



# Maintenance and Service Guide

## HP Series 7 Pro 738pu model

### **SUMMARY**

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

© Copyright 2021 HP Development Company, L.P.

AMD is a trademark of Advanced Micro Devices, Inc. Bluetooth is a trademark owned by its proprietor and used by HP Inc. under license. NVIDIA is a trademark and/or registered trademark of NVIDIA Corporation in the U.S. and other countries. USB Type-C and USB-C are registered trademarks of USB Implementers Forum. DisplayPort and the DisplayPort logo are trademarks owned by the Video Electronics Standards Association (VESA) in the United States and other countries.

The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

First Edition: February 2024

Document Part Number: N56082-HP Series 7 Pro 738pu-MSG-V1

Assembly part number: N56082-001

#### **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".

# Table of Contents

1	Getting started .....	1
	Important safety information .....	1
	Important service information and precautions .....	1
	RoHS (2002/95/EC) requirements .....	2
	General descriptions .....	2
	Firmware updates .....	2
	Before returning the repaired product to the customer .....	2
2	Monitor features .....	3
	Features .....	3
	Front components .....	5
	Rear and side components .....	6
	Locating the serial number and product number .....	7
3	Illustrated parts catalog .....	8
	How to order parts .....	9
4	Removal and replacement procedures .....	11
	Preparation for disassembly .....	11
	Rear Cover .....	11
	Power board .....	15
	Connector repair .....	16
	HDMI connector HDMI1 .....	18
	DP connector DP1 .....	19
	USB-C connector SKT1/SKT2 .....	19
	RJ45 connector RJ1 .....	20
	USB-A connector USB3/USB4 .....	21
	Function test .....	21
	Support and troubleshooting .....	22
	Index .....	24

---

# 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](http://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

- 95,2 cm/37,5 in diagonal viewable screen area with 3840 x 1600 resolution (HSD-0168-W), plus full-screen support for lower resolutions; includes custom scaling for maximum image size while preserving original aspect ratio
- Nonglare panel with an LED backlight
- Wide viewing angle to allow viewing from a sitting or standing position, or moving from side to side
- Tilt, swivel, and height adjustment capabilities
- Pivot capability to rotate the monitor head from landscape to portrait mode (Select models)
- Removable stand for flexible monitor head mounting solutions
- Plug and Play capability, if supported by your operating system
- 100 mm integrated VESA mounting
- Security cable slot on the rear of the monitor for an 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
- ALS Sensor automatically adjusts monitor brightness

#### Connectors

- DisplayPort™ video input (cable included)
- DisplayPort™ video output (cable included)
- HDMI video input
- Two USB Type-C® Thunderbolt™ ports (cable included in select regions)
- RJ-45 (network) jack
- Four USB ports (downstream)
- Plug and Play capability, if supported by your operating system

#### Monitor stand

- Removable stand for flexible monitor head mounting solutions

- HP Quick Release 2 device to quickly attach the monitor head to the stand with a simple click, and then remove it with the convenient sliding tab release
- VESA® mounting bracket for attaching the monitor head to a wall-mount device or swing arm
- VESA mounting capability (100 × 100 mm) for attaching the monitor to a swing arm mount
- Support for a mounting bracket to attach the monitor to a workstation

---

**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 **Setup & User Guides**.

---

## Front components

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

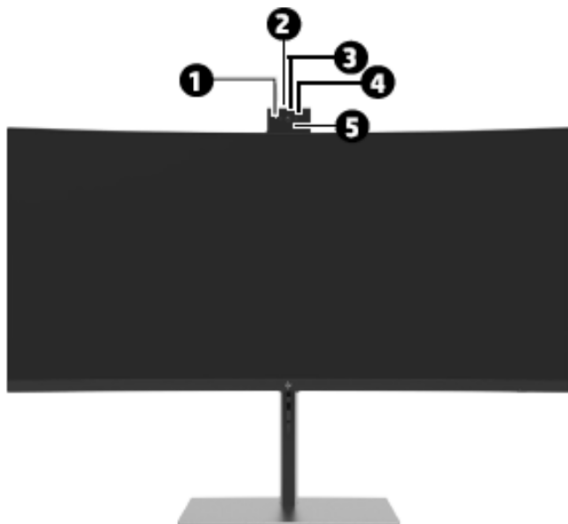


Table 2-1 Front components and their descriptions

Component	Description
(1) Camera light	On: The camera is in use.
(2) ALS Sensor	Automatically adjusts monitor brightness.
(3) Camera RGB lens	Transmits your image in a video conference.
(4) Camera IR lens	Transmits your image for Windows Hello facial recognition.
(5) User-proximity sensor	Uses the Auto Lock and Awake feature to monitor your presence in front of the computer to save power and add security. When you step away from the computer, the proximity sensor puts the computer into the Sleep state. When you return to the computer, your computer recognizes you and wakes the computer automatically. Auto Lock and Awake is turned on by default.



# Rear and side components

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

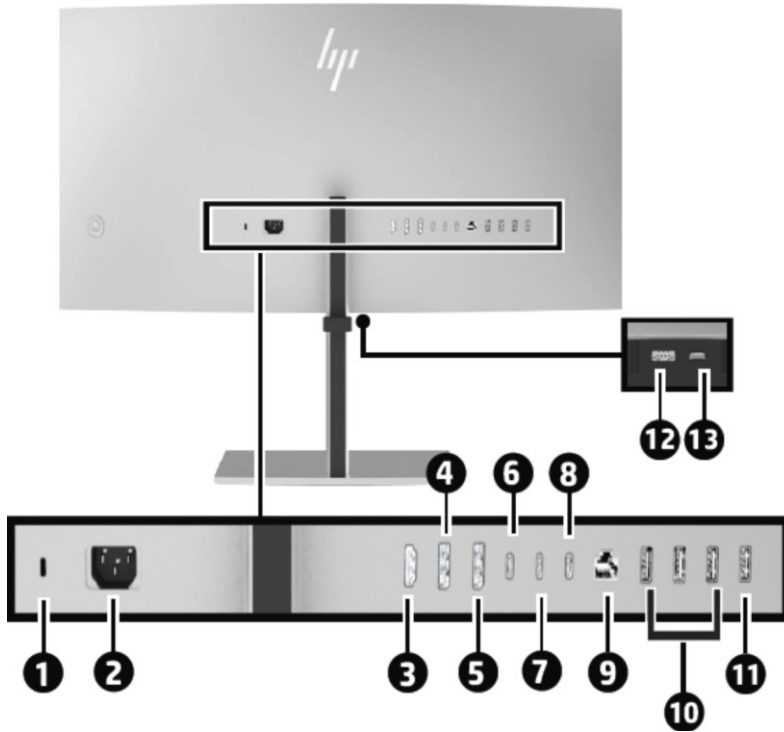
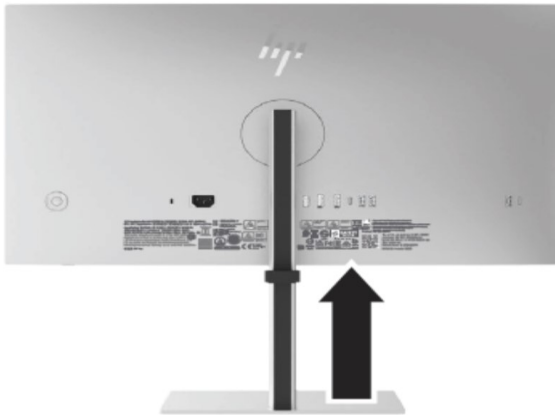


Table 2-2 Rear components and their descriptions

Component	Description
(1)	Security cable slot Connects an optional security cable.
(2)	Power connector Connects your monitor to a power outlet.
(3)	HDMI port Connects the HDMI cable to a source device such as a computer or game console.
(4)	DisplayPort In connector Connects the DisplayPort cable to a source device such as a computer or game console.
(5)	DisplayPort Out connector Connects the DisplayPort cable from the monitor to a secondary monitor.
(6)	USB Type-C port with DP Alt Mode 1.4, USB upstream data, and maximum power delivery up to 65 W Connects the USB C-C cable to a source such as computer for DP Alt mode and USB data.
(7)	TB4 Out connector Connects a TB4 cable to a TBT4 monitor or TBT4 device and supports PD 5 V @ 3 A.
(8)	TB4 In connector Connects the TB4 cable from the monitor to a source device such as a computer or game console and supports up to PD 20 V @ 5 A.
(9)	RJ45 connector Connects an RJ-45 Ethernet network cable to the monitor.
(10,12)	USB Type-A port (4) (downstream) Connect USB cables to peripheral devices, such as a keyboard, mouse, or USB hard drive, and provides data transfer.
(11)	USB Type-A port Battery charging 1.2 (downstream) Connects a USB cable to a peripheral device, such as a keyboard, mouse, or USB hard drive and supports battery charging 1.2.
(13)	USB Type-C port with 15W charging (downstream) Connects the USB Type-C cable to a peripheral device, and charge peripheral devices. NOTE: This port provides data transfer only 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 all regions:**

## Barcode label & Spec label

Regulatory Model / 规定型号 / 规定型号 / 모델명: HSD-0168-W  
 型号: HP 738pu Monitor 液晶显示器 / 液晶显示器 / 모니터 95.2 cm (37.5 in.)  
 Input Rating 电源电压 / 輸入電壓 / 交流電壓 / 정격입력: 100-240V (伏特) ~ 3.8A (3.8A) 安培 50 / 60 Hz (赫茲)  
 제조국: 중국 / Made in China / Fabriqué en Chine / 製造地: 中國 / 製造地: 中國  
 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.  
 制造商: HP Inc.

ENERGY STAR  
 Consumable energy xx.x kWh

HP 142-152  
 71228 Shenzhen  
 Germany

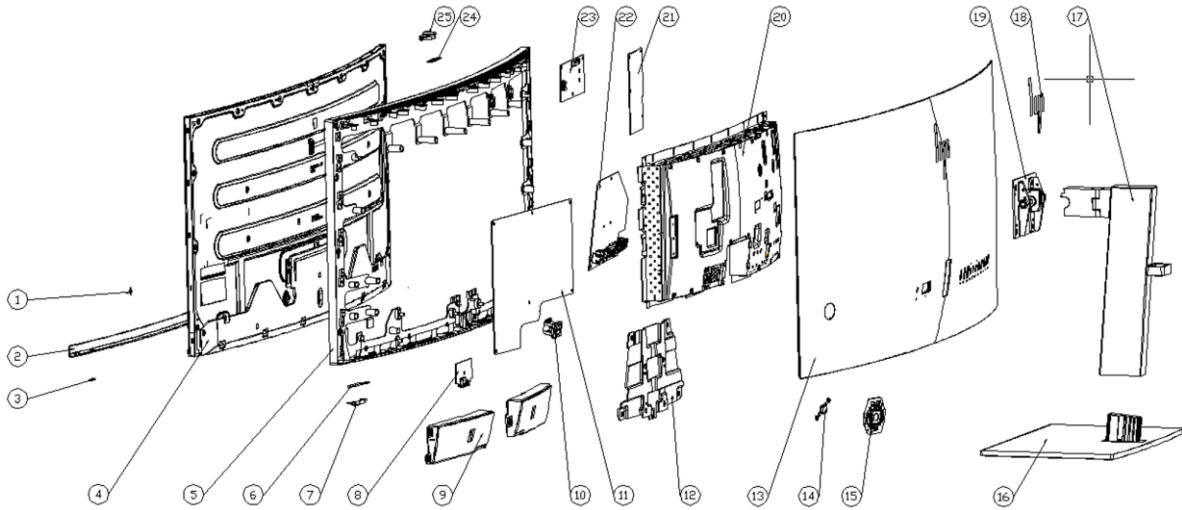
SAFETY MARK  
 XXXXXX XXXXX-XX

Product No.: 9K 167AA  
 Serial No. 序号/序號: CN43400001  
 Assembly Part No.: N56082-001  
 Spares No.: N64409-001 ASSYN/5608-700  
 Rev.: XXXXXXX  
 Manufacture d 製造/製造日期/ 再上市日期: September 2023

Service label is 45X15mm, R=2mm  
 QR code size is 11.75mm X11.75mm  
 QR code just include Serial Number, eg 'CNC0450001'  
 Serial No. Font is Arial Bold 6pt  
 The rest of variate data font is Arial 5.7pt

# 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	#Front logo 738pu		1
2	#ASSY Display Chin 738pu		1
3	#Lens 738pu		1
4	#ASSY Panel 738pu		1
5	#ASSY Middle frame 738pu		1
6	#ASSY Power key BD 738pu		1
7	#Power key 738pu		1
8	#ASSY Bottom USB BD 738pu		1
9	#ASSY Speaker 738pu		1
10	#AC socket 738pu		1
11	# ASSY Power BD 738pu		1
12	#ASSY Hinge bracket 738pu		1
13	#ASSY Rear cover 738pu		1
14	#OSD center key 738pu		1
15	#OSD around key 738pu		1
16	#ASSY Base 738pu		1
17	#ASSY Stand 738pu		1
18	#Rear Logo 738pu		1
19	#ASSY Hinge 738pu		1

20	#ASSY Main chassis 738pu	1
21	#ASSY Audio BD 738pu	1
22	#ASSY Interface BD 738pu	1
23	#ASSY Driver BD 738pu	1
24	#ASSY ALS BD 738pu	1
25	#ALS lens 738pu	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 MA375HC-CJCL-HU(C) 738pu LGD D	N97157-001	755.0AT10.0001

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

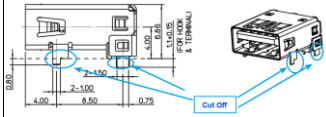
- Digi-Key(RUBYCON ALU CAP): [www.digikey.com](http://www.digikey.com)

### Capacitors by distributor

Component description	Location	Component distributor	Distributor part number
CAP EL 470U 35V M RT5 10X16 MG/HX SUSCON	AC651,AC652,AC653,AC654,AC655,AC656,A C657	SUSCON	MG035M471G16T014P50 R HX035M471G16T014P50 R
CAP EL 470U 35V M P5 10*16 ZH CAPXON		CAPXON	ZH471M035G160ETABHR

### Connectors by manufacturer

Component description	Location identifier	Component distributor	Distributer part number	Remark
HDMI	HDMI1	CUI Devices	<a href="https://www.digikey.com">https://www.digikey.com</a> PN: HD12-19-SMT-TR	Modify the rear cover I/O metal and plastic. Modify the Pin to SMT type
DP	DP1 DP2	Molex	<a href="https://www.digikey.com">https://www.digikey.com</a> PN: 2041441-1	
USB-C	USBC3	TE Connectivity	<a href="https://www.digikey.com">https://www.digikey.com</a> PN: 2385692-1	

USB-C	USBC1 USBC2	Molex	<a href="https://www.digikey.com">https://www.digikey.com</a> PN: DX07S024WJ3R400 900-2171840001DKR-ND	Cut off the Pin as below
USB-A	USB1 USB2 USB3 USB4	Molex	<a href="https://www.digikey.com">https://www.digikey.com</a> PN: 0484080003	
USB-A	USB5	Molex	<a href="https://www.digikey.com">https://www.digikey.com</a> PN: WM10413TR-ND	Modify the rear cover I/O metal and plastic. 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/>

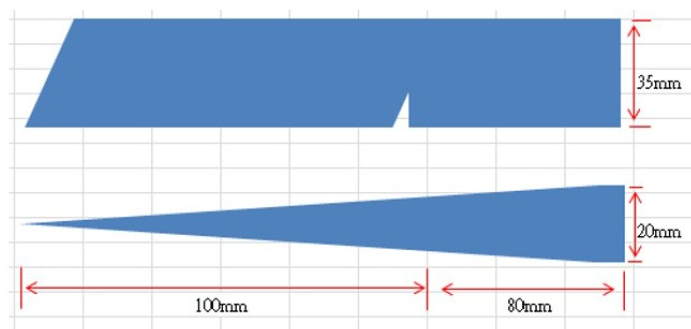
## 4 Removal and replacement procedures

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.

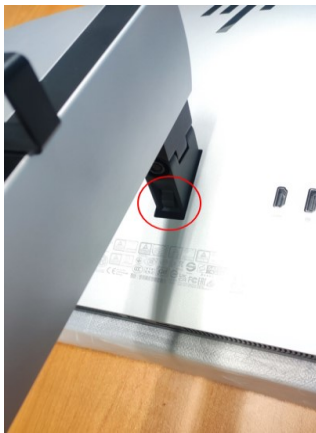
- 1) Read the “Important safety information” and “Important service information and precautions” sections in the “Getting started” chapter of this guide.
- 2) Clean the room for disassembly.
- 3) Identify the disassembly area.
- 4) Check the position that the monitors are to be placed along with the 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:

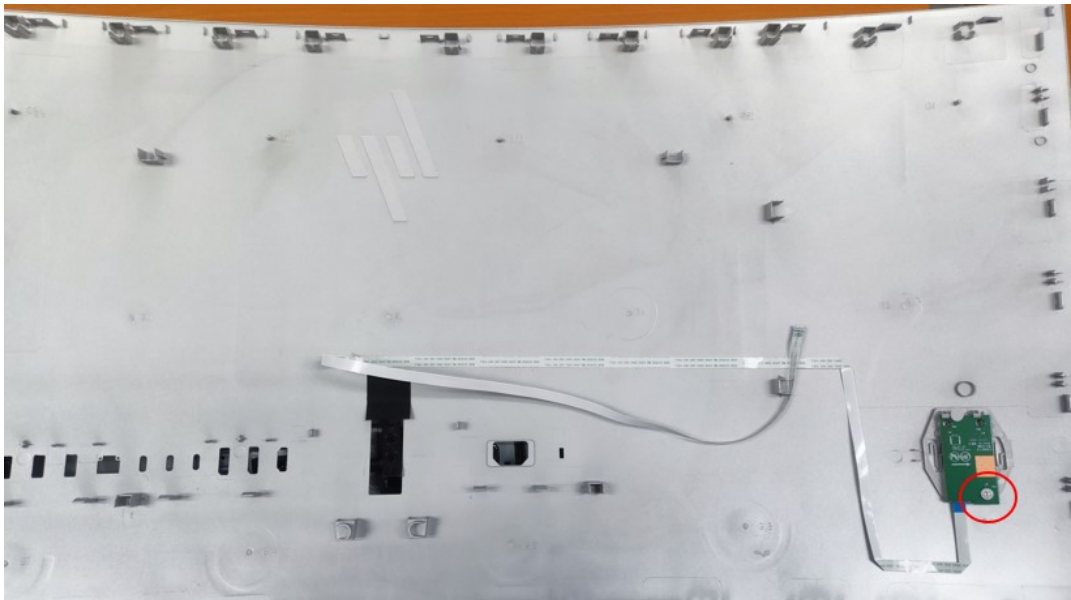
- ▲ Prepare the monitor for disassembly. See Preparation for disassembly on page 11.
- 1) Remove Stand Base From Display Head by pushing the release button



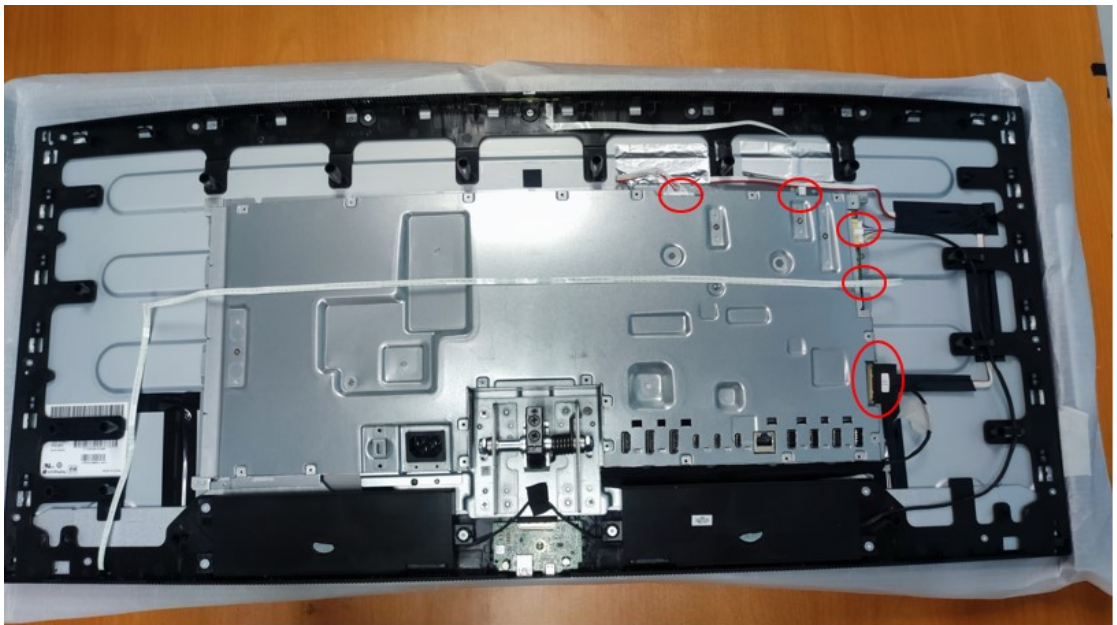
- 2) Remove Rear Cover From Display Head: Loosen all the hooks by hand in order for pulling the rear cover, and disconnect the key cable away from the connector.



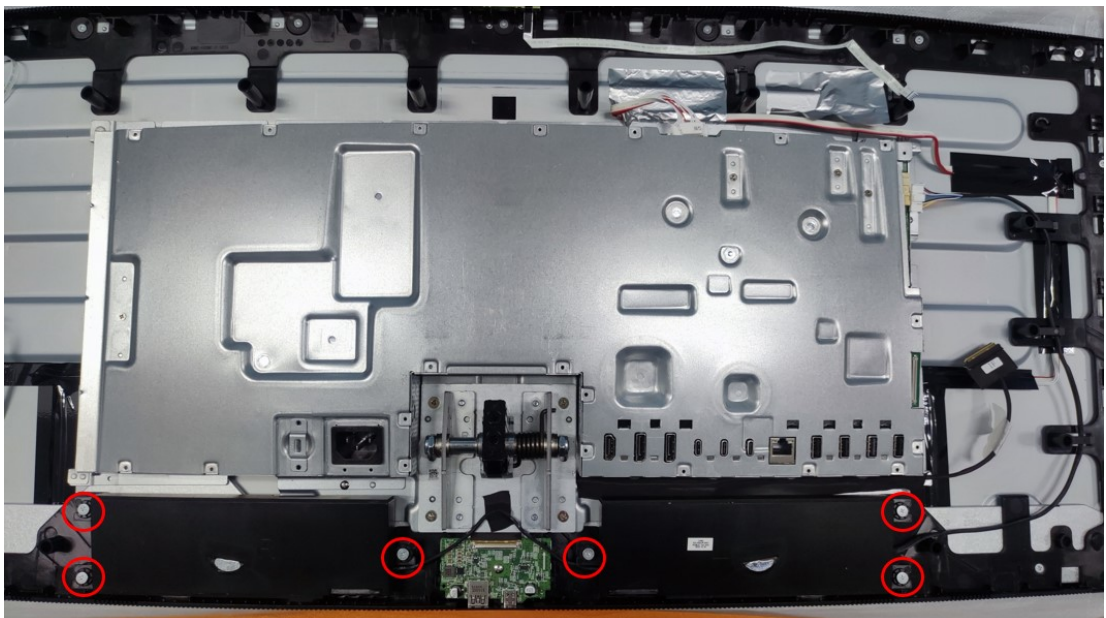
- 3) Remove OSD key board from the rear cover: remove 1pc screw



- 4) Disconnect all the cable from the main chassis.

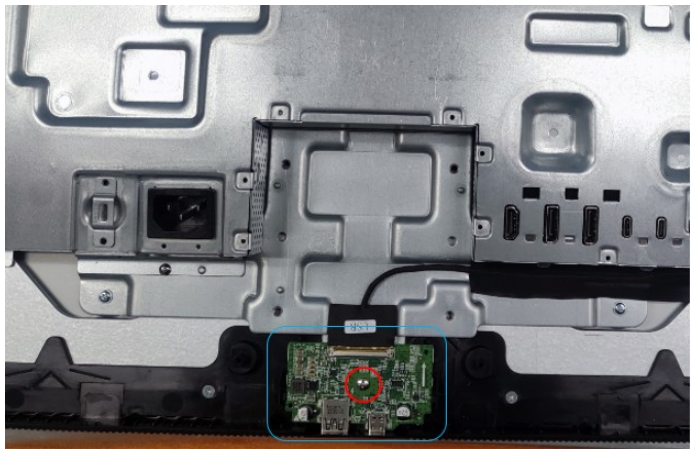
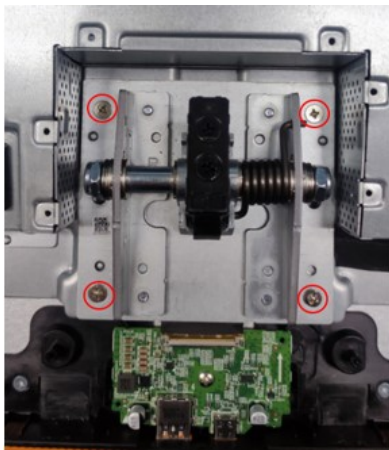


5) Remove Speaker from Middle frame by removing 6pcs screws

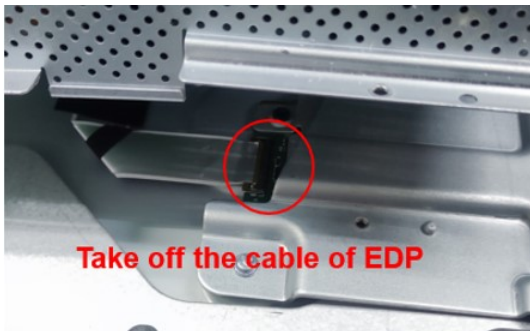
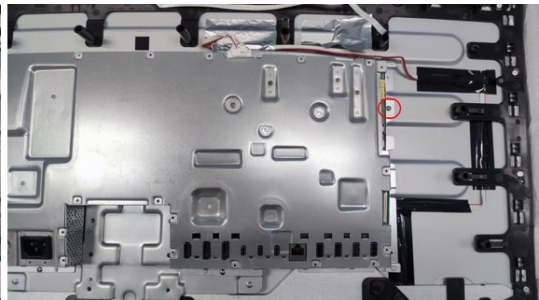
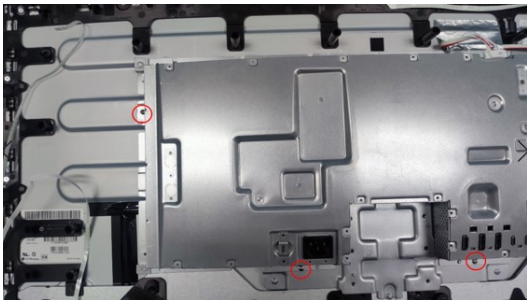


6) Remove Hinge from Display Head by removing 4 screws. Remove bottom USB board by removing 1pcs screw





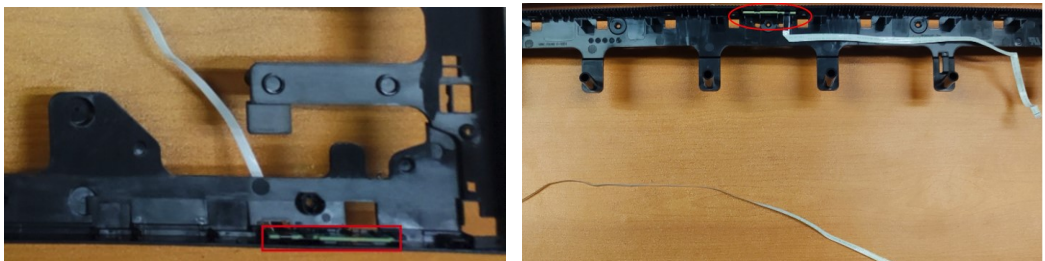
- 7) Remove Main Bracket Assy from Display Head: remove 4pcs screws and then disconnect EDP cable from the panel



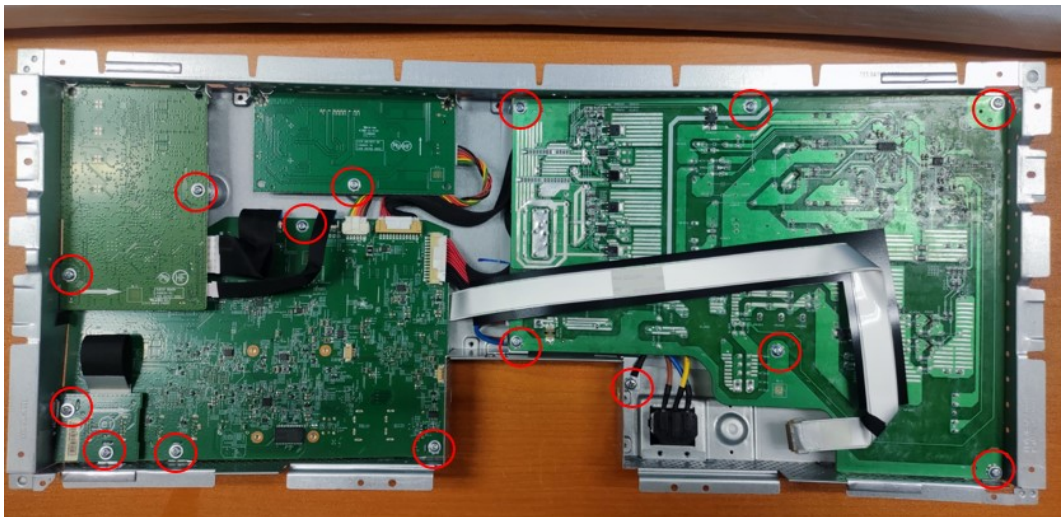
- 8) Remove middle frame from the display head: remove 21pcs screws



9) Remove Power key Board and ALS Board from Middle Frame



10) Remove all the circuit board From bracket Assembly by unlocking 15pcs screws



## Power board

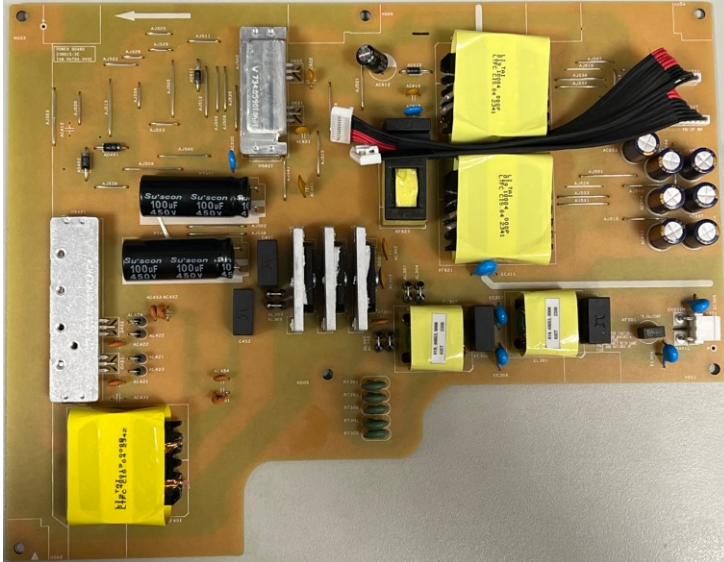
The power board part number is 755.0AT10.0001.

Before removing the power board, follow these steps:

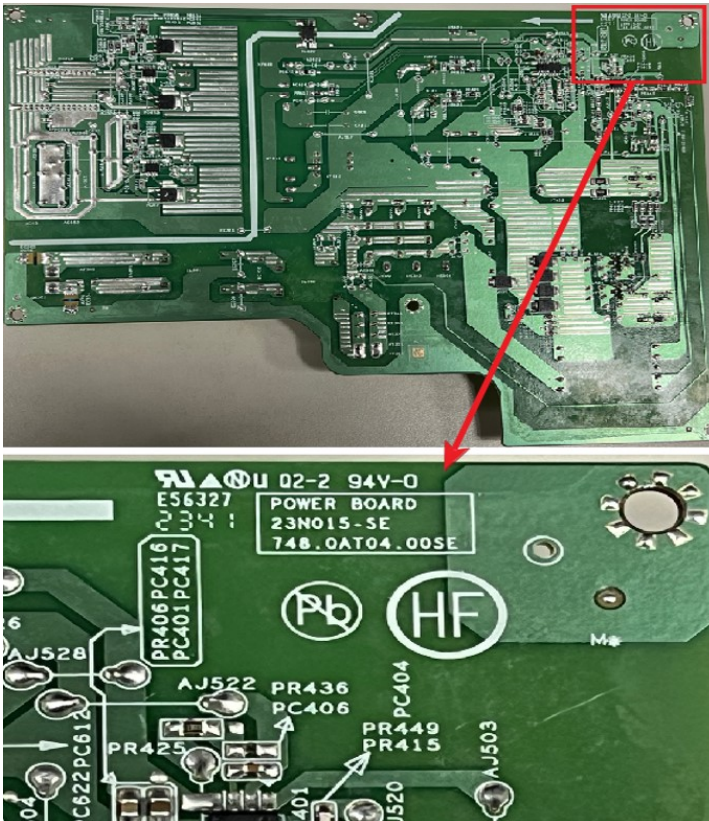
- ▲ Prepare the monitor for disassembly. See Preparation for disassembly on page 11.

Remove the power board:

- 1) The HP Series 7 Pro 738pu 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.  
NA

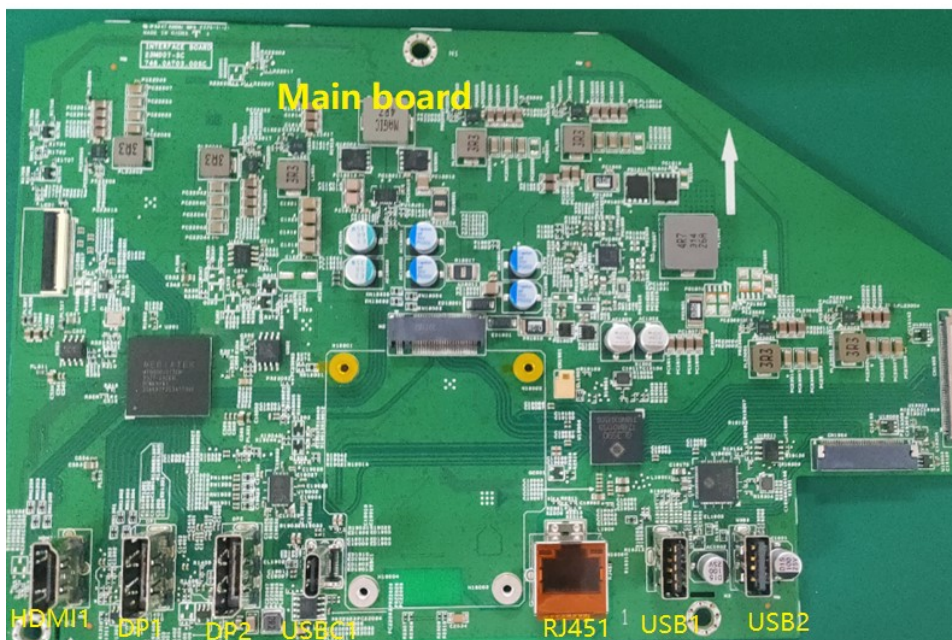
## Connector repair

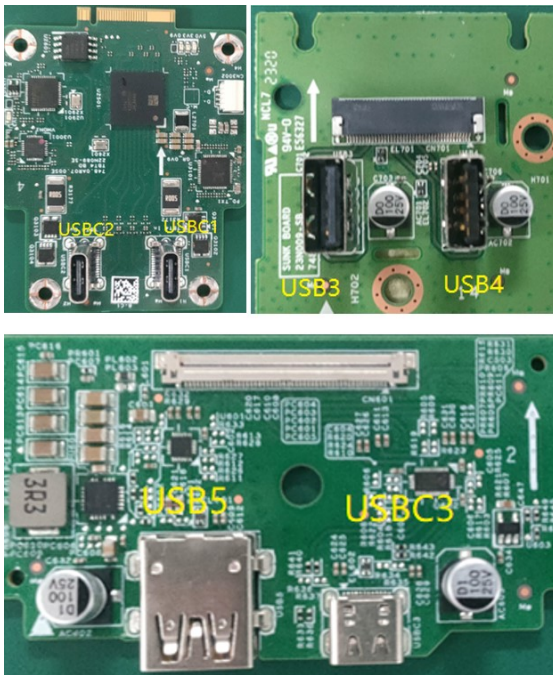
This procedure includes HDMI, Display Port, USB-C, TBT4, RJ45, USB-A connectors.

The connectors are on the main board (board part number 7ZB.0AT01.0005).

The connector identifiers are as follows:

Connector	Location
HDMI	HDMI1
DP	DP1, DP2
USB-C	USBC1, USBC3
TBT4	USBC1, USBC2
RJ45	RJ451
USBA	USB1, USB2
USBA	USB3, USB4
USBA	USB5





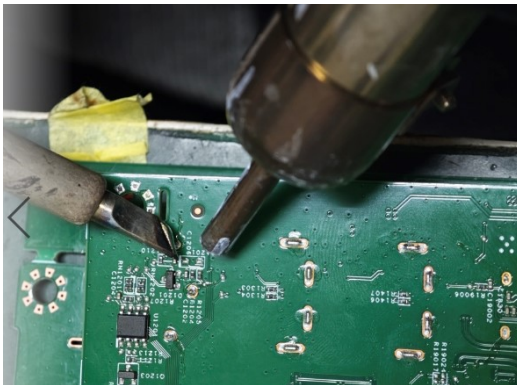
Before repairing connectors, follow these steps:

- ▲ Prepare the monitor for disassembly. See [Preparation for disassembly](#) on page 11.

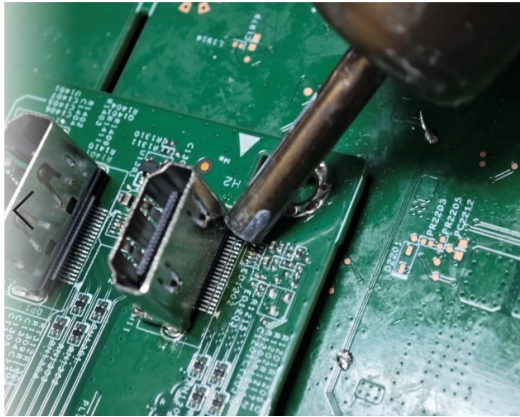
## HDMI connector HDMI1

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) Lift the HDMI connector from the PCB.

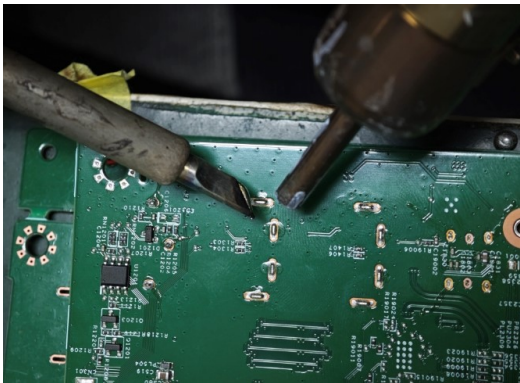


- 3) Place the new component on the PCB. Be sure that it matches the PCB footprint.
- 4) Solder the new component.

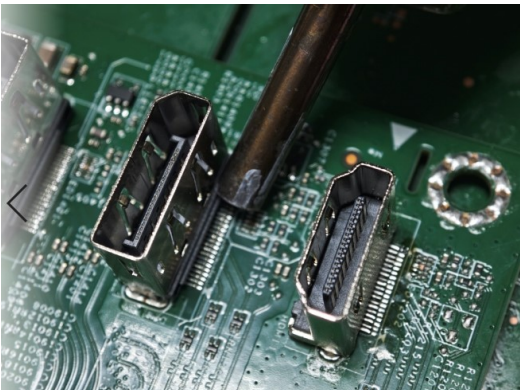
## DP connector DP1/DP2

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) Lift the DP 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.

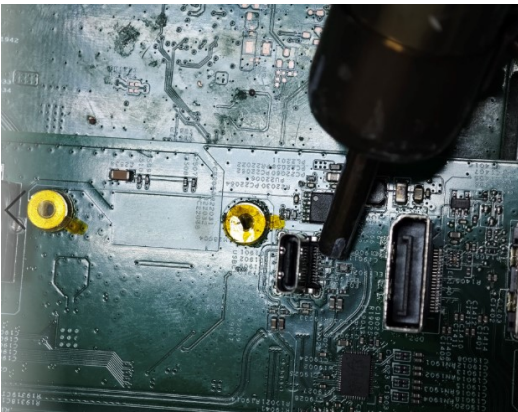
## USB-C connector USBC1/USBC2

Repair the USB-C 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-C connector from the PCB.

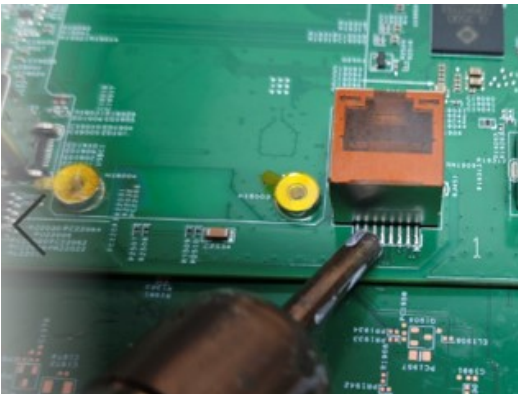


- 3) Place the new component on the PCB. Be sure that it matches the PCB footprint.
- 4) Solder the new component

## RJ45 connector RJ1

Repair the RJ45 connector:

- 1) Use a soldering iron and a de-soldering pump to remove as much solder as possible from the pin.
- 2) Lift the RJ45 connector from the PCB.

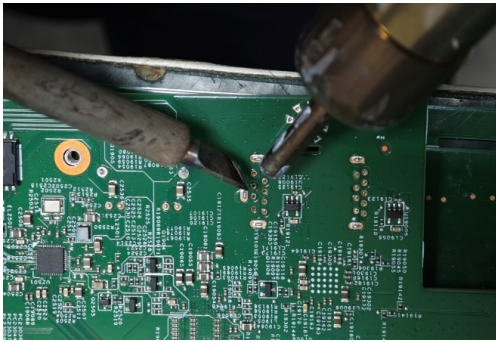


- 3) Place the new component on the PCB. Be sure that it matches the PCB footprint.
- 4) Solder the new component.

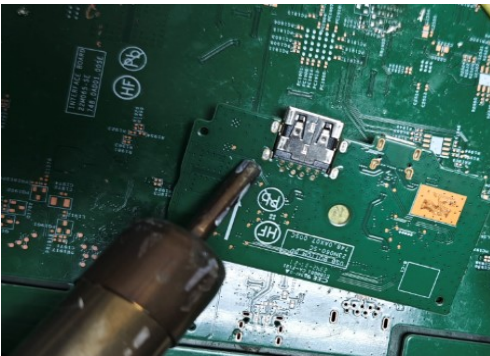
## USB-A connector USB1/USB2/USB3/USB4/USB5

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 and sound plays correctly on the monitor.	Computer or DVD player
DP test	Confirm whether image displays and sound plays correctly on the monitor.	Computer or DVD player
DP test	Confirm whether image displays and sound plays correctly on the monitor.	Computer or DVD player
USB-C Alt-Mode	Confirm whether image displays and sound plays correctly on the monitor.	Computer or Notebook
USB-C PD Function	Confirm PDO/Charging working normally.	Notebook



USB Hub test	Confirm USB function of 3-USB Type-A and 1-USB Type-C working normally.	Computer or Notebook
Audio test	Change volume and balance to confirm whether volume is smooth and loud enough.	Sound bar

## 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.
	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.
	Video card is incompatible.	Open the OSD menu and select the <b>Input</b> menu. Set <b>Auto-Switch Input</b> to <b>Off</b> 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.
Image appears blurred, indistinct, or too dark.	Brightness is too low.	Open the OSD menu and select <b>Brightness</b> to adjust the brightness scale as needed.
<b>Check Video Cable</b> 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.
<b>Input Signal Out of Range</b> is displayed on screen.	Video resolution and/or refresh rate are set higher than what the monitor supports.	Change the settings to a supported setting.
The monitor does	The monitor's power saving control is disabled.	Open the OSD menu and

not enter into a low-power sleep state.		select <b>Power</b> , select <b>Auto-Sleep Mode</b> and set auto-sleep to <b>On</b> .
“OSD Lockout” is displayed.	The monitor’s OSD lock function is enabled.	Press and hold the <b>Menu</b> button for 10 seconds to disable the OSD lockout function.
“Power Button Lockout” is displayed.	The monitor’s power button is locked.	Press and hold the <b>Power</b> button for 10 seconds to disable the power button lock function.
The camera and USB ports donot work, but the monitor is turned on.	There is no upstream USB connection.	Be sure that the host computer is connected to the monitor with a USB Type-C to USB Type-C cable or a USB Type-C to USB cable.

# Index

- components
  - front, 5
  - rear, 6
- connector repair, 16
- features, 3
- firmware updates, 2
- front components, 5
- function test, 20
- how to order parts, 9
- illustrated parts catalog, 8
- parts, 8
- parts, ordering, 9
- power board removal, 15
- precautions, 1
- preparation for disassembly, 11
- RC removal, 11
- rear components, 6
- removal
  - power board, 15
  - RC, 11
- removal and replacement procedures, 11
- returning to customer, 2
- RoHS (2002/95/EC) requirements, 2
- safety information, 1
- serial number location, 7
- service information, 1
- spare parts, 8
- support and troubleshooting, 21
- troubleshooting, 21