

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:

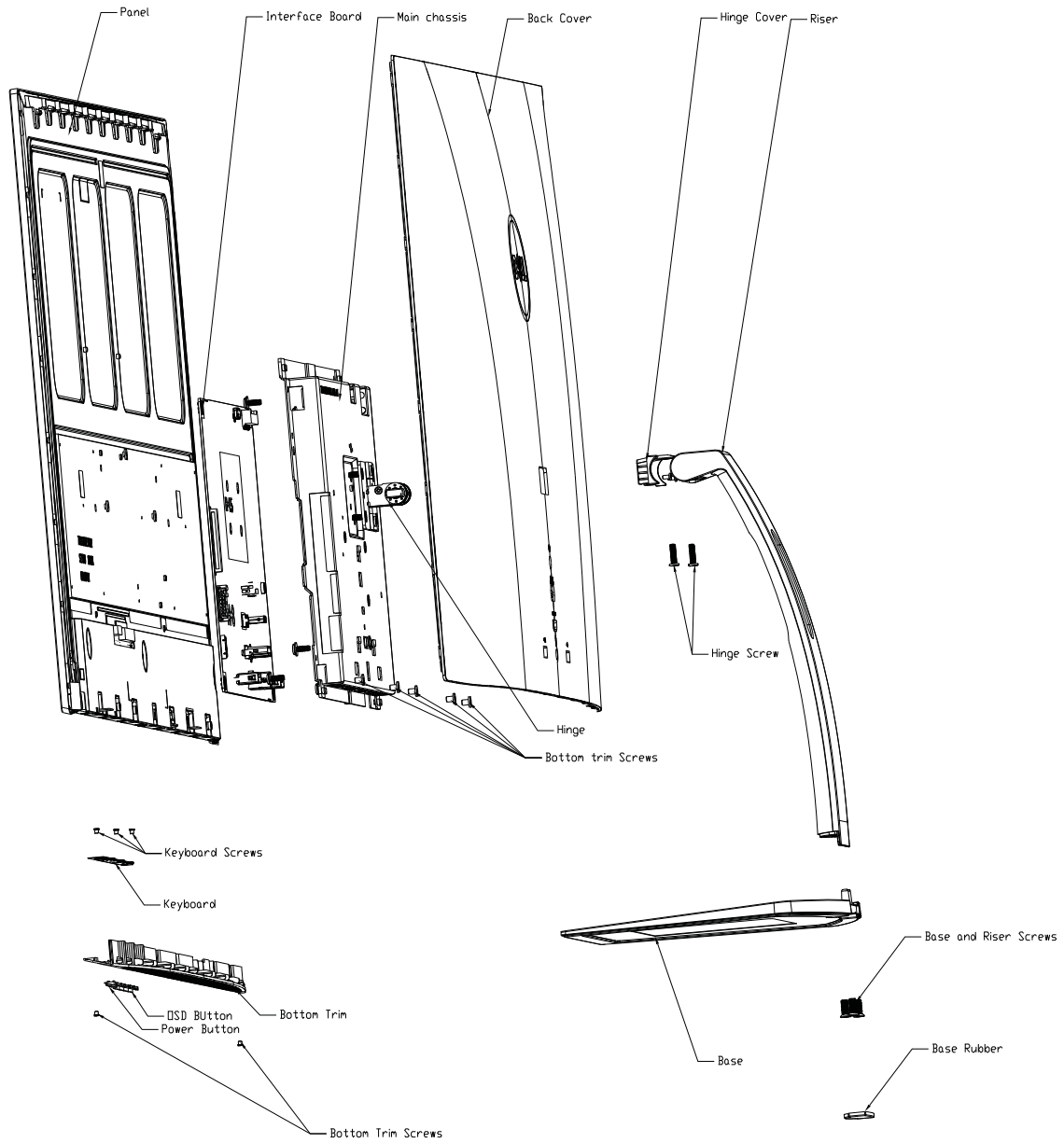
Proper service and repair is important to the safe, reliable operation of all series products. The service providers recommended by vender should be aware of notices listed in this service manual in order to minimize the risk of personal injury when perform service procedures. Furthermore, the possible 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:

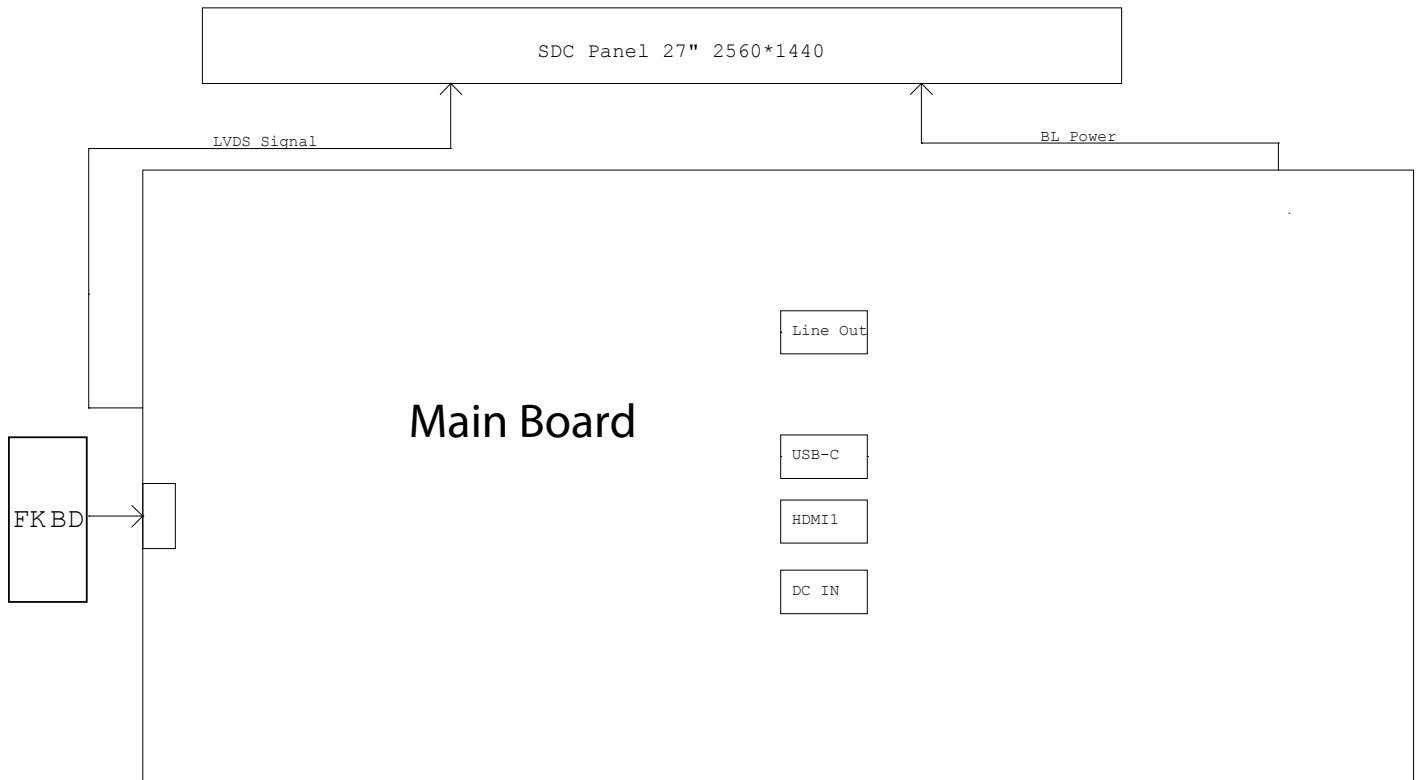
- ! To avoid electrical shocks, the products should be connected to an authorized power cord, and turn off the master power switch each time before removing the AC power cord.
- ! To prevent the product away from water or expose in extremely high humidity environment.
- ! To ensure the continued reliability 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



3. Wiring Connectivity Diagram



4. Disassembly and Assembly Procedures

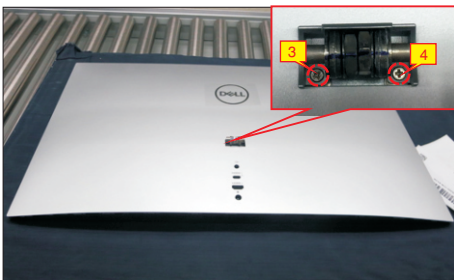
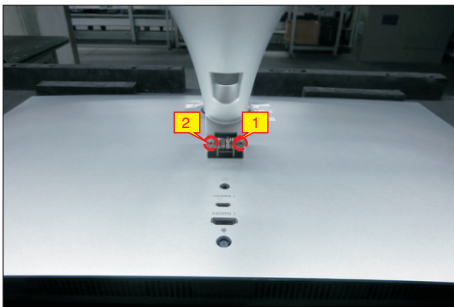
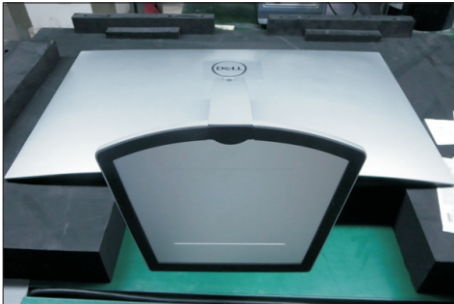
Necessary repair and test equipment:

1. Philips-head screwdriver

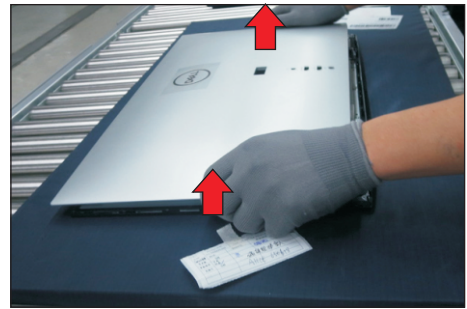
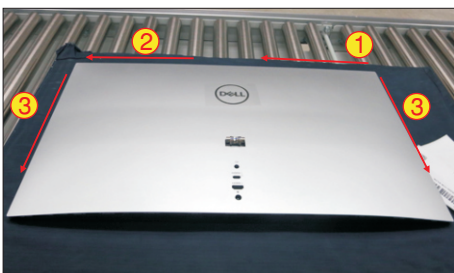
4.1 Disassembly Procedures:

S1 Put the monitor on a protective cushion. Lift up the stand, then use a Philips-head screwdriver to remove 2pcs screws for unlocking the whole unit including stand and base, then remove the stand and base. Use a Philips-head screwdriver to remove 2pcs screws for release the hinge cover.

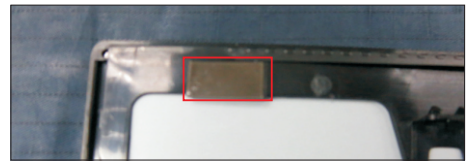
(No.1~2 screw size=M3x11, Torque=7.5±0.5kgfxcm;
No.3~4 screw size=M2x0.4x3.2, Torque=2~3kgfxcm)



S2 Wedge your fingers between the rear cover and the middle bezel on the corners 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.

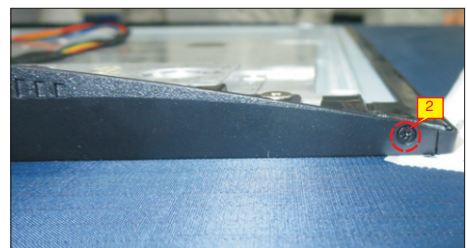


S3 Tear off 2pcs double-faced tapes on the left and right side of the middle bezel, then tear off 2pcs aluminum foil to release the panel lamp cable and LVDS connector.

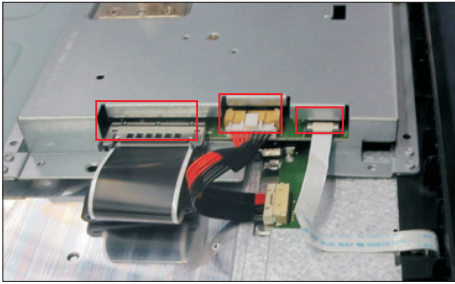


S4 Use a Philips-head screwdriver to remove 2pcs screws for unlocking the front bezel with the panel module, and then use a proper tool to disconnect the panel lamp cable, LVDS cable and function key board from the connector of the main board.

(No.1~2 screw size=M1.6x2.2, Torque=0.5±0.1kgfxcm)

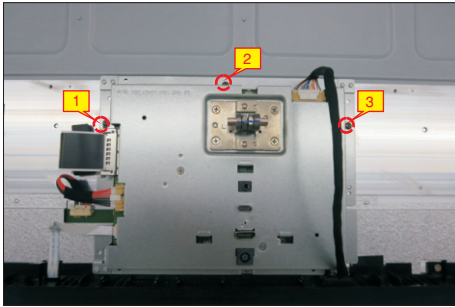


4. Disassembly and Assembly Procedures



S5

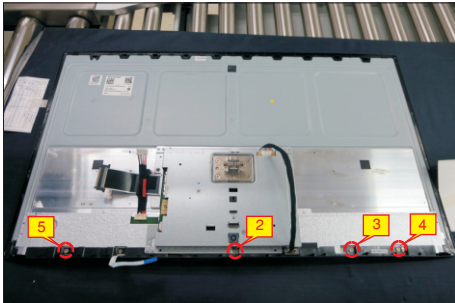
Use a Philips-head screwdriver to remove 3pcs screws for unlocking bracket with panel module.
(No.1~3 screw size=M3x2.8, Torque=3±0.5kgfxcM)



S6

Use a Philips-head screwdriver to remove 4pcs screws for unlocking bracket, move away the bracket and then remove 1pcs screw for removing the front bezel carefully.

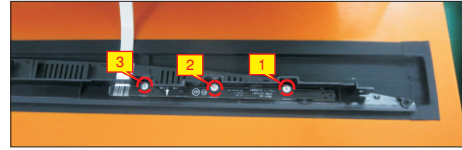
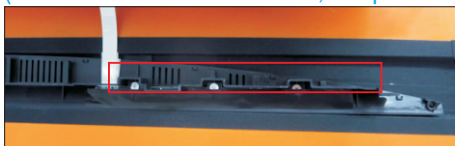
(No.1~5 screw size=M3x4, Torque=3±0.5kgfxcM)



S7

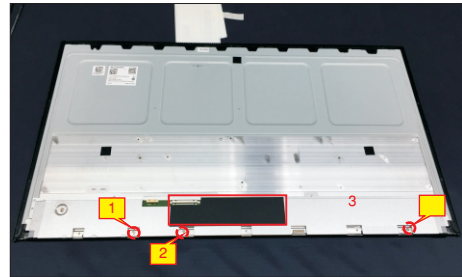
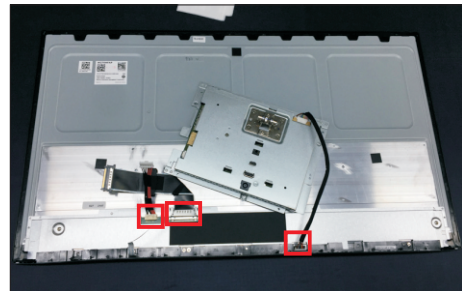
Put the front bezel with function key board into a fixture, tear off the mylar, then use a Philips-head screwdriver to remove 3pcs screws for unlocking the function key board with front bezel.

(No.1~3 screw size=M0.2x2.4, Torque=1±0.2kgfxcM)



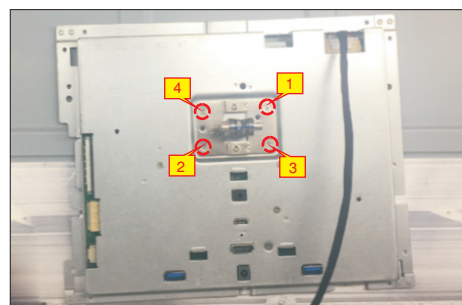
S8

Disconnect the panel lamp cable from the connector on the panel module, then remove bracket and put it on a protect cushion for later disassembling. Unplug the LVDS cable and panel lamp cable from the connectors of panel module. Tear off the mylar tape which is stucked on the specific position of the back of panel, and then use a Philips-head screwdriver to remove 3pcs screws for unlocking the panel module.
(No.1~3 screw size=M3x2.7, Torque=3~4kgfxcM)



S9

Put the bracket chassis on a protector cushion, then use a Philips-head screwdriver to remove 4pcs screws for unlocking the hinge.
(No.1~4 screw size=M3x5.3, Torque=7.5±0.5kgfxcM)

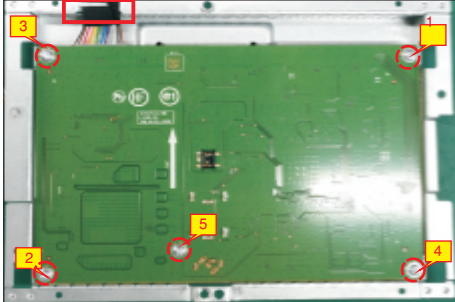


4. Disassembly and Assembly Procedures

S10

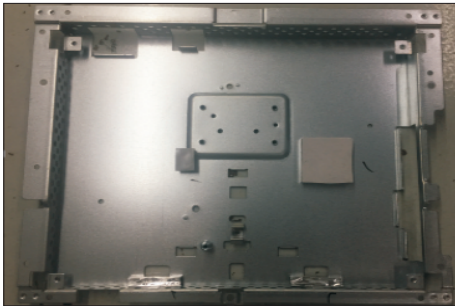
Turn over the bracket chassis module. Use a Philips-head screwdriver to remove 5pcs screws for unlocking the main board.

(No.1~3 screw size=M3x7.5, Torque=7.5±0.5kgfxcm)



S11

Remove the main board from the bracket chassis module by taking out the panel lamp cable from the hole of the bracket carefully, and then disconnect all of the cables.

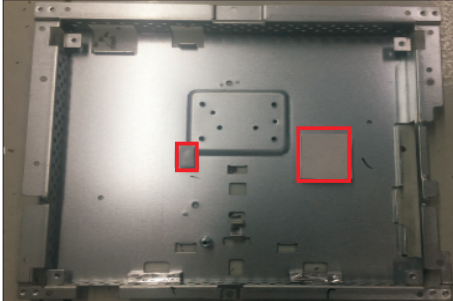


4. Disassembly and Assembly Procedures

4.2 Monitor Assembly Procedures:

S1

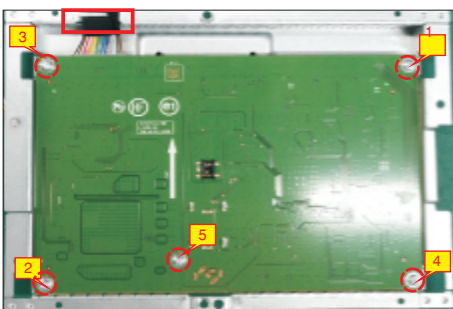
Place a bracket chassis base on a protective cushion, then stick 2pcs T-PAD on the specific position of the bracket as the picture below shown.



S2

Take a main board and then stick 1pcs Absorption of foil on the specific position, and connect 1pcs lamp cable to the connector of the main board, then turn over the main board and through the lamp cable into the hole of the bracket, then put the main board into the bracket chassis. Use a Philips-head screwdriver to tighten 5pcs screws for locking the main board.

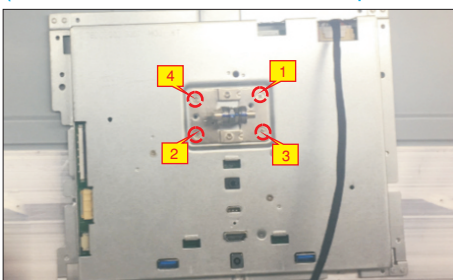
(No.1~5 screw size=M3x7.5, Torque=7~8kgfxcM)



S3

Turn over the bracket chassis base and take a Hinge put on it. Then use a Philips-head screwdriver to tighten 4pcs screws for locking the Hinge.

(No.1~4 screw size=M3x5.3, Torque=7~8kgfxcM)



S4

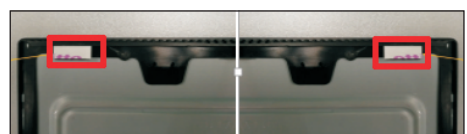
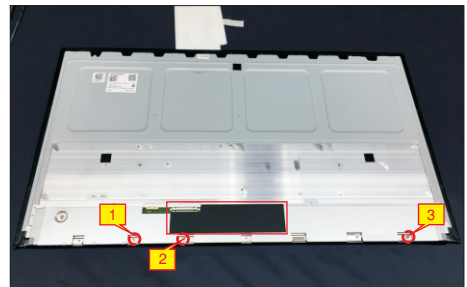
Panel preparation: Examine the panel surface according to inspection criteria. Turn over the panel to place screen faced down on the protective cushion.



S5

Stick 1pcs mylar tape on the correct position and then use a Philips-head screwdriver to tighten 3pcs screws for locking the panel module, then connect 1pcs LVDS and 1pcs panel lamp cable into the connectors. Stick 2pcs double-faced tapes on the specific position of the panel module as the picture below shown.

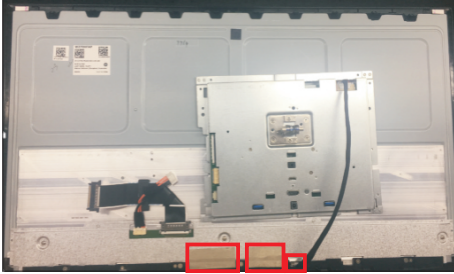
(No.1~3 screw size=M3x2.7, Torque=3~4kgfxcM)



4. Disassembly and Assembly Procedures

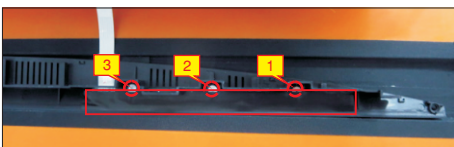
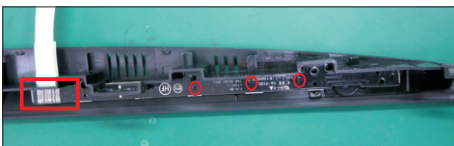
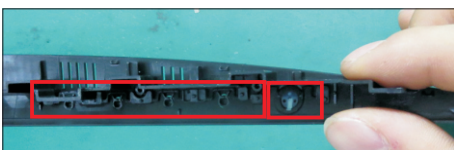
S6

Put the bracket chassis module on the back of panel module, then connect the panel lamp power to the connector of the panel module. Stick 2pcs conductive on the specific position of the panel.



Take 1pcs front bezel, 1pcs power key lens, 1pcs function key lens, assemble the power key lens and function key lens to the correct positions of the front bezel. Take 1pcs function key board, assemble the function key board with the front bezel through the hole of the front bezel. Take a fixture to locate the front bezel with the function key board, then use a Philips-head screwdriver to tighten 3pcs screws for locking the function key board with front bezel, then stick a mylar tape to cover the function key board.

(No.1~3 screw size=M0.2x2.4, Torque=1±0.2kgfxcM)



S7

S8

Move the front bezel with function key board close to the panel module, lift up the panel and assemble front bezel unit with the panel module. Use a Philips-head screwdriver to tighten 1pcs screw for locking front bezel with panel module.

(No.1 screw size=M3x4, Torque=3±0.5kgfxcM)



Adjust the bracket to make it with the panel module firmly attachment. Use a Philips-head screwdriver to tighten 4pcs screws for locking bracket with front bezel and panel module.

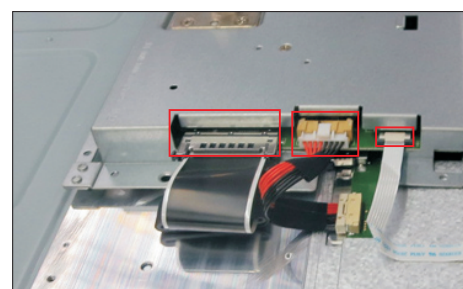
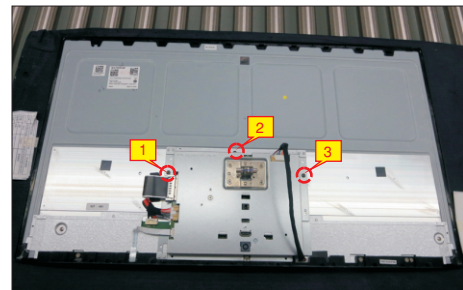
(No.2~5 screw size=M3x4, Torque=3±0.5kgfxcM)



Use a Philips-head screwdriver to tighten 3pcs screws for locking bracket with panel module, then use a proper tool to connect the LVDS cable, panel lamp cable and function key cable to the connectors of the main board.

(No.1~3 screw size=M3x2.8, Torque=3±0.5kgfxcM)

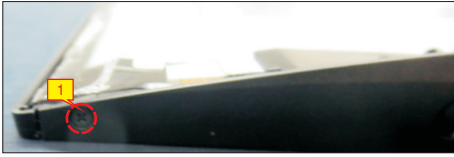
S10



4. Disassembly and Assembly Procedures

S11

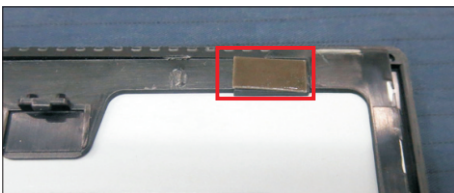
Use a Philips-head screwdriver to tighten 2pcs screws for locking the front bezel with the panel module.
(No.1~2 screw size=M1.6x2.2, Torque=0.5±0.1kgfxcM)



Stick 1pcs aluminum foil to cover the LVDS connector, then stick 1pcs aluminum foil on the specific position to fix the bracket chassis module.

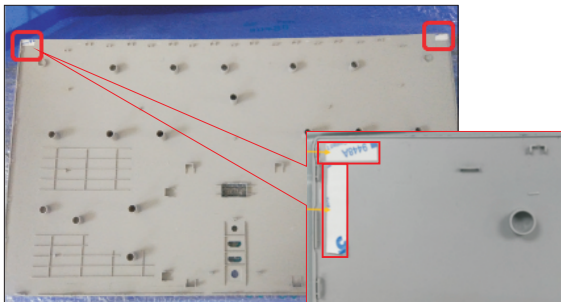
S12

Tear off 2pcs protective papers of double-faced tapes on the left-top and right-top of the middle bezel as the picture below shown.



S13

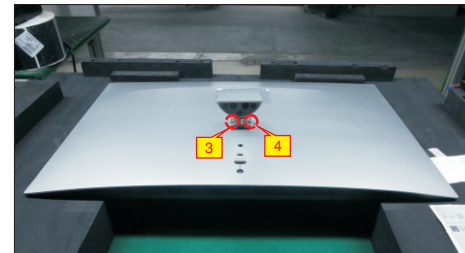
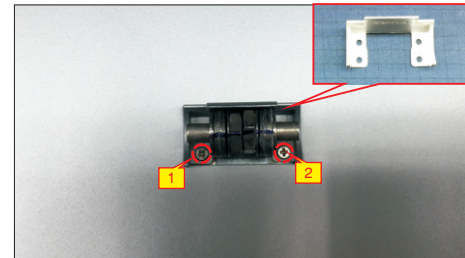
Take a rear cover, tear off the gum on the inside of the rear cover, put down the rear cover on the assembled unit carefully and push the rear cover on the positions marked for two parts engagement.



Take a hinge cover to assemble it with the hinge, then use a Philips-head screwdriver to tighten 2pcs screws for locking the hinge cover with the hinge. Take a stand to assemble with the hinge, then use a Philips-head screwdriver to tighten 2pcs screws for locking the stand with the hinge.

S14

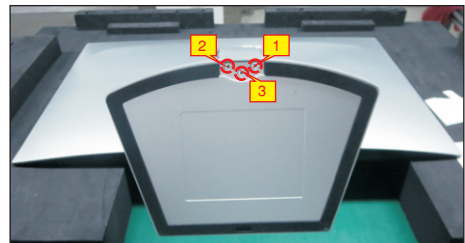
(No.1~2 screw size=M2x0.4x3.2, Torque=2~3kgfxcM;
No.3~4 screw size=M3x11, Torque=7.5±0.5kgfxcM)



Take a base to assemble it with stand, then use a Philips-head screwdriver to tighten 3pcs screws for locking the stand with base. Take 1pcs decoration strip, tear off the adhesive paper and stick it on the correct position as the picture below shown.

S15

(No.1~3 screw size=M4x8, Torque=11±0.5kgfxcM)




4. Disassembly and Assembly Procedures

S16

Lift up the monitor to checking the gap, then provide power supply and a video signal to the monitor , then turn on the monitor for functionality check.



5. Trouble Shooting Instructions

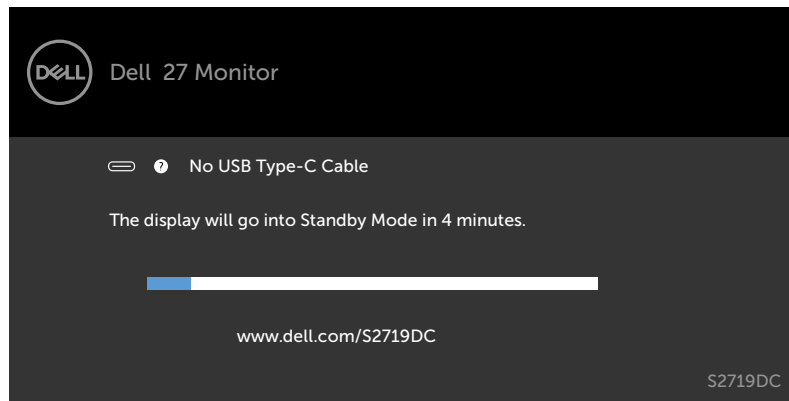
 **WARNING:** Before you begin any of the procedures in this section, follow the [Safety instructions](#).

Self-test

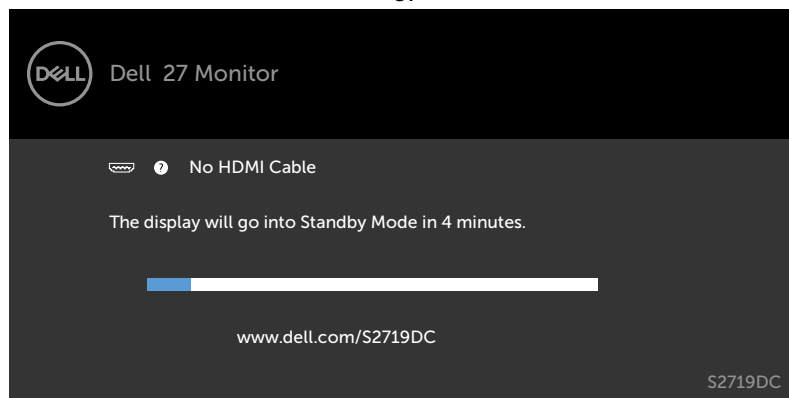
Your monitor provides a self-test feature that enables you to check whether your monitor is functioning properly. If your monitor and computer are properly connected but the monitor screen remains dark, run the monitor self-test by performing the following steps:

- 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 digital and analog 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 is working correctly but does not detect a video signal. While in self-test mode, the power LED remains white. Depending upon the selected input, one of the dialog box is displayed and will continuously scroll through the screen.



or




- 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.

5. Trouble Shooting Instructions

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.



To run the built-in diagnostics:

- 1 Ensure that the screen is clean (no dust particles on the surface of the screen).
- 2 Disconnect 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.

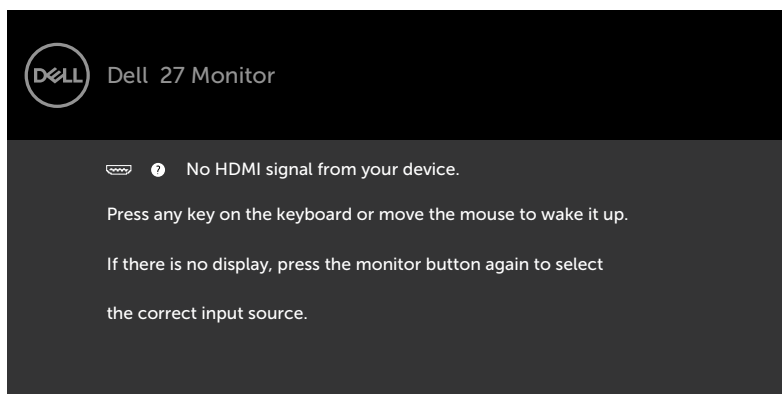
The test is complete when the text screen appears. To exit, press Button 1 again.

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.

Recovery mode for HDMI

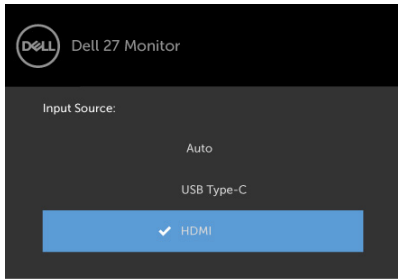
Your monitor provides an HDMI version recovery failsafe mechanism. HDMI switches to version 2.0 when one of the Smart HDR modes is selected. If the screen goes blank after switching to HDMI version 2.0, perform the following steps to revert to HDMI version 1.4:





- 1 Press any of the menu key to wake up the monitor.

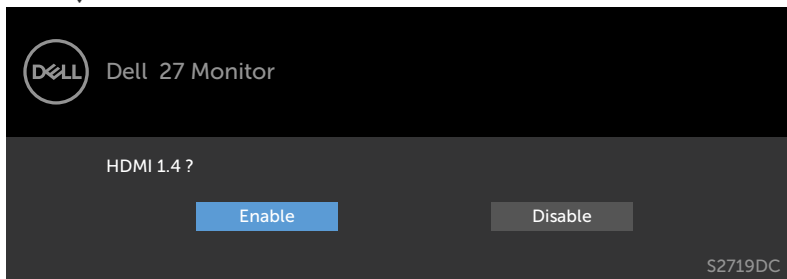


5. Trouble Shooting Instructions

- 2 Press any of the menu key to enter the Input Source select menu.



- 3 Use  and  to select the current HDMI port, then press and hold  for 8 seconds to enter the HDMI 1.4 failsafe dialog.
- 4 Press  to enable the HDMI version 1.4.



Common problems

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

Issue	Short description	Possible solutions
No Video/Power LED off	No picture	<ul style="list-style-type: none">• Ensure that the video cable connecting the monitor and the computer is properly connected and secure.• Verify that the power outlet is functioning properly using any other electrical equipment.• Ensure that the power button is depressed fully.• Ensure that the correct input source is selected in the Input Source menu.• If current HDMI version is 2.0, switch to 1.4.
No Video/Power LED on	No picture or no brightness	<ul style="list-style-type: none">• Increase brightness and contrast controls through the OSD.• Perform monitor self-test feature check.• Check for bent or broken pins in the video cable port.• Run the built-in diagnostics.• Ensure that the correct input source is selected in the Input Source menu.

5. Trouble Shooting Instructions

Issue	Short description	Possible solutions
Missing pixels or Stuck pixels	LCD screen has spots	<ul style="list-style-type: none">• Power cycle. Turn the monitor and the computer off, and then turn it on again.• A pixel that is permanently off is a natural defect that can occur in LCD technology.• For more information about Dell Monitor Quality and Pixel Policy, see Dell Support site at: https://www.dell.com/support/monitors.
Brightness problems	Picture too dim or too bright	<ul style="list-style-type: none">• Reset the monitor to factory settings.• Adjust brightness and contrast controls through OSD.
Safety related issues	Visible signs of smoke or sparks	<ul style="list-style-type: none">• Do not perform any troubleshooting steps.• Contact Dell immediately.
Intermittent problems	Monitor malfunctions on and off	<ul style="list-style-type: none">• Ensure that the video cable connecting the monitor to the computer is connected properly and is secure.• Reset the monitor to factory settings.• Perform monitor self-test feature check to determine if the intermittent problem occurs in self-test mode.
HDR problems	Cannot set GFX solution into HDR mode after switching into Desktop/Movie HDR/Game HDR/Reference Presets	<ul style="list-style-type: none">• Ensure your computer or graphics solution meets the minimum requirement for HDR playback and install the latest software drivers for the graphics card.• Ensure that the HDMI 2.0 cable that comes with the package is used.• If the above steps fail, choose the resolution 3840 x 2160 from the Display Properties to force the proper HDR signaling.
Missing color	Picture missing color	<ul style="list-style-type: none">• Perform monitor self-test.• Ensure that the video cable connecting the monitor to the computer is connected properly and is secure.• Check for bent or broken pins in the video cable port.
Wrong color	Picture color incorrect	<ul style="list-style-type: none">• Change the settings of the Preset Modes in the Color menu OSD depending on the application.• Adjust R/G/B value under Custom Color in Color menu OSD.• Change the Input Color Format to computer RGB or YPbPr in the Color menu OSD.• 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	<ul style="list-style-type: none">• 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.• Alternatively, use a dynamically changing screensaver.

5. Trouble Shooting Instructions

Product specific problems

Problem	What you experience	Possible solutions
Screen image is too small	Image is centered on screen, but does not fill entire viewing area	<ul style="list-style-type: none">• Check the Aspect Ratio setting in the Display menu OSD.• Reset the monitor to factory settings.
Cannot adjust the monitor with the buttons on the front panel	OSD does not appear on the screen	<ul style="list-style-type: none">• Turn off the monitor, unplug the monitor power cable, plug it back, and then turn on the monitor.
No Input Signal when user controls are pressed	No picture, the LED light is white	<ul style="list-style-type: none">• Check the signal source. Ensure that the computer is not in the power saving mode by moving the mouse or pressing any key on the keyboard.• Check whether the signal cable is plugged in properly. Connect the signal cable again, if necessary.• 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	<ul style="list-style-type: none">• Due to different video formats (aspect ratio) of DVDs, the monitor may display in full screen.• Run the built-in diagnostics.
No image when using USB Type-C connection to computer, laptop, and so on	Black screen	<ul style="list-style-type: none">• Verify if the USB Type-C interface of the device can support DP alternate mode.• Verify if the device required more than 45 W power charging.• USB Type-C interface of device cannot support DP alternate mode.• Set Windows to Projection mode.• Ensure that the USB Type-C cable is not damaged.
No charging when using USB Type-C connection to computer, laptop, and so on	No charging	<ul style="list-style-type: none">• Verify if the device can support one of 5 V/9 V/15 V/20 V charging profiles.• Verify if the device requires more than 45 W power charging.• Ensure that you use only Dell approved adapter or the adapter that comes with the product.• Ensure that the USB Type-C cable is not damaged.
Intermittent charging when using USB Type-C connection to computer, laptop, and so on	Intermittent charging	<ul style="list-style-type: none">• Check if the maximum power consumption of device is over 45 W.• Ensure that you use only Dell approved adapter or the adapter that comes with the product.• Ensure that the USB Type-C cable is not damaged.