



Maintenance and Service Guide

Z24q G3 model

SUMMARY

This guide provides information about spare parts, removal and replacement of parts, diagnostic tests, problem troubleshooting, and more.

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Assembly part number: M84050-700

Product notice

Only trained service personnel familiar with this product should service it. Before performing any maintenance or service, be sure to read "Important Safety Information".

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1 Getting started

Read this chapter to learn about safety information and where to find additional HP resources.

Important safety information

Carefully read the cautions and notes within this document to minimize the risk of personal injury to service personnel. The cautions and notes are not exhaustive. Proper service methods are important to the safe, reliable operation of equipment. Improper service methods can damage equipment.

The service procedures recommended and described in this service manual provide effective methods of performing service operations. Service engineers should have prior repair knowledge and experience as well as appropriate training for the product before performing service procedures.

- Be sure your working environment is dry and clean and meets all government safety requirements.
- Be sure that other persons are safe while you are servicing the product.
- Do not perform any action that can cause a hazard to the customer or make the product unsafe.
- Use proper safety devices to ensure your personal safety.
- Always use approved tools and test equipment for servicing.
- Never assume the product's power is disconnected from the main power supply. Check that it is disconnected before opening the product's cabinet.
- Modules containing electrical components are sensitive to electrostatic discharge (ESD). Follow ESD safety procedures while handling these parts.
- Some products contain more than one battery. Do not disassemble or expose a battery to high temperatures, such as throwing into fire, or the battery may explode.
- Refer to government requirements for battery recycling or disposal.

This information provides general service information for the monitor. Adherence to the procedures and precautions is essential for proper service.

IMPORTANT: Only trained service personnel who are familiar with this HP product should perform service or maintenance for it. Before performing any service or maintenance, personnel must read the important safety information.

IMPORTANT: You must disconnect the power cord from the power source before opening the monitor to prevent component damage.

Important service information and precautions

- Repair must be performed by professional service technicians in a repair center. End users should not perform these procedures.
- Please note during servicing that the primary side is the high voltage area.
- This monitor meets ROHS requirements. Be sure to use lead-free solder wire when soldering.
- If you must change a capacitor, be sure to match the polarity as printed on the PCB.
- If you must replace a capacitor, make sure the specification and part number match the BOM and

location.

- If you must replace a capacitor, insert new parts carefully to avoid a short circuit caused by the near pin.
- Do not get the board wet. Water and moisture can cause a short circuit that causes malfunctions.
- To avoid damage, be sure to use lead-free solder.
- When soldering, work quickly to avoid overheating the circuit board.
- Keep the soldering iron tip clean and well tinned when replacing parts.
- After repair, perform a close inspection of the circuit board to confirm it is in good condition.
- After repair, perform a function test to confirm the power supply is working properly.

ERP Lot5 requirement

1. A professional repairer must have the technical competence to repair electronic displays and comply with the applicable regulations for repairers of electrical equipment in the Member States where the repairer operates. Reference to an official registration system as professional repairer, where such a system exists in the Member States, shall be accepted as proof of compliance.

2. A professional repairer must have insurance that covers liabilities resulting from repairs, regardless of whether required by the Member State.

RoHS (2002/95/EC) requirements

Applied to all countries that require RoHS.

The RoHS (Restriction of Hazardous Substance in Electrical and Electronic Equipment Directive) is a legal requirement by the EU (European Union) for the global electronics industry sold in the EU and other countries. Any electrical and electronics products launched in the market after June 2006 should meet this RoHS requirement. Products launched in the market before June 2006 are not required to be compliant with RoHS parts. If the original parts are not RoHS compliant, the replacement parts can be non-ROHS compliant. If the original parts are RoHS compliant, the replacement parts **MUST** be RoHS compliant.

If product service or maintenance requires replacing parts, confirm the RoHS requirement before replacement.

General descriptions

This manual contains general information. There are two levels of service:

Level 1: Cosmetic/appearance/alignment service

Level 2: Circuit board or standard parts replacement

Firmware updates

Firmware updates for the monitor are available at support.hp.com. If no firmware is posted, the monitor does not need a firmware update.

Before returning the repaired product to the customer

Perform an AC leakage current check on exposed metallic parts to be sure the product is safe to operate without the potential of electrical shock. Do not use a line isolation transformer during this check.

Measurements that are not within specified limits present a possible shock hazard. You must check and repair the product before returning it to the customer.

2 Monitor features

This chapter provides an overview of the monitor's features.

Features

Depending on the model, your monitor might include the following features:

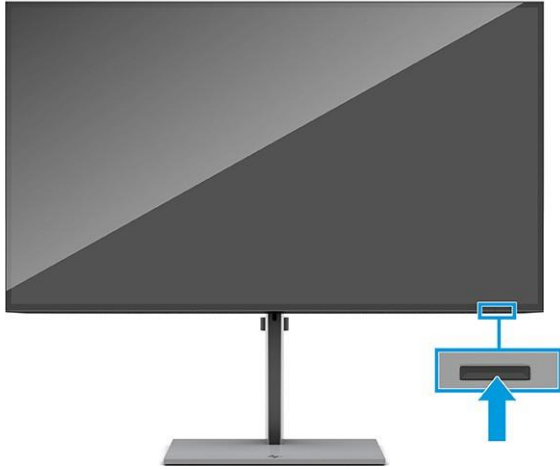
Display features

- 60.5 cm (23.8 in) diagonal viewable screen area with 2560 × 1440 resolution, plus full-screen support for lower resolutions; includes custom scaling for maximum image size while preserving original aspect ratio
- Nonglare screen with an LED backlight
- Wide color gamut to provide coverage of sRGB color spaces
- Nonglare panel with an LED backlight
- Wide viewing angle to allow viewing from a sitting or standing position, or when moving from side to side
- Tilt, swivel, and height adjustment capabilities
- Pivot capability to rotate the monitor head from landscape to portrait orientation
- Removable stand for flexible monitor head mounting solutions
- DisplayPort and High-Definition Multimedia Interface (HDMI) video inputs
- USB cable provided to connect the monitor's USB hub to the USB port on the computer
- Plug and Play capability, if supported by your operating system
- 100 mm integrated VESA mounting
- Security cable slot provision on rear of monitor for optional security cable
- On-screen display (OSD) adjustments in several languages for easy setup and screen optimization
- HP Display Assistant software for adjusting monitor settings and enabling theft deterrence features
- High-bandwidth Digital Content Protection (HDCP) copy protection on all digital inputs
- Energy saver feature to meet requirements for reduced power consumption

NOTE: For safety and regulatory information, refer to the Product Notices provided in your documentation kit. To access the latest user guides or manuals for your product, go to <http://www.hp.com/support> and follow the instructions to find your product. Then select **Manuals**.

Front components

To identify the components on the front of the monitor, use this illustration and table.



Rear and side components

To identify the components on the rear of the monitor, use this illustration and table.

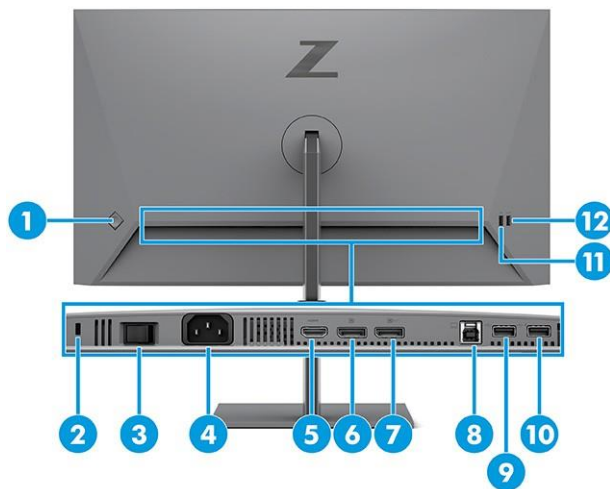
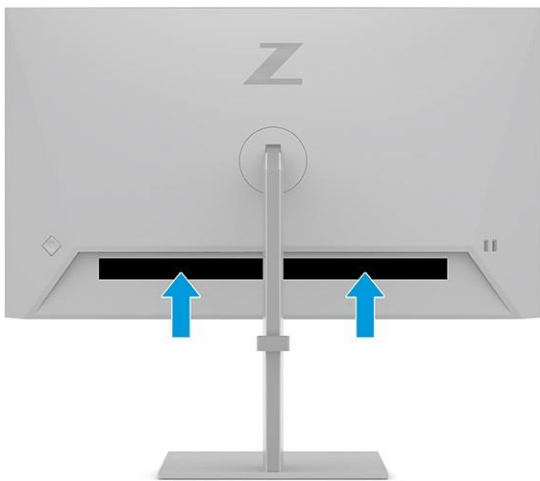


Table 2-2 Rear and side components and their descriptions

Component	Description
(1) OSD control	Activates the OSD buttons so that the button labels appear on the right side of the screen.
(2) Security cable slot	Connects an optional security cable.
(3) Master power switch	Turns on or off all power to the monitor.
(4) Power connector	Connects the power cord.
(5) HDMI port	Connects the HDMI cable to a source device such as a computer.
(6) DisplayPort connector	Connects the DisplayPort cable to a source device such as a computer.
(7) DisplayPort connector OUT	Connects the DisplayPort cable from the monitor to a secondary monitor.
(8) USB Type-B port (upstream)	Connects the USB Type-B cable to a source device such as a computer. This port enables the USB Type-A ports to perform their functions.
(9) USB port	Connects a USB cable to a peripheral device, such as a keyboard, mouse, or USB hard drive.
(10) USB port Battery charging 1.2	Connects a USB cable to a peripheral device, such as a keyboard, mouse, or USB hard drive and supports battery charging 1.2.
(11) USB port	Connects a USB cable to a peripheral device, such as a keyboard, mouse, or USB hard drive.
(12) USB port Battery charging 1.2	Connects a USB cable to a peripheral device, such as a keyboard, mouse, or USB hard drive and supports battery charging 1.2.

Locating the serial number and product number

The serial number and product number are located on the rear of the monitor. You may need these numbers when contacting HP about the monitor model.



For worldwide models(including India):

Barcode label & Spec label

<p>HP Z24q G3 QHD Monitor Regulatory Model / 規定型号 / 規定型號 / 모델명: HSD-0122-W 型号/型號: Z24q G3 液晶显示器 / 液晶顯示器 60.5 cm (23.8 in.) Input Rating 电源电压 / 輸入電壓 / 交流電壓 / 입력전압: 100-240V (伏特) ~ 1.6A (1.6A) 安培 50 / 60 Hz (赫茲) Made in China / Fabriqué en Chine / 製造地: 中国 / 製造地: 中國</p> <p>This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. 製造商: HP Inc.</p>	<p>XLU000000-00000 R-Hp-HSD-0122-W</p> <p>이 제품은 고압 전압이므로 주의하십시오. 경고: 고압 전압이므로 주의하십시오. HP Inc. 71025 Boeblingen Germany</p>	<p>为防止电击之危险 请勿任意打开后盖 Warning: Shock Hazard, Do Not Open. Avertissement: haute tension interne, ouverture du couvercle arrière strictement interdite.</p> <p>Apparatet må tilkoples jordet stikkontakt. Apparatet skall anslutas till jordat uttag. Laite on liitettävä suojakoskettimille varustettuun pistorasiaan. Apparatets släckprop skall tillslutas en stikkontakt med jord, som giver forbindelse til stikkroppens jord. CAN ICES-003(B)/NMB-003(B)</p> <p>Serial No. 序号/序號: CN40300001 Product No.: 4G8N4AA Assembly Part No.: M84050-700 Spares No.: M84506-001 Rev.: XXXXX Manufactured / 製造日期: October 2021</p>
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3 Illustrated parts catalog

To identify the monitor major components, use this illustration and table.

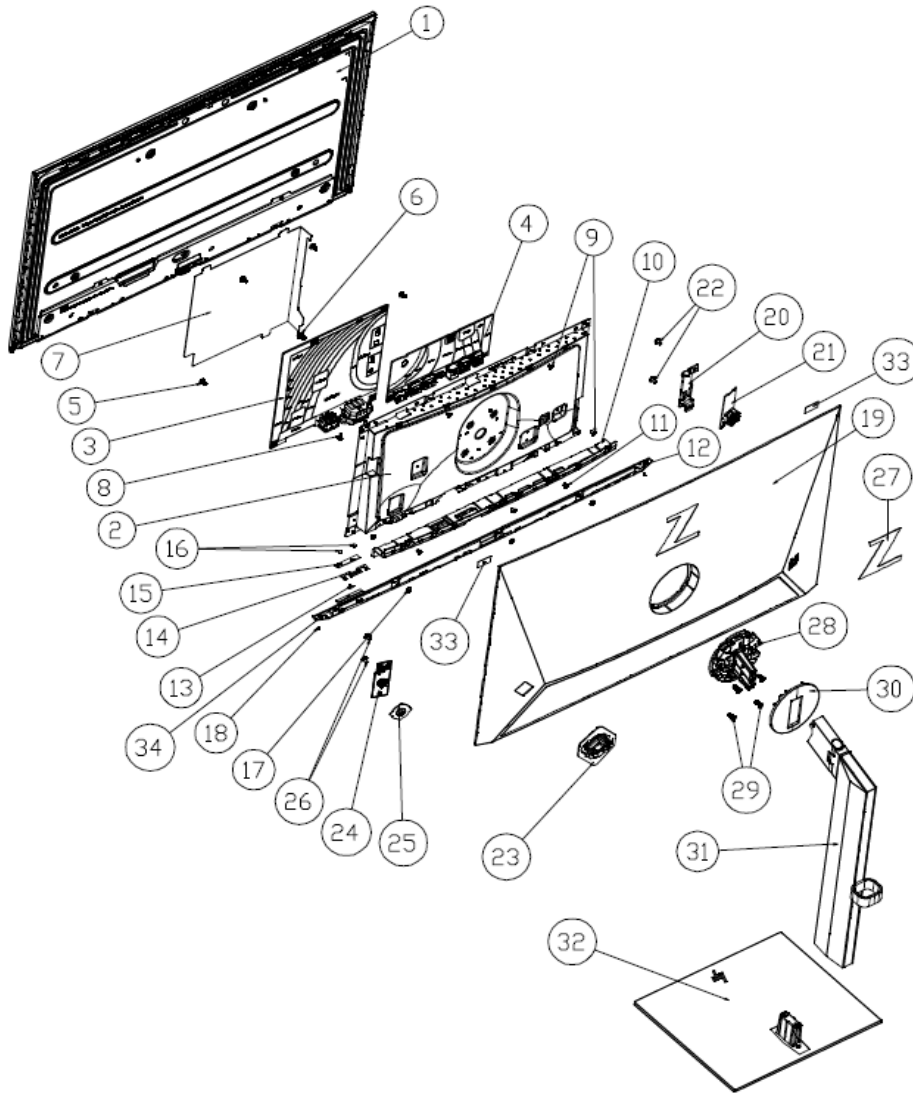


Table 3-1: Monitor major components and their descriptions

Item	Description	Part number	Qty
1	# ASSY Panel Z24q G3		1
2	#ASSY Main Chassis Z24q G3		1
3	#Power Board Z24q G3		1
4	#Interface Board Z24q G3		1
5	#Screw Machine M3*6		5
6	#Screw Cap Head M4*8		1
7	#Mylar Power Z24q G3		1

8	#Screw Tapping Wafer M3*8 White Ni	2
9	#Screw MAC PRU M3*0.5*L3.0 Ni	4
10	#IO Cover Z24q G3	1
11	#Screw MAC Wafer M3*0.5*L4 Ni	3
12	#BEZEL_BOTTOM_Z24Q	1
13	#Power Lens Z24q G3	1
14	#Power Key Z24q G3	1
15	#Power Key Board Z24q G3	1
16	#Screw Tapping without Taper M2*2.4	2
17	#Screw M2*2.2*0.8T	4
18	# Screw M2*2.8L	2
19	#REAR_COVER_Z24q_WP	1
20	#Side USB Holder Z24q G3	1
21	#Side USB Board Z24q G3	1
22	#Screw Tap Pan M3*6 Ni	2
23	#OSD Key Holder Z24q G3	1
24	#OSD Board Z24q G3	1
25	#Joystick Cap Z24q G3	1
26	#Screw Tap Pan M3*6 Ni	2
27	#Z Logo 48mm PET Black	1
28	#Hinge Tilt 5-20 Pivot 45 Z24q G3	1
29	#Screw M4*6 FH+CN+NYLON	4
30	#Hinge Cover OP Turbo Silver Z24q G3	1
31	#Stand Arm Lift 150 AL Z24q G3	1
32	#Stand Base Turbo Silver Z24q G3	1
33	#Double Adhesive Tape	2
34	#PET Shading Lens	1

How to order parts

The HP authorized repair center can purchase the power board from HP.

Power board

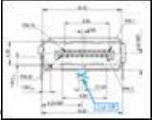
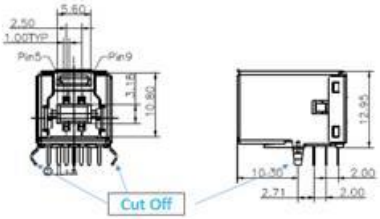
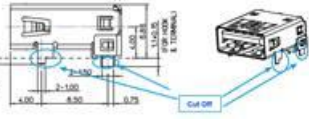
Description	HP spare part number	Manufacturer part number
POWER BD RD238HC-BNUW(C)Z24q	N12333-001	755.08002.0001

Capacitors and connectors are available for purchase from the following EU distributors:

- TC (RUBYCON ALU CAP): www.thin-chan.com.tw

- CAPXON: www.capxongroup.com

Connectors by manufacturer

Component description	Location identifier	Component distributor	Distributer part number	Remark
HDMI	HDMI1	Switchcraft Inc.	https://www.digikey.com PN: 137-RAHHD19TR-ND	1. Modify the rear cover I/O metal and plastic.
DP	DP1 DP2	Molex	https://www.digikey.com PN: WM14328DKR-ND	1. Only DP1.1 2. Modify the rear cover I/O metal  3. Cut off the through hole
USB-B	USB1	Amphenol ICC	https://www.digikey.com PN:AE11189-ND	1. Modify the rear cover I/O metal and plastic. 2. Cut off the Pin as below 
USB-A	USB2 USB3	Molex	https://www.digikey.com PN: WM10413TR-ND	1. Cut off the Pin as below 
USB-A	USB4 USB5	Molex	https://www.digikey.com PN: WM10413TR-ND	1. Modify the rear cover I/O metal and plastic. 2. Change the height from 15mm to 11.5mm 3. Cut off the Pin as below

NOTE: The connector may need to be modified to meet functionality, regulatory and safety requirements if it is not an exact match.

You can purchase cables from the HP part store at <https://partsurfer.hp.com/Search.aspx>.

NOTE: HP continually improves and changes product parts. For complete and current information about supported parts for your computer, go to <http://partsurfer.com>, select your country or region, and then follow the on-screen instructions.

Internal and External Power Supplies are available for purchase from the following EU distributor: EET
<https://www.eetgroup.com/en-eu/>

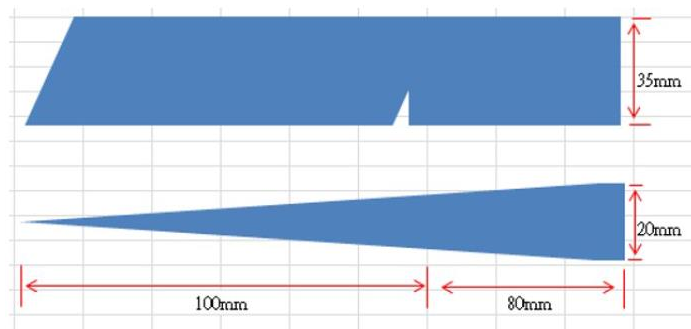
4 Removal and replacement procedures

Adherence to these procedures and precautions is essential for proper service.

Preparation for disassembly

Use this information to properly prepare to disassemble and reassemble the monitor.

- 1) Read the “Important safety information” and “Important service information and precautions” sections in the “Getting started” chapter of this guide.
- 2) Clean the room for disassembly.
- 3) Identify the disassembly area.
- 4) Check the position that the monitors are to be placed along with the number of monitors. Prepare the area for material flow according to the disassembly layout.
- 5) Be sure to have the following equipment and materials:
 - Press fixture
 - Working table
 - Screwdriver
 - Knife
 - Gloves
 - Cleaning cloth
 - ESD protection
 - Scraper bar in the following dimensions:



Rear Cover

Before removing the Rear Cover, follow these steps:

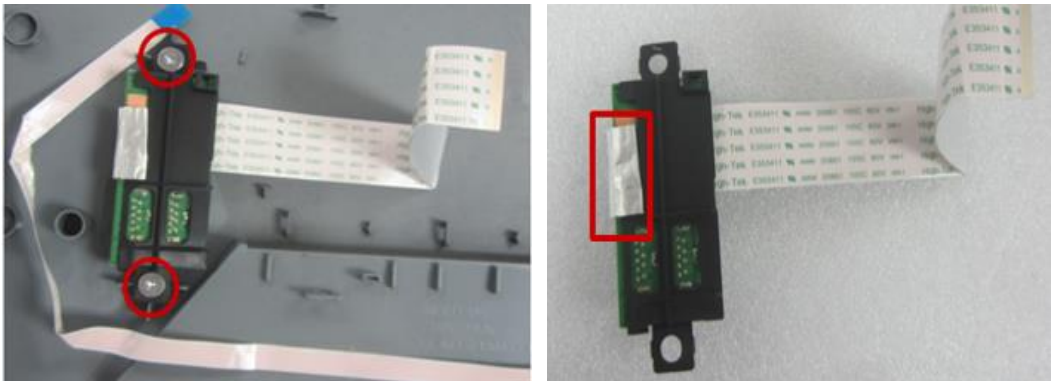
- ▲ Prepare the monitor for disassembly. See Preparation for disassembly on page 10.
- 1) Pull the release button to remove Stand Base From Display Head



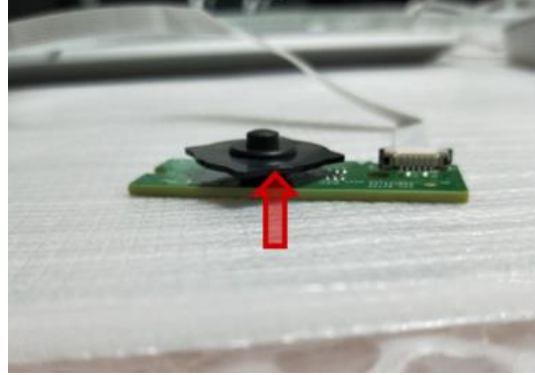
- 2) Remove Rear Cover From Display Head: Use the tool to remove the hinge cover, then Release the four screws from back bracket and remove the hinge, then Loose all the hooks by hand for pulling the rear cover



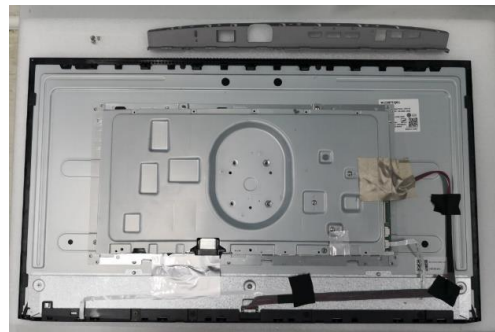
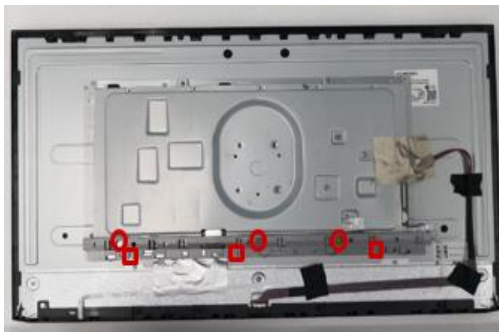
- 3) Remove USB BD Screws to remove USB BD: Remove the EMI gasket, then loose the two hooks by hand, then remove the cable



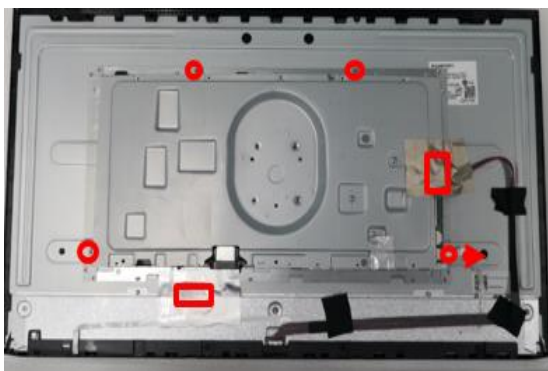
- 4) Release OSD key BD from rear cover



- 5) Remove IO cover from display head (Remove three screws and loose three hooks by hand)



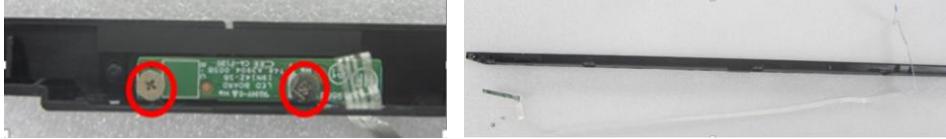
- 6) Remove Bracket Assembly From Display Head (remove 4 pcs screws and remove three cable connectors)



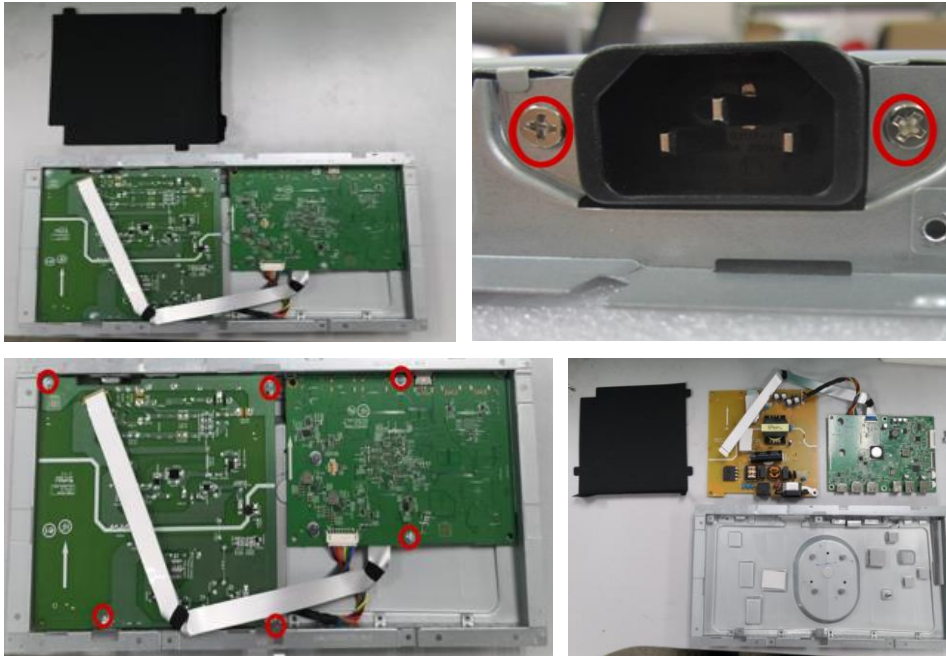
- 7) Remove bezel bottom ASSY from display head (Remove 5 pcs screws)



- 8) Remove Power Key Board from Bezel bottom assy.(Remove two screws)



- 9) Disassemble Bracket Assembly: remove black Mylar, then release the 2pcs AC screws from bracket, Release the 5pcs screws for releasing the power board and interface board.



Power board

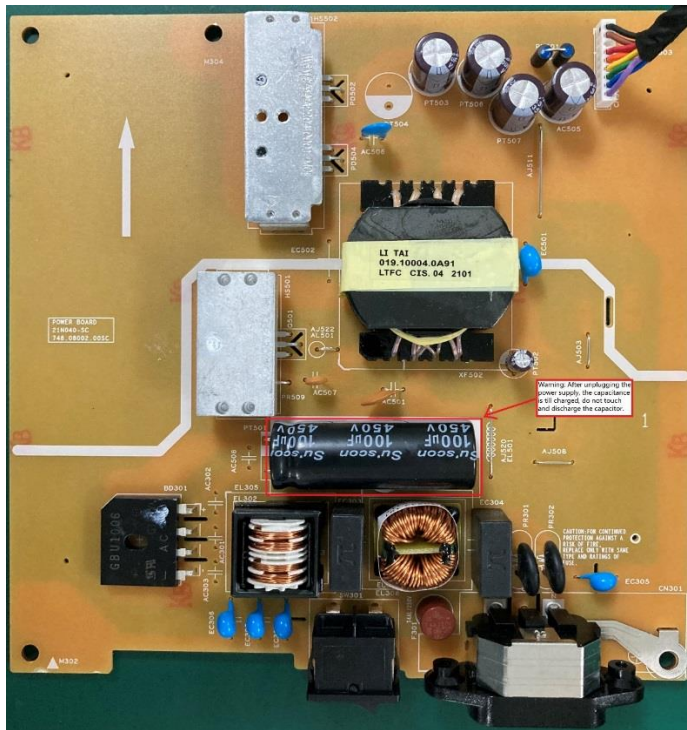
The power board part number is 755.08002.0001.

Before removing the power board, follow these steps:

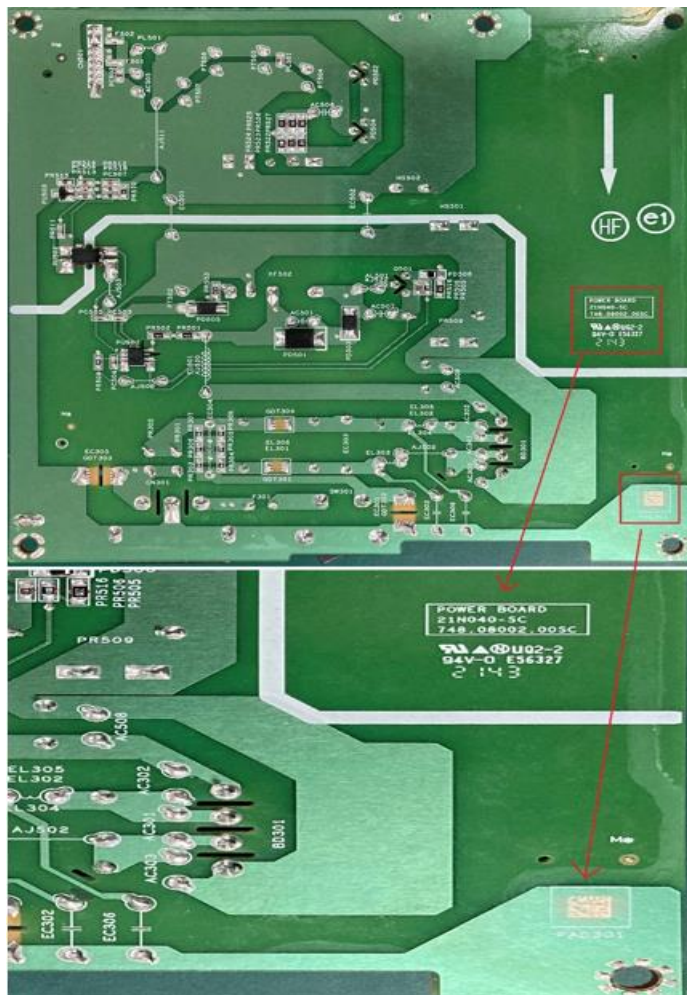
- ▲ Prepare the monitor for disassembly. See Preparation for disassembly on page 10.

Remove the power board:

- 1) The HP Z24q G3 power board connector position is as follows:



2) Locate the part number location on the board.



3) Pin solder with soldering iron and absorber.

NA

- 4) Lift the connector up and away from the PCB.
No

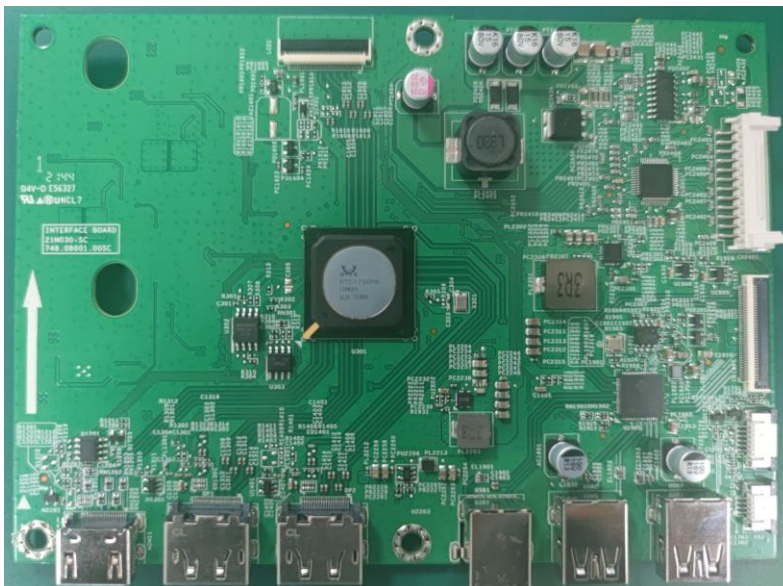
Connector repair

This procedure includes HDMI, Display Port, USB-B and USB-A connectors.

The connectors are on the main board (board part number 7ZB.08001.0007).

The connector identifiers are as follows:

Connector	Location
HDMI	HDMI1
DP	DP1,DP2
USB-B	USB1
USB-A	USB2,USB3
USB-A	USB4,USB5



Before repairing connectors, follow these steps:

- ▲ Prepare the monitor for disassembly. See [Preparation for disassembly](#) on page 10.

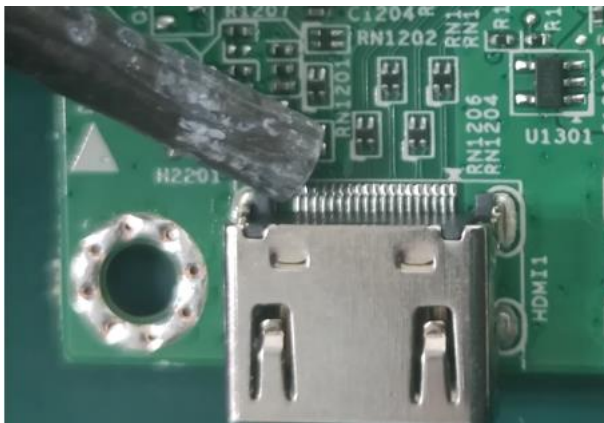
HDMI connector HDMI1

Repair the HDMI connector:

- 1) Use a soldering iron and a de-soldering pump to remove as much solder as possible from the pin.



- 2) Use a hot air gun to melt the solder on the pins.



- 3) Lift the HDMI connector from the PCB.
- 4) Place the new component on the PCB. Be sure that it matches the PCB footprint.
- 5) Solder the new component.

DP connector DP1 DP2

Repair the DP connector:

- 1) Use a soldering iron and a de-soldering pump to remove as much solder as possible from the pin.



- 2) Use a hot air gun to melt the solder on the pins.



- 3) Lift the DP connector from the PCB.
- 4) Place the new component on the PCB. Be sure that it matches the PCB footprint.
- 5) Solder the new component.

USB-B connector USB1

Repair the USB-B connector:

- 1) Use a soldering iron and a de-soldering pump to remove as much solder as possible from the pin.



- 2) Lift the USB-B connector from the PCB.
 - 3) Place the new component on the PCB. Be sure that it matches the PCB footprint.
- Solder the new component

USB-A connector USB2/USB3

Repair the USB-A connector:

- 1) Use a soldering iron and a de-soldering pump to remove as much solder as possible from the pin.



- 2) Lift the USB-A connector from the PCB.
- 3) Place the new component on the PCB. Be sure that it matches the PCB footprint.
- 4) Solder the new component.

USB-A connector USB4/USB5

Repair the USB-A connector:

- 1) Use a soldering iron and a de-soldering pump to remove as much solder as possible from the pin.



- 2) Lift the USB-A connector from the PCB.
- 3) Place the new component on the PCB. Be sure that it matches the PCB footprint.
- 4) Solder the new component.

Function test

After repair, be sure to confirm that all functions are working.

Table 4-1: Function test

Test item	Operating description	Tool used
HDMI test	Confirm whether image displays	Computer or DVD player
DP test	Confirm whether image displays	Computer or DVD player

DP out test	Confirm whether image displays	Computer / DVD player and other monitor
USB Hub Test	Confirm USB function of 4-USB Type-A working normally.	Computer or Notebook

Support and troubleshooting

The following table lists possible problems, the possible cause or each problem, and the recommended solutions.

Table 4-2: Solving common problems

Problem	Possible cause	Solution
Screen is blank or video is flashing.	Power cord is disconnected.	Connect the power cord.
	Monitor is turned off.	Power the power button. NOTE: If pressing the Power button has no effect, press and hold the power button for 10 seconds to disable the Power button lockout feature.
	Master power switch is set to off.	Set the master power switch on the rear of the monitor to the On position.
	Video cable is improperly connected.	Connect the video cable properly.
	System is in Sleep mode.	Press any key on the keyboard or move the mouse to exit Sleep mode.
Image appears blurred, indistinct, or too dark.	Video card is incompatible.	Open the OSD menu and select the Input menu. Set Auto-Switch Input to Off and manually select the input. or Replace the video card or connect the video cable to one of the computer's on-board video sources.
	Brightness is too low.	Open the OSD menu and select Brightness to adjust the brightness scale as needed.
Check Video Cable is displayed on screen.	Monitor video cable is disconnected.	Connect the appropriate video signal cable between the computer and monitor. Be sure that the computer power is off while you connect the video cable.
Input Signal Out of Range is	Video resolution and/or refresh rate are set higher than what the monitor supports.	Change the settings to a supported setting.

displayed on screen.		
The monitor does not enter into a low-power sleep state.	The monitor's power saving control is disabled.	Open the OSD menu and select Power , select Auto-Sleep Mode and set auto-sleep to On .
"OSD Lockout" is displayed.	The monitor's OSD lock function is enabled.	Press and hold the Menu button to disable the OSD lockout function.
"Power Button Lockout" is displayed.	The monitor's power button is locked.	Press and hold the Power button for 10 seconds to disable the power button lock function.

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