

Self-service Repair Manual for vivo X300

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1 About this manual

1.1 Purpose

This manual is intended to guide DIY hobbyists with certain hands-on skills and repair experience in replacing official components of vivo phones.

1.2 Caution

All features, characteristics, specifications, and other device information provided in this manual, including but not limited to device advantages, design, pricing, components, performance, availability, and functionality, are subject to change without prior notice. vivo reserves the right to modify this manual or any descriptions herein at any time without the obligation to give notice of such modifications. Please read through this manual carefully before repair. If you do not meet the repair conditions, do not disassemble the device. You may visit a vivo customer service center for repairs.

1.2.1 Repair notes

Warning: Failure to follow the instructions herein or the use of non-official vivo components or improper tools may damage the device, its components, or other property; impair device functionality and water resistance; and in severe cases, cause fires or other safety hazards, leading to personal injury or death.

(1) vivo assumes no liability for any damage or defects resulting from repairs made by unauthorized carriers, yourself, or other non-professionals. vivo is not responsible for any device damage, personal injury, or other safety consequences caused by failure to follow this manual.

(2) Any damage or defects resulting from attempts to repair the device by anyone other than a vivo-certified service provider are not covered by the warranty.

(3) We recommend that you use only official tools for repairing. Most electronic components are sensitive to electromagnetic forces, and low-quality tools may easily damage your device. For tool details, see Section 3.1.

(4) We recommend that you use only official spare parts. Third-party spare parts may not function properly and may cause fires or personal injury.

(5) Some components, such as laser focusing/proximity/fingerprint sensors, rear cameras, touchscreen panels, and speakers, may require calibration to ensure their performance after repair.

(6) The water and dust resistance of a device repaired by yourself or other non-professionals cannot be guaranteed.

(7) If you need to access device fault data or obtain more detailed diagnostics, please visit a vivo customer service center.

(8) If you need to replace components that are unavailable on the market, please visit a vivo customer service center for further assistance.

(9) Before making repairs, back up important data stored in the device.

(10) Before making repairs, wear proper safety gear. vivo is not responsible for any injury due to failure to wear proper safety gear. For details of the required disassembly and assembly tools, see Section 3.1.

(11) Make repairs in a safe location.

(12) Before making repairs, make sure that the device is powered off and its battery is fully discharged.

(13) If the device is damaged, emits smoke, or produces a burning smell, stop repairing it immediately and contact vivo customer service. If a fire is started, extinguish it with a carbon dioxide or dry powder fire extinguisher, specialized foam, sand, soil, gravel, or a dedicated lithium-ion battery fire suppressant.

(14) When repairing the device, wear protective gear such as safety goggles, gloves, and masks.

(15) When removing the back cover, take care not to damage the device. Before reassembling the device,

make sure that no free screws or foreign objects are left around the battery.

(16) During reassembly, inspect the back cover for abnormalities before reinstalling it. Avoid impact or pressure on the battery to prevent damage. If the battery is damaged, please visit a vivo customer service center.。

1.2.2 ESD precautions

Electrostatic discharge (ESD) is a sudden flow of electric current between two charged objects due to contact, a short circuit, or dielectric breakdown. ESD negatively affects mobile devices, particularly their electronic components.



- (1) We recommend that you wear anti-static wrist straps and gloves, and use anti-static mats when you repair the device.
- (2) Increase airflow in the work area to reduce the likelihood of accidental ESD. In an environment with low humidity, such as an air-conditioned room, ESD is more likely to happen.。



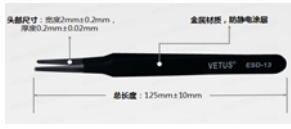
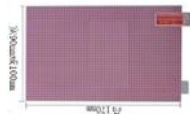
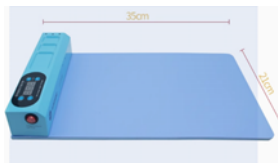
2Warranty

- 2.1 A 90-day warranty is provided for official spare parts. If any quality issues arise with them within that period, you may contact vivo for a replacement.
- 2.2 A device repaired by anyone other than a vivo-authorized service provider is not covered by the warranty, and you will bear the repair costs.
- 2.3 Any damage caused during self-service repairs will be your responsibility.

3Tools

3.1 Hardware tools

Tool name	Photo	Usage
Metal pry pick (with a scale)		Disassembling the display module
Screwdriver kit (rubber-grip dual-purpose screwdriver, 6 × 100 mm)		Removing and installing screws

PET pry sheet		Removing the back cover and display module
Suction cup		Removing the back cover
Anti-static carbon fiber tweezers (with pointed tips)		Removing board-to-board (BTB) and coaxial cable connectors
Metal flat-head tweezers		Removing the M board and ANA board, or cleaning adhesive
Anti-shatter film		Preventing glass shattering on screen / back cover
Universal pressure fixture		Securing the screen or back cover
Universal pressure fixture		Optical calibration
False finger, flesh-colored, 20 × 20 × 12 mm		Testing electrooptical fingerprint recognition
False finger, black, 22 × 22 × 12 mm		Testing electrooptical fingerprint recognition
Heating pad (default temperature: 65°C)		Heating the back cover and screen

3.1.1 Tool purchase

Official purchase link:

<https://www.vivo.com/eu/view/support/aboutSelfServiceRepair?code=selfServiceRepair>

3.2 Software update and software tools (to be confirmed after software release)

3.2.1 Software update via FOTA

To update software, go to Settings > System Update

If the system is already of the latest version, no update is needed

If a software update is available, you can set the time for automatic update

Note:

1. Updating software via mobile data may incur additional fees.
2. If the latest software has been downloaded to the device, these options do not take effect.

3.2.2 Self-diagnosis

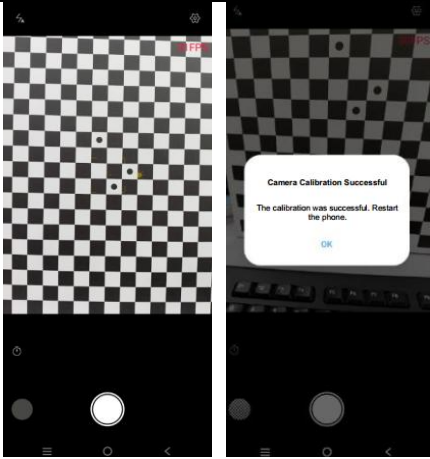
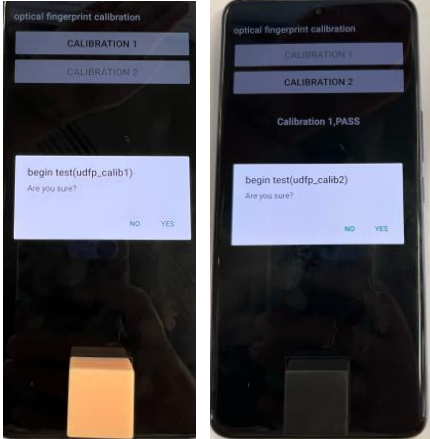
Before and after repair, perform a self-diagnosis to check if the device functions properly.

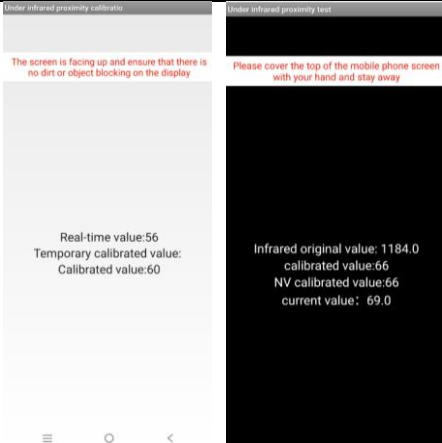
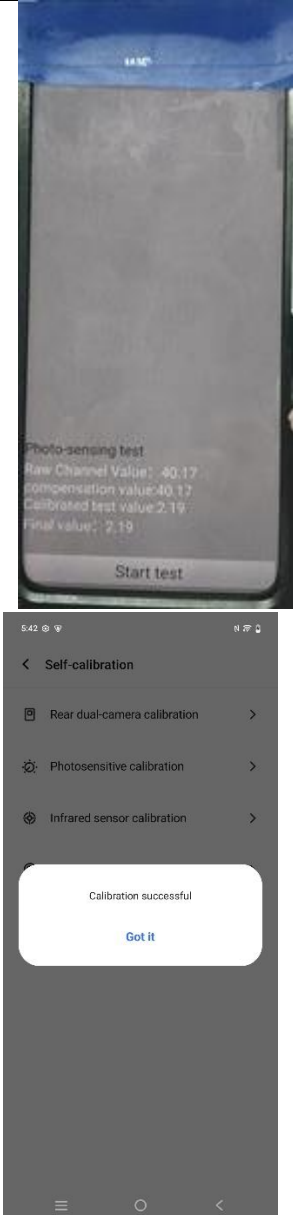
Open the vivo Store / vivo.com app, go to Support > Hardware Test > Self-calibration, and enter the calibration code "SELFREPAIR" to perform the check.

3.2.3 Self-calibration on the vivo Store / vivo.com app

You can perform calibration after replacing the display or camera, such as the calibration of the rear cameras (for devices with two or more rear cameras), in-display fingerprint scanner, infrared proximity sensor, and ambient light sensor. The calibration ensures proper functionality of components after repairs.




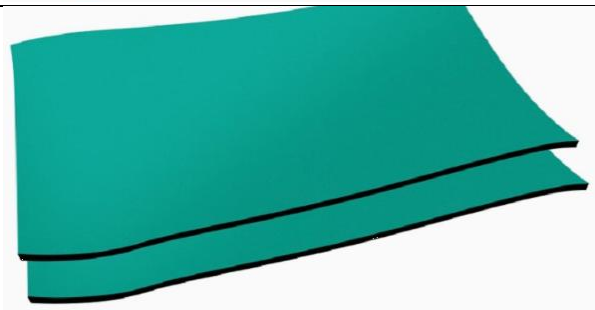
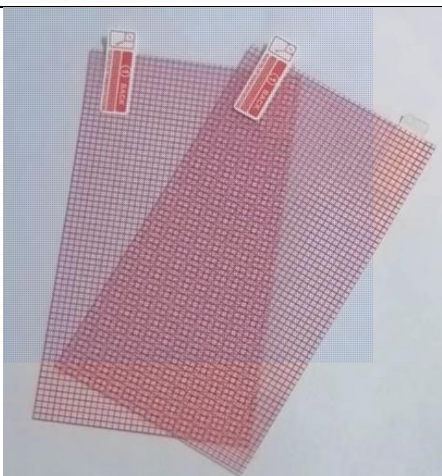
The following table describes calibration items and instructions:

Calibration item	Instruction	Illustration	Description
Rear cameras	Open the vivo Store /vivo.com app, go toSupport>Hardware Test>Self-calibration, enter the calibration code "SELFREPAIR", tap Rear dual-camera calibration, and calibrate the cameras.		This calibration is Required after M Board disassembly Or replacement of any rear camera
In-display fingerprint scanner	Open the vivo Store / vivo.com app, go to Support > Hardware Test>Self-calibration, enter the calibration code "SELFREPAIR", tap Screen finger calibration, and calibrate the fingerprint scanner.		This calibration is Required after Replacement of the Display assembly, Display module, or Fingerprint module

Infrared proximity sensor	Open the vivo Store / vivo.com app, go to Support > Hardware Test > Self-calibration, enter the calibration code "SELFREPAIR", tap Infrared proximity sensor calibration, and calibrate the infrared proximity sensor		This calibration is Required after M Board disassembly Or replacement of the display assembly or display module
Ambient light sensor	Open the vivo Store / vivo.com app, go to Support > Hardware Test > Self-calibration, enter the calibration code "SELFREPAIR", tap Photosensitive calibration, and calibrate the ambient light sensor		This calibration is Required after M Board disassembly Or replacement of the display assembly or display module

3.3 Protective tools

Tool name	Photo	Usage
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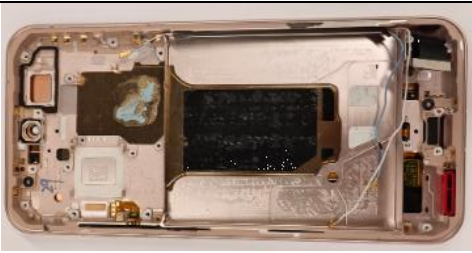
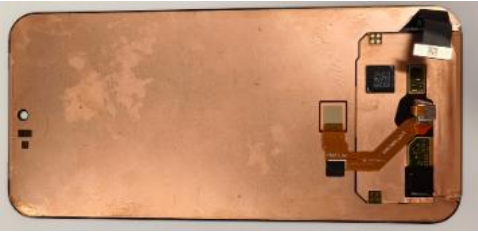



Safety goggles		Preventing liquid/splinter splashes from hurting your eyes during repairs
Anti-static cut-resistant gloves		Preventing ESD damage and cuts during repairs
Anti-static wrist strap		Preventing ESD damage to the device during repairs
Anti-static mat		Preventing ESD damage to the device during repairs
Anti-shatter film		Preventing device damage or personal injury due to screen or back cover shattering

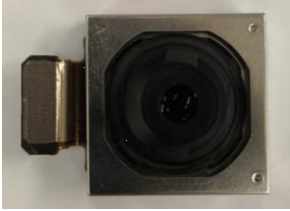
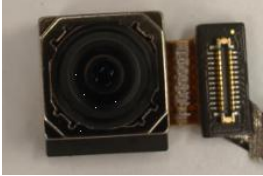


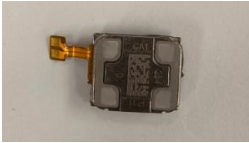


Fire bucket		Containing a burning battery
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Note: vivo does not provide all protective tools. You need to purchase them from other sources.

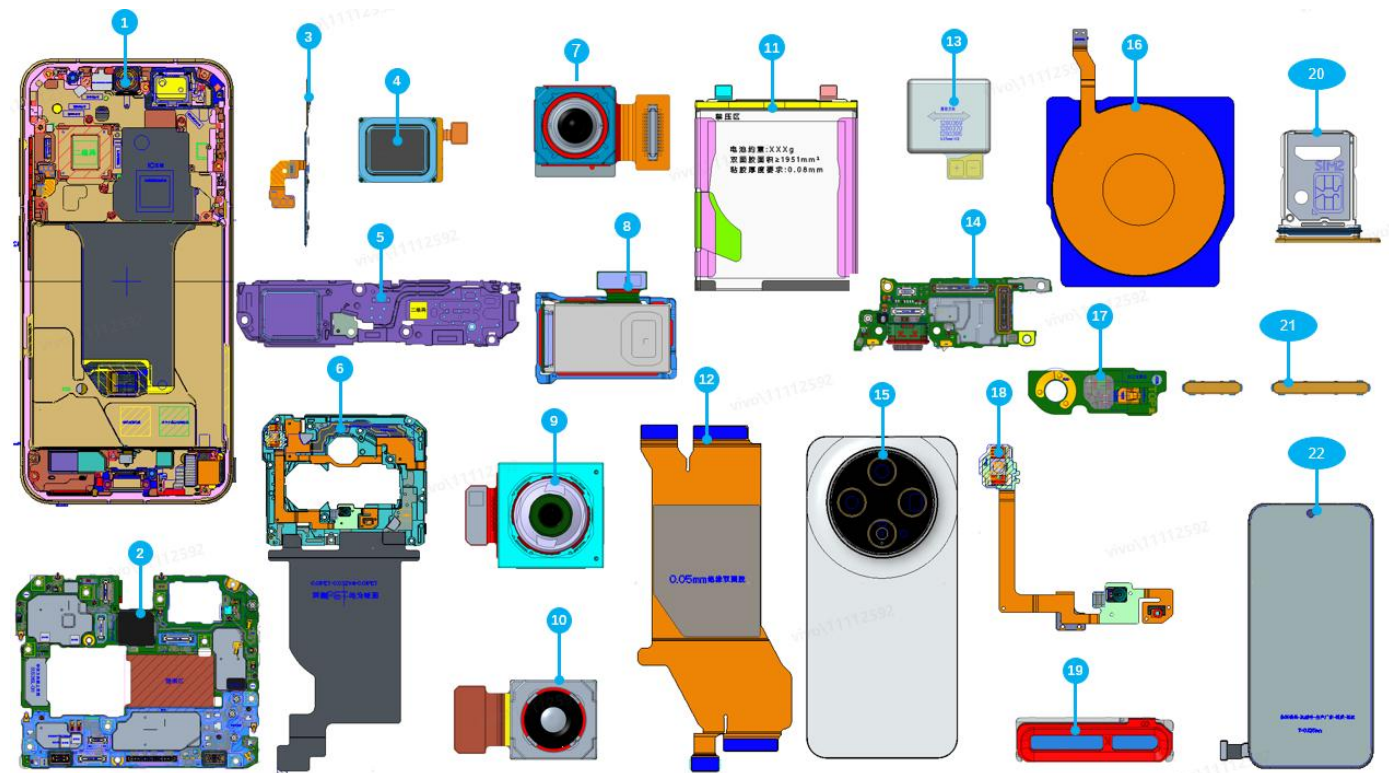
4Repair Guide

4.1 Spare Part List (with Purchase Codes)

Sr. No.	Material Name	Purchase Code	Illustration
1	Display Component	5438434 5438435	
2	Display Screen Unit Component	5438447	
3	Battery Cover Component	5438442 5438443	
4	Battery Component	5438444	
5	Wide-Angle Camera	5438439	

6	Rear Main Camera	5438437	
7	Front Camera	5438436	
8	Sub Board	4935702	
9	Lower Speaker	5438441	
10	Upper Speaker	5438440	
11	Side Button	5438449 5438450	
12	SIM Card Tray	5438445 5438446	

4.2 Product Exploded View



No.	Component Name
1	Display Component
2	M Board
3	FK Board
4	Upper Speaker Component
5	Lower Speaker Component
6	Mainboard Bracket Component
7	Front Camera Component
8	Rear Periscope Camera Component
9	Rear Main Camera Component
10	Rear Wide-Angle Camera Component
11	Plastic-Coated Lithium Battery
12	FMA Board
13	Motor Component
14	ANA Board
15	Battery Cover Component
16	Wireless Charging Receiver Antenna Component
17	Antenna Board
18	Laser Light Board
19	Speaker Dust Screen Component

4.3 Removal and Installation Guide

- Before starting repair, be sure to complete the following steps:
- Back up your data
- Fully discharge the battery
- Power off the device and disconnect all external cables
- Wear anti-static gloves
- If any cosmetic damage or adhesive overflow occurs after assembly, please visit a official vivo Service Center for inspection and support
- For disassembly and reassembly, please refer to the video for model V50, as it shares the [same structure](https://www.tiktok.com/@vivocare_global/video/7512646319626833182?is_from_webapp=1&sender_device=pc) https://www.tiktok.com/@vivocare_global/video/7512646319626833182?is_from_webapp=1&sender_device=pc




4.3.1 Battery Cover Replacement




Repair Difficulty: Low

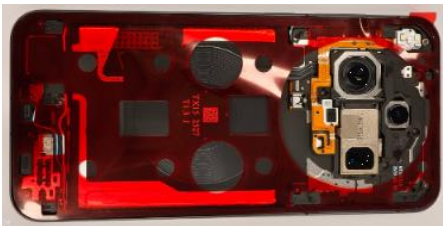

Estimated Time: 6–10 minutes

Required Spare Parts: Battery Cover Component

Required Tools:

Removal		
Procedure	Illustration	Notes
Step 1: Power off the device. Insert a SIM card tray eject tool into the eject hole to remove the SIM card tray.		
Step 2: Use a heating pad set to 65°C to heat the phone for 5 minutes.		
Step 3: Place a suction cup on the bottom center edge of the back cover, lift upwards to create a gap, and then insert a prying pick into the gap. Do not pry all four sides at this stage—only insert the pick.		Notes: Exercise caution when using a handled suction cup to avoid injury, as the handle may detach during use.

Step 4: Apply protective film to the battery cover to prevent it from cracking. Use a prying pick to work around the edges. Do not insert deeper than 5 mm.		To avoid damaging internal circuits, never insert the pick deeper than 5 mm.
Step 5: Once the edges are cut open, gently lift the back cover from the left side at a shallow angle, and then detach the battery cover.		
Step 6: Use pointed anti-static tweezers or your fingers to remove all residual adhesive from the back cover and the back of the device.		Do not touch the rear cameras or the lens of the back cover with your fingers or any foreign objects, and avoid damaging nearby components.

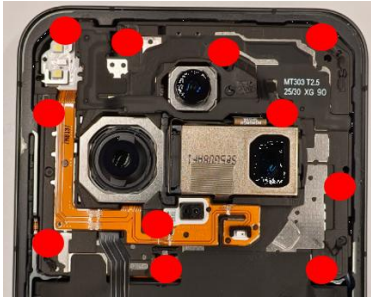



Installation		
Procedure	Illustration	Notes
Step 1: Peel off the release film from the battery cover's double-sided adhesive. Align the adhesive with the frame and attach it in place.		
Step 2: Align the battery cover with the frame and press it into place. Wrap your fingers with lint-free cloth and press along the adhesive areas to activate bonding.		

4.3.2 Removal and Installation of Mainboard Bracket

Repair Difficulty: Low

Estimated Time: 8–12 minutes

Required Spare Parts: Mainboard Bracket Component

Removal		
Procedure	Illustration	Notes
Step 1: Remove the battery cover (refer to the battery cover removal steps).	Refer to section 4.3.1	
Step 2: Use a Phillips screwdriver to remove the 11 mainboard bracket screws as shown in the picture.		
Step 3: Lift the mainboard bracket from its bottom edge, and then remove it by moving from left to right.		
Installation		
Procedure	Illustration	Notes
Step 1: Position the left side of the mainboard bracket first, and then snap it onto the mainboard and press into place.		Ensure the camera module is properly aligned.
Step 2: Install all 11 mainboard bracket screws.		


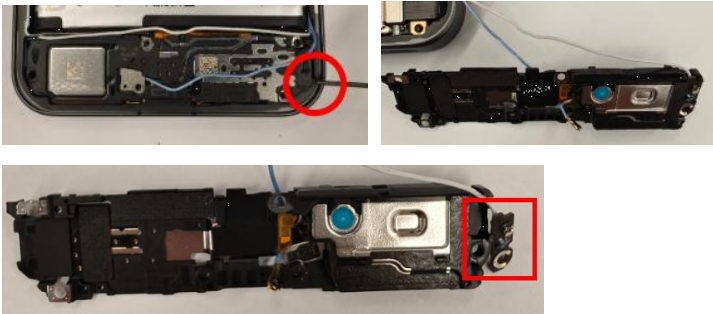



4.3.3 Lower Speaker Replacement

Repair Difficulty: Low

Estimated Time: 8–12 minutes

Required Spare Parts: Lower Speaker Component

Removal		
Procedure	Illustration	Notes
Step 1: Remove the battery cover (refer to the battery cover removal steps).	Refer to section 4.3.1	

Step 2: Disconnect the coaxial cable, and then remove the 6 screws securing the speaker bracket.		
Step 3: Disconnect the coaxial cable, and then use a flat-head screwdriver at the location shown in the picture to detach the speaker and antenna board.		Notes: Do not puncture the battery during the operation.
Installation		
Procedure	Illustration	Notes
Step 1: Install the antenna board and the speaker into the main upper part: secure the lower end, insert the upper end, and then press firmly around the entire perimeter. Ensure the speaker lies flat without warping.		Before installation, ensure the speaker is free of debris.
Step 2: Install the screws.		
Step 3: Position the coaxial cable neatly into the cable groove of the speaker bracket.		

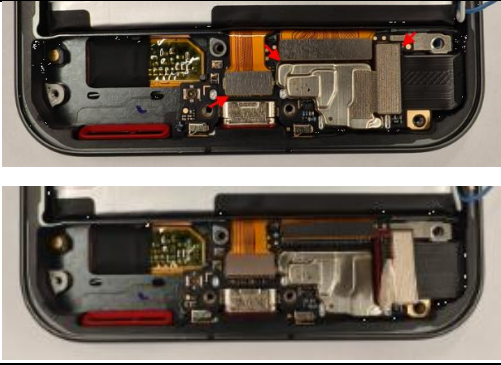
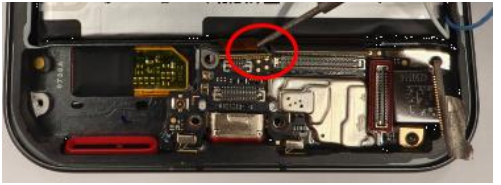


4.3.4 Sub-Board Replacement (Main MIC & Charging Port)

Repair Difficulty: Low

Estimated Time: 9–13 minutes

Required Spare Parts: Sub-board module

Removal		
Procedure	Illustration	Notes
Step 1: Remove the battery cover (refer to the battery cover removal steps).	Refer to section 4.3.1	
Step 2: Remove the speaker (refer to the lower speaker removal steps).	Refer to section 4.3.3	

Step 3: Disconnect the component BTB connectors and coaxial cable at the indicated locations.		
Step 4: Use pointed tweezers to pry up the ANA board from the indicated location.		
Installation		
Procedure	Illustration	Notes
Step 1: Align the bottom edge of the sub board against the frame, press it into place, and ensure it lies flat without warping.		
Step 2: Reconnect the BTB connectors for the display and fingerprint module.		

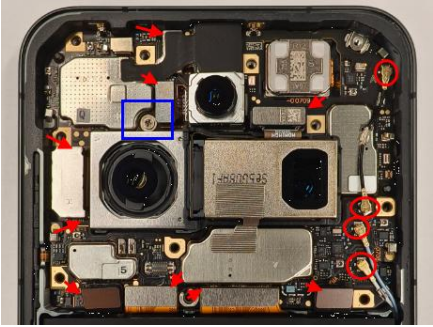
4.3.5 Removal and Installation of Mainboard


Repair Difficulty: Low

Estimated Time: 9–12 minutes

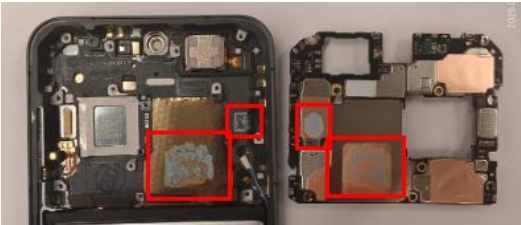
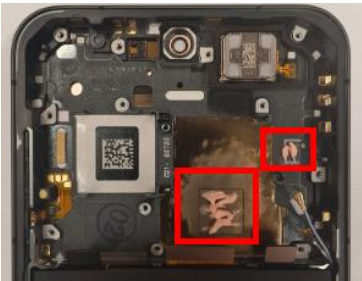
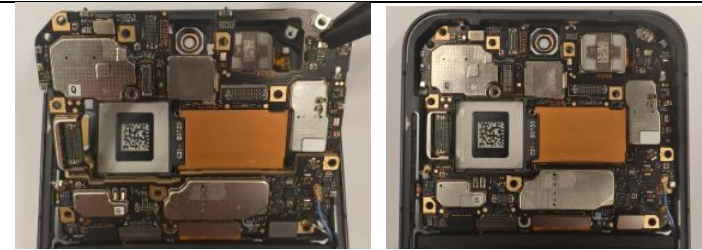
Required Spare Parts: Mainboard


Removal		
Procedure	Illustration	Notes
Step 1: Remove the battery cover (refer to the battery cover removal steps).	Refer to section 4.3.1	
Step 2: Remove the mainboard bracket (refer to the mainboard bracket removal steps)	Refer to section 4.3.2	

<p>Step 3: Remove one screw from the mainboard, and then use pointed tweezers to disconnect the battery BTB connector, other BTB connectors, and coaxial cables. After removing the cameras, keep them free from dust and debris, and avoid direct contact to prevent any impact on image quality.</p>		<p>After removing the cameras, keep them free from dust and debris, and avoid direct contact to prevent any impact on image quality.</p>
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<p>Step 4: Use a flat-head screwdriver at the indicated position to pry up the mainboard.</p>		
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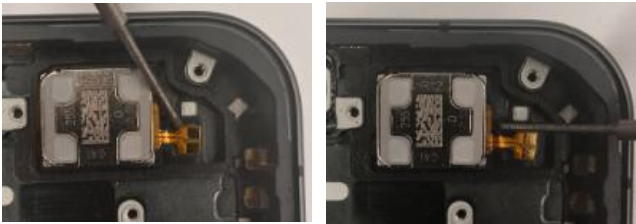

Installation		
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Procedure	Illustration	Notes
<p>Step 1: Clean residual thermal gel from the main upper part and mainboard with a dry, lint-free cloth.</p>		<p>Handle with care, avoiding excessive force, particularly on the mainboard.</p>
<p>Step 2: Apply new thermal gel to the indicated locations.</p>		
<p>Step 3: Insert the bottom edge of the mainboard into the frame, and then snap it into place. Ensure it lies flat without warping.</p>		

Step 4: Reinstall the cameras and reconnect all BTB connectors and coaxial cables.		
Step 5: Calibrate.	After reassembly, calibrate the rear dual cameras, light sensor, and infrared sensor as specified in section 3.2.3.	

4.3.6 Removal and Installation of Upper Speaker

Repair Difficulty: Low
Estimated Time: 9–12 minutes
Required Spare Parts: Upper Speaker

Removal		
Procedure	Illustration	Notes
Step 1: Remove the battery cover (refer to the battery cover removal steps).	Refer to section 4.3.1	
Step 2: Remove the mainboard bracket (refer to the mainboard bracket removal steps)	Refer to section 4.3.2	
Step 3: Remove the mainboard.	Refer to section 4.3.5	
Step 4: Remove the upper speaker. Pry off the reinforcement plate first with a flat-head screwdriver, and then remove the speaker itself.		To avoid damaging the screen, insert the flat-head screwdriver only shallowly when removing the speaker.
Installation		
Procedure	Illustration	Notes
Step 1: Clean any residual adhesive from the speaker area on the main upper part, apply new upper speaker double-sided tape to the frame, peel off the release film, and press it firmly onto the corresponding position on the frame.		Be careful not to damage the screen while cleaning the adhesive.

4.3.7 Battery Replacement




Repair Difficulty: Low

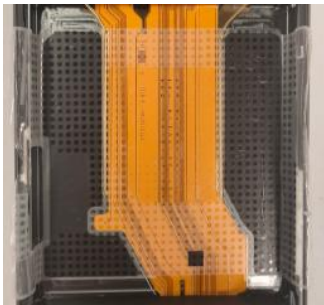


Estimated Time: 6–10 minutes

Required Spare Parts: Battery Component

Preparation before battery removal:

1. Ensure the battery is fully discharged.
2. Prepare a sand bucket to mitigate safety risks in case the battery ignites during removal.

Removal		
Procedure	Illustration	Notes
Step 1: Remove the battery cover (refer to the battery cover removal steps).	Refer to section 4.3.1	
Step 2: Remove the mainboard bracket (refer to the mainboard bracket removal steps)	Refer to section 4.3.2	
Step 3: Disconnect the battery BTB connectors.		
Step 4: Lift the PET pull tab on the battery and slowly pull it at a 145° angle to detach the battery.		Ensure your hand do not obstruct the battery area during removal.
Installation		
Procedure	Illustration	Notes
Step 1: Inspect the battery for signs of swelling, deformation, or damage. If present, replace with a new battery.		

Step 2: Clean any residual adhesive on the main upper part and battery, especially any black adhesive in the indicated areas. Peel off also the PET disc for the old battery.		
Step 3: Take a new PET disc and two pieces of double-sided tape for the battery. Attach them to the battery and the main upper part at the indicated locations. Peel off all release films.		
Step 4: Before installation, ensure the battery and battery compartment are free from any foreign objects. Pace the battery into the main upper part, and press firmly on adhesive areas indicated by the blue frames to activate the adhesive.		


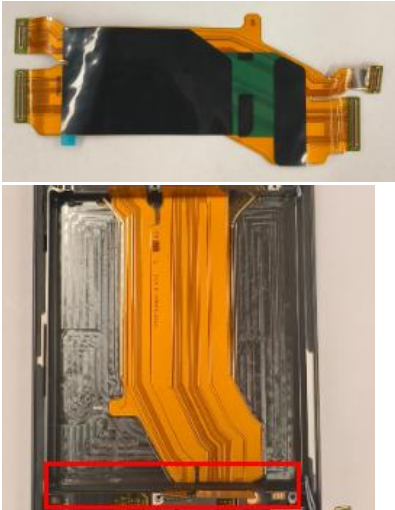
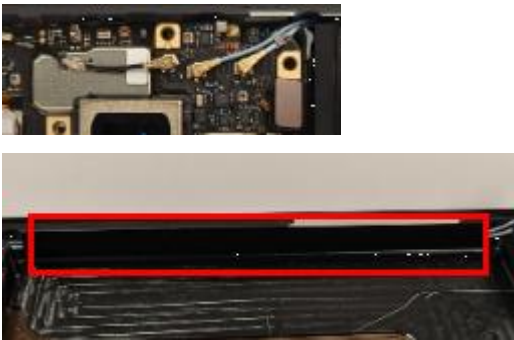

4.3.8 Display Component Replacement

Repair Difficulty: Neutral

Estimated Time: 15–20 minutes

Required Spare Parts: Display Component

Removal		
Procedure	Illustration	Notes
Step 1: Remove the battery cover.	Refer to section 4.3.1	
Step 2: Remove the mainboard bracket.	Refer to section 4.3.2	
Step 3: Remove the lower speaker support.	Refer to section 4.3.3	
Step 4: Remove the mainboard and cameras.	Refer to section 4.3.5	
Step 5: Remove the battery.	Refer to section 4.3.7	
Step 6: Remove the upper speaker.	Refer to section 4.3.6	
Step 7: Remove the sub-board.	Refer to section 4.3.4	


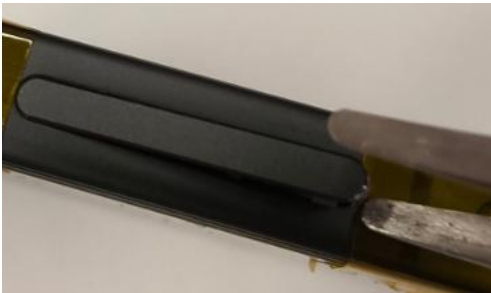

Step 8: Remove the motor.		
Installation		
Procedure	Illustration	Notes
Step 1: Install the upper speaker, mainboard, cameras, motor, and ANA board.	Refer to the installation steps in sections 4.3.6, 4.3.5, and 4.3.4	
Step 2: Install the FMA board. Apply the FMA board back adhesive, reconnect the BTB connectors on both ends to the mainboard and ANA board, and then secure it to the frame and attach it to the bottom cushion of the battery compartment.		
Step 3: Install the coaxial cable. First secure one end to the M board, route the cable neatly into the cable groove, Place the PET disc and press it firmly, and then reconnect the coaxial cable to the ANA board.		
Step 4: Install the speaker, battery, mainboard bracket, and battery cover.	Refer to the installation steps in sections 4.3.3 and 4.3.7, 4.3.2, and 4.3.1	
Step 5: Power on the device to verify that the screen lights up and functions correctly.		
Step 6: Calibrate.	After reassembly, calibrate the rear dual cameras, in-display fingerprint sensor, infrared sensor, and light sensor as specified in section 3.2.3.	

4.3.9 Side Button Replacement

Repair Difficulty: Low

Estimated Time: 5 minutes

Required Spare Parts: Side Button

Removal		
Procedure	Illustration	Notes
Step 1: Apply high-temperature tape to protect the surface.		
Step 2: Pry out the side button from the opening shown in the picture with a flathead screwdriver or flat tweezers.		
Installation		
Procedure	Illustration	Notes
Step 1: Insert the new side button into the slot, keeping it parallel to the frame as shown, and then press it firmly into place.		

4.3.10 Display Screen Unit Replacement

Repair Difficulty: High




Estimated Time: 20–50 minutes




Required Spare Parts: Display Screen Unit Component

Preparation before removal:


1. Wear gloves to prevent hand injuries from metal prying pick.
2. Insert the metal prying pick between the cover glass and the display panel. Do not insert it into the gap of the frame, as this could cause scratches to the frame.
3. For models requiring adhesive, please note that the glue may need to be purchased separately. (Purchase code: XXXX)

Removal		
Procedure	Illustration	Notes
Step 1: Remove the battery cover.	Refer to section 4.3.1	
Step 2: Remove the mainboard bracket.	Refer to section 4.3.2	
Step 3: Remove the mainboard.	Refer to section 4.3.5	
Step 4: Remove	Refer to section 4.3.7	

the battery.		
Step 5: Use a heating pad to heat the screen at 65°C for 5 minutes.		
Step 6: Insert a metal prying pick 3 mm deep from the bottom-right corner to create a gap between the display from the mainboard upper cover. Once a gap is formed, switch to a PET prying pick to continue the separation. Separate the display FPC from the frame.		Do not pause after heating—prolonged cooling may complicate removal. Use the metal prying pick for stubborn areas.
Step 7: After separating the edges, gently lift the screen from the bottom upward.		
Installation		
Procedure	Illustration	Notes

<p>Step 1: Remove residual adhesive from the frame as shown in the first picture while the frame is still warm. Inspect and replace damaged frame if necessary.</p>		<p>Adhesive Removal Tips:</p> <ol style="list-style-type: none"> 1. For adhesive left in strips, lift one end with your fingers and pull it off in a straight line. 2. For irregular adhesive, use flat plastic tweezers to scrape along the frame repeatedly until clean. For stubborn spots, wrap double-sided tape around the tweezers and press it onto the residue to lift it away.
<p>Step 2: Apply display double-sided tape 1 onto the main upper part, and then apply tape 2. Press each strip firmly with your fingers to fully activate the adhesive.</p>	<p>① LCM double-sided tape (lower) and ② LCM double-sided tape</p> 	
<p>Step 3: Peel off the release film, and then apply glue at the areas marked with a red circle. Before application, clear any cured glue from the needle tip to ensure proper glue flow.</p>		

<p>Step 4: Insert the display FPC into the frame's FPC slot as shown. Pre-align the display screen and gradually press it into place, ensuring proper alignment.</p>		
<p>Step 5: After installing the display, wrap your fingers in a lint-free cloth and press firmly around all adhesive and glued areas for 1 minute to activate the adhesive and secure the bond.</p>		
<p>Step 6: Attach FPC double-sided tape to the frame, install the mainboard, and then peel off the FPC tape's release film. Reconnect the display FPC BTB connector to the mainboard and secure the FPC.</p>		
<p>Step 7: After assembling the device, place it into a pressure holding jig as shown in the picture, and apply pressure to the screen for 30 minutes.</p>		

<p>Step 8: Power on the device and verify the display functions properly.</p>		
<p>Step 9: Calibrate.</p>	<p>After reassembly, calibrate the rear dual cameras, in-display fingerprint sensor, infrared sensor, and light sensor as specified in section 3.2.3.</p>	