

Service Manual - S2425H

Version: 02

Date: 2024/03/20

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:

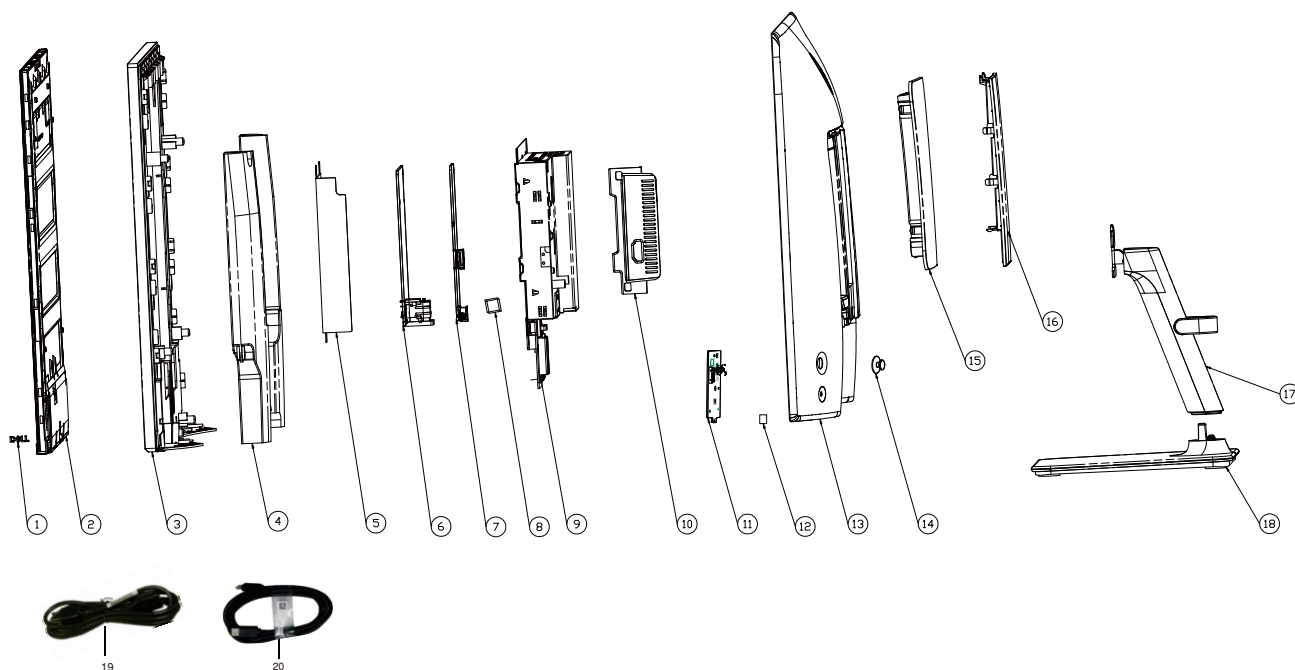
Proper service and repair is important to the safe, reliable operation of all series products. The service providers recommended by vender should be aware of notices listed in this service manual in order to minimize the risk of personal injury when perform service procedures. Furthermore, the possible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



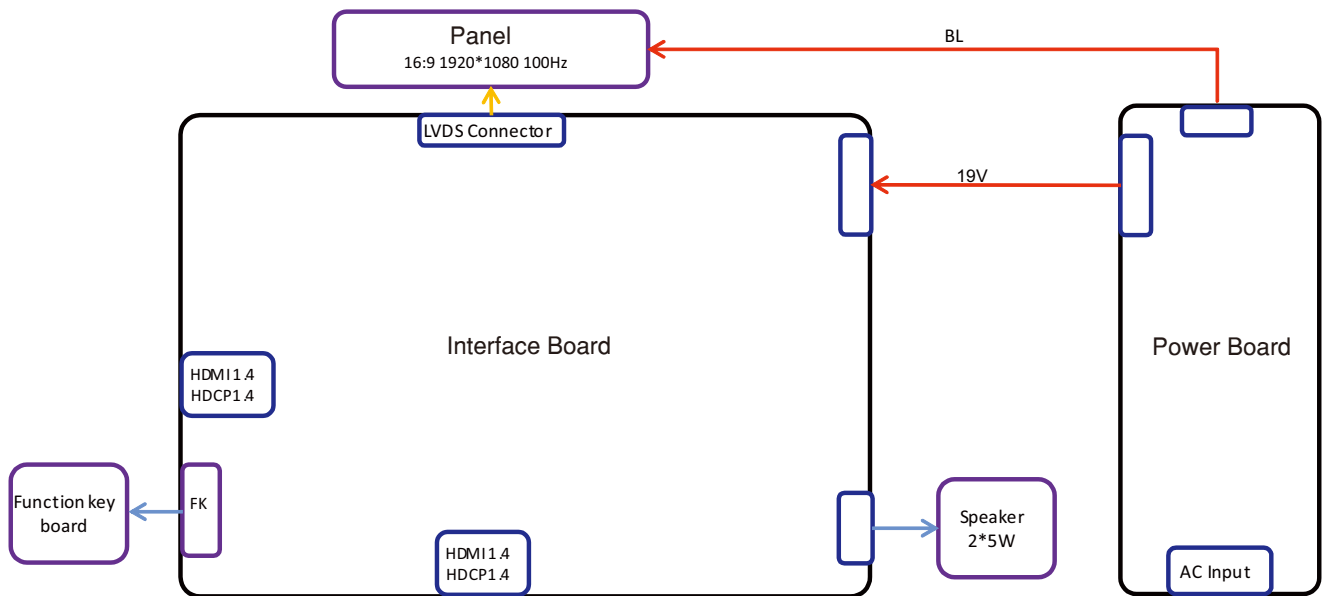
Item	Description	Q'ty	Remark
1	Front Logo	1	For EMEA Only, not for other regions
2	Panel	1	
3	Mid Frame	1	
4	Speaker	1	
5	Safety Mylar	1	
6	Power BD	1	
7	Interface BD	1	
8	Thermal Pad	1	
9	Chassis Assy	1	
10	IO Cover	1	
11	Function key BD	1	
12	Mylar	1	
13	Back Cover	1	
14	Joystick	1	
15	Cable Cover	1	
16	VESA Cover	1	
17	Riser Assy	1	
18	Base Assy	1	
19	Power cable (varies by country)	1	See "NOTE"
20	HDMI cable	1	See "NOTE"

NOTE:

For replacement of power cord, connectivity cable and external power supply (if applicable), contact Dell:

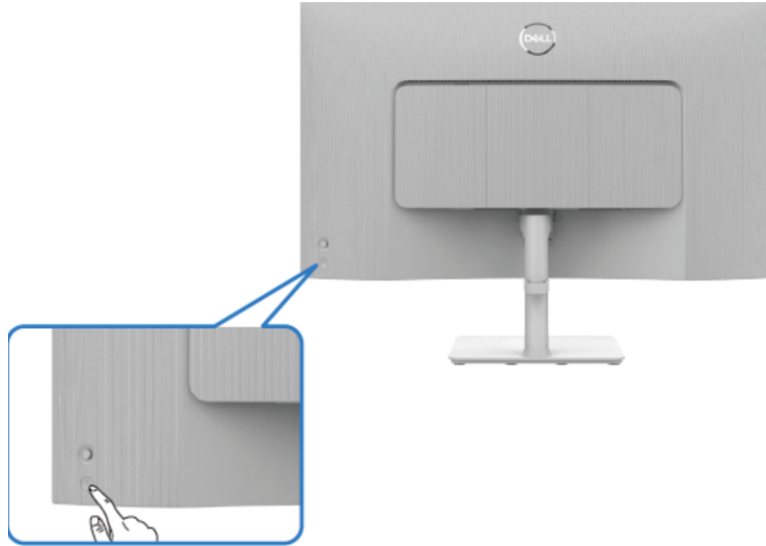
1. Go to <https://www.dell.com/support>.
2. Verify your country or region in the Choose A Country/Region drop-down menu at the bottom-right corner of the page.
3. Click Contact Us next to the country drop down.
4. Select the appropriate service or support link based on your need.
5. Choose the method of contacting Dell that is convenient for you.

3. Wiring Connectivity Diagram

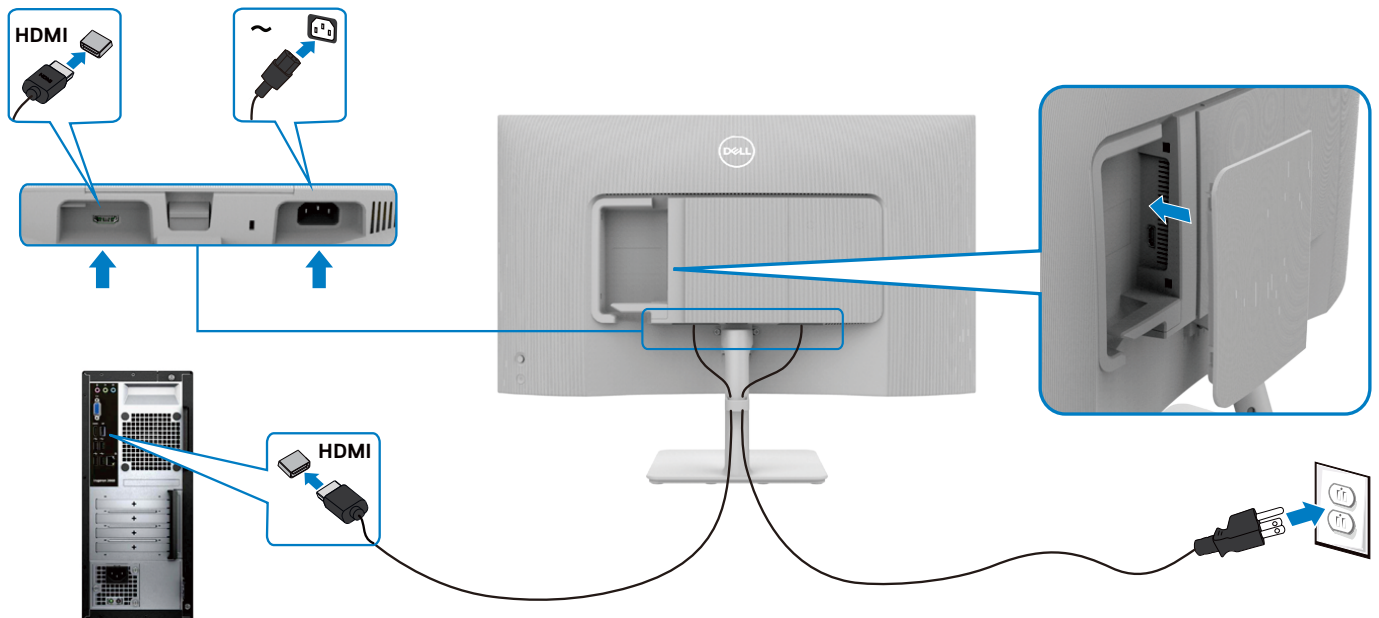


4. How to connect and disconnect power cable/ connectivity cable

WARNING: To change power cable/ connectivity cable, switch off power before unplugging the cable and replugging in required cable.



Connecting the HDMI cable



5. Disassembly and Assembly Procedures

NOTE:

This “Disassembly and Assembly Procedures” is for EMEA only, not for other regions. Please note that Dell will deem warranty void if any disassembly is done on the monitors.

Tool 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:

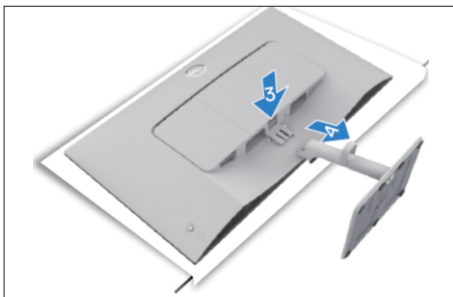
- Screwdriver(Phillip head) #1
- Screwdriver(Phillip head) #2
- Penknife
- Soldering iron and absorber

5.1 Disassembly Procedures:

Remove the monitor stand base:

1. Place a flat cushion or a sitting mat near the edge of a table and place the monitor on it with the display facing down.
2. Press the stand down to access to the release latch.
3. Press the release latch.
4. While pressing the release latch, slide out the stand assembly from the monitor.

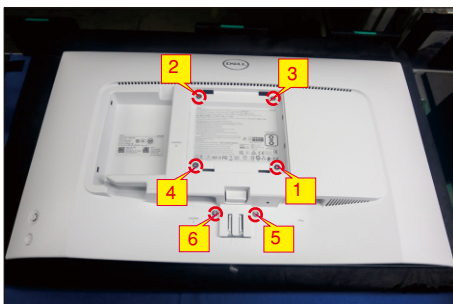
S1



Use a Philips-head screwdriver to remove 6pcs screws for unlocking mechanisms.

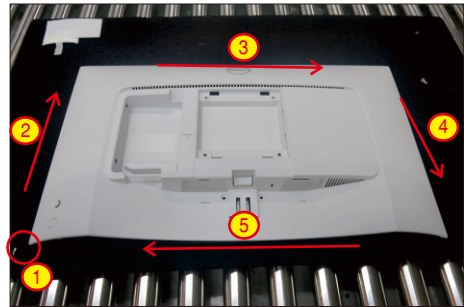
(No.1~4 screw size=M4x11; Torque=10±1kgfxcn;
No.5~6 screw size=M4x8; Torque=10±1kgfxcn)

S2



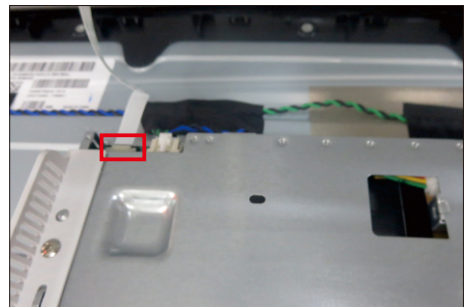
Use a mylar sheet to insert the left-bottom corner to release the rear cover, then wedge your fingers between the rear cover and the middle frame of the monitor to release the rear cover, then use one hand to press the middle bezel, the other hand to pull up carefully the rear cover in order of arrow preference for unlocking mechanisms of rear cover.

S3



S4

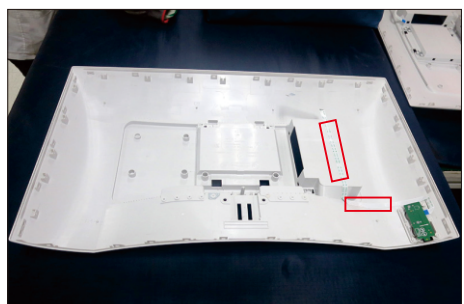
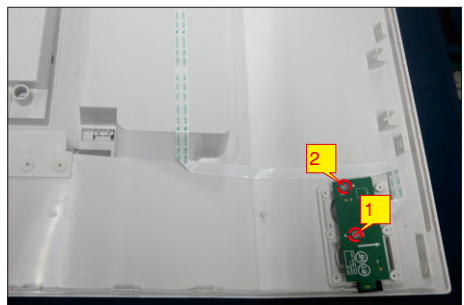
Lift the rear cover up carefully. Disconnect the joystick cable from the connectors of the interface board, and then remove the rear cover.



Use a Philips-head screwdriver to remove 2pcs screws for unlocking the joystick key board unit, then tear off the tapes and release the USB board.

S5

(No.1~2 screw size=M2x3.3, Torque=1±0.2kgfxcn)

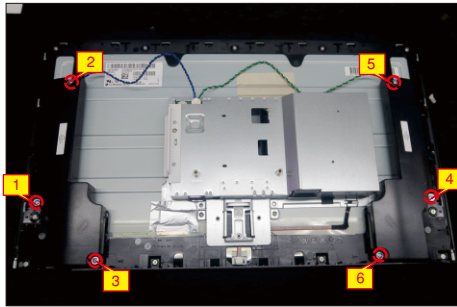
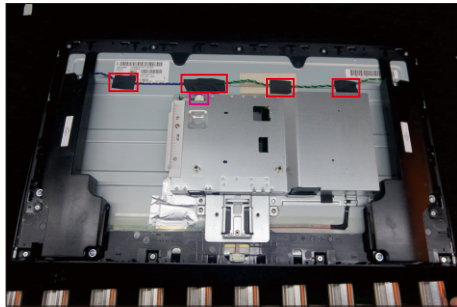


5. Disassembly and Assembly Procedures

S6

Tear off 4pcs acetate tapes to release speakers' cables, then use a Philips-head screwdriver to remove 6pcs screws for unlocking the speakers, then disconnect the speakers' cable away from the connector and release the two speakers from the hooks of the middle frame.

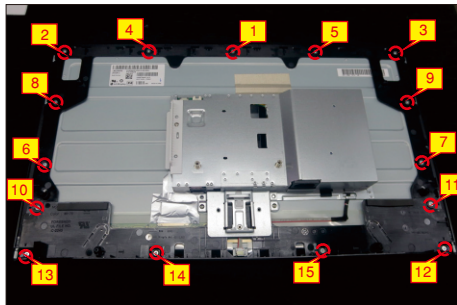
(No.1~6 screw size=M3x8, Torque=6±1kgfxcn)



S7

Use a Philips-head screwdriver to remove 15pcs screws for unlocking the middle frame with the panel module.

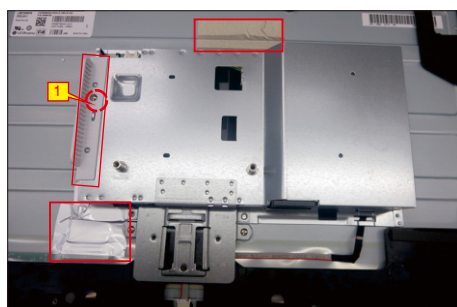
(No.1~15 screw size=M3x4, Torque=5±1kgfxcn)



S8

Tear off 1pcs conductive tape and 1pcs aluminum foil, then use a Philips-head screwdriver to remove 1pcs screws for unlocking the IO cover, then release the IO cover from the hooks of the bracket chassis.

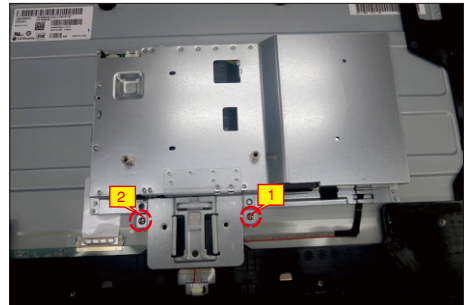
(No.1 screw size=M3x4, Torque=5±1kgfxcn)



S9

Use a Philips-head screwdriver to remove 2pcs screws for unlocking the bracket with panel module.

(No.1~2 screw size=M3x4, Torque=5±1kgfxcn)



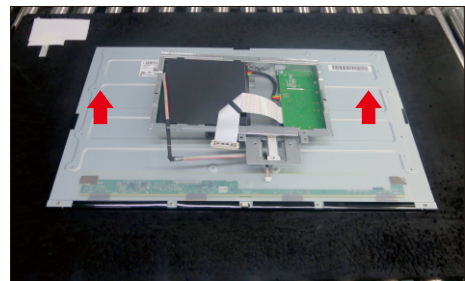
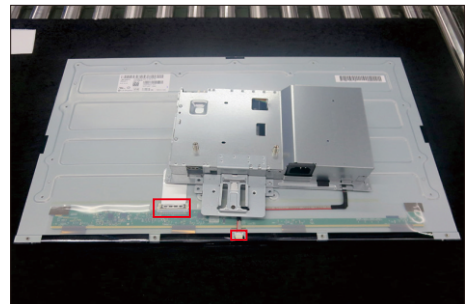
S10

Take away the middle frame, and put it on a protective cushion.



S11

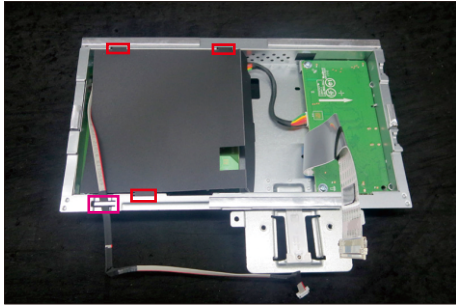
Move up the bracket chassis module, and disconnect the LVDS cable and panel lamp cables from the connectors of the panel, then tear off the tapes and lift up the bracket chassis and put it aside.



5. Disassembly and Assembly Procedures

S12

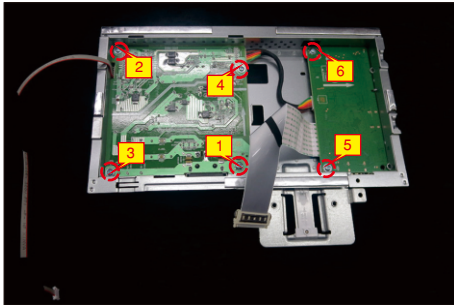
Release the lamp cable and Mylar sheet from the hooks of the bracket chassis module.



S13

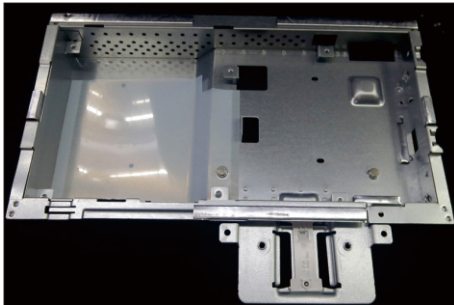
Use a Philips-head screwdriver to remove 6pcs screws for unlocking the circuit board.

(No. 1 screw size=M4x8, Torque=6±0.5kgfxcn;
No.2~6 screw size=M3x6, Torque=6±0.5kgfxcn)



S14

Remove the interface board and power board from the bracket chassis and disconnect all the cables.

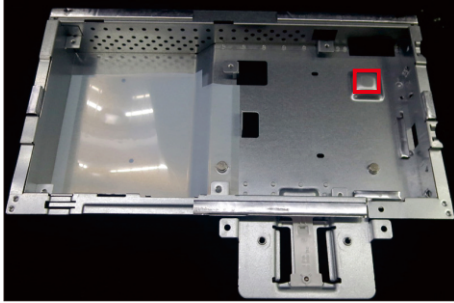


5. Disassembly and Assembly Procedures

5.2 Assembly Procedures:

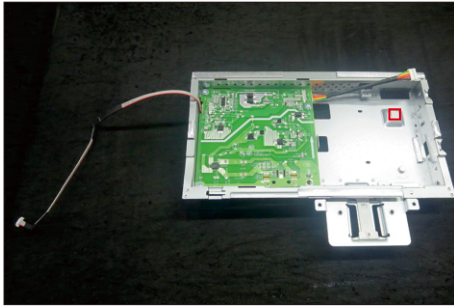
S1

Place a bracket chassis base on a protective cushion. Paste 1pcs silicon sheet on the correct position of the bracket.



S2

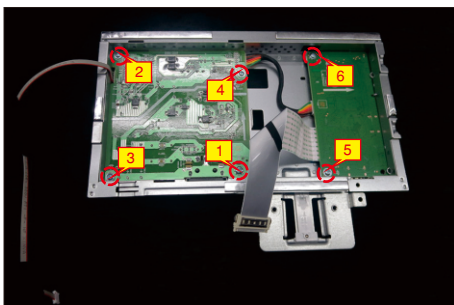
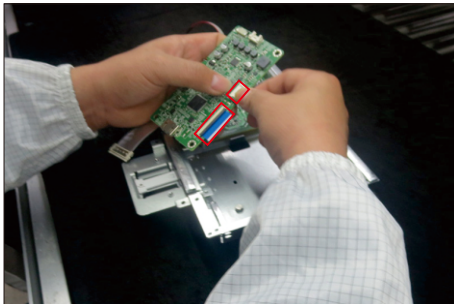
Take 1pcs lamp cable to connect with 1pcs power board, then turn over the power board and put it into the bracket chassis.



S3

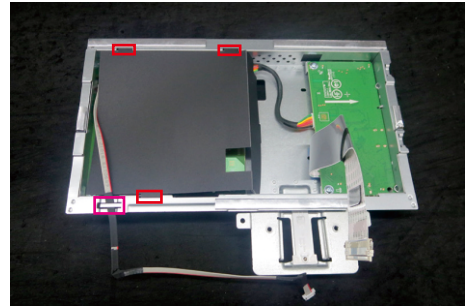
Take a interface board, connect 1pcs LVDS cable to the connector of the interface board, then connect the cable of the power board to the connector of the interface board. Turn over the interface board and locate it into the bracket. Use a Philips-head screwdriver to tighten 6pcs screws for locking the power board and interface board.

(No.1~5 screw size=M3x6, Torque=6±0.5kgfxcn;
No.6 screw size=M4x8, Torque=6±0.5kgfxcn)



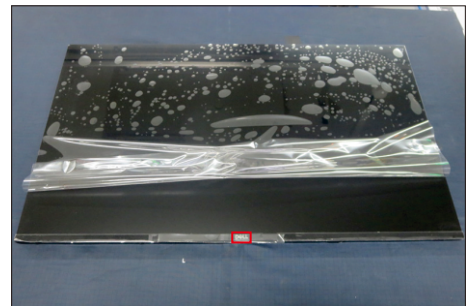
S4

Take a mylar to insert the hooks of the bracket to cover the power board, then locate the lamp cable into the hook of the bracket.



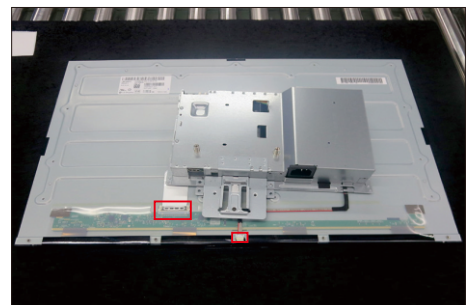
S5

Panel preparation: Take out 1pcs panel LCM module from the carton, then remove the protective film by tearing off the tapes, and then examine the panel surface according to inspection criteria. Paste 1pcs dell nameplate to the front bezel of the panel module, then use a locating fixture to fix the nameplate with bezel. Turn over the panel, and then place screen faced down for later assembling.



S6

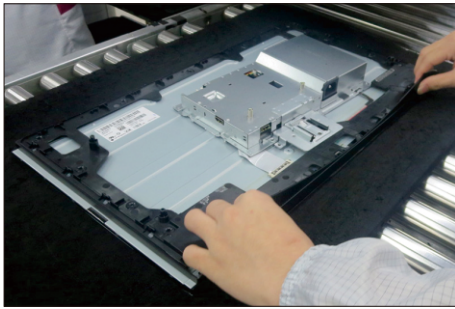
Put the bracket chassis down on the back of the panel, then connect LVDS cable and lamp cable to the connectors of the panel module.



5. Disassembly and Assembly Procedures

S7

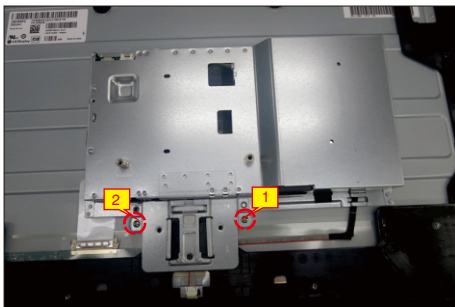
Take 1pcs middle frame to assemble with the panel module.



Adjust the bracket chassis module to make it firmly attached with the panel module. Use a Philips-head screwdriver to tighten 2pcs screws for locking the bracket with panel and middle frame.

(No.1~2 screw size=M3x4, Torque=5±1kgfxcM)

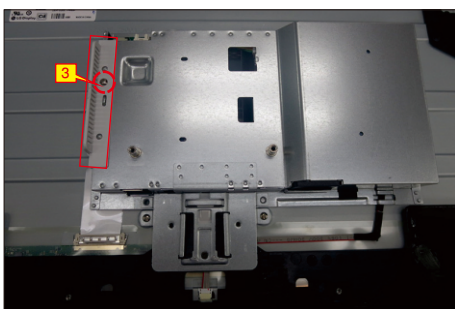
S8



Take 1pcs IO cover to locate the hooks of the bracket chassis module, then use a Philips-head screwdriver to tighten 1pcs screw for locking the IO cover with bracket chassis module.

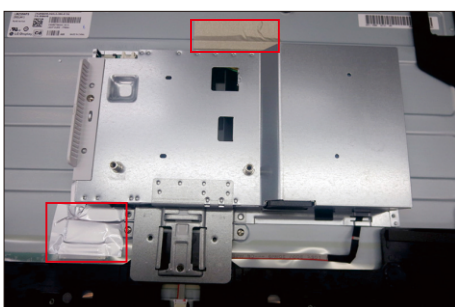
(No.3 screw size=M3x4, Torque=5±1kgfxcM)

S9



Paste 1pcs aluminum foil to cover the LVDS connector, and then paste 1pcs conductive tape to fix the bracket chassis module.

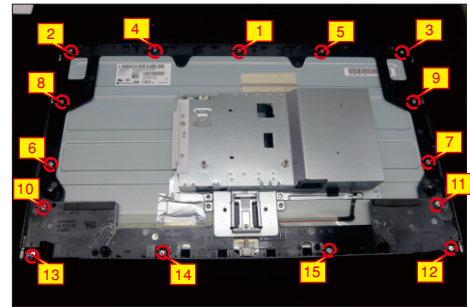
S10



S11

Use a Philips-head screwdriver to lock 15pcs screws for locking the middle frame with the panel module.

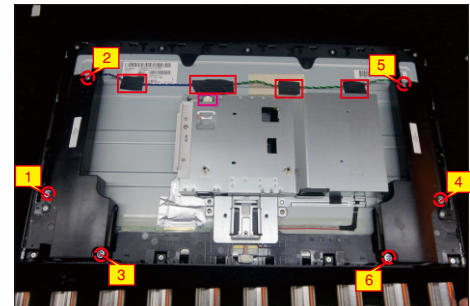
(No.1~15 screw size=M3x4, Torque=5±1kgfxcM)



Take a pair of speakers to locate the probes of the middle frame, then connect the speaker cable to the connector of the board. Use a Philips-head screwdriver to tighten 6pcs screws for locking the speakers with middle frame, then fix the speaker's cables with 4pcs acetate tapes as the picture below shown.

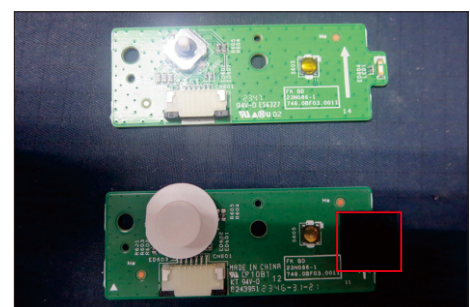
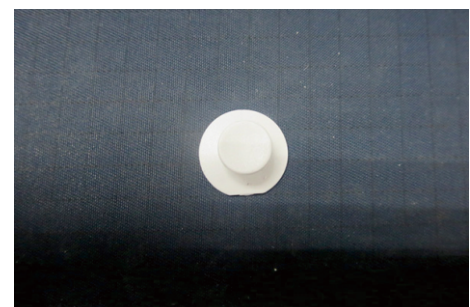
(No.1~6 screw size=M3x8, Torque=6±1kgfxcM)

S12

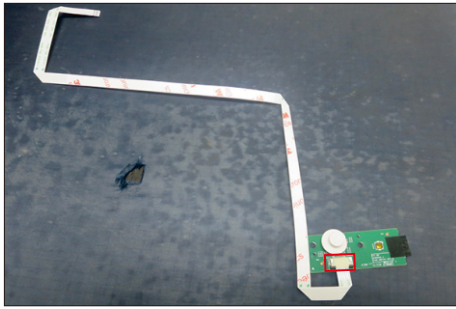


Take 1pcs joystick key, 1pcs joystick board and 1pcs key cable, then assemble the joystick key with board. Paste 1pcs mylar tape to cover the LED, then connect the key cable with the joystick board.

S13



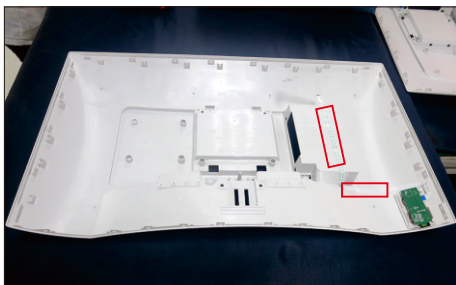
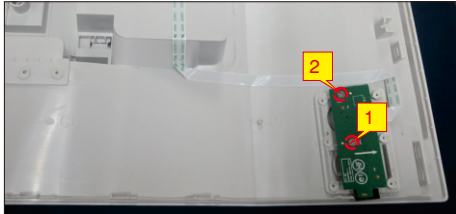
5. Disassembly and Assembly Procedures



S14

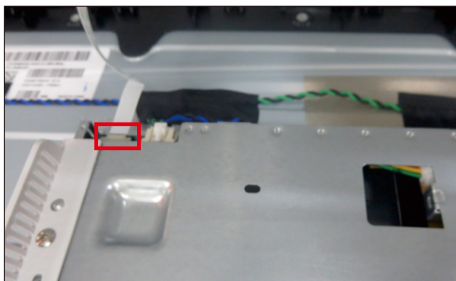
Take 1pcs rear cover, then locate the joystick board to the correct position of the rear cover, then use a Philips-head screwdriver to tighten 2pcs screws for locking the joystick board with rear cover, then fix the key cable with 2pcs tapes as the picture below shown.

(No.1~2 screw size=M2x3.3,Torque=1±0.2kgfxcM)



S15

Move the assembled rear cover close to the panel unit, then connect the key cable to the connector of interface board. Put down the rear cover and push the rear cover on the positions marked as the picture below shown for mechanisms engagement.

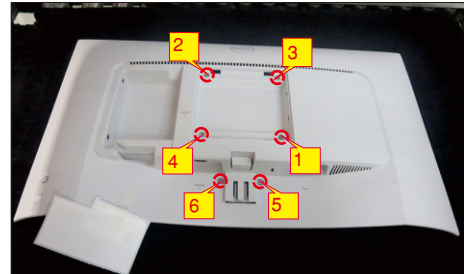


S16

Use a Philips-head screwdriver to tighten 4pcs screws for locking rear cover with the assembled unit, to tighten 2pcs screws for locking the rear cover with bracket chassis module.

(No.1~4 screw size=M4x11; Torque=10±1kgfxcM;

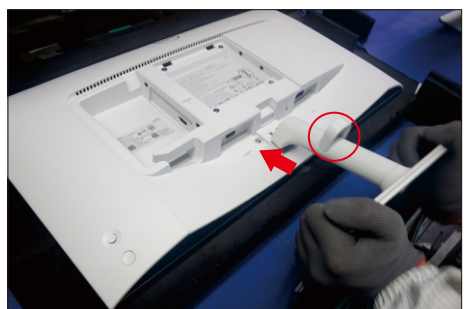
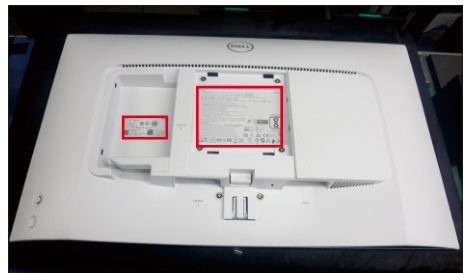
No.5~6 screw size=M4x8; Torque=10±1kgfxcM)



S17

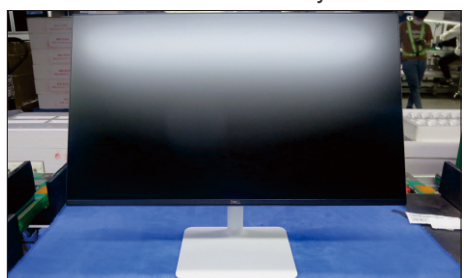
Stick 2pcs labels on the specific positions as the picture below shown. Take 1pcs stand riser with cable clip and 1pcs stand base, assemble the stand base with stand riser, then rotate the screw clockwise to lock the stand base and stand riser. Insert the stand-riser into monitor groove until it snaps into its place.

Note: Please ensure the cable clip is attached to the stand before shipping out the refurbished unit from the repair station.



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.



6. Trouble Shooting Instructions

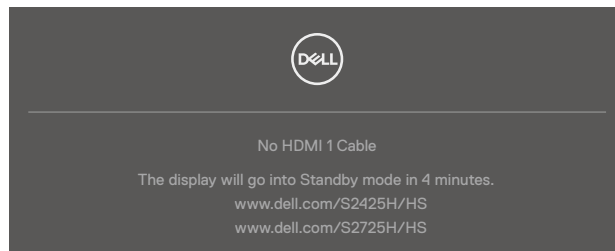
⚠ WARNING: Before you begin any of the procedures in this section, follow the **Safety instructions**.

Self-test

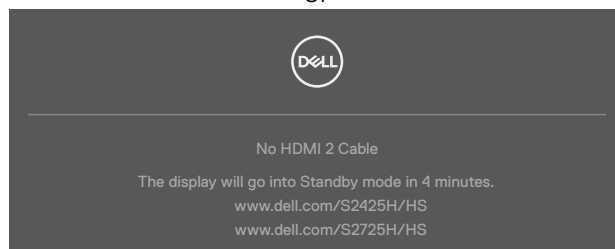
Your monitor provides a self-test feature that allows you to check whether your monitor is functioning properly. If your monitor and computer are properly connected but the monitor screen remains dark, run the monitor self-test by performing the following steps:

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 digital and the 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 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.



or



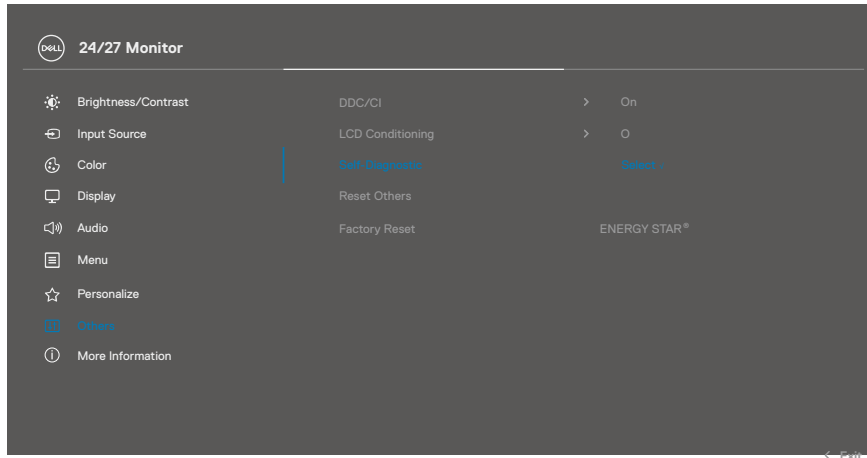
4. This message also appears during normal system operation if the video cable is disconnected or damaged.
5. Turn off your monitor and reconnect the video cable; then turn on both your computer and the monitor.

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

6. 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.



To run the built-in diagnostics:

1. Ensure that the screen is clean (no dust particles on the surface of the screen).
2. Select OSD items of **Self-Diagnostics** in **Others** feature.
3. Press the Joystick button to start the diagnostics. A gray screen is displayed.
4. Observe if the screen has any defects or abnormalities.
5. Toggle the joystick once again until a red screen is displayed.
6. Observe if the screen has any defects or abnormalities.
7. Repeat steps 5 and 6 until the screen displays green, blue, black, and white colors. Note any abnormalities or defects.

The test is complete when a text screen is displayed. To exit, toggle the joystick control 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.

6. Trouble Shooting Instructions

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. • Verify that the power outlet is functioning properly using any other electrical equipment. • Ensure that the power button is on. • 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 and contrast controls through OSD. • Perform monitor self-test feature check. • Check for bent or broken pins in the video cable connector. • Run the built-in diagnostics. • Ensure that the correct input source is selected in the Input Source menu.
Missing pixels	LCD screen has spots	• Cycle power on-off. • Pixel that is permanently off is a natural defect that can occur in LCD technology. • For more information on Dell Monitor Quality and Pixel Policy, see Dell Support site at: https://www.dell.com/support/monitors .
Stuck-on pixels	LCD screen has bright spots	• Cycle power On-Off. • Pixel that is permanently off is a natural defect that can occur in LCD technology. • For more information on Dell Monitor Quality and PixelPolicy, see Dell Support site at: https://www.dell.com/support/monitors .
Brightness problems	Picture too dim or too bright	• Reset the monitor to factory settings. • Adjust brightness and contrast controls through OSD.
Safety related issues	Visible signs of smoke or sparks	• Do not perform any troubleshooting steps. • Contact Dell immediately.

6. Trouble Shooting Instructions

Common symptoms	What you experience	Possible solutions
Intermittent problems	Monitor turns on and off	• 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.
Missing color	Picture missing color	• 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 connector.
Wrong color	Picture color not good	• 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 YCbCr 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	• 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.
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. • Reset the monitor to factory settings.

6. Trouble Shooting Instructions

Common symptoms	What you experience	Possible solutions
Cannot adjust the monitor with the buttons on the front panel	OSD does not appear on the screen	• 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	• 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. • 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	• Due to different video formats (aspect ratio) of DVDs, the monitor may display in full screen. • Run the built-in diagnostics.