



Maintenance and Service Guide

Engage One 10tw model

SUMMARY

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

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First Edition March 2021

Document Part Number: L13639-Engage One 10tw-MSG-V1

Assembly part number: L13639-010

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 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

The HP LCD (liquid crystal display) monitor has an active matrix, thin-film transistor (ADS) screen with the following features:

- 25.65 cm (10.1–inch) diagonal viewable screen area with 1280 × 800 resolution, plus full-screen support for lower resolutions
- 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 adjustment capability
- Removable stand for flexible display head mounting solutions
- VESA mount capability
- USB-C with DisplayPort 1.2, power up to 15W (5V/3A)
- Plug and Play capability if supported by your operating system
- On-screen display (OSD) adjustments in several languages for easy setup and screen optimization
- 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**.

Rear components

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

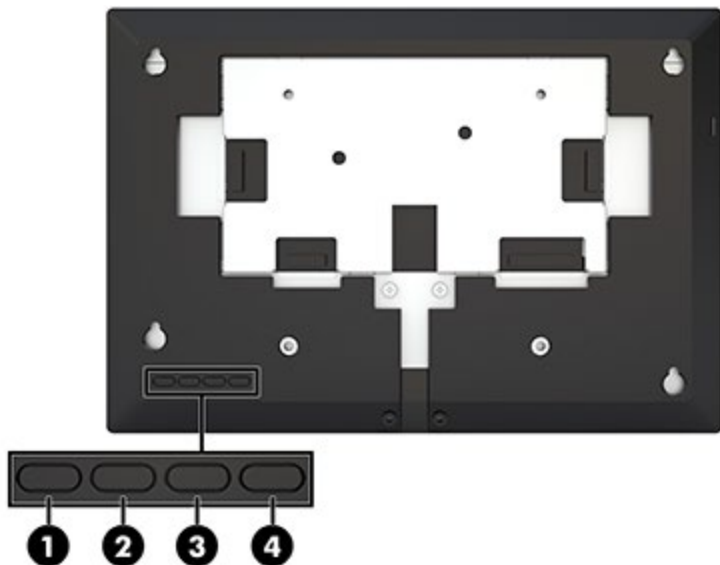


Table 1-1: Front components and their descriptions

Component	Description
(1) Brightness button	Adjusts the brightness level of the screen. The factory default is 90.
(2) Color Control button	Selects and adjusts the screen color.
(3) Display Information button	Selects and displays important information about the monitor.
(4) Menu button	Press to open the OSD menu, select a menu item from the OSD, or close the OSD menu.

Connecting the cable

The monitor ships with the USB-C flat cable attached. To use the monitor, connect the cable to the source device to provide signal and power.



Locating the serial number and product number

The serial number and product number are located on a label on the bottom edge of the display head. You may need these numbers when contacting HP about the monitor model.



For worldwide models (except India):

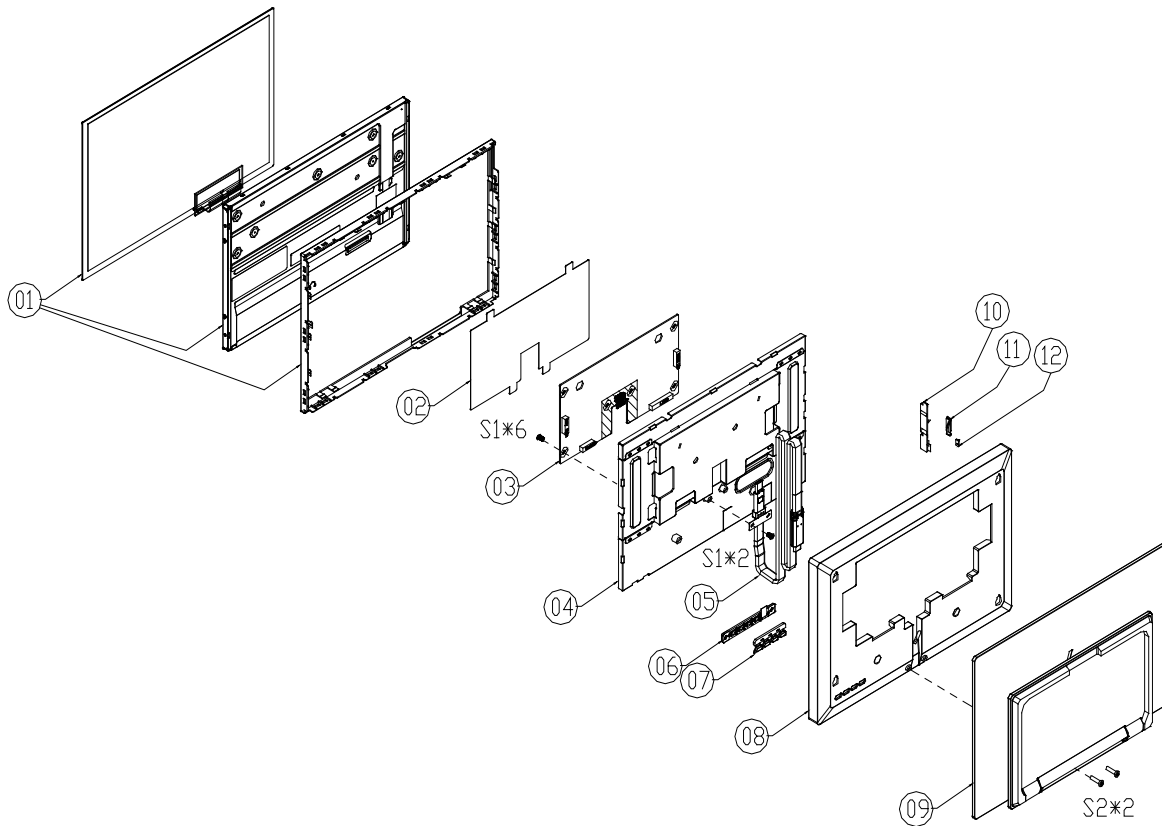
	型号: HP Engage One 10tw HP Engage One 10tw 10.1 in Touch Display (White)			
	液晶显示器/液晶顯示器 25,65cm(10.1") LCD Monitor Regulatory Model No./規定型号/型號/모델명: HSTND-9771-A Input Rating/輸入电压 电流/輸入電壓 電流/정격입력: 5V --- 3A CAN ICES-3(B)/NMB-3(B) 警告: 使用過度恐傷害視力。 HP Inc. 제조국 : 중국 / 中国制造 / 中國製造 / Made in China Q40G010E-690-24E	Consumo de energia: 5.82 Wh En modo de espera: 0.27 Wh	HP Inc UK Ltd, Regulatory Enquiries, Earley West, 300 Thames Valley Park Drive, Reading, RG6 1PT	HP Inc UK Ltd, Regulatory Enquiries, Earley West, 300 Thames Valley Park Drive, Reading, RG6 1PT
MSIP-REM-hpi-HSTND-9771-A TPV Electronics (Fujian) Co., Ltd. 서비스센터 : 1588-3003				

Manufactured/製造日期/ 製造日期/제조일: Q40G010E-690-11B	December 2017	Assembly Part No. L13639-010 Product No. 3FH67AA	REV. IIT111
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	Serial No.: CNC7010001 Spares No. L13703-001	Q40G010E-690-12A
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3 Illustrated parts catalog

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



No.	Description	No.	Description
1	PANEL		
2	INSULATING SHEET		
3	MAIN BOARD		
4	MAINFRAME		
5	USB Type-C Cable		
6	KEY BOARD		
7	KEY_FUNCTION		
8	REAR_COVER		
9	BASE_ASS'Y		
10	KEY BOARD	S1	SCREW(MAIN BOARD/MAINFRAME&USB CABLE/MAINFRAME)
11	KEY_POWER	S2	SCREW(BASE ASSY/REAR COVER)
12	LENS		

How to order parts

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

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

- RS: [Capacitors | RS Components \(rs-online.com\)](#)

Connectors by manufacturer

Component description	Location identifier	Component distributor	Distributor part number
USB-C	CN501	RS	R-S13KG-03 (CIE-Group)

NOTE: Rear cover and chassis need to be modified to hold connector. Connector may need modifications to meet functional, safety and regulatory requirements accordingly if it doesn't match exactly.

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.

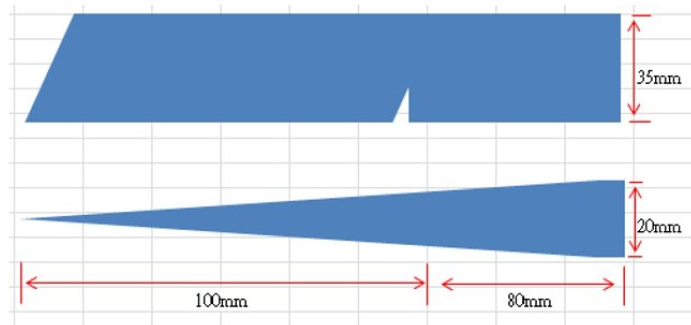
4 Removal and replacement procedures

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:

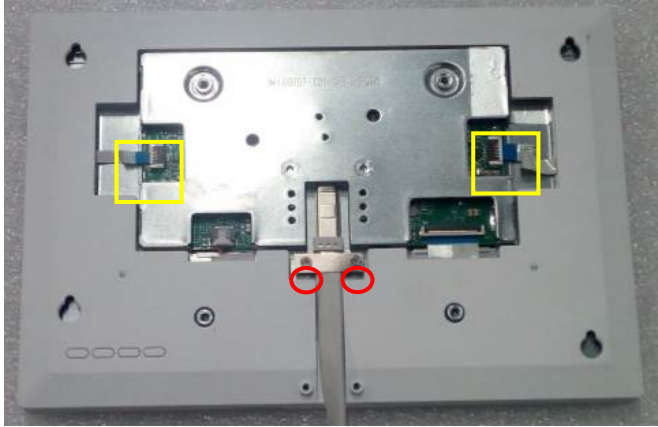
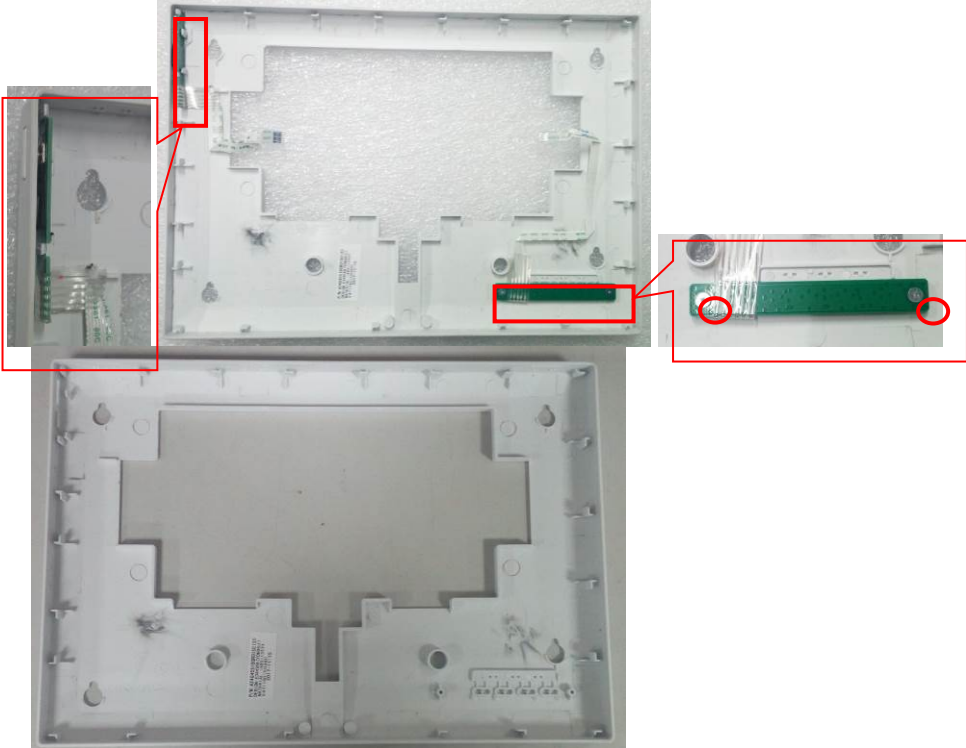


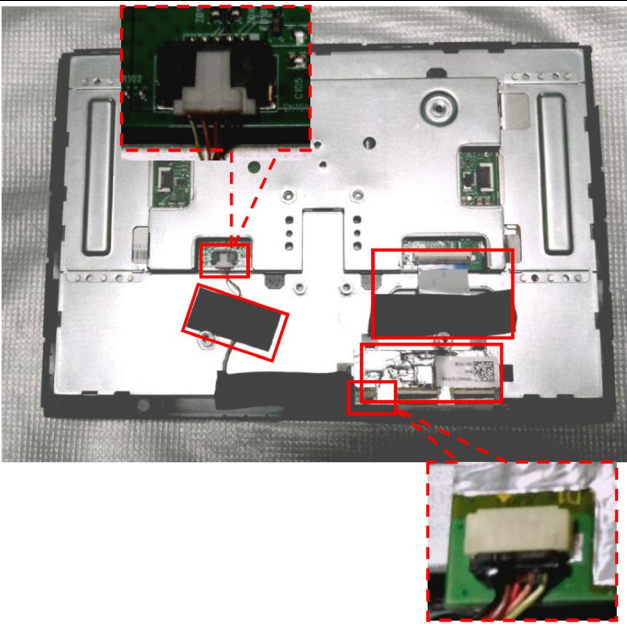
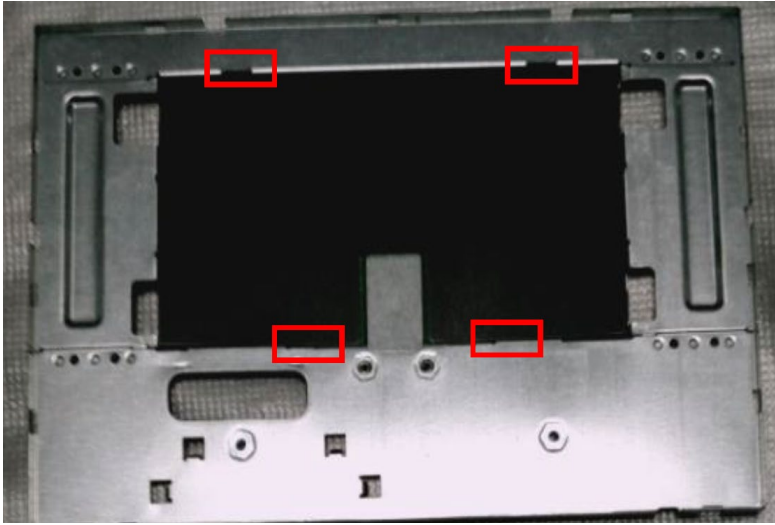
RC

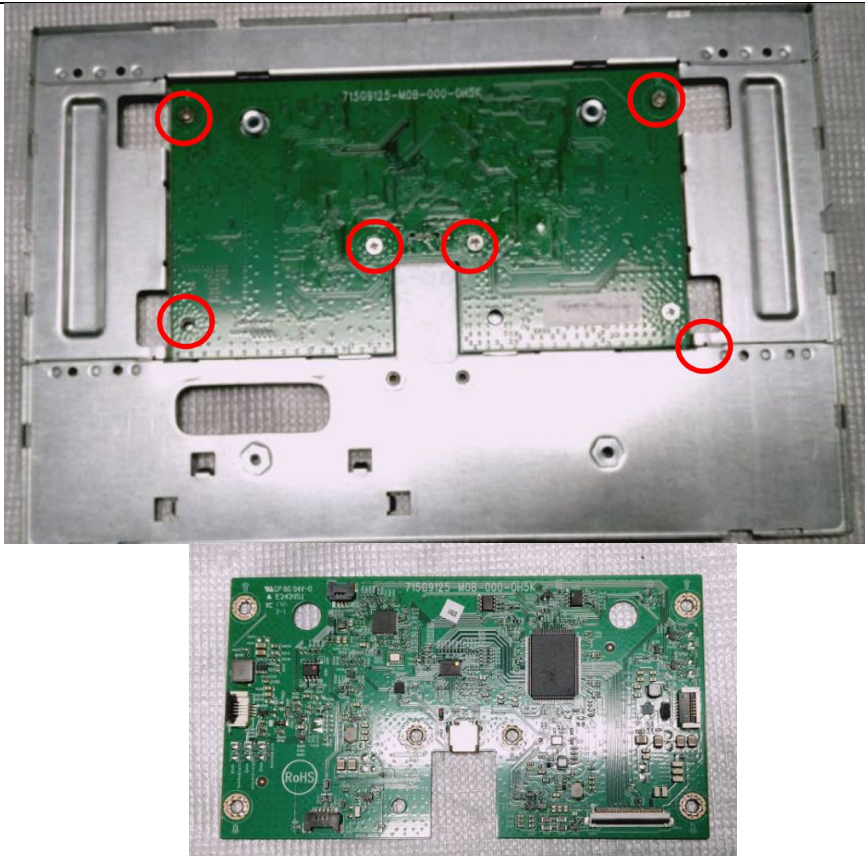

Before removing the RC, follow these steps:

- ▲ Prepare the monitor for disassembly. See Preparation for disassembly on page 8.

Step	Figure	Description
Preparation		Lay the monitor on a flat, soft and clean surface and pull up the deco cover.
Remove the BASE		Unscrew the screws to move the BASE ASSY.

<p>Remove the rear cover</p>	 <p>The image shows the back of a grey device. Two USB ports are highlighted with yellow boxes. Two screws at the bottom center are circled in red, indicating they need to be removed.</p>	<p>Unscrew the screws to remove the USB cable and disconnect the connectors to remove the rear cover.</p>
<p>Remove key boards</p>	 <p>The image shows the internal components of the device. Two keyboards are shown being removed from the rear cover. Red boxes and arrows highlight the connection points and screws on the keyboards.</p>	<p>Unscrew the screws to remove the key boards from the rear cover.</p>

<p>Remove the tapes and pins.</p>		<p>Disconnect the connectors and remove the tapes.</p>
<p>Remove the Mylar</p>		<p>Remove the Mylar.</p>

<p>Remove the main board.</p>		<p>Unscrew the screws to remove the main board from the mainframe.</p>
<p>The panel</p>		<p>The panel</p>

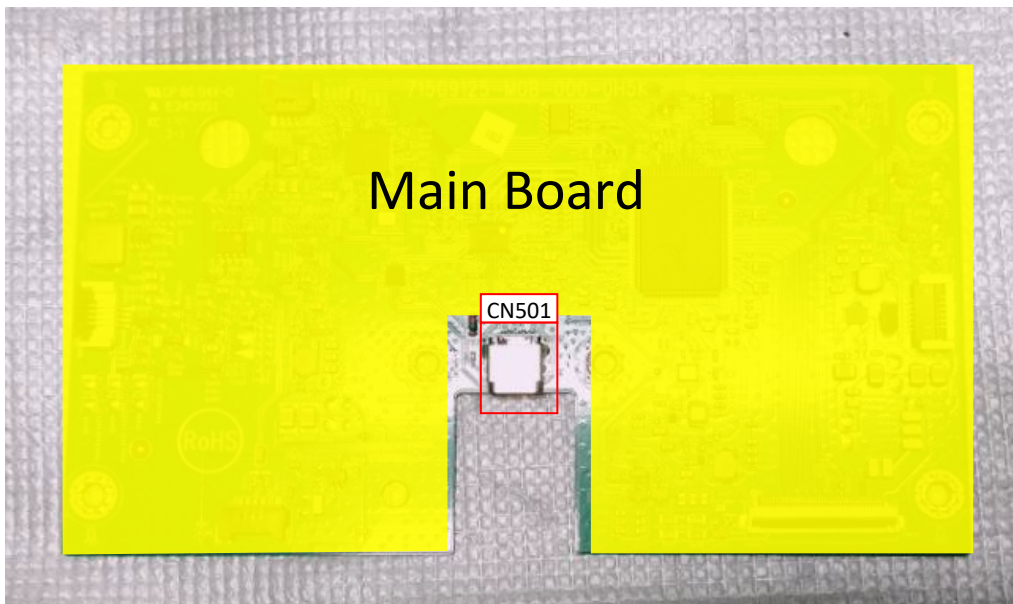
Connector repair

This procedure includes USB-C connectors.

The connectors are on the main board (board part number CBPCLW1HPQ2).

The connectors identifiers are as follows:

Connector	Location
Type-c	CN501



Before repairing connectors, follow these steps:

- ▲ Prepare the monitor for disassembly. See [Preparation for disassembly](#) on page 8.

IMPORTANT:

- **Repair Condition: Connector repair is only for out of warranty.**
- **Repairing must operate by professional repairers (Note) in repair center, not applicable for end user.**
- **Electrostatic protection is required when component replacement is required.**
- **The monitor meets ROHS, please use Lead-free solder wire for soldering.**
- **If Connector need to replace, must check specification and part number whether match the BOM and location.**
- **If connector need to replace, please insert new parts carefully because the near pin may cause short circuit by inappropriate operate.**
- **DO NOT allow any liquid on the board. Water and moisture may cause short-circuit to the electronic components and lead to malfunctions.**
- **The fusion point of Lead-Free solder is requested. Repairing with conventional lead wire may cause damage.**
- **Work quickly to avoid overheating the circuit board as soon as you confirm the steady soldering condition.**
- **Keep the soldering iron tip clean and well tinned and when replacing parts.**
- **A close inspection of the circuit board revealed look in good condition.**
- **After repaired, must connect source to each port to check Main board function is ordinary.**

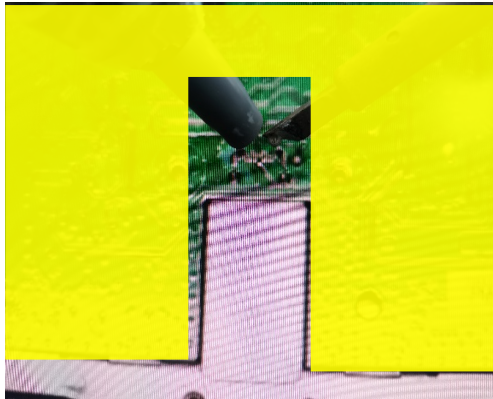
Note: (The requirement of professional repairers' regulation by ERP lot5)

- 1) The professional repairer has the technical competence to repair electronic displays and complies with the applicable regulations for repairers of electrical equipment in the Member States where it operates. Reference to an official registration system as professional repairer, where such system exists in the Member States concerned, shall be accepted as proof of compliance with this point.
- 2) The professional repairer is covered by insurance covering liabilities resulting from its activity, regardless of whether this is required by the Member State.

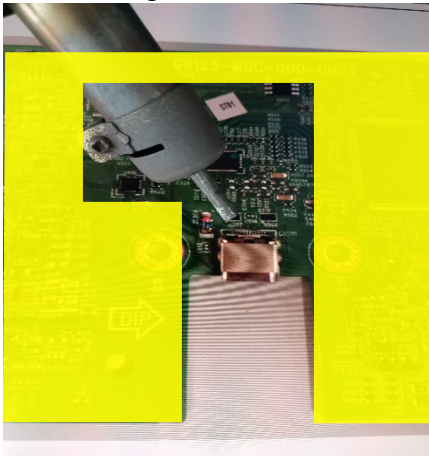
USB Type-c CN501

Repair the USB connector:

- 1) Use a soldering iron and a desoldering 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 CN501 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.

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
D-SUB test	Confirm whether image displays and sound plays correctly on the monitor	Computer or D-SUB player
Audio test	Change volume and balance to confirm whether volume is smooth and loud enough.	Speaker

Support and troubleshooting

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

Problem	Possible Cause	Solution
Screen is blank or video is flashing.	USB video cable is not connected.	Connect the video cable between the source device and monitor. Be sure the computer power is off while you connect the video cable. Refer to Connecting the cable on page 4 for more information.
	System is in sleep mode.	Press any key on the keyboard or move the mouse to exit sleep mode.
	Video card is incompatible.	Replace the video card or connect the video cable to one of the computer's onboard video sources.
Image appears too dark.	Brightness setting is too low.	Open the OSD menu and select Brightness to adjust the brightness scale as needed.
Input Signal Not Found 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 connecting the video cable.
Input Signal Out of Range is displayed on screen.	Video resolution and/or refresh rate are set higher than the monitor supports.	Change the settings to a supported setting (see Preset display resolutions on page 15).
The monitor is off but it did not seem to enter a low-power sleep mode.	The monitor's sleep mode is disabled.	Open the OSD menu and select Power Control , select Auto-Sleep Mode , and then set auto-sleep to On .
OSD Lockout is displayed.	The monitor's OSD Lockout function is enabled.	Press and hold the Menu button for 10 seconds to disable the OSD Lockout function.
Power Button Lockout is displayed.	The monitor's Power Button Lockout function is enabled.	Press and hold the power button for 10 seconds to disable the Power Button Locket function.

Preset display resolutions

The display resolutions listed below are the most commonly used modes and are set as defaults. The monitor automatically recognizes these preset modes, and they will appear properly sized and centered on the screen.

25.65 cm/10.1-inch model

Preset display resolutions

640 × 480 @ 60 Hz

800 × 600 @ 60 Hz

1024 × 768 @ 60 Hz

1280 × 720 @ 60 Hz

1280 × 800 @ 60 Hz

Preset	Timing name	Pixel format
1	480p	720 × 480
2	720p60	1280 × 720
3	720p50	1280 × 720
4	576p	720 × 576