# 1. 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.
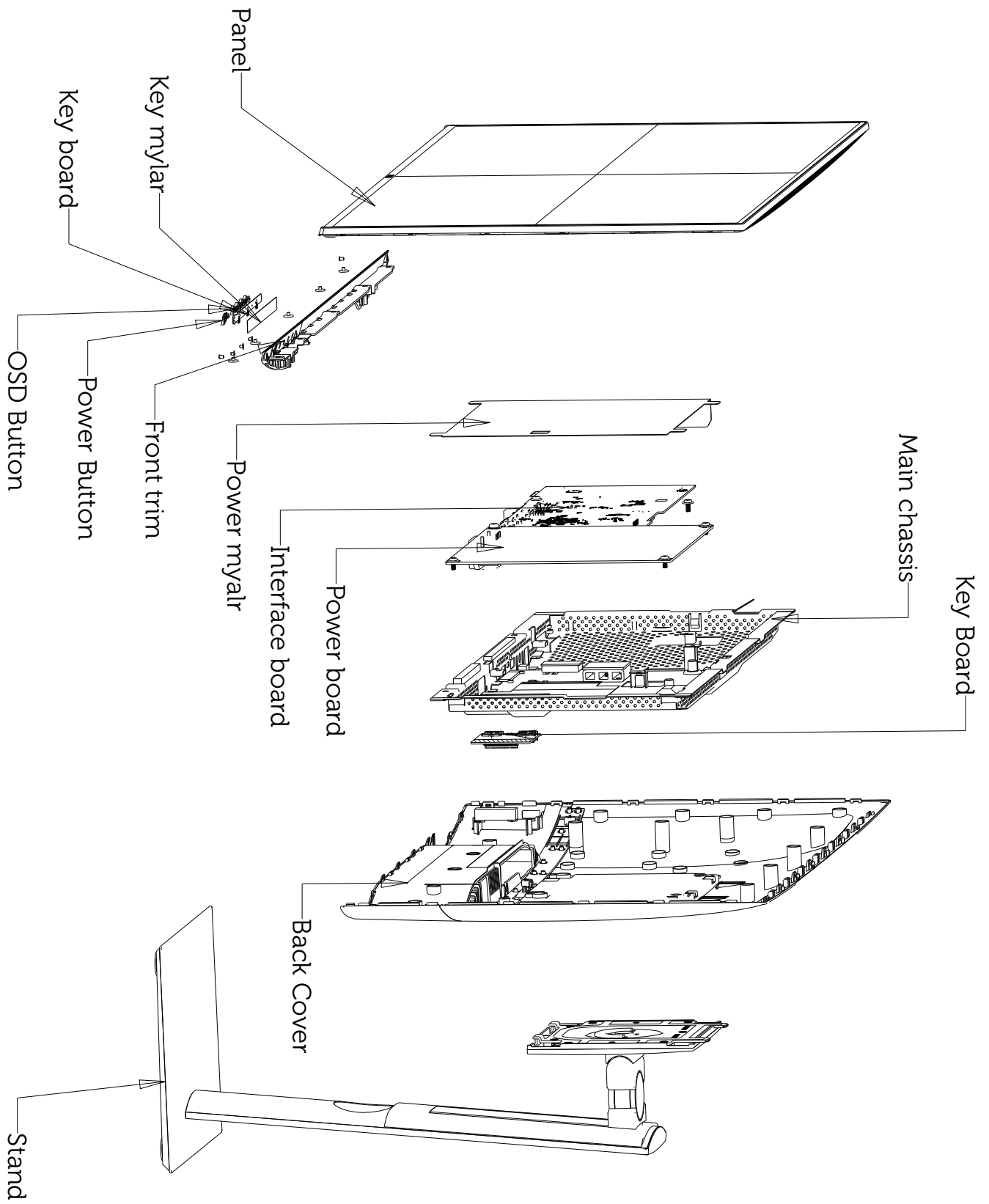
Qualified Repairability:

Proper service and repair is important to the safe, reliable operation of all series products. The service providers recommended by vender should be 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.
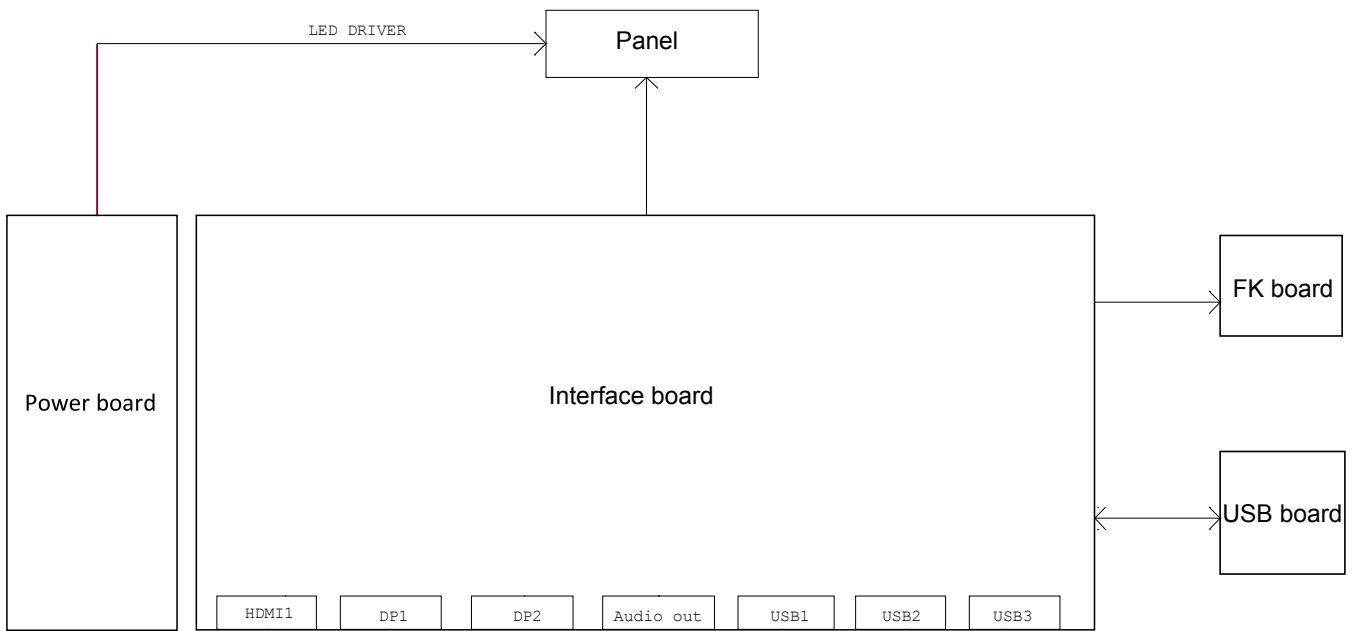
NOTICE:

**!** To avoid electrical shocks, the products should be connected 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 expose 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 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.

## 2. Exploded view diagram with list of items



Panel

Key mylar

Key board

OSD Button

Power Button

Front trim

Power myalr

Interface board

Power board

Main chassis

Key Board

Back Cover

Stand

# 3. Wiring Connectivity Diagram

LED DRIVER

Panel

Power board

Interface board

FK board

USB board

| HDMI1 | DP1 | DP2 | Audio out | USB1 | USB2 | USB3 |

# 4. Disassembly and Assembly Procedures

Necessary repair and test equipment:

1. Philips-head screwdriver

2.1 Disassembly Procedures:

Remove the monitor stand base:
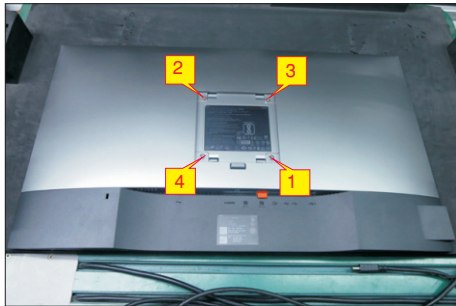
**S1**
1. Place the monitor on a soft cloth or cushion.
2. Press and hold the stand-release button.
3. Lift the stand up and away from the monitor.
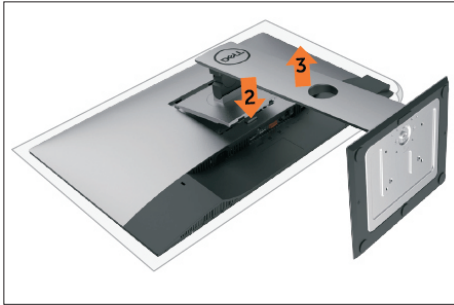


**S2** Use a Philips-head screwdriver to remove four screws for unlocking mechanisms.
(No.1~4 screw size=M4x8; Torque=10~11kgfxcm)



**S3** Wedge your fingers between the rear cover and the middle bezel on the corner of the top side of the monitor to release the rear cover, then use one hand to press the middle bezel, the other hand to pull up carefully the rear cover in order of arrow preference for unlocking mechanisms of rear cover.
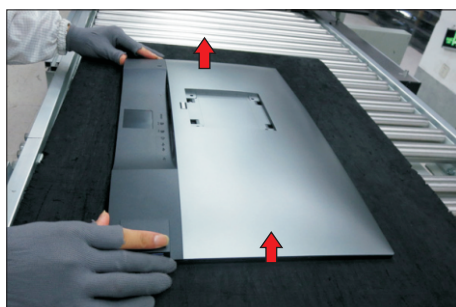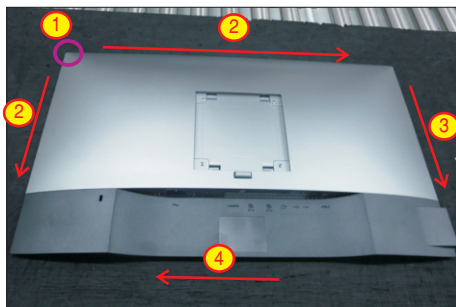


**S4** Lift the rear cover up carefully. Disconnect the USB FFC cable from the connector of the interface board, and then remove the rear cover.
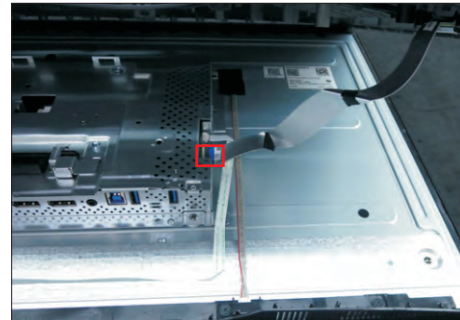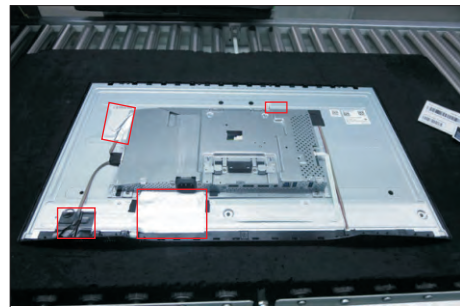


**S5** Use a Philips-head screwdriver to remove one screw for unlocking the USB board unit, then release the USB board unit and put it aside.
(No.1 screw size=M3x6, Torque=4±0.5kgfxcm)



**S6** Tear off 2pcs aluminium foils for unfixing the bracket, then tear off 1pcs mylar tape, and then tear off 1pcs acetate tape for unlocking the panel lamp cable.



**S7** Tear 1pcs PVC tape, then use a proper tool to release the function key cable from the connector, then pull the function key cable high for releasing the function key cable as the picture below shown.
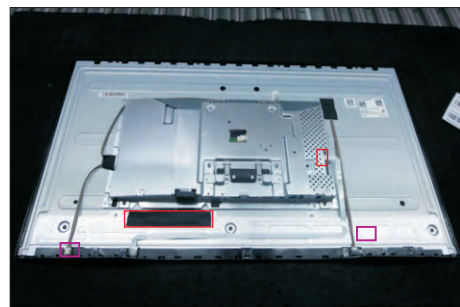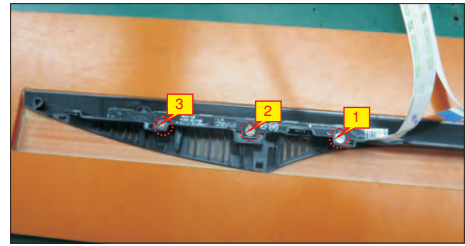
# 4. Disassembly and Assembly Procedures

**S8** Use a Philips-head screwdriver to remove 5pcs screws for unlocking the front bezel with the assembled unit.
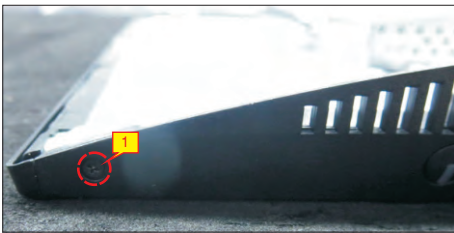
(No.1~5 screw size=M2x2.7, Torque=3±0.5kgfxcm)



**S9** Use a Philips-head screwdriver to remove 2pcs screws(left and right) for unlocking the front bezel with the panel module, then disassemble the front bezel with the unit and put it aside.

(No.1~2 Screw size= M3x0.5x4, Torque=3~4kgfxcm)



**S10** Tear off the mylar tape on the function key board, then use a Philips-head screwdriver to tighten 3pcs screws for locking the function key board with the front bezel.

(No.1~3 Screw size= M2x2.4, Torque=1±0.2kgfxcm)



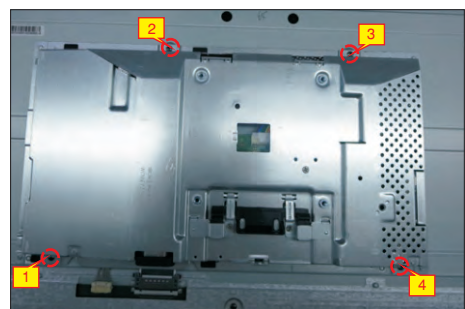

**S11** Tear off 1pcs acetate tape, then disconnect the panel lamp cables from the connectors of the panel module and power board.
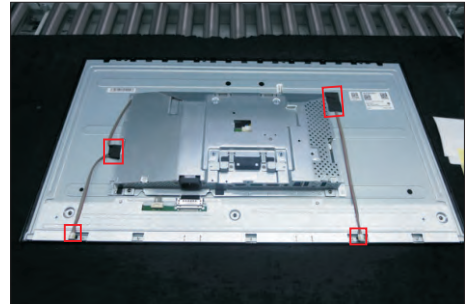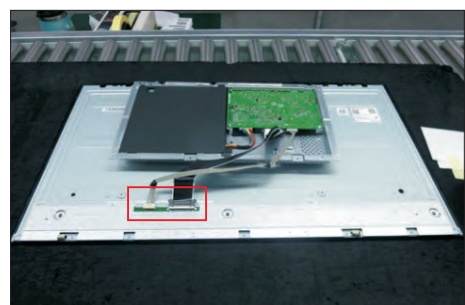


**S12** Use a Philips-head screwdriver to remove 4pcs screws for locking the bracket chassis module with the panel.

(No.1~4 Screw size= M3x0.5x3, Torque=5~6kgfxcm)



**S13** Lift up the bracket chassis, and disconnect the LVDS cable from the connector of the panel module, then put the bracket chassis on a protective cushion.
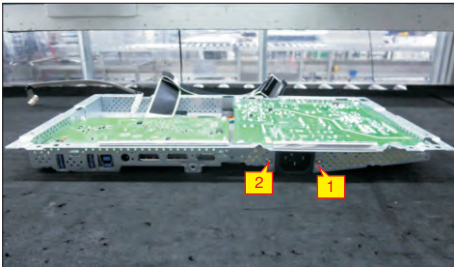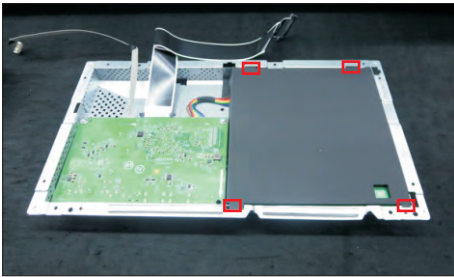
# 4. Disassembly and Assembly Procedures



**S14**  Turn over the bracket chassis module. Remove the Mylar from the hooks of the bracket, and then use a Philips-head screwdriver to remove two screws for unlocking AC power outlet.
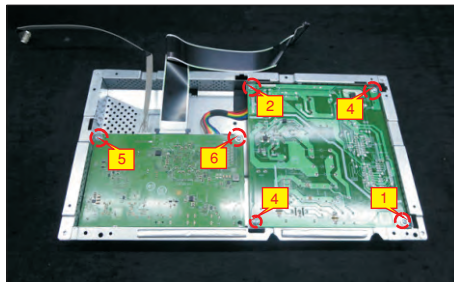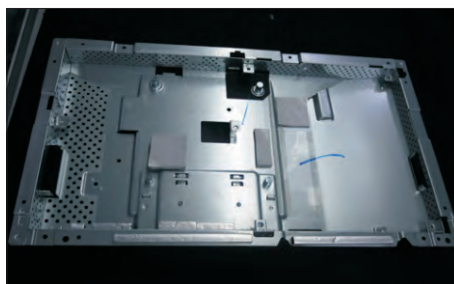(No.1~2 screw size=M3x10, Torque=6±0.5kgfxcm)





**S15**  Use a Philips-head screwdriver to remove 6pcs screws for unlocking power board and interface board.
(No.1 screw size=M4x8, Torque=6±0.5kgfxcm;
 No.2~6 screw size=M3x7.5, Torque=6±0.5kgfxcm)



**S16**  Remove the circuit boards from the bracket chassis module carefully, and then disconnect all of the cables.
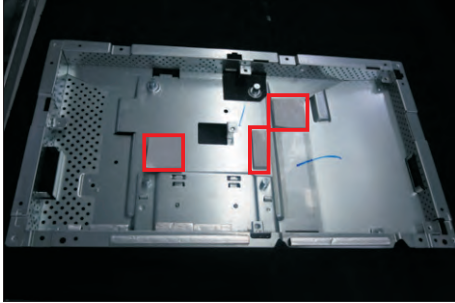
# 4. Disassembly and Assembly Procedures
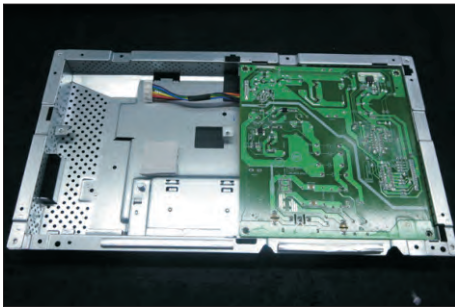
4.2 Assembly Procedures:

**S1** Place a bracket chassis base on a protective cushion, then stick 3pcs Silicon sheets on the position as the picture below shown.



**S2** Turn over a power board and put the power board into the bracket chassis, settle the panel power cable to the correct position.



**S3** Take a interface board, connect a LVDS cable to the connector of the interface board, then connect the cable of the power board to the connector of the interface board. Turn over the interface board and locate it into the bracket. Use a Philips-head screwdriver to tighten 6pcs screws for locking the power board and interface board.
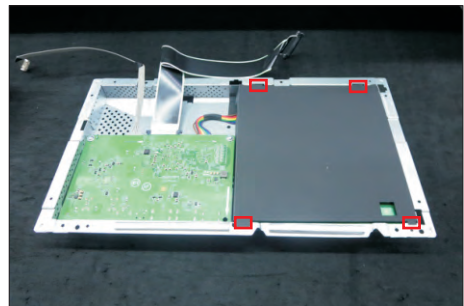
(No.1 screw size=M4x8, Torque=6±0.5kgfxcm;
 No.2~6 screw size=M3x7.5, Torque=6±0.5kgfxcm)
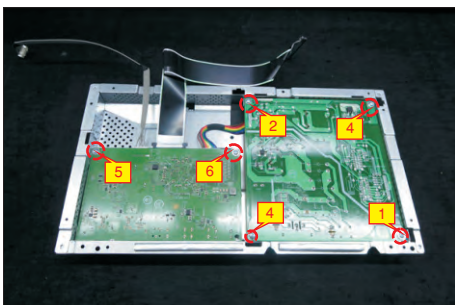




**S4** Use a Philips-head screwdriver to tighten two screws for locking the AC-power outlet connector. Take a mylar to insert the hooks of the bracket to cover the power board.

(No.1~2 screw size=M3x8, Torque=6~8kgfxcm)





**S5** Panel preparation: Take out 1pcs panel module from the carton, remove the protective film by tearing off the tapes, then Examine the panel surface according to inspection criteria. Turn over the panel to place screen faced down for later assembling.
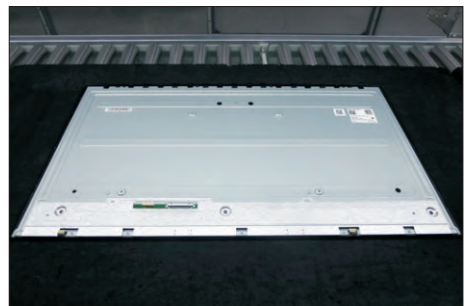


**S6** Move the bracket chassis module close to the panel module, then connect the LVDS cable and panel power cable to the connectors of the panel module, then turn over the bracket chassis and put it on the back of the bracket chassis module.
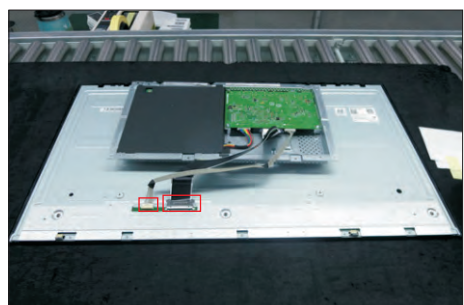
# 4. Disassembly and Assembly Procedures



**S7** Adjust the bracket chassis module, and then use a Philips-head screwdriver to tighten 4pcs screws for locking the bracket chassis module with the panel.
(No.1~4 Screw size= M3x0.5x3, Torque=5~6kgfxcm)



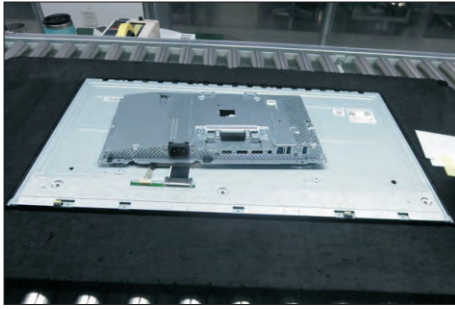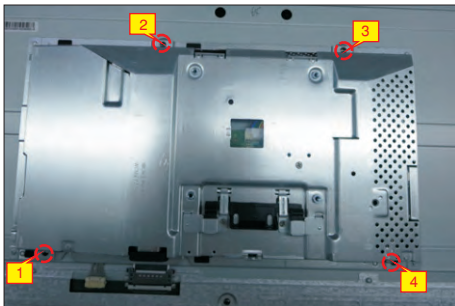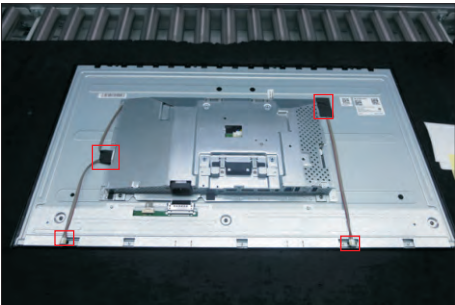**S8** Take 1pcs panel power cable, plug the cable to the connectors of the panel module and power board, then fix the cables with 1pcs acetate tape.



**S9** Take 1pcs function key board, 1pcs lens and 1pcs middle bezel, assemble the lens with the front bezel, and then locate the function board into the specific position of the front bezel. Put the unit into a fixture, use a Philips-head screwdriver to tighten 3pcs screws for locking the function key board with the front bezel. Stick 1pcs mylar tape to cover the function key board.
(No.1~3 Screw size= M2x2.4, Torque=1±0.2kgfxcm)
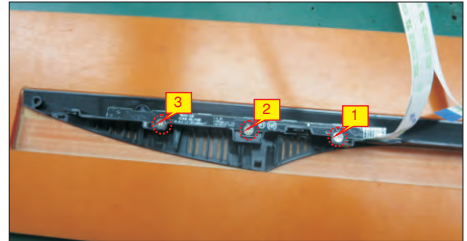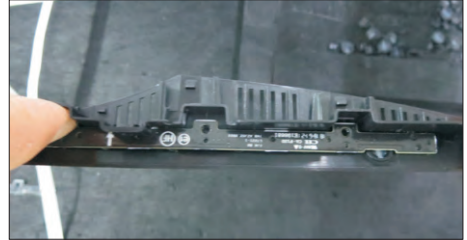










**S10** Assemble the front bezel with the assembled unit, then use a Philips-head screwdriver to tighten 2pcs screws(left and right) for locking the front bezel with the panel module.
(No.1~2 Screw size= M3x0.5x4, Torque=3~4kgfxcm)

# 4. Disassembly and Assembly Procedures



**S11** Use a Philips-head screwdriver to tighten 5pcs screws for locking the front bezel with the assembled unit.
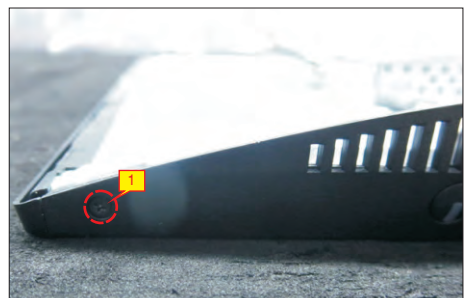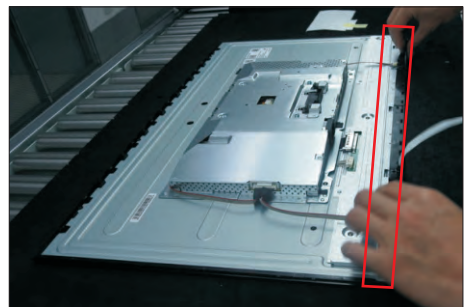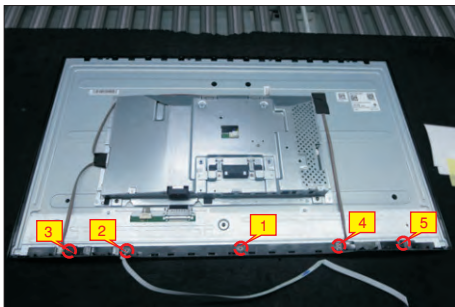
(No.1~5 screw size=M2x2.7, Torque=3±0.5kgfxcm)



**S12** Tear off all the double-faced adhesive tapes which sticked on the back of the function key cable, and then fix the cables with the double-faced tape. Use a proper tool to connect the function key cable to the connector of the interface board. Stick 1pcs PVC tape to cover the LVDS and power connectors.
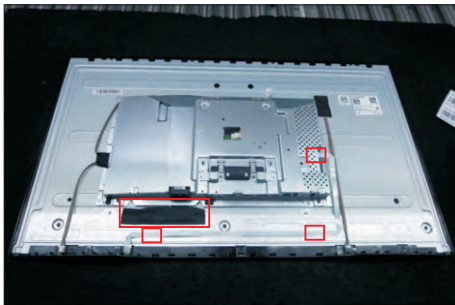


**S13** Stick 1pcs shading mylar tape to cover the left lamp connector, stick 1pcs acetate tape to fix the panel lamp cables on the specific position, and then stick 2pcs aluminum foil to fix the bracket chassis as the picture below shown.
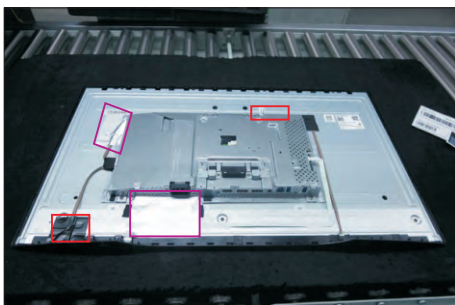


**S14** Take a USB board, a USB hub and a connect cable. Connect the cable to the USB board, then locate the USB board into the USB hub. Stick 1pcs aluminum foil on one side of the USB hub, then locate the USB unit into the hook of a rear cover. Use a Philips-head screwdriver to tighten one screw for locking the USB unit with the rear cover.

(No.1 screw size=M3x6, Torque=4±0.5kgfxcm)
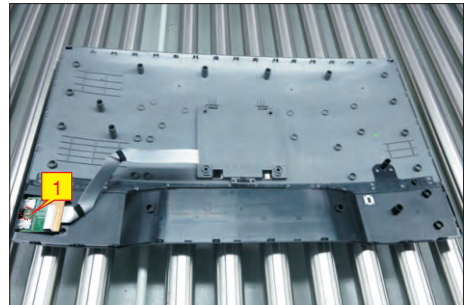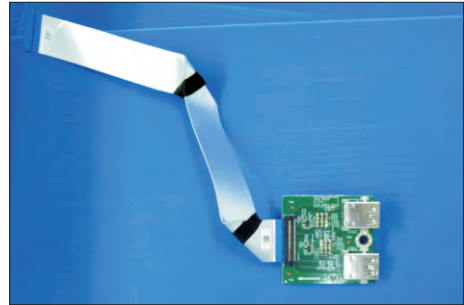




**S15** Move the assembled rear cover close to the panel unit, then connect the USB FFC cable to the connector of interface board, then stick the USB FFC cable on the panel module. Put down the rear cover and push the rear cover on the positions marked as the picture below shown for mechanisms engagement.
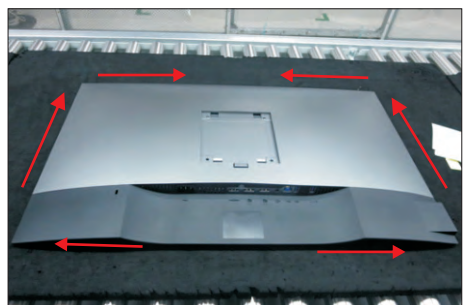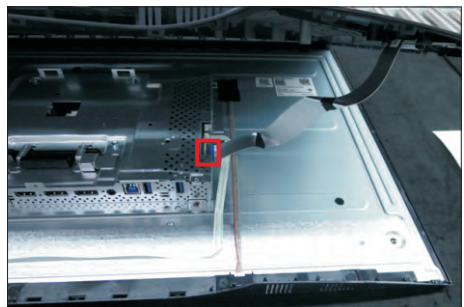
# 4. Disassembly and Assembly Procedures

**S16**
Use a Philips-head screwdriver to tighten four screws for locking mechanisms. Stick two pieces of lable on the specific positions, then insert a DP out Cap into the DP out connector.
(No.1~4 screw size=M4x10; Torque=9±0.5kgfxcm)
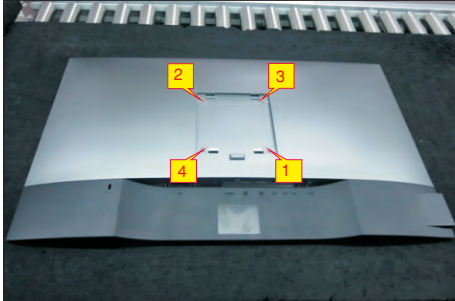




**S17**
Take a stand base close to the monitor. Fit the two tabs on the upper part of the stand into the grooves on the back of the monitor, and then lower the stand so that the monitor mounting area snaps onto the stand.



**S18**
Lift up the monitor to checking the gap between the front bezel with panel module , then provide power supply and a video signal to the monitor, then turn on the monitor for functionality check.

⚠️ **WARNING: Before you begin any of the procedures in this section, follow the Safety Instructions.**

# Self-Test

Your monitor provides a self-test feature that allows you to check whether your monitor is functioning properly. If your monitor and computer are properly connected but the monitor screen remains dark, run the monitor self-test by performing the following steps:

**1** Turn off both your computer and the monitor.

**2** Unplug the video cable from the back of the computer. To ensure proper Self-Test operation, remove all video cables from the back of computer.

**3** Turn on the monitor.

The floating dialog box should appear on-screen (against a black background), if the monitor cannot sense a video signal and is working correctly. While in self-test mode, the power LED remains white. Also, depending upon the selected input, one of the dialogs shown below will continuously scroll through the screen.

U2419H/U2419HX                          U2719D/U2719DX



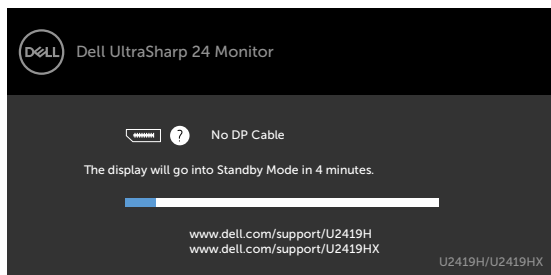| DELL Dell UltraSharp 24 Monitor | DELL Dell UltraSharp 27 Monitor |
| No DP Cable | No DP Cable |
| The display will go into Standby Mode in 4 minutes. | The display will go into Standby Mode in 4 minutes. |
| www.dell.com/support/U2419H www.dell.com/support/U2419HX | www.dell.com/support/U2719D www.dell.com/support/U2719DX |

or                                      or

| DELL Dell UltraSharp 24 Monitor | DELL Dell UltraSharp 27 Monitor |
| No HDMI Cable | No HDMI Cable |
| The display will go into Standby Mode in 4 minutes. | The display will go into Standby Mode in 4 minutes. |
| www.dell.com/support/U2419H www.dell.com/support/U2419HX | www.dell.com/support/U2719D www.dell.com/support/U2719DX |

**4** This box also appears during normal system operation, if the video cable becomes disconnected or damaged.

**5** Turn off your monitor and reconnect the video cable; then turn on both your computer and the monitor.

If your monitor screen remains blank after you use the previous procedure, check your video controller and computer, because your monitor is functioning properly.

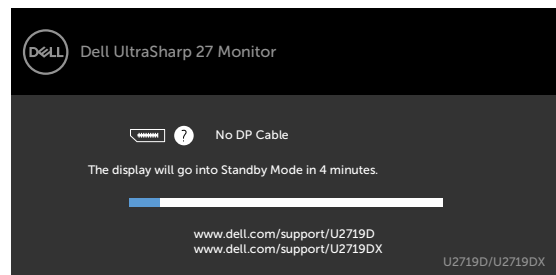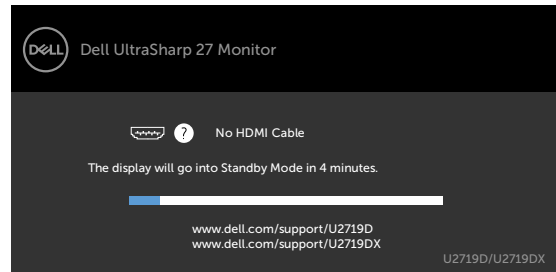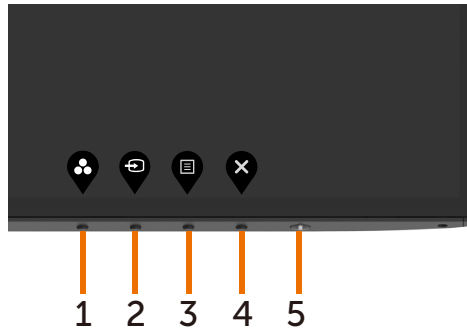# Built-in Diagnostics

Your monitor has a built-in diagnostic tool that helps you determine if the screen abnormality you are experiencing is an inherent problem with your monitor, or with your computer and video card.

NOTE: You can run the built-in diagnostics only when the video cable is unplugged and the monitor is in self-test mode.



1  2  3  4  5

To run the built-in diagnostics:

1   Make sure that the screen is clean (no dust particles on the surface of the screen).
2   Unplug the video cable(s) from the back of the computer or monitor. The monitor then goes into the self-test mode.
3   Press and hold **Button 1** for 5 seconds. A gray screen appears.
4   Carefully inspect the screen for abnormalities.
5   Press **Button 1** on the front panel again. The color of the screen changes to red.
6   Inspect the display for any abnormalities.
7   Repeat steps 5 and 6 to inspect the display in green, blue, black, white, and text screens.

The test is complete when the text screen appears. To exit, press **Button 1** again.
If you do not detect any screen abnormalities upon using the built-in diagnostic tool, the monitor is functioning properly. Check the video card and computer.

# Common Problems

The following table contains general information about common monitor problems you might encounter and the possible solutions:

| Common Symptoms | What You Experience | Possible Solutions |
|---|---|---|
| No Video/Power LED off | No picture | • Ensure that the video cable connecting the monitor and the computer is properly connected and secure.<br>• Verify that the power outlet is functioning properly using any other electrical equipment.<br>• Ensure that the power button is depressed fully.<br>• Ensure that the correct input source is selected in the Input Source menu. |
| No Video/Power LED on | No picture or no brightness | • Increase brightness & contrast controls via OSD.<br>• Perform monitor self-test feature check.<br>• Check for bent or broken pins in the video cable connector.<br>• Run the built-in diagnostics.<br>• Ensure that the correct input source is selected in the Input Source menu. |
| Missing Pixels | LCD screen has spots | • Cycle power on-off.<br>• Pixel that is permanently off is a natural defect that canoccur in LCD technology.<br>• For more information on Dell Monitor Quality and Pixel Policy, see Dell Support site at: http://www.dell.com/support/monitors. |
| Stuck-on Pixels | LCD screen has bright spots | • Cycle power On-Off.<br>• Pixel that is permanently off is a natural defect that canoccur in LCD technology.<br>• For more information on Dell Monitor Quality and PixelPolicy, see Dell Support site at: http://www.dell.com/support/monitors. |
| Brightness Problems | Picture too dim or too bright | • Reset the monitor to factory settings.<br>• Adjust brightness & contrast controls via OSD. |
| Safety Related Issues | Visible signs of smoke or sparks | • Do not perform any troubleshooting steps.<br>• Contact Dell immediately. |
| Intermittent Problems | Monitor malfunctions on & off | • Ensure that the video cable connecting the monitor to the computer is connected properly and is secure.<br>• Reset the monitor to factory settings.<br>• Perform monitor self-test feature check to determine if the intermittent problem occurs in self-test mode. |
| Missing Color | Picture missing color | • Perform monitor self-test.<br>• Ensure that the video cable connecting the monitor to the computer is connected properly and is secure.<br>• Check for bent or broken pins in the video cable connector. |

| Common Symptoms | What You Experience | Possible Solutions |
|---|---|---|
| Wrong Color | Picture color not good | • Change the settings of the **Preset Modes** in the **Color** menu OSD depending on the application.<br>• Adjust R/G/B value under **Custom. Color** in **Color** menu OSD.<br>• Change the **Input Color Format** to PC RGB or YPbPr in the **Color** menu OSD.<br>• Run the built-in diagnostics. |
| Image retention from a static image left on the monitor for a long period of time | Faint shadow from the static image displayed appears on the screen | • Set the screen to turn off after a few minutes of screen idle time. These can be adjusted in Windows Power Options or Mac Energy Saver setting.<br>• Alternatively, use a dynamically changing screensaver. |

# Product Specific Problems

| Specific Symptoms | What You Experience | Possible Solutions |
|---|---|---|
| Screen image is too small | Image is centered on screen, but does not fill entire viewing area | • Check the **Aspect Ratio** setting in the **Display** menu OSD.<br>• Reset the monitor to factory settings. |
| No Input Signal when user controls are pressed | No picture, the LED light is white | • Check the signal source. Ensure the computer is not in the power saving mode by moving the mouse or pressing any key on the keyboard.<br>• Check whether the signal cable is plugged in properly. Re-plug the signal cable if necessary.<br>• Reset the computer or video player. |
| The picture does not fill the entire screen | The picture cannot fill the height or width of the screen | • Due to different video formats (aspect ratio) of DVDs, the monitor may display in full screen.<br>• Run the built-in diagnostics. |
| No image when using DP connection to the PC | Black screen | • Verify which DP standard (DP 1.1a or DP 1.4) is your Graphics Card certified to. Download and install the latest graphics card driver.<br>• Some DP 1.1a graphics card cannot support DP 1.4 monitors. Go to OSD menu, under Input Source selection, press and hold DP select ♥ key for 8 sec to change the monitor setting from DP 1.4 to DP 1.1a. |