Simplified Service Manual

LCD Monitor

P2721Q

Simplified Service Manual

Service Manual Versions and Revision

No.	Version	Release Date	Revision
1	1.0	2020/03/20	Initial Release
2	2.0	2021/03/15	ErP lot 5 additional requirements

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1. Important Safety notice

Connecting your monitor

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

✎ NOTE: Dell monitors are designed to work optimally with Dell supplied inbox cables. Dell does not guarantee the video quality and performance when using non-Dell cables.

✎ NOTE: Route the cables through the cable-management slot before connecting them.

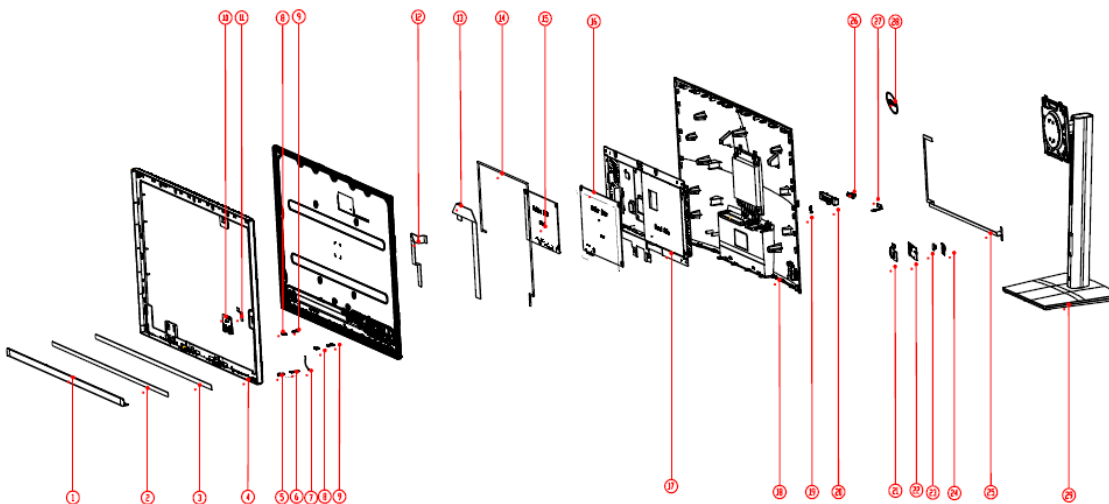✎ NOTE: Do not connect all cables to the computer at the same time.

✎ NOTE: The graphics are used for the purpose of illustration only. Appearance of the computer may vary.
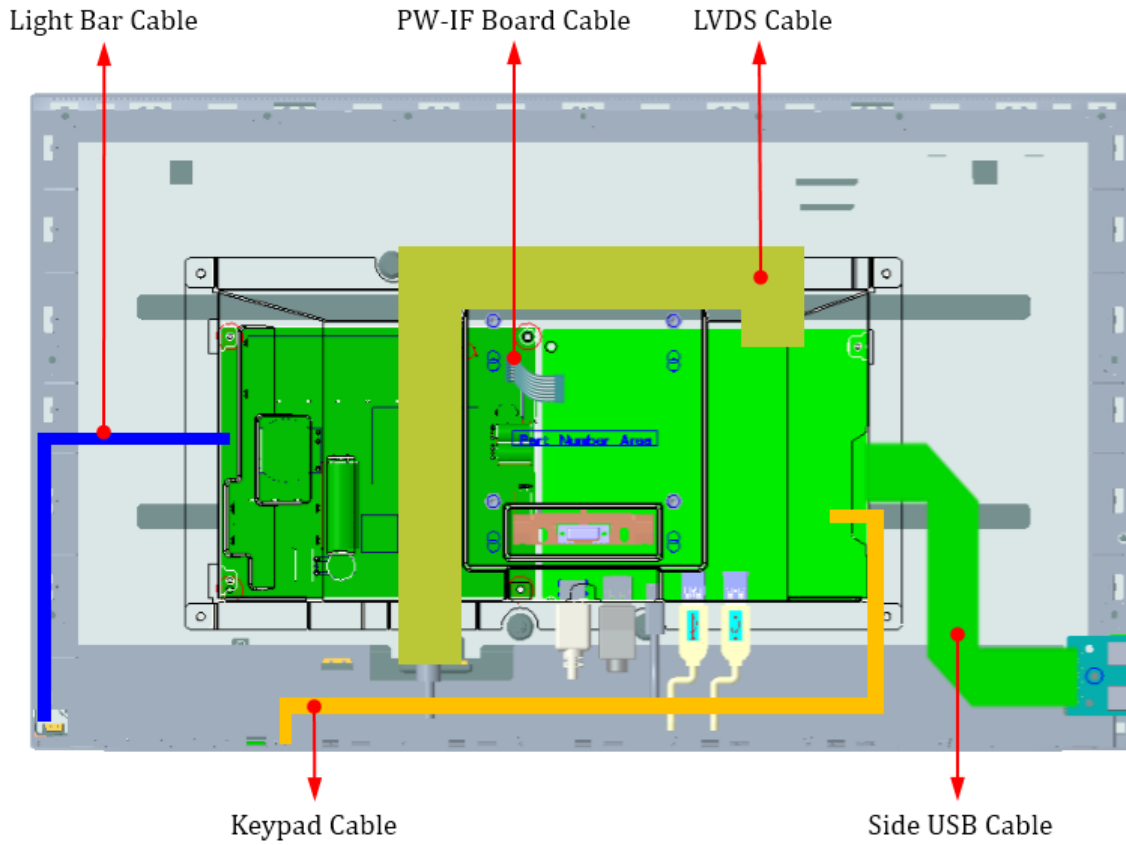
To connect your monitor to the computer:

1. Turn Off your computer and disconnect the power cable.
2. Connect the DisplayPort, HDMI, or Type-C cable from your monitor to the computer.
3. Switch on your monitor.
4. Select the correct input source at monitor OSD Menu and turn on your computer.

2. Exploded view diagram with list of items

P2721Q.pdf

3. Wiring connectivity diagram

Light Bar Cable   PW-IF Board Cable   LVDS Cable

Part Number Area

Keypad Cable   Side USB Cable

4. List of tools / equipment

1. Philips-head screwdriver
2. Hex-head screwdriver
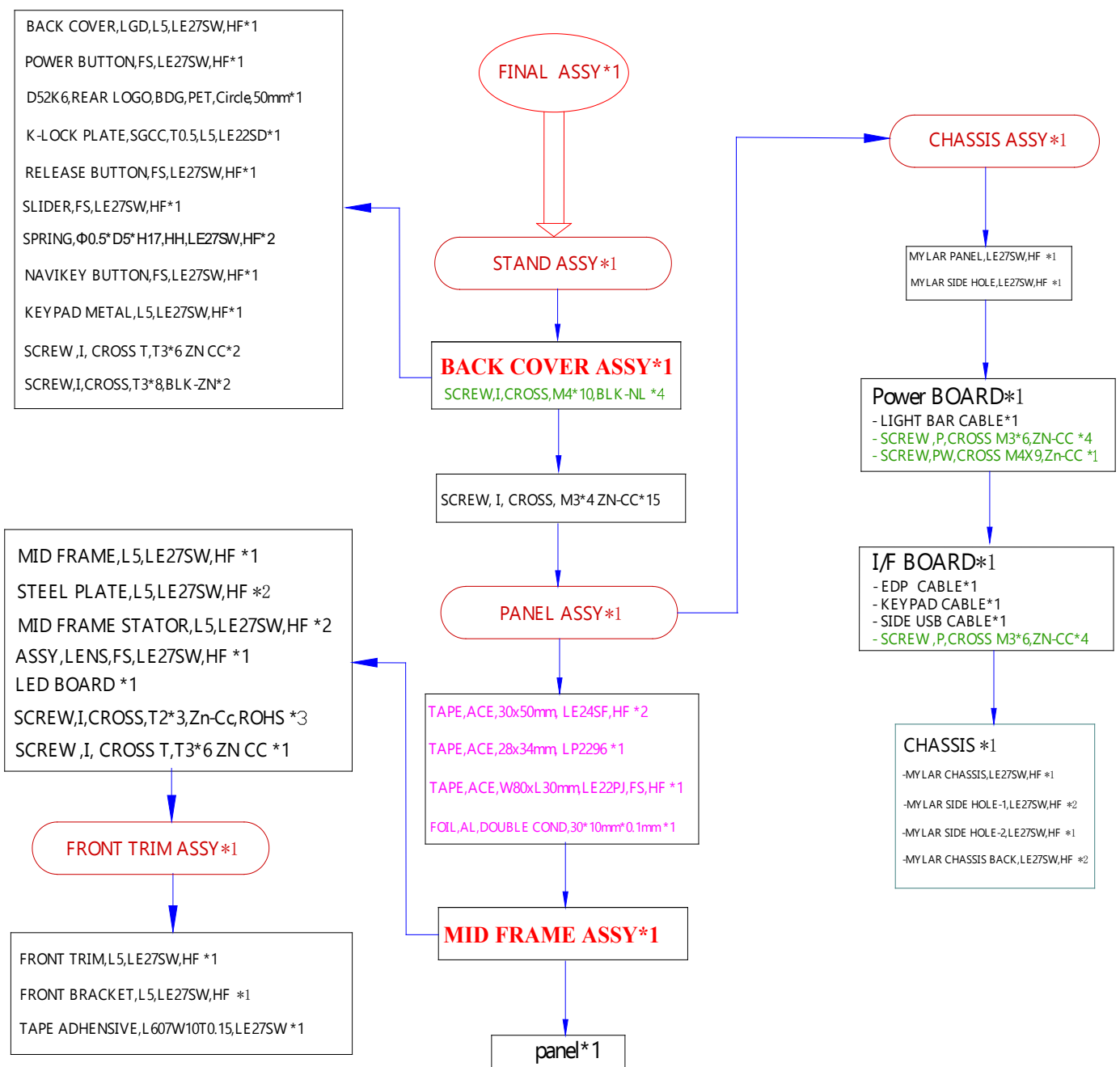
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5. Disassembly and Assembly Procedures

Note: 1. The arrows point out the direction of disassembly.
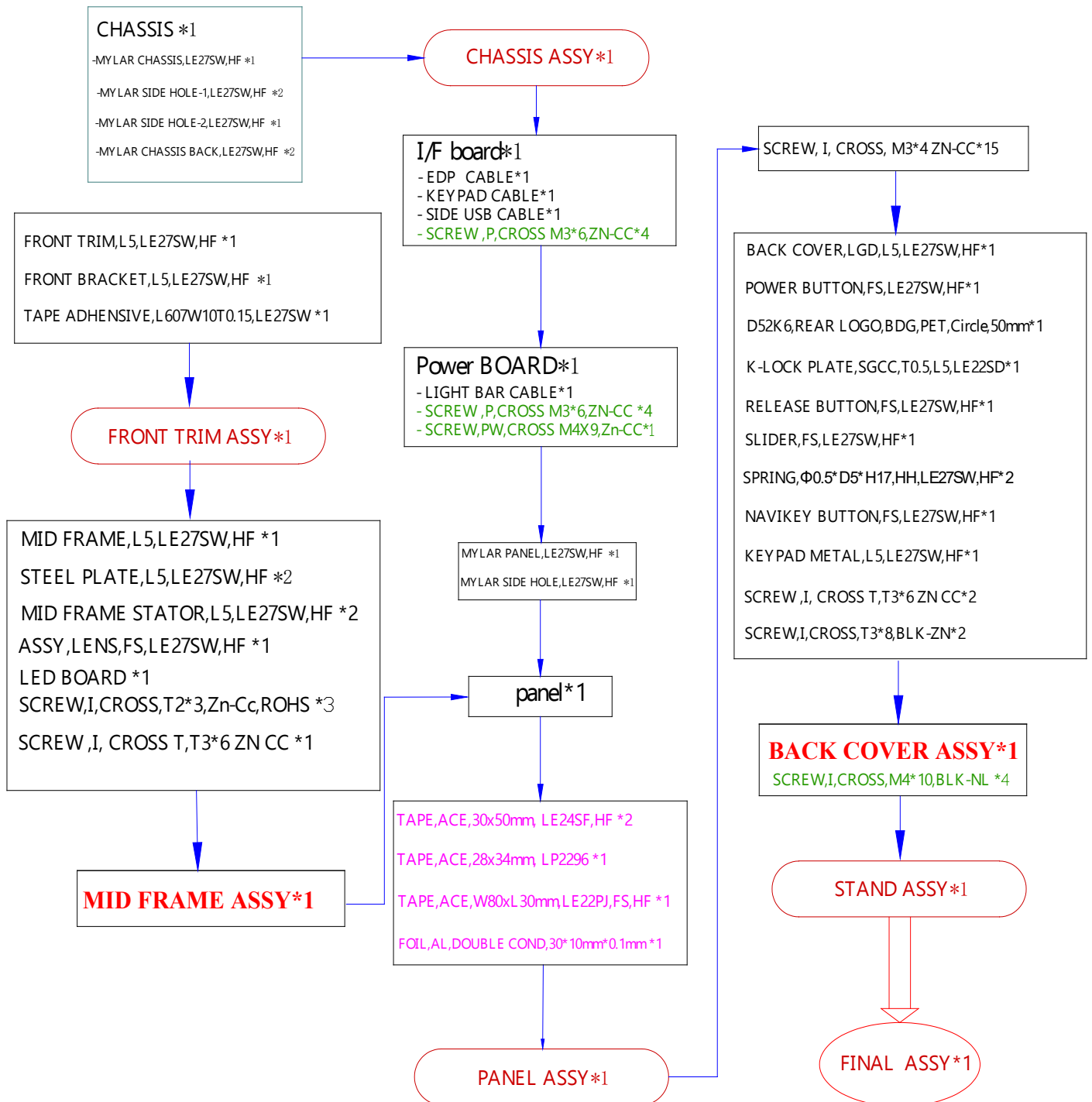**Disassemble the slot of Back cover from monitor**

LE27SW DISASSEMBLY BLOCK

LE27SW DISASSEMBLY BLOCK

```
BACK COVER,LGD,L5,LE27SW,HF*1

POWER BUTTON,FS,LE27SW,HF*1

D52K6,REAR LOGO,BDG,PET,Circle,50mm*1

K-LOCK PLATE,SGCC,T0.5,L5,LE22SD*1

RELEASE BUTTON,FS,LE27SW,HF*1

SLIDER,FS,LE27SW,HF*1

SPRING,Φ0.5*D5*H17,HH,LE27SW,HF*2

NAVIKEY BUTTON,FS,LE27SW,HF*1

KEYPAD METAL,L5,LE27SW,HF*1

SCREW ,I, CROSS T,T3*6 ZN CC*2

SCREW,I,CROSS,T3*8,BLK-ZN*2
```

FINAL ASSY*1

STAND ASSY*1

BACK COVER ASSY*1
SCREW,I,CROSS,M4*10,BLK-NL *4

SCREW, I, CROSS, M3*4 ZN-CC*15

PANEL ASSY*1

TAPE,ACE,30x50mm, LE24SF,HF *2

TAPE,ACE,28x34mm, LP2296 *1

TAPE,ACE,W80xL30mm,LE22PJ,FS,HF *1

FOIL,AL,DOUBLE COND,30*10mm*0.1mm *1

CHASSIS ASSY*1

MYLAR PANEL,LE27SW,HF *1
MYLAR SIDE HOLE,LE27SW,HF *1

Power BOARD*1
- LIGHT BAR CABLE*1
- SCREW ,P,CROSS M3*6,ZN-CC *4
- SCREW,PW,CROSS M4X9,Zn-CC *1

I/F BOARD*1
- EDP CABLE*1
- KEYPAD CABLE*1
- SIDE USB CABLE*1
- SCREW ,P,CROSS M3*6,ZN-CC*4

CHASSIS *1
-MYLAR CHASSIS,LE27SW,HF *1
-MYLAR SIDE HOLE-1,LE27SW,HF *2
-MYLAR SIDE HOLE-2,LE27SW,HF *1
-MYLAR CHASSIS BACK,LE27SW,HF *2

```
MID FRAME,L5,LE27SW,HF *1

STEEL PLATE,L5,LE27SW,HF *2

MID FRAME STATOR,L5,LE27SW,HF *2

ASSY,LENS,FS,LE27SW,HF *1

LED BOARD *1

SCREW,I,CROSS,T2*3,Zn-Cc,ROHS *3

SCREW ,I, CROSS T,T3*6 ZN CC *1
```

FRONT TRIM ASSY*1

```
FRONT TRIM,L5,LE27SW,HF *1

FRONT BRACKET,L5,LE27SW,HF *1

TAPE ADHENSIVE,L607W10T0.15,LE27SW *1
```

MID FRAME ASSY*1

panel*1

LE27SW ASSEMBLY BLOCK

LE27SW ASSEMBLY BLOCK

CHASSIS *1
- MYLAR CHASSIS,LE27SW,HF *1
- MYLAR SIDE HOLE-1,LE27SW,HF *2
- MYLAR SIDE HOLE-2,LE27SW,HF *1
- MYLAR CHASSIS BACK,LE27SW,HF *2

→ CHASSIS ASSY *1

I/F board *1
- EDP CABLE*1
- KEYPAD CABLE*1
- SIDE USB CABLE*1
- SCREW ,P,CROSS M3*6,ZN-CC*4

SCREW, I, CROSS, M3*4 ZN-CC*15

FRONT TRIM,L5,LE27SW,HF *1

FRONT BRACKET,L5,LE27SW,HF *1

TAPE ADHENSIVE,L607W10T0.15,LE27SW *1

FRONT TRIM ASSY *1

Power BOARD *1
- LIGHT BAR CABLE*1
- SCREW ,P,CROSS M3*6,ZN-CC *4
- SCREW,PW,CROSS M4X9,Zn-CC*1

BACK COVER,LGD,L5,LE27SW,HF*1

POWER BUTTON,FS,LE27SW,HF*1

D52K6,REAR LOGO,BDG,PET,Circle,50mm*1

K-LOCK PLATE,SGCC,T0.5,L5,LE22SD*1

RELEASE BUTTON,FS,LE27SW,HF*1

SLIDER,FS,LE27SW,HF*1

SPRING,Φ0.5*D5*H17,HH,LE27SW,HF*2

NAVIKEY BUTTON,FS,LE27SW,HF*1

KEYPAD METAL,L5,LE27SW,HF*1

SCREW ,I, CROSS T,T3*6 ZN CC*2

SCREW,I,CROSS,T3*8,BLK-ZN*2

MID FRAME,L5,LE27SW,HF *1

STEEL PLATE,L5,LE27SW,HF *2

MID FRAME STATOR,L5,LE27SW,HF *2

ASSY,LENS,FS,LE27SW,HF *1

LED BOARD *1

SCREW,I,CROSS,T2*3,Zn-Cc,ROHS *3

SCREW ,I, CROSS T,T3*6 ZN CC *1

MYLAR PANEL,LE27SW,HF *1

MYLAR SIDE HOLE,LE27SW,HF *1

panel *1

MID FRAME ASSY*1

TAPE,ACE,30x50mm, LE24SF,HF *2

TAPE,ACE,28x34mm, LP2296 *1

TAPE,ACE,W80xL30mm,LE22PJ,FS,HF *1

FOIL,AL,DOUBLE COND,30*10mm*0.1mm *1

BACK COVER ASSY*1
SCREW,I,CROSS,M4*10,BLK-NL *4

STAND ASSY *1

PANEL ASSY *1

FINAL ASSY *1

6. Trouble shooting instructions

Troubleshooting

⚠ **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 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.

DELL

No USB-C Cable

The display will go into Standby mode in 4 minutes.

www.dell.com/P2721Q

or

DELL

No DP Cable

The display will go into Standby mode in 4 minutes.

www.dell.com/P2721Q

or

DELL

No HDMI Cable

The display will go into Standby mode in 4 minutes.

www.dell.com/P2721Q
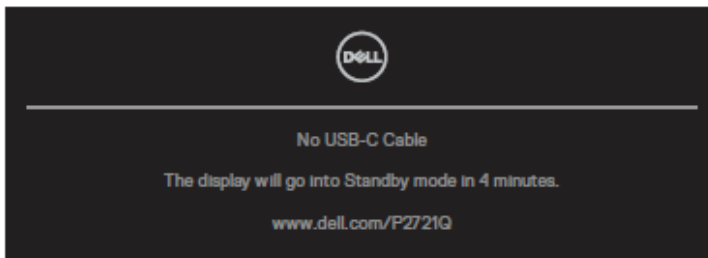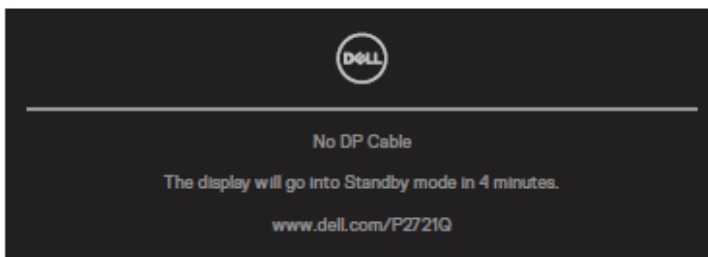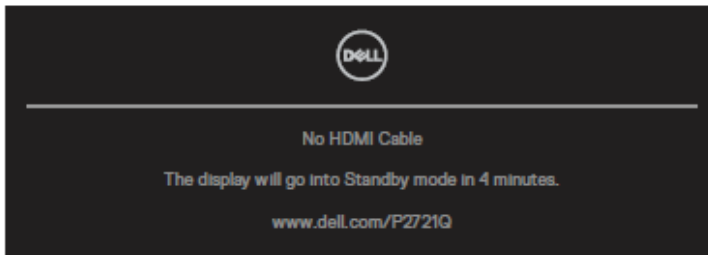
4. This message also appears during normal system operation, if the video cable becomes disconnected or damaged.

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.

To run the built-in diagnostics:

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

2. Press and hold in Up or Down or Left or Right direction for 4 secs and wait for a pop up nenu.

3. Use up or down direction to select the ⊡ and press ⊘ to confirm.

   A gray test pattern appers at the beginning of the diagnostic program.

4. Carefully inspect the screen for abnormalities.

5. Select Up or Down or Left or Right key to change the test patterns.

6. Repeat steps 4 and 5 to inspect red, green, blue, black, white and text screens.

7. When in White color test screen, check for white color uniformity and if there white color appears greenish/reddish, etc.

8. Press Up or Down or Left or Right key to end the diagnostic program.

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Common problems

The following table provides 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 pressed fully. · 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. · 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.
No video/ at HDMI/ DisplayPort/ USB-C port	When connected to some dongle/ docking device at the port, there is no video when unpluging/pluging the Thunderbolt cable from the notebook	· Unplug the HDMI/DisplayPort/USB-C cable from dongle/docking device, then plug the docking Thunderbolt cable to the notebook. Plug the HDMI/DisplayPort/USB-C cable 7 seconds later.
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 about Dell Monitor Quality and Pixel Policy, see Dell support site at: **https://www.dell.com/support/monitors**.

Common symptoms	What you experience	Possible solutions
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 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	· Reset the monitor to factory settings. · Adjust brightness & contrast controls via OSD.
Synchronization problems	Screen is scrambled or appears torn	· Reset the monitor to factory settings. · Perform monitor self-test feature check to determine if the scrambled screen appears in self-test mode. · Check for bent or broken pins in the video cable connector. · Restart the computer in the safe mode.
Safety related issues	Visible signs of smoke or sparks	· Do not perform any troubleshooting steps. · 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. · 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 feature check. · 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 the **Color** menu OSD. · Run the built-in diagnostics.

Common symptoms	What you experience	Possible solutions
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.

Product specific problems

Common 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. · Reset the monitor to factory settings.
Cannot adjust the monitor with the Joystick on the back panel	OSD does not appear on the screen	· Turn Off the monitor, unplug the power cable, plug it back, and then turn On the monitor. · The OSD menu may be locked. Press and hold in Up or Down or Left or Right direction for 4 secs to unlock.
No Input Signal when user controls are pressed	No picture, the LED light is white	· 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. Re-plug the signal cable 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.
No image when using USB-C connection to computer, laptop, and so on	Black screen	· Verify if the USB-C interface of the device can support DP alternate mode. · Verify if the device required more than 65 W power charging. · USB-C interface of device cannot support DP alternate mode. · Set Windows to Projection mode. · Ensure that the USB-C cable is not damaged.

Common Symptoms	What you experience	Possible Solutions
No charging when using USB-C connection to computer, laptop, and so on	No charging	· Verify if the device can support one of 5 V/9 V/15 V/20 V charging profiles. · Verify if the Notebook requires a > 65 W power adapter. · If the Notebook requires a > 65 W power adapter, it may not charge with the USB-C connection. · Ensure that you use only Dell approved adapter or the adapter that comes with the product. · Ensure that the USB-C cable is not damaged.
Intermittent charging when using USB-C connection to computer, laptop, and so on	Intermittent charging	· Check if the maximum power consumption of device is over 65 W. · Ensure that you use only Dell approved adapter or the adapter that comes with the product. · Ensure that the USB-C cable is not damaged.
No image when using DP connection to the PC.	Black screen	· Verify which DP standard (DP 1.1a or DP 1.2) is your Graphics Card certified to. Download and install the latest graphics card driver. · Some DP 1.1a graphics card cannot support DP 1.2 monitors. Go to OSD menu, under Input Source selection, press and hold DP select ⊘ key for 8 secs to change the monitor setting from DP 1.2 to DP 1.1a.

Universal Serial Bus (USB) specific problems

Common Symptoms	What you experience	Possible Solutions
USB interface is not working	USB peripherals are not working	· Check that your monitor is turned On. · Reconnect the upstream cable to your computer. · Reconnect the USB peripherals (downstream connector). · Switch Off and then turn On the monitor again. · Reboot the computer. · Some USB devices like external portable HDD require higher electric current; connect the device directly to the computer system.
SuperSpeed USB 5Gbps (USB 3.2 Gen1) interface is slow	USB 3.2 Gen1 (5Gbps) peripherals working slowly or not working at all	· Check that your computer is USB 3.2 Gen1 (5Gbps)-capable. · Some computers have USB 3.2 Gen1 (5Gbps), USB 2.0, and USB 1.1 ports. Ensure that the correct USB port is used. · Reconnect the upstream cable to your computer. · Reconnect the USB peripherals (downstream connector). · Reboot the computer.
Wireless USB peripherals stop working when a USB 3.2 Gen1 (5Gbps) device is plugged in	Wireless USB peripherals responding slowly or only working as the distance between itself and its receiver decreases	· Increase the distance between the USB 3.2 Gen1 (5Gbps) peripherals and the wireless USB receiver. · Position your wireless USB receiver as close as possible to the wireless USB peripherals. · Use a USB-extender cable to position the wireless USB receiver as far away as possible from the USB 3.2 Gen1 (5Gbps) port.