



Maintenance and Service Guide

V241ib model

SUMMARY

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

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M74040-001

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	4
	Rear components	5
	Locating the serial number and product number	6
3	Illustrated parts catalog	8
	How to order parts	9
4	Removal and replacement procedures	10
	Preparation for disassembly	10
	Rear Cover	10
	Power board	12
	Connector repair	14
	VGA connector CN201	14
	HDMI connector CN301	15
	DP connector CN401	16
	Function test	17
	Function test	17
	Support and troubleshooting	17
	Index	19

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 complaint, the replacement parts can be non-ROHS complaint. If the original parts are RoHS compliant, the replacement parts **MUST** be RoHS complaint.

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

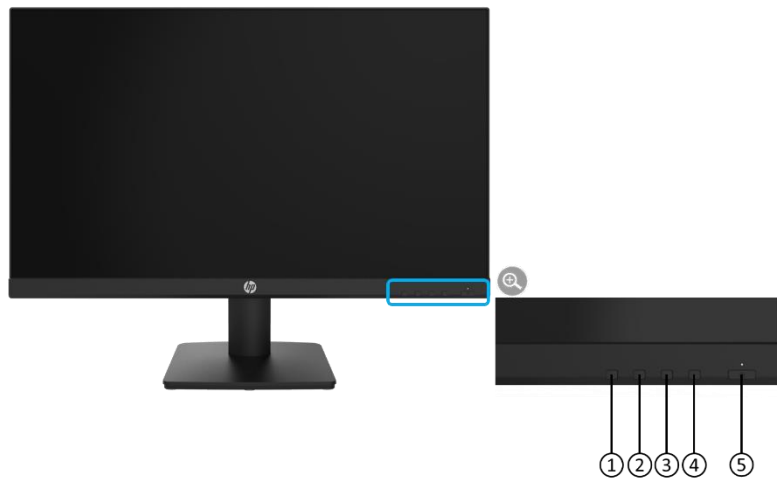
Depending on the model, your monitor might include the following features:

- 60.45 cm (23.8 in) diagonal viewable area with 1920 × 1080 resolution, plus full-screen support for lower resolutions, includes custom scaling for maximum image size while preserving the original aspect ratio
- Anti-Glare screen with an LED backlight
- Viewing angle to allow viewing from a sitting or standing position, or moving from side to side
- Tilt capability
- VGA video input
- DisplayPort video input
- High-Definition Multimedia Interface (HDMI) video input
- Plug-and-play capability if supported by the operating system
- 100 mm integrated VESA mounting
- Security slot provision on rear of monitor for optional cable lock
- On-Screen Display (OSD) adjustments in several languages for easy setup and screen optimization
- HP Display Center software for adjusting monitor settings and enabling theft deterrence features
- HDCP (High Bandwidth Digital Content Protection) 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.



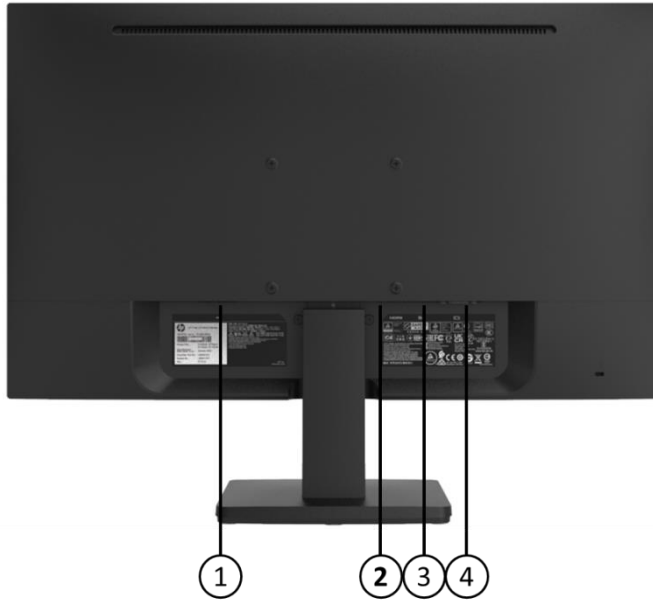
Front of monitor showing locations of controls

Table 1-1: Front components and their descriptions

Component	Function
1 Menu/ Select	Opens the OSD menu or selects items on the OSD menu.
2 Brightness / Minus	Brightness: If the OSD menu is inactive, press to activate the Brightness to adjust brightness. Minus: If the OSD menu is open, press to navigate backward through the OSD menu and decrease adjustment levels.
3 Auto-Adjustment / Plus	Auto Adjustment: If the OSD menu is inactive, press to do an auto adjustment from a VGA Plus: If the OSD menu is open, press to navigate forward through the OSD menu and increase adjustment levels.
4 Next Input / Exit	Next Input: If the OSD menu is inactive, press to switch the video switch to next Input source. Exit: If the OSD menu is open, press to save any changes made, and exit the OSD menu.
5 Power	Turns the monitor on or off.

Rear components

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



Rear component location showing

Table 1-2: Rear components and their descriptions

Component	Function
1 Power connector	Connects the power cable to the monitor.
2 HDMI connector	Connects the HDMI cable to the monitor.
3 DisplayPort connector	Connects the DisplayPort cable to the monitor.
4 VGA connector	Connects a VGA cable to the monitor.

Locating the serial number and product number

The Barcode label (1) and Spec label (2) are located on the rear of the monitor. The serial number and product number are located on ID label. You may need these numbers when contacting HP about the monitor model.






Label Location

For worldwide models (except India):

Barcode label

 <p>HP V2411b 23.8-inch Monitor</p> <p>Serial No./原號/原号: 3CQ1120001</p>  <p>Product No.: 453D6AA</p> <p>Manufactured/製造日期/製造日期/제조년월일: March 2021</p> <p>Assembly Part No.: M74040-001</p> <p>Spares No.: M74140-001</p> <p>Rev.: PTCxyz</p>	<p>型號 / 型号: HP V2411b 60.45 cm(23.8 in.) LCD Color Monitor 彩色液晶顯示器 / 彩色液晶显示器 Regulatory Model No. / 認證型號 / 規定识别号 / 모델명: HSD-0120-F Input Rating / 輸入規格 / 輸入規格: 100-240V ~ 1.5A(1.5A) 50/60Hz Made in China / 製造: 中國 / 中國製造 / 中国製造</p> <p>警告 Warning / Advertencia / Advertencia 為防止電擊之危險 請勿任意打開後蓋 為防止電擊之危險 請勿任意打開後蓋</p> <p>To prevent electric shock, do not remove cover! Entfernen Sie nicht den Deckel, um einen elektrischen Schlag zu vermeiden! Afin d'éviter toute electrocution, ne pas démonter le capot! ¡para evitar descargas eléctricas, no quite la tapa!</p> <p><small>PARA USO DOMESTICO O PARA USO EN OFICINA</small></p> <p>CAN ICES-3(B)/NMB-3(B) Consumo de energia: 12.5 Wh</p> <p>HP Inc. 3C029N00-xxx-G(A)xx</p>
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Barcode label for Worldwide region

 <p>Serial No./原號/原号: 3CQ1120001</p>  <p>Product No.: 453D6AA</p> <p>Manufactured/製造日期/製造日期/제조년월일: March 2021</p> <p>Assembly Part No.: M74040-001</p> <p>Spares No.: M74140-001</p> <p>Rev.: PTCxyz</p>	<p>60.45 cm(23.8 in.) LCD Color Monitor 彩色液晶顯示器 / 彩色液晶显示器 Regulatory Model No. / 認證型號 / 規定识别号 / 모델명: HSD-0120-F Input Rating / 輸入規格 / 輸入規格: 100-240V ~ 1.5A(1.5A) 50/60Hz Made in China / 製造: 中國 / 中國製造 / 中国製造</p> <p>警告 Warning / Advertencia / Advertencia 為防止電擊之危險 請勿任意打開後蓋 為防止電擊之危險 請勿任意打開後蓋</p> <p>To prevent electric shock, do not remove cover! Entfernen Sie nicht den Deckel, um einen elektrischen Schlag zu vermeiden! Afin d'éviter toute electrocution, ne pas démonter le capot! ¡para evitar descargas eléctricas, no quite la tapa!</p> <p><small>PARA USO DOMESTICO O PARA USO EN OFICINA</small></p> <p>CAN ICES-3(B)/NMB-3(B) Consumo de energia: 12.5 Wh</p> <p>IS 13252 (Part 1) /IEC 60950-1</p> <p></p> <p>R-41082635 www.bis.gov.in</p> <p>3C029NH00-xxx-G(A)xx</p>
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Barcode label for India region

Spec label

HDMI **D** **IOI**

Low Blue Light (Software Solution) 显示器合格证 Type Approved Safety Regular Production Surveillance Bildqualität ISO 9241-307
www.tuv.com ID: 111129435 www.tuv.com ID: 2003160000 www.tuv.com ID: 111129471

NOM **EAC** **FCC** **IS 13252 (Part 1) / IEC 60950-1**
www.tuv.com ID: 2003160000 www.tuv.com ID: 2003160000 www.tuv.com ID: 2003160000

Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan
 Apparatet må tilkoples jordet stikkontakt
 Apparatets skall anslutas till jordat uttag
 Apparatets stikkprop skal tilsluttes en stikkontakt med jord,
 som giver forbindelse til stikkroppens jord.
 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.
 警語: 使用過度恐傷害視力

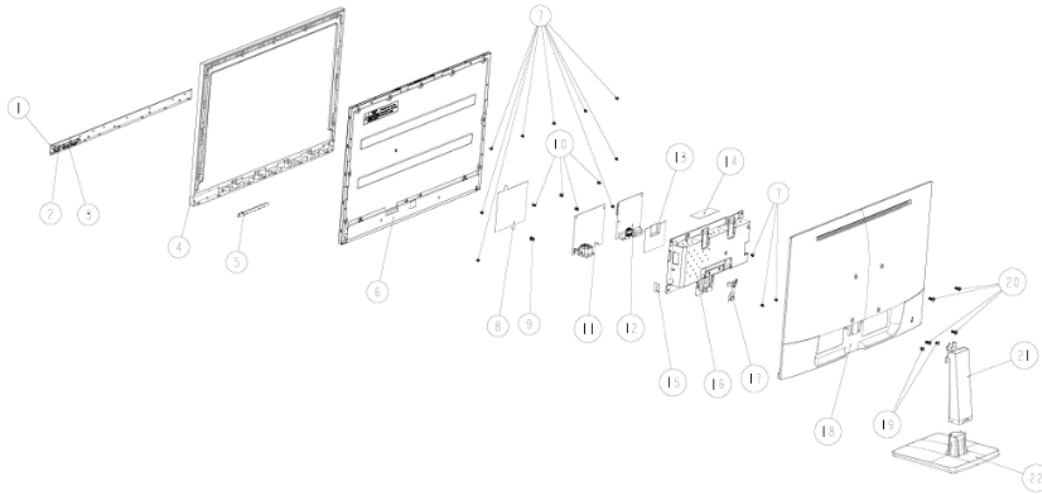
HP Inc UK Ltd, Regulatory Enquiries, Earley West, 300 Thomas Valley Park Drive, Reading, RG6 1PT HP, HQ-TRE, 71025 Boeblingen, Germany

R-41082635
www.bis.gov.in
 3C029NG00-xxx-G(A)xx

Spec label for Worldwide region

3 Illustrated parts catalog

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



Mechanical explosion

Item	Description	Qty
1	FRONT TRIM	1
2	LED LENS	1
3	FUNCTION KEY	1
4	FRONT BEZEL	1
5	PCBA KEYPAD	1
6	PANEL	1
7	SCREW, I, CROSS, M3*4 ZN-CC	12
8	MYLAR, POWER BOARD AND PANEL	1
9	SCREW, PW, CROSS M4X9, Zn-CC	1
10	SCREW, P, CROSS M3*6, ZN-CC	4
11	PCBA POWER BOARD	1
12	PCBA IF BOARD	1
13	MYLAR, POWER BOARD BOTTOM	1
14	MYLAR, CHASSIS MAIN	1
15	MYLAR, CHASSIS SAFETY	1
16	MAIN CHASSIS,1A1H1DP	1
17	RELEASED BUTTON	1
18	BACK COVER	1
19	SCREW, I, CROSS, M4*4.5, BLACK, NL HF (NYLOK)	2

20	SCREW, I, CROSS, M4*10, BLK-NL	4
21	STAND RISER	1
22	STAND BASE	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
PCBA,PI/BD,W/OSPK,LE22TH-M18/V222vb/RoHS	M75014-001	790TK1400M00R01

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

- Farnell: [Farnell UK - Electronic Components Distributor](#)
- RS Component: [Capacitors | RS Components \(rs-online.com\)](#)
- Digi-Key Component: [Digi-Key Electronic United Kingdom](#)

Capacitors by distributor

Component description	Location	Component distributor	Distributor part number
ECAP,47uF,M,450V,105T,CFL,16x32,2KH,HF	C854	RS	711-2141
ECAP,LR,4.7uF,M,50V,105T,3.4R,VT,5x11,HF	C878		711-1413
ECAP,LR,10uF,M,100V,105T,1.77R,VT,8x12,H	C53		711-1693
ECAP,LR,220uF,M,25V,105T,72mR,VT,8x12,HF	C869		70-1193
ECAP,LR,470uF,M,25V,105T,38mR,ST,10x16,H	C875		170-1196

Connectors by manufacturer

Component description	Location identifier	Component distributor	Distributor part number
DisplayPort	CN401	Farnell	47272-0001
HDMI	CN301	Farnell	208658-1051
VGA	CN201	Digi-key	193-015-213R531-ND

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.

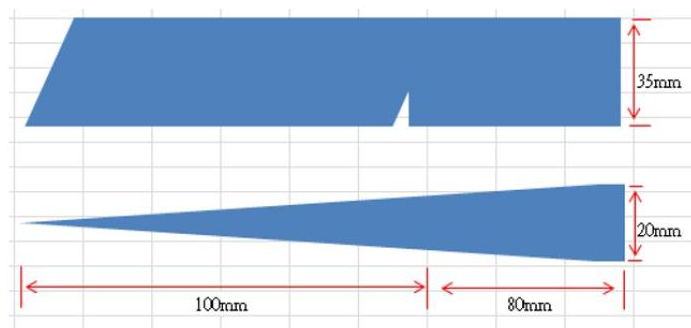
4 Removal and replacement procedures

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.

Remove the Rear Cover:

- 1) Remove 6 screws from the rear cover.



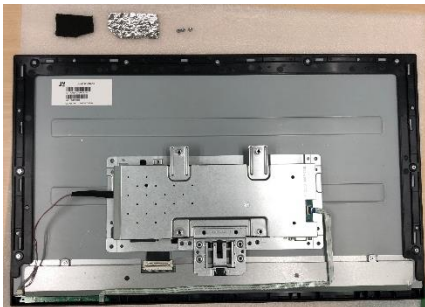
Remove screws from the rear cover

- 2) Insert the scraper bar tool into the gap between the middle frame and rear case, and then rotate. The hook opens. Repeat the steps. Disassemble the top side and the right side.



Separating the rear cover

- 3) Remove 3 screws that fixed on Panel and peel off all Foils.



Remove screws and foils

- 4) Take out the mylar.



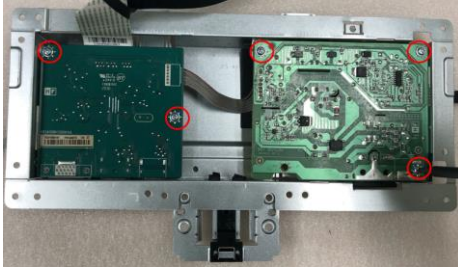
Remove screws and foils

- 5) Remove 2 screws from the housing.



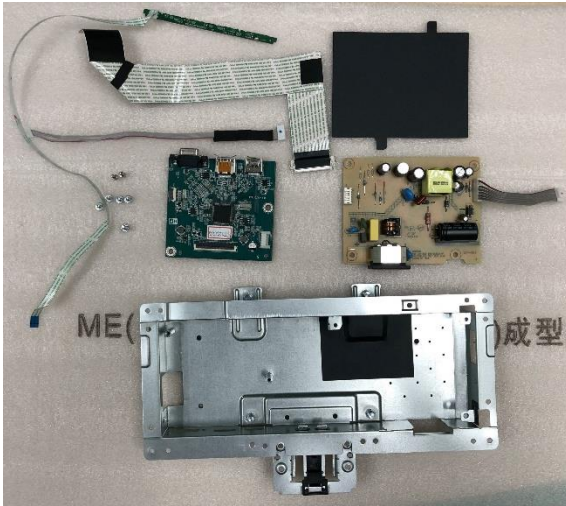
Remove the VGA screws

- 6) Disassemble 5 screws from the board.



Remove the screws from the PCBA

- 7) Disassemble all the boards from housing and disconnect all the wires from the board.



Separate the PCBA from chassis

Power board

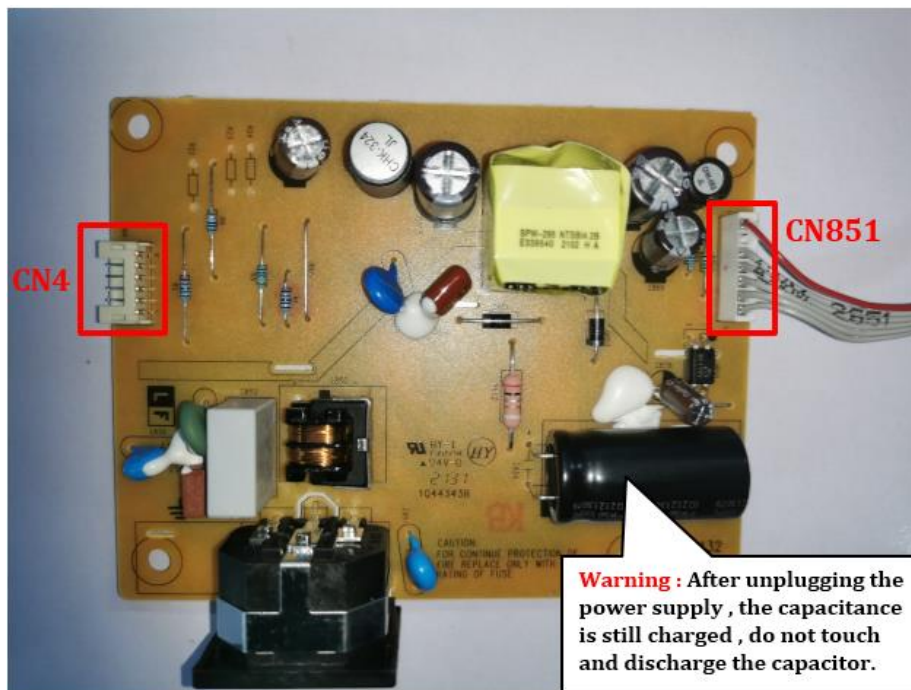
The power board part number is 790TK1400M00R01.

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 V241ib power board connector position is as follows:



Power Board location showing of connector

- 2) Locate the part number location on the board.



Part number location of power board

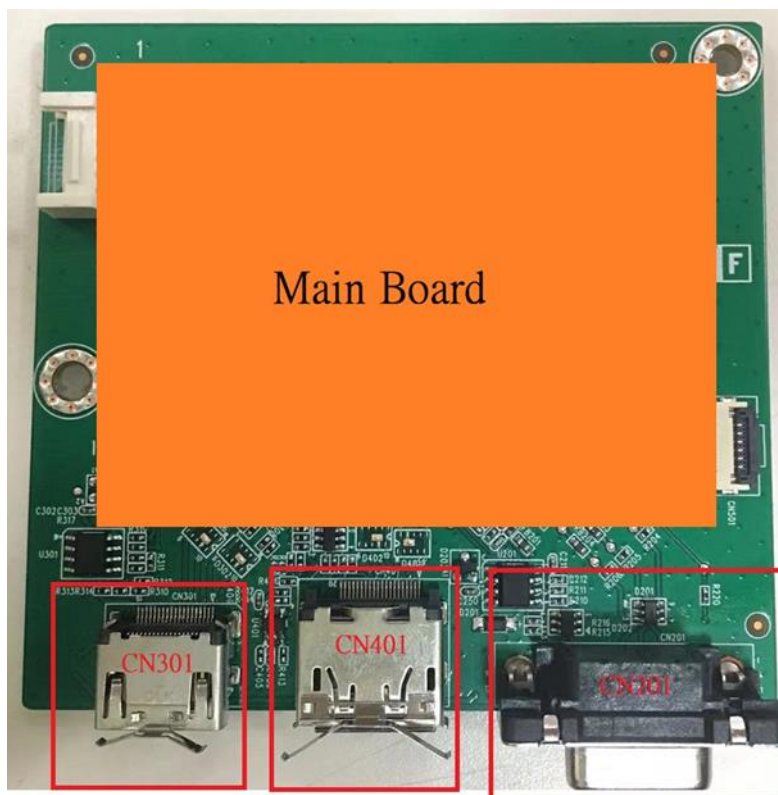
Connector repair

This procedure includes HDMI, DisplayPort and VGA connectors.

The connectors are on the main board (board part number 790TL1300xxxR01).

The connectors identifiers are as follows:

Connector	Location
HDMI	CN301
DisplayPort	CN401
VGA	CN201



Connector location showing of main board

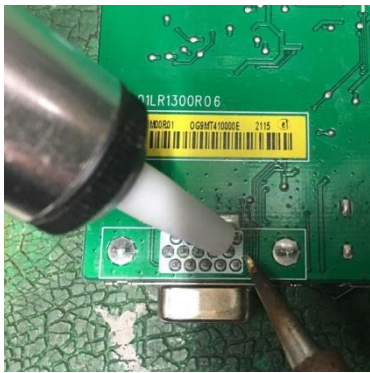
Before repairing connectors, follow these steps:

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

VGA connector CN201

Repair the audio connector:

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



VGA (D-Sub) connector repairing

- 2) Lift the CN201 connector from the circuit board.
- 3) Place the new component on the circuit board. Be sure that it matches the footprint.
- 4) Solder the new component.

HDMI connector CN301

Repair the HDMI connector:

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



HDMI connector repairing

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



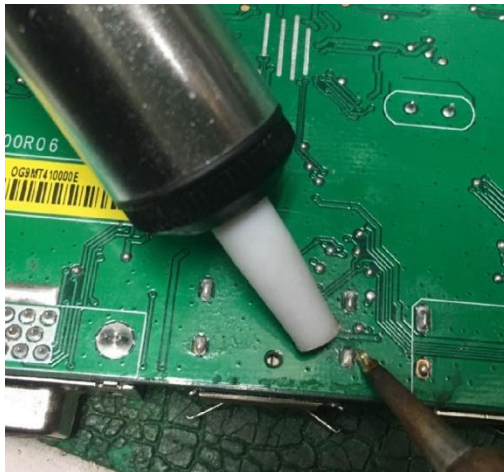
HDMI connector repairing

- 3) Lift the CN301 connector from the circuit board.
- 4) Place the new component on the circuit board. Be sure that it matches the footprint.
- 5) Solder the new component.

DP connector CN401

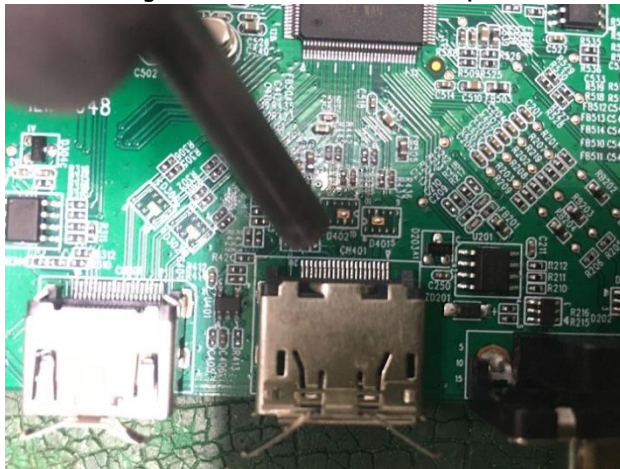
Repair the DP connector:

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



DP connector repairing

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



DP connector repairing

- 3) Lift the CN401 connector from the circuit board.
- 4) Place the new component on the circuit board. Be sure that it matches the footprint.
- 5) 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
VGA test	Confirm whether image displays correctly on the monitor	Computer

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 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.
Image appears blurred, indistinct, or too dark.	Video card is incompatible.	Open the OSD menu and select the Input Control menu. Set Auto-Switch Input to Off and manually select the input
	Brightness is too low.	Open the OSD menu and select Brightness to adjust the brightness scale as needed.
Check Video Cable	Monitor video cable is disconnected.	Connect the appropriate

is displayed on screen.		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 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 is off, but it did not seem to enter into Sleep mode.	The monitor's power saving control is disabled.	Open the OSD menu and select Power Control > Auto-Sleep Mode and set auto-sleep to On .
On-Screen Menus are Locked is displayed.	The monitor's OSD lock function is enabled.	Press and hold the Menu button on the front bezel to 10 seconds to disable the OSD lockout function.
Power Button is Locked 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.

Index

- Auto-Adjustment / Plus button locations, 4
- Brightness / Minus button location, 4
- components
 - front, 4
 - rear, 5
- connector repair, 14
- DisplayPort connector location, 5
- features, 3
- firmware updates, 2
- front components, 4
- function test, 17
- HDMI connector location, 5
- how to order parts, 9
- illustrated parts catalog, 8
- Menu/ Select button location, 4
- Next Input / Exit button location, 4
- parts, 8
- parts, ordering, 9
- power board removal, 12
- power button location, 4
- power connector location, 5
- precautions, 1
- preparation for disassembly, 10
- RC removal, 10
- rear components, 5
- removal
 - power board, 12
 - RC, 10
- removal and replacement procedures, 10
- returning to customer, 2
- RoHS (2002/95/EC) requirements, 2
- safety information, 1
- serial number location, 6
- service information, 1
- spare parts, 8
- support and troubleshooting, 17
- troubleshooting, 17
- VGA connector location, 5

