG	27.T1BM2.001
	AUDIO CABLE 1800	389G017356G53R	50.LXPM2.012

6. Trouble shooting instructions

Before sending your LCD monitor for servicing, please check the troubleshooting list below to see if you can self-diagnose the problem.

HDMI/DP Mode (Optional)

Problem	LED status	Remedy
No picture visible	Blue	Using the OSD menu, adjust brightness and contrast to maximum or reset to their default setting.
	Off	Check the power switch. Check if the AC power cord is properly connected to the monitor.
	Amber	Check if the video signal cable is properly connected at the back of monitor. Check if the computer system is switched on and in power saving/standby mode. If OSD Lock is On, the LED status set Amber.

Note: Acer monitor is purposed for video and visual display of information obtained from electronic devices.