CROSSCALL

STELLAR-X5

DISASSEMBLY - ASSEMBLY GUIDE

Version 2.1

INTRODUCTION

Crosscall was founded more than 10 years ago on a commitment: to manufacture durable mobile phones, even under the most difficult conditions of use.
It is thanks to its years of experience and the special attention of its teams to design, industrialization and quality control that Crosscall offers its users a **5-year manufacturer's warranty** and spare parts available for 10 years. on all products from the new CORE range, which is exceptional in the world of telephony.

This document is a disassembly and reassembly guide for the **Crosscall STELLAR-X5** smartphone.

It also explains what operations must be carried out when changing a part.

It is organized as follows:
- **Warnings and precautions to be taken before disassembling the device.**
- **Necessary equipment: List of essential tools for the disassembly/reassembly of the parts**
- **Change of parts:**

  Structured as follows for each main room:
  - Equipment required: Tools required for the operation concerned.
  - Operations prior to dismantling the part: indicates the other parts to be dismantled before being able to access the desired part.
  - Disassembly of the part.
  - Exchange of the part: concerns the preparation of the new part.
  - Reassembly of the part.

WARNINGS

Beyond the impact on the warranty (see box below), opening the device and replacing parts can have an impact on the water resistance, resistance and autonomy of your product. , if this is not carried out in a center approved by CROSSCALL.

Before having a repair carried out, check whether or not it is guaranteed by referring to the general after-sales service conditions on our website and read the elements below.

WARRANTY IMPACT

Any modification or change made to your device outside of an authorized CROSSCALL repair center will void the warranty. If your device needs to be repaired, we advise you to entrust it to the CROSSCALL after-sales service
(contact available on our website https://crosscall.com/sav/).

WATERPROOFING

Please note that telephones repaired outside an approved CROSSCALL center are no longer watertight.

BATTERY

The dangers of handling batteries.

To ensure your safety, CROSSCALL batteries and devices are tested according to international standards. The design of our devices also contributes to your safety: the battery is confined in a metal frame.

The battery is a part that can present risks for the person carrying out the repair if the latter does not have the required qualifications. Failure to remove the battery correctly may damage the device and cause personal injury.

A lithium battery is characterized by its **high energy density**. Before handling a battery, you should be aware of the following risks (non-exhaustive list).

The main risk is related to **poor handling** (shocks, blows, deterioration) which can pose a **significant security risk.**

Mechanical damage can lead to deformation of the cells inside the battery and cause internal shorts and **battery runaway**. The lithium battery then releases the energy it has stored in an uncontrolled manner.

Thermal runaway, with temperatures above 250°C, will lead to a strong generation of flammable gases inside the battery concerned and these gases will trigger the explosion of the battery casing. The metals then merge and burn.

The fumes given off are **toxic** and **highly corrosive**.

Contact with moisture can also cause short circuit.

Safety instructions

- Switch off the device before any intervention.
- Do not turn it back on before complete reassembly.
- Turn off the device before removing the battery. If you remove the battery while the device is on, the device may malfunction.
- Do not disassemble or puncture the battery, as this may cause an explosion or fire.
- Do not cause a short circuit.
- Do not reuse the battery if you have any doubts about its integrity following dismantling.
- Recycle the battery according to the standards in force.
- Do not throw it into fire

Please observe the waste disposal rules when disposing of the packaging, battery, device and its electronic parts. Drop them off at a collection point so that they can be properly recycled. Do not dispose of used electrical and electronic devices or batteries in an ordinary trash can. Please deposit the used lithium batteries in a place designed for this purpose.

ELECTROSTATIC DISCHARGES, WORKING ENVIRONMENT

During the disassembly / reassembly operation, it is advisable to wear an antistatic bracelet connected to the ground. If this is not possible, it is essential to wash your hands and discharge yourself of any static electricity build-up by touching a grounded metal object (ex. radiator) before proceeding with the disassembly / reassembly of the device.

Electrostatic discharge can permanently damage the electronics of the device.

Any work on the device must be carried out in a bright, clean and dust-free environment. The latter can deposit on parts related to photography and video and distort the focus. Metallic dust can also cause short circuits.

REQUIRED EQUIPMENT

Description	Picture	Description	Picture
ESD equipment		LOCTUO RTV165 silicone syringe	
Antistatic tools for dismantling: nylon pointer, pick, etc.		SIM extractor	
Antistatic tweezers		Glue applicator gun	
Cutter		Tape screen protector	
Philips screwdriver PH00		Isopropylic alcohol	
Torque screwdriver PH00		Rag	

DISASSEMBLY, ASSEMBLY AND EXCHANGE OF PARTS

Back housing

Back housing dissassembly

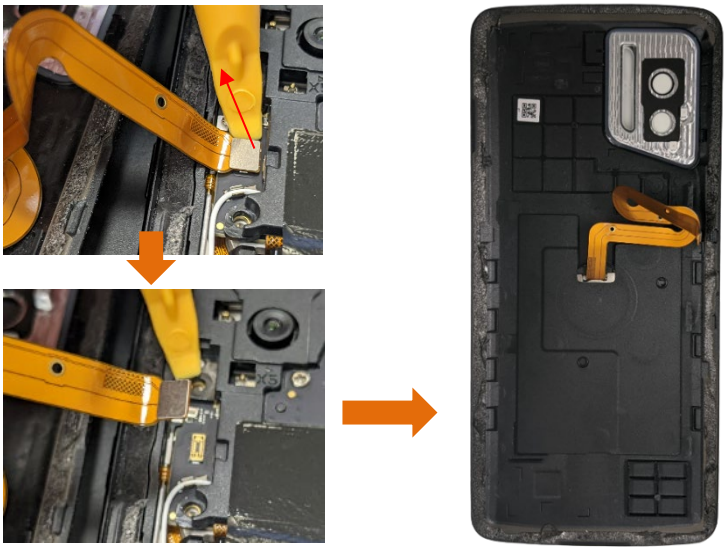
Tools needed	• Anti-static dissassembly tool • SIM extractor
Preliminary operations	• None

	Extract the SIM drawer by inserting the extractor into the hole in the drawer.
	Open the USB cover and insert the pick between the back cover and the front cosmetic. Move the pick along the green line, then the blue one to cut the self-adhesive joint. **Do not run the pick over the red zone as this may tear a hose.**
	The back cover can be opened. **Be careful not to tear the flex of the magnetic connector during this operation.**

Unscrew the **2 M1.4x5.0 screws.**

screw M1.4x5.0

Remove the Magconn flex support



Disconnect the connector from the magnetic flex using a plastic tool.
The back cover can be removed.

Changing the back housing

Tools needed	• Precision tweezers

	Remove the protective film from the double-sided adhesive.

Reassembling the back housing

Tools needed	• Precision tweezers • Screwdriver PH00

	Remove glue residue and old adhesive from the inner perimeter of the front cosmetic.
	Plug in the flex of the magnetic connector.
PH00 (x2)  	Install and screw the connector bracket with **2 M1.4x5.0 screws.** 

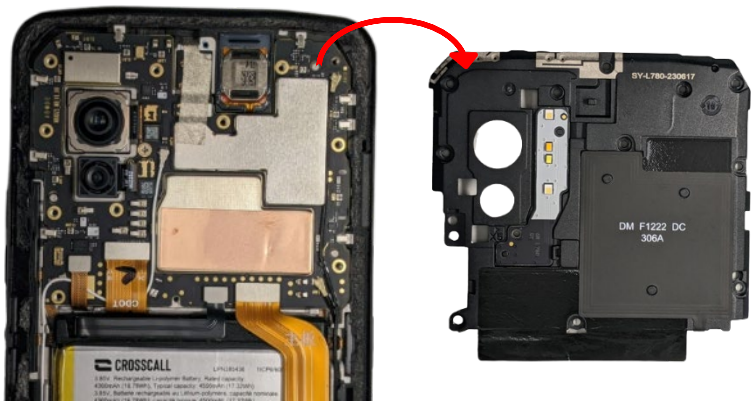
	Fold down and stick the flex to the substrate with a double-sided adhesive.
	Press around the back cover to plate the adhesive between the cosmetics.

Motherboard support

Disassembly

Tools needed	• Anti-static disassembly tool • PH00 Screwdriver • Precelle Clamp

Unscrew the **10 M1.4x3.5 screws** circled in red and **the white M1.4x5 screw** circled in yellow.

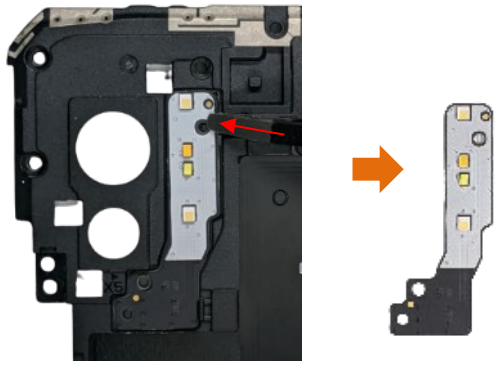
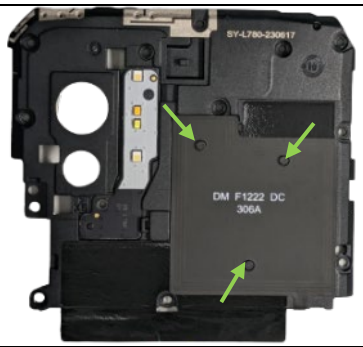


The motherboard bracket can be removed.

Motherboard bracket exchange

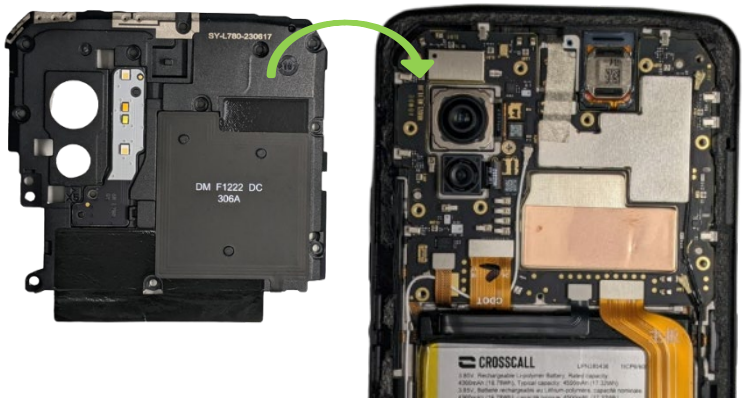
Tools needed	• Precision tweezer

Recover the flash daughter card and NFC antenna.

	Peel off the flash girl card using tweezers.
	Glue the map back together according to the 2 guide pads marked in green.
	Peel off the NFC antenna starting with the contacts. 
	Reattach the NFC antenna using the 3 guide pads marked in green.

Reassembling the motherboard bracket

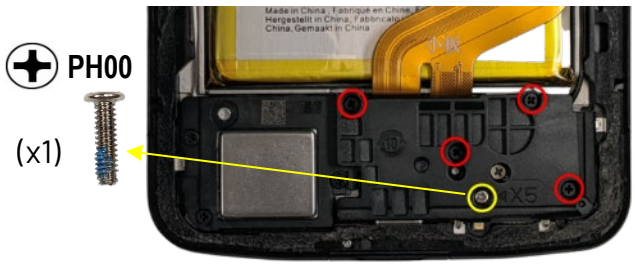
Tools needed	• Screwdriver PH00 • Precision tweezer

	Placing the bracket on the motherboard.
	Screw in the **10 M1.4x3.5 screws** circled in red and the **white M1.4x5 screw** circled in yellow.  Screw M1.4x5.0  Screw M1.4x3.5

Daughter motherboard bracket

Dissassembly

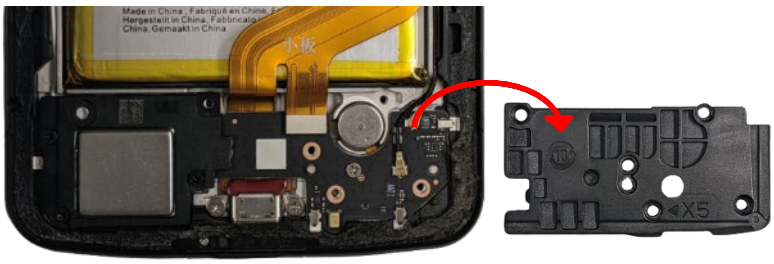
Tools needed	• Anti-static disassembly tool • PH00 Screwdriver • Precelle Clamp



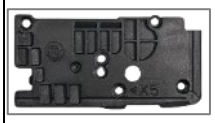
Unscrew the **4 M1.4x3.5 screws** circled in red and **the white M1.4x5 screw** circled in yellow.


Screw M1.4x5.0

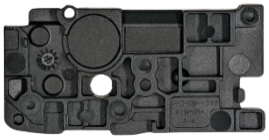

Screw M1.4x3.5



The daughter card holder can be removed.



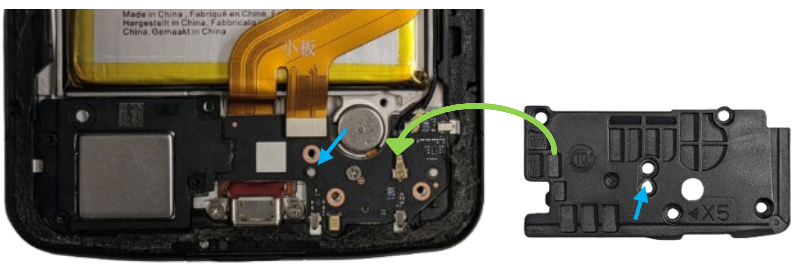
Changing the daughter bracket

No specific action when changing this part.

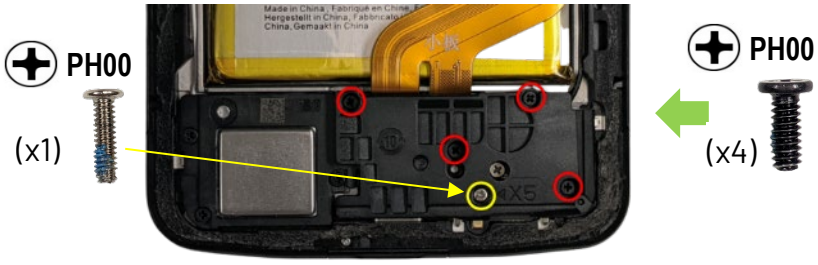
Assembly the doughterboard bracket

Tools needed	• PH00 screwdriver • Precision tweezer



Place the support along the guide pad marked in blue.

Be careful to insert the lug of the bracket following the red arrow, under the speaker bracket.



Screw in the **4 M1.4x3.5 screws** circled in red and **the white M1.4x5 screw** circled in yellow.

 Screw M1.4x5.0

 Screw M1.4x3.5

Speaker

Disassembly

Tools needed	• PH00 screwdriver • Precision tweezer

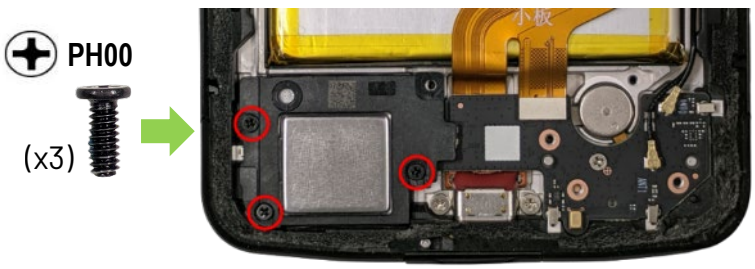
	Unscrew the **3 M1.4x3.5 screws** circled in red. 
	The speaker can be removed.

Speaker exchange

	No specific action when changing this part.

Assembly

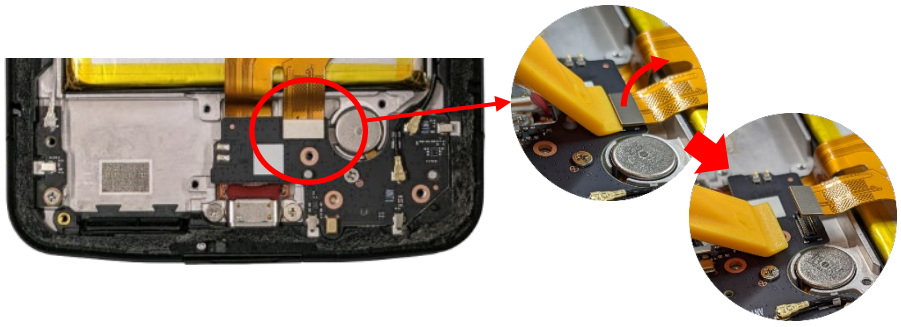
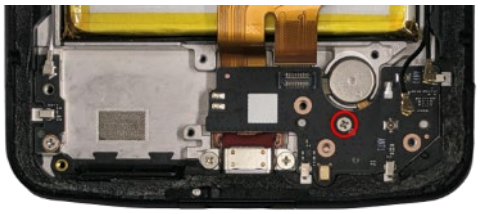
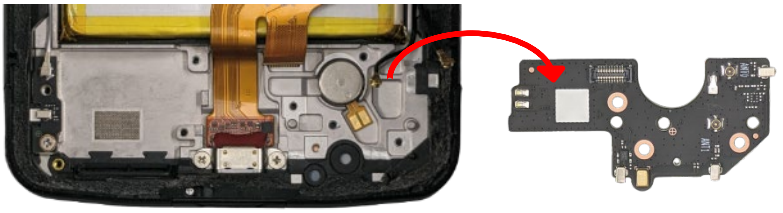
Tools needed	• PH00 screwdriver

	Place the speaker in its compartment and screw in the **3 M1.4x3.5 screws** circled in red. 

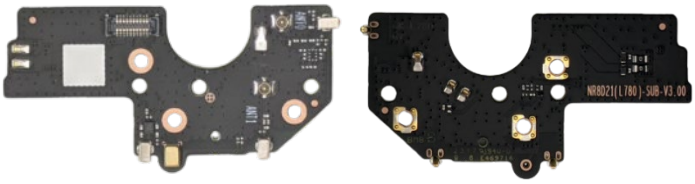
Main daughter motherboard

Disassembly

Tools needed	• Anti-static disassembly tool • PH00 screwdriver • Precision tweezer

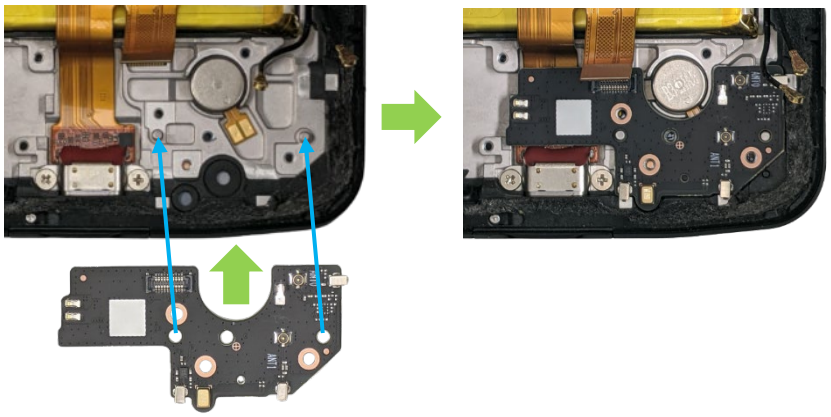
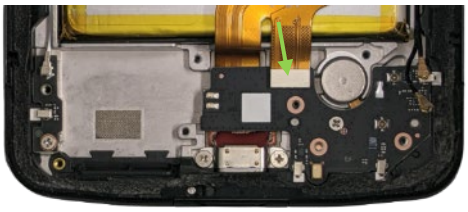
	Disconnect the main flex connector on the daughterboard using an Anti-static disassembly tool.
	Unplug the 2 coaxial connectors on the daughter board using a Precision tweezer.
	Unscrew **the M1.4x2.5 screw** circled in red. 
	The daughter card can be removed.

Swapping the main daughter board

	No specific action when changing this part.

Assembly

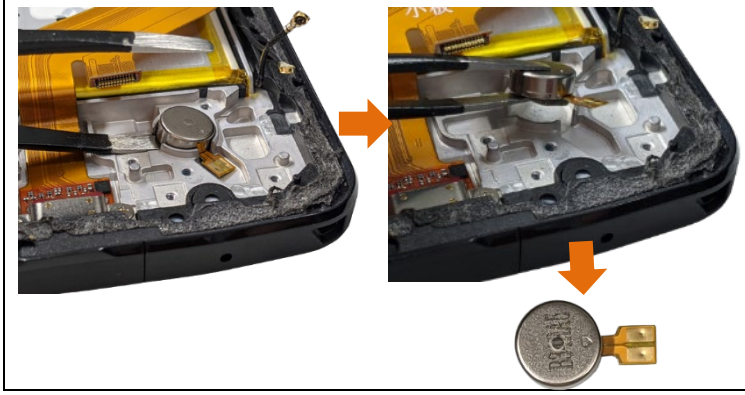
Tools needed	• PH00 screwdriver • Precision tweezer

	Place the daughter board according to the 2 guide pads marked in blue.
	Screw in **the M1.4x2.5 screw** circled in red. 
	Plug the main flex connector into the daughter board.
	Connect the 2 coaxial connectors and insert the longest one into its guide marked in yellow.

Vibrator

Disassembly

Tools needed	• Precision tweezer

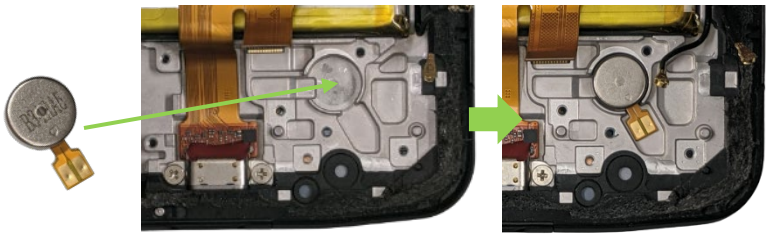
	Remove the vibrator by inserting the Precision tweezer from underneath the left side. 

Vibrator exchange

	The vibrator is glued with a conductive adhesive.

Assembly

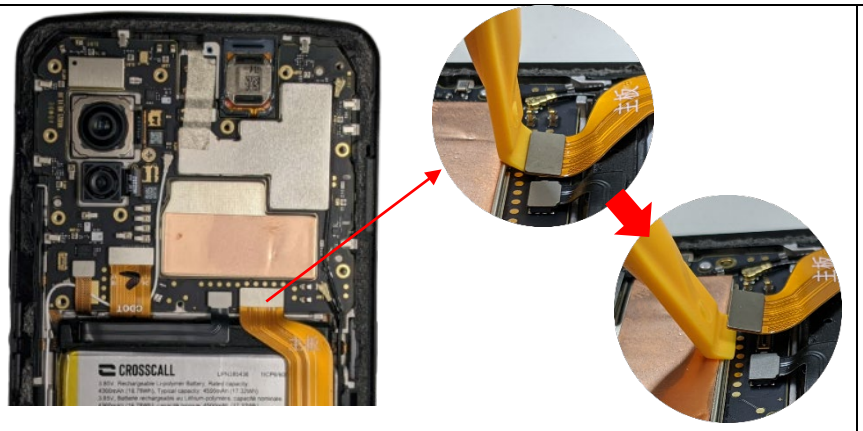
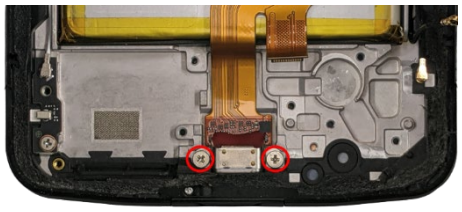
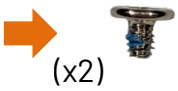
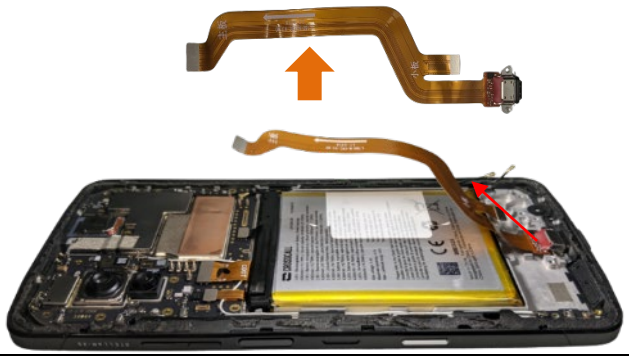
Tools needed	• Precision tweezer

	Stick the vibrator to its location.

Main USB flex

Disassembly

Tools needed	• PH00 screwdriver • Precision tweezer

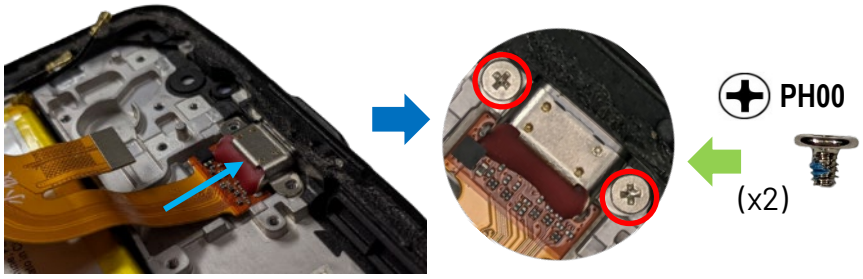
	Unplug the main flex connector on the motherboard using an Anti-static disassembly tool.
  PH00 (x2)	Unscrew the **2 M1.4x2.0 screws** of the USB connector.  Screw M1.4x2.0
	The main USB flex can be removed. 

Changing the USB main flex

	No specific action.

Reassembling the USB main flex

Tools needed	• Precision tweezer • Tournevis cruciforme PH00

	Insert the USB connector into its slot, then screw in the 2 M1.4x2.0 screws circled in red. 
	Connect the connector to the main board..

Battery

Removing the battery

Tools needed	• Anti-static disassembly tool • Precision tweezer

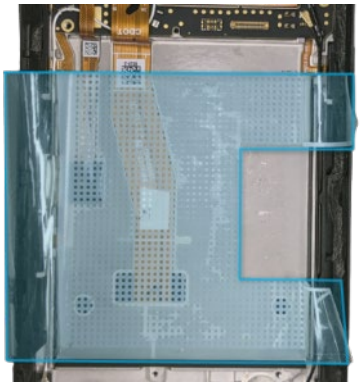
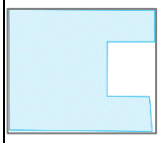
	Disconnect the battery connector by lifting it out using a non-metallic dismantling tool.
	Pull forcefully on tab No. 3 to remove the battery
	Pull forcefully on tab No. 3 to remove the battery.  Battery

Replacing the batterie

	No specific action required when changing the battery.

Reassembly

Tools needed	• Precision tweezer

	If necessary, change the adhesive coating on the battery.  Adhesive battery cover
	Insert the battery into its compartment and stick the 4 tabs of the adhesive sleeve together.
	Connect the battery connector.

Câbles coaxiaux

3 coaxial cables :

1 black 137.5 mm

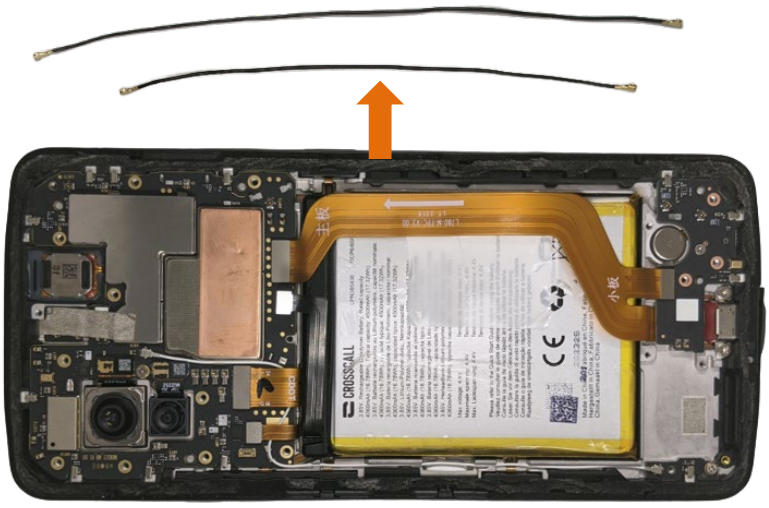
1 black 102.5 mm

1 white 143.5 mm

Disassembly des câbles coaxiaux

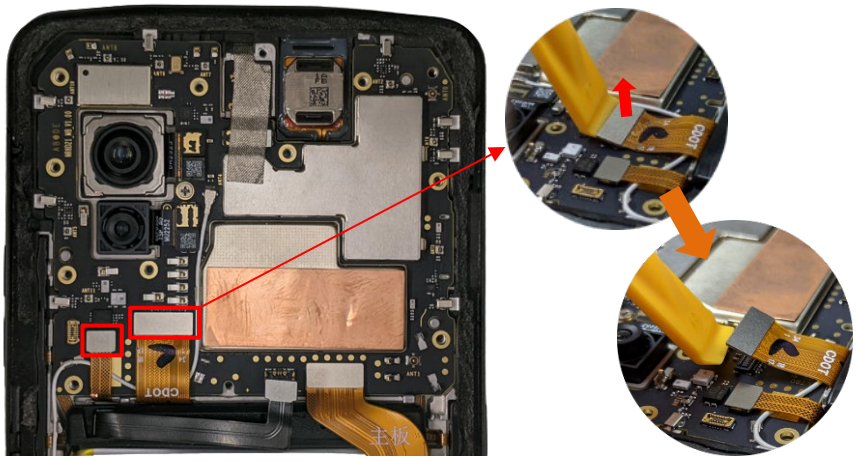
Tools needed	• Precision tweezer

Unplug the 6 connectors on the motherboard and daughterboard using a Precision tweezer.



Remove the 2 black cables, starting with the longer one

.

	Disconnect the 2 flex connectors framed in red using an antistatic tool.
	Remove the white coaxial cable.

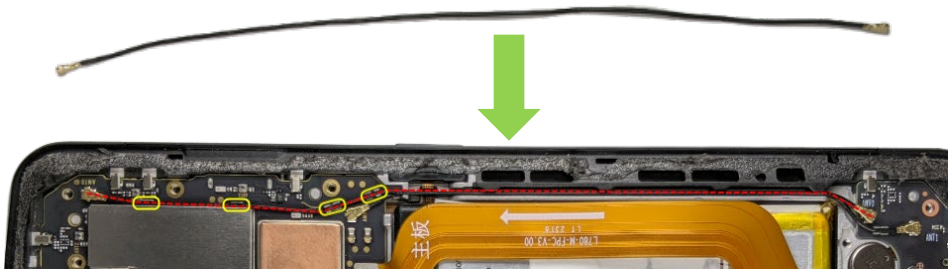
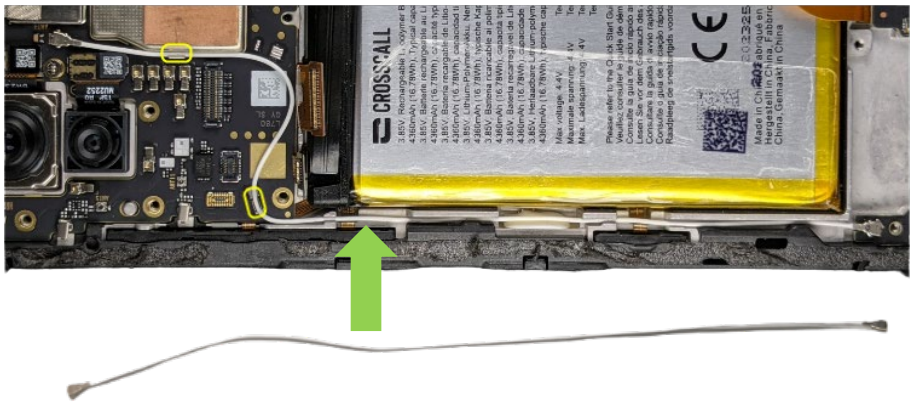
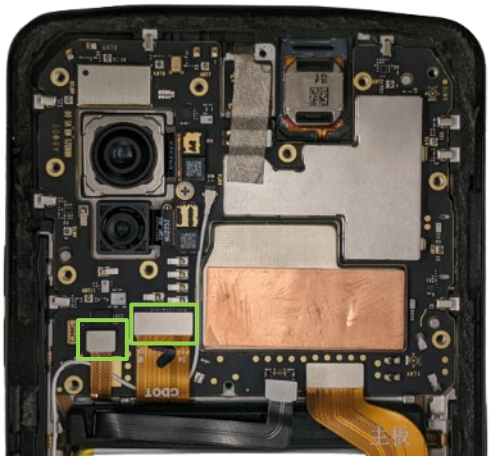
Replacing coaxial cables

	COAXIAL CABLE (137.5MM)	
	COAXIAL CABLE (102.5MM)	
	COAXIAL CABLE (143.5MM)	

Assembly

Tools needed	• Precision tweezer

	First, insert and connect the shorter black cable as shown in the photo, in the side trunking and in the yellow framed guide.

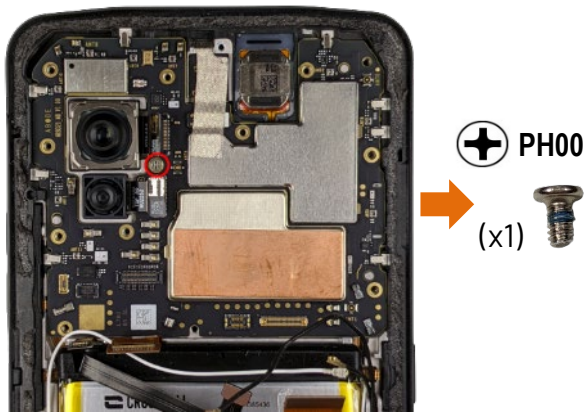
	Then lay the black cable along the red line in the photo. Insert it in the same trunking over the first black cable and in the 4 guides framed in yellow.
	Lay and connect the last white cable as shown in the photo and by the 2 guides shown in yellow.
	Connect the 2 flex connectors.

Motherboard

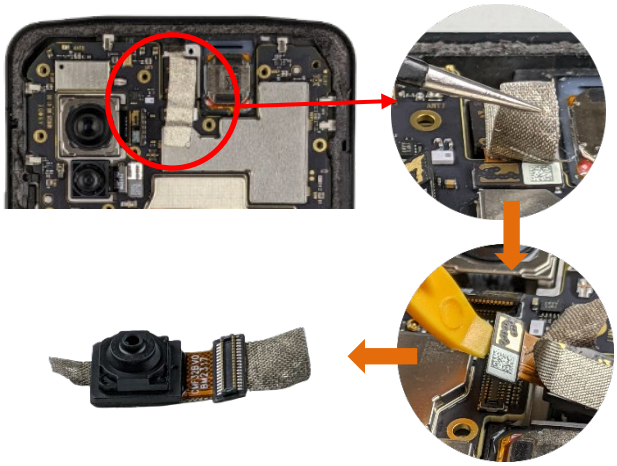
Disassembling the motherboard

Tools needed	• Anti-static disassembly tool • PH00 screwdriver • Precision tweezer

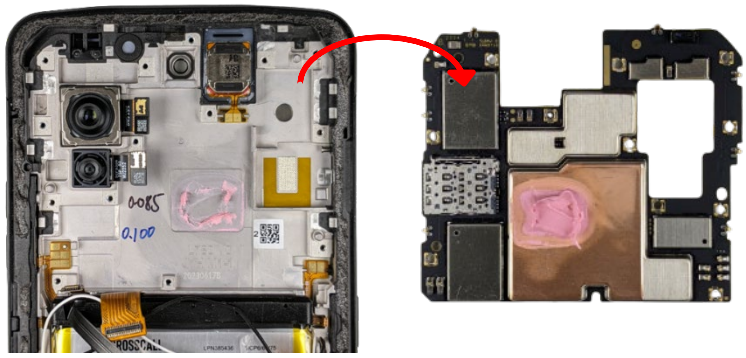
Disconnect all the flex connectors framed in red, starting with the battery connector.
Disconnect and free the coaxial cables from the motherboard.



Unscrew the M1.4x2.5 screw circled in red.

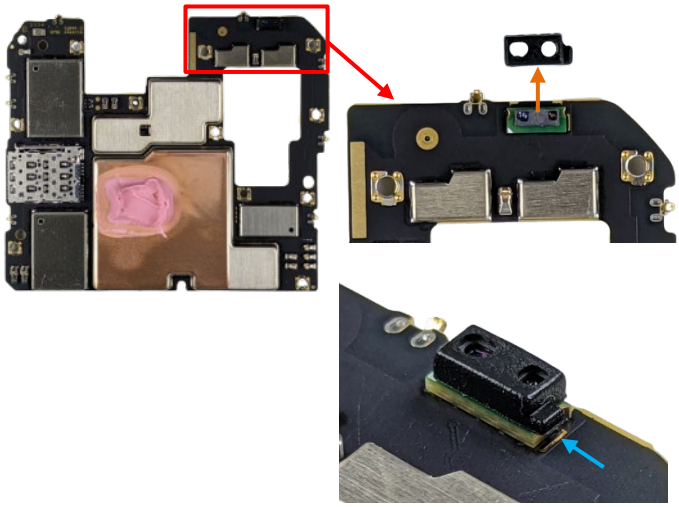
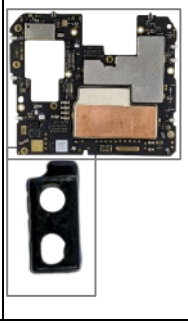


Peel off the conductive adhesive from the front camera.
Unplug the camera connector using an antistatic tool, then remove the camera.
Be careful not to touch the camera lens or contacts when handling the camera.

	Remove the motherboard. **When handling the motherboard, be careful not to touch the thermal paste between the front cosmetics and the board.**

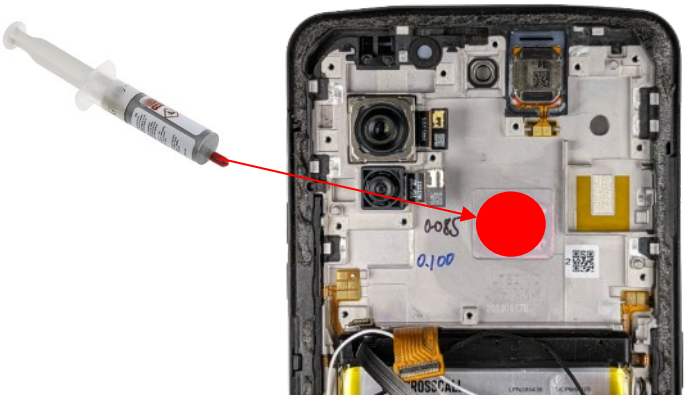
Replacing the motherboard

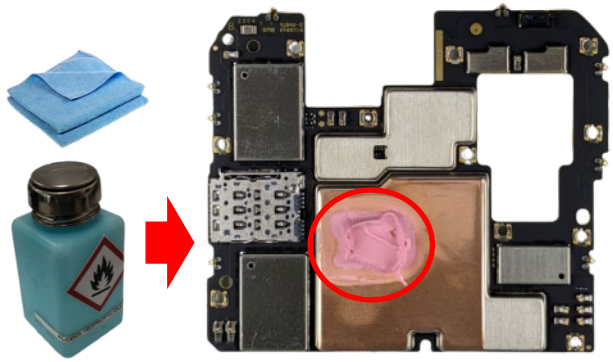
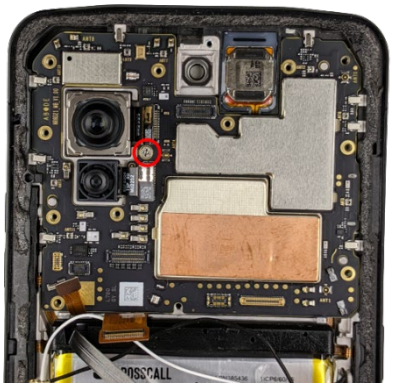
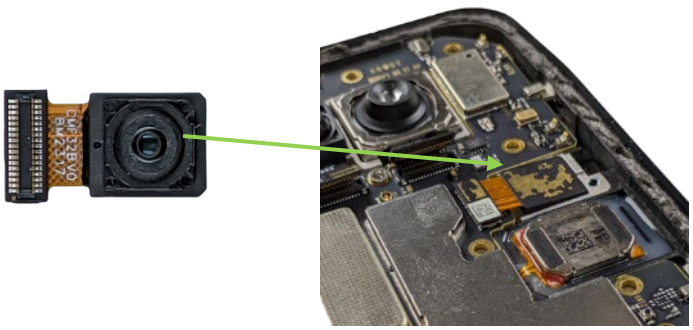
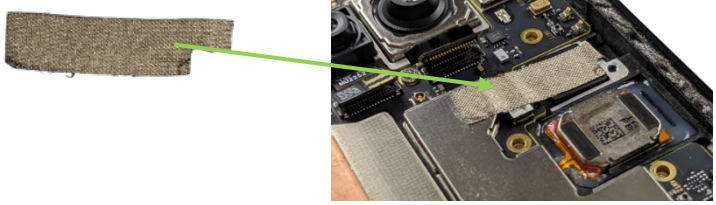
Tools needed	• Precision tweezer

	Remove the light guide from the proximity sensor. Pay attention to the reassembling direction: the pin is on the side of the copper marking on the motherboard, marked by the blue arrow. 

Reassembling the motherboard

Tools needed	• PH00 screwdriver • Precision tweezer • Alcohol isopropylic

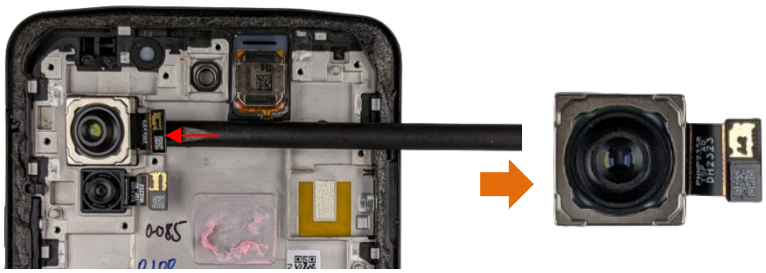
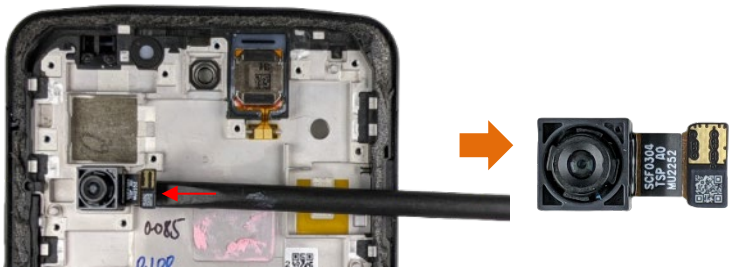
	Apply thermal paste to the area marked in red on the photo. Clean the area with alcohol if any thermal paste residue remains. 

	If you are reassembling the old motherboard, clean any thermal paste residue with alcohol.
PH00 (x1) 	Insert the motherboard into its slot, then screw in the M1.4x2.5 screw circled in red. 
	Inserting and connecting the front camera.
	Stick the conductive adhesive to the shield of the motherboard, the camera and the ground of the front cosmetic.  Camera conductive adhesive
	Connect the 6 flex connectors and the coaxial cables. Refer to the section on coaxial cables for reassembling.

Rear cameras

Disassembly

Tools needed	• Anti-static disassembly tool • Precision tweezer

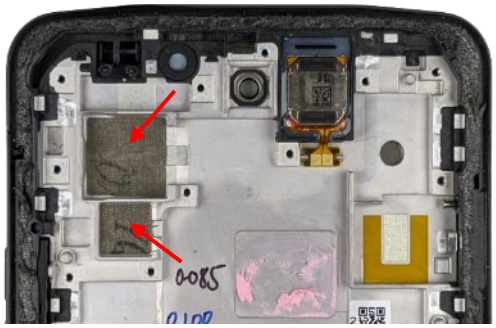
	When handling the cameras, take care not to touch the lenses and connector contacts.
	Remove the main camera using an anti-static tool inserted from below. 
	Remove the wide-angle camera using an anti-static tool inserted from below. 

Rear camera replacement

 Caméra arrière principale  Caméra arrière grand angle	No specific action..

Reassembling the rear cameras

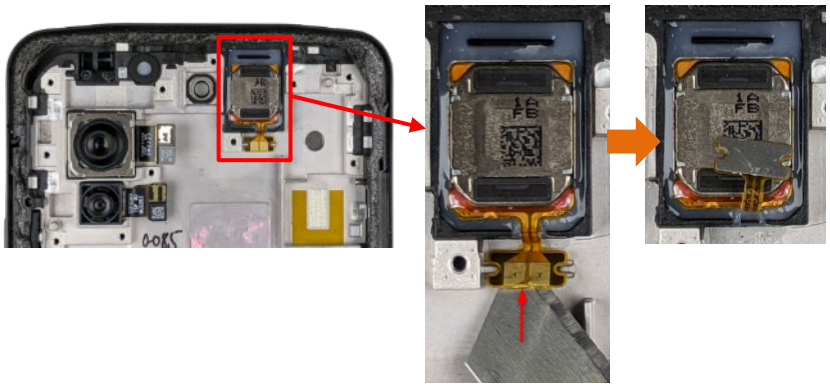
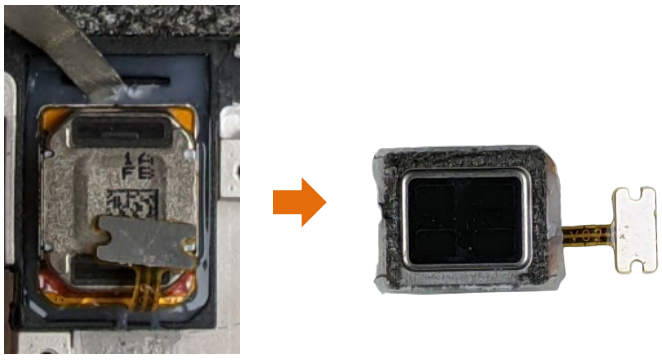
Tools needed	• Precision tweezer

	Check the presence and condition of the conductive tape on the cameras.
	Position and glue the cameras in their housings.

Earphone

Disassembly

Tools needed	• Precision tweezer • Cutter

	Fold down the contacts of the earphone.
	Cut the silicone seal around the earpiece with a cutter.
	Use the flat-nose pliers to remove the earpiece. Be careful not to damage the membrane on the cosmetic during this operation.
	Clean the silicone seal remaining in the earphone compartment

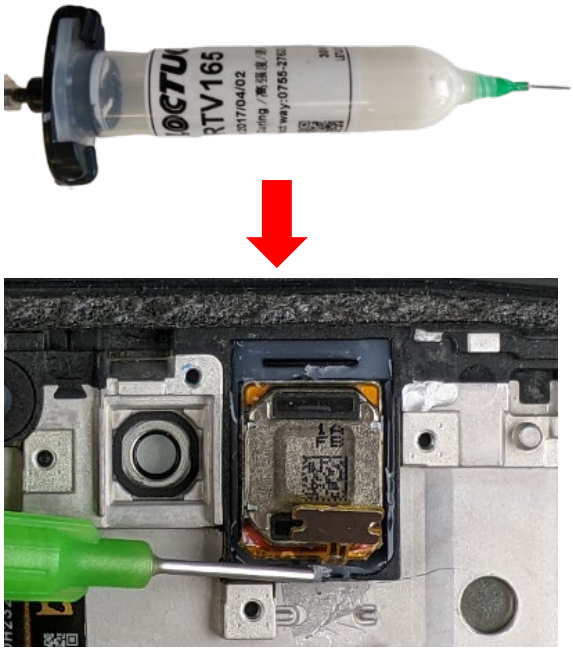
Replacement of earphone

Tools needed	• Precision tweezer

	Remove the protective film from the adhesive.

Assembly

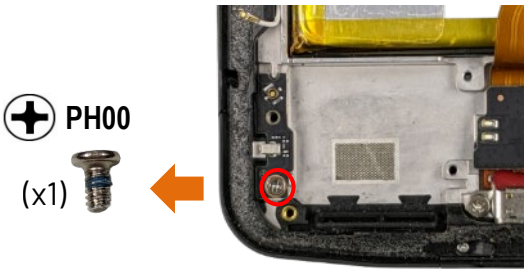
Tools needed	• LOCTUO RTV165 glue applicator / silicone syringe

	Place the earpiece in its compartment, in the direction shown in the photo. Fold back the contacts to apply the silicone adhesive.
	Apply LOCTUO RTV165 silicone sealant (recommended product - not sold by CROSSCALL) around the earpiece and allow to dry for a few minutes before reassembling the product.

Antenna daughter board

Disassembly

Tools needed	• Precision tweezer • PH00 screwdriver

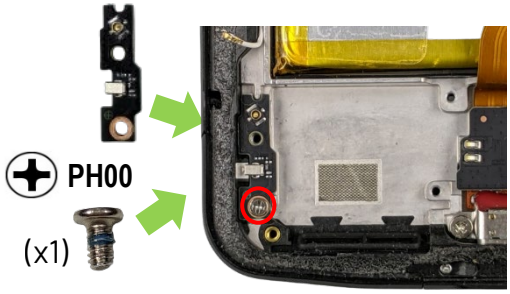
	Unplug the coaxial connector using a Precision tweezer.
	Unscrew the M1.4x2.5 screw circled in red.  M1.4x2.5
	Remove the antenna daughter board 

Replacement

	No specific action required when changing this part.

Assembly

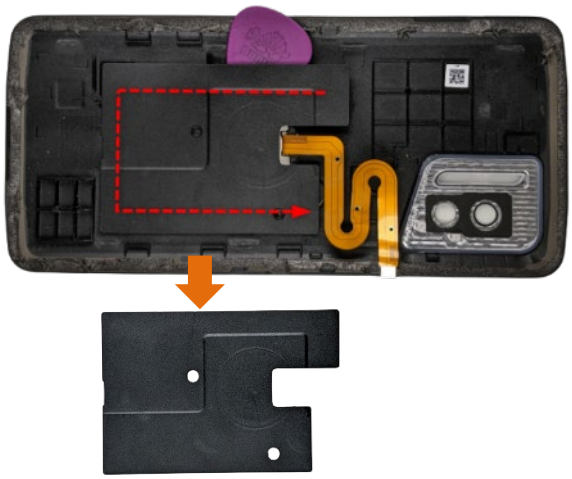
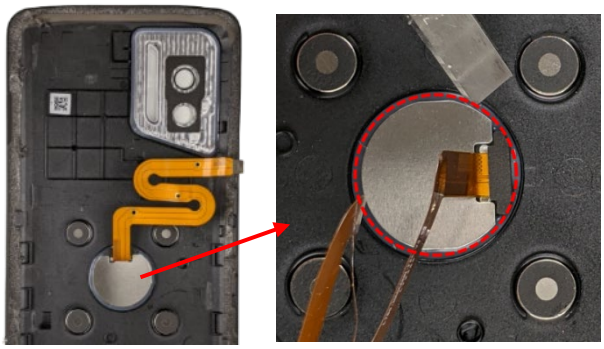
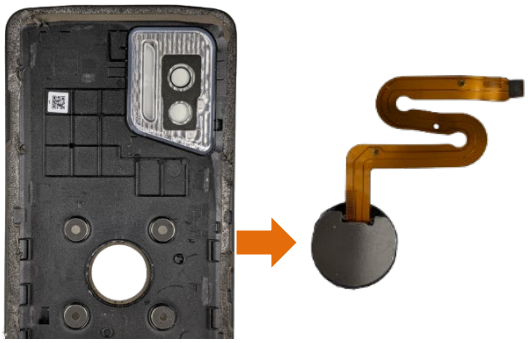
Tools needed	• Precision tweezer • PH00 screwdriver

	Insert the antenna daughter board into its slot. Screw in the M1.4x2.5 screw circled in red.  M1.4x2.5
	Connect the coaxial cable connector.

Magnetic connector

Disassembly

Tools needed	• Precision tweezer • Cutter

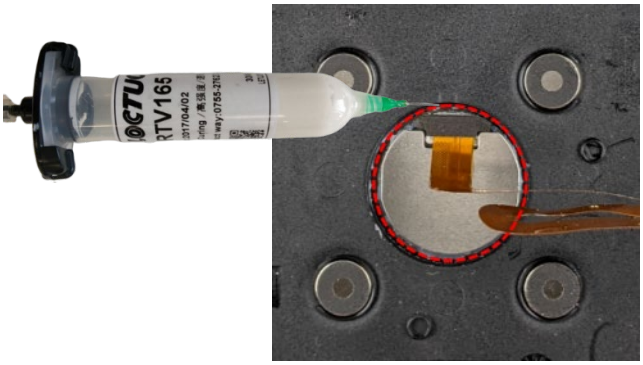
	Remove the magnetic connector support using a plastic disassembly tool.. 
	Cut the silicone seal around the connector.
	Remove the connector and clean any excess silicone from the cosmetic.

Replacement of magnetic connector

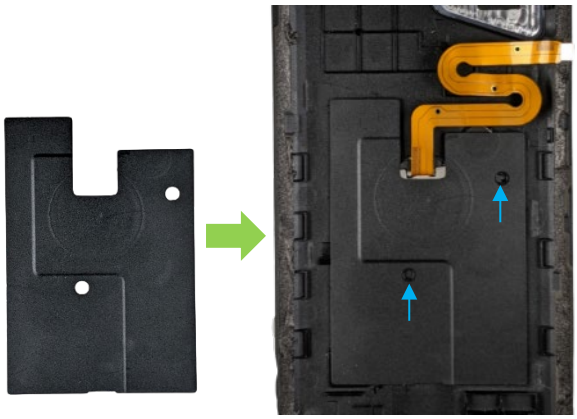
	No specific action is required when changing this part.

Assembly

Tools needed	• Precision tweezer



Fit the new magnetic connector and apply LOCTUO RTV165 silicone sealant (recommended product - not sold by CROSSCALL).



Then glue the magnetic connector support in place, following the 2 mounting guides marked in blue.

Front casing

Disassembly

No further action is required once all the preliminary operations have been carried out.

Replacement

Tools needed	• Precision tweezer

Remove the protective films from the new part.

Assembly

Refer to the relevant chapters for reassembly of the various components.

INFORMATION FOR RECYCLERS

MATERIAL	CAS-NUMBER	WEIGHT IN THE DEVICE (G)	% IN THE DEVICE	COMPONENTS	% IN THE COMPONENT
ALUMINIUM	7429-90-5	45,59	**18%**	Frame	86%
				Battery	6%
				Camera decoration	83%
				Speaker	14%
				SIM slot	32%
				Buttons	100%
SILVER	7440-22-4	0,14	**0,1%**	Screen	<1%
				Motherboard	<1%
				Battery	<1%
COBALT	7440-48-4	16,30	**7%**	Battery	40%
COPPER	7440-50-8	17,77	**7%**	Motherboard	49%
				Daughterboard	57%
				Frame	2%
				Speaker	4%
				SIM drawer	14%
DYSPROSIUM	7429-91-6	0,0015	**0,0006%**	Vibrator	<1%
TIN	7440-31-5	1,40	**0,6%**	Motherboard	10%
IRON	7439-89-6	13,75	**6%**	Screen	12%
				Speaker	56%
				Screw	79%
				Vibrator	52%
				USB-C	61%
INDIUM	7440-74-6	0,000030	**0,00001%**	Screen	<1%
				Cameras	<1%
				Motherboard	<1%
LITHIUM	12190-79-3 21324-40-3 12031-63-9 12031-66-2	1,96	**0,8%**	Battery	3%
MAGNESIUM	7439-95-4	0,35	**0,1%**	Screen	<1%
NEODYME	7440-00-8	0,48	**0,2%**	Loudspeaker	7%
				Vibrator	1%
				Magnet	25%
NICKEL	7440-02-0	2,98	**1%**	Screen	1%
				Battery	0,5%
				Speaker	2%

Any modifications or changes made to your device outside of an authorized center will void the warranty. If your device needs to be repaired, we advise you to entrust it to the CROSSCALL after-sales service (contact available on our website https://crosscall.com/sav/).

GOLD	7440-50-5 13967-50-5	0,021	**0,009%**	Motherboard	<1%
				Battery	<1%
				Speaker	<1%
				Cameras	<1%
				USB-C	<1%
PALLADIUM	7440-05-3	0,0026	**0,001%**	USB-C	<1%
PET	25038-59-9	6,28	**3%**	Screen	12%
PLATINUM	7440-06-4	0,000050	**0,00002%**	FPC	<1%
POLYAMIDE	25038-54-4	3,93	**2%**	PCB Battery cover	5%
POLYCARBONATE	24936-68-3	29,83	**12%**	Back cover	100%
				PCB Protection	100%
				Battery Protection	100%
				Sidebar	100%
				Buttons	60%
POLYMER	/	29,05	**12%**	Screen	14%
				Motherboard	14%
				Daughterboard	19%
PRASEODYME	7440-10-0	0,21	**0,1%**	Loudspeaker	4%
				Vibrator	4,0%
				Magnet	4%
RHODIUM	7440-16-6	0,000090	**0,00004%**	X-Link	<1%
TANTALE	7440-25-7	0,000020	**0,00001%**	Motherboard	<1%
TITANE	7440-32-6	0,19	**0%**	Motherboard	<1%
				Screen	<1%
				Cameras	<1%
TUNGSTENE	7440-33-7	0,114050	**0,04580%**	Vibrator	14%
GLASS	65997-17-3	22,33	**9%**	Screen	29%
				Frame (plastic)	10%
				Motherboard	20%
ZINC	7440-66-6	1,745200	**0,70088%**	Speaker	<1%

BILL OF MATERIAL

- BACK HOUSING ASSEMBLY

- FRONT HOUSING ASSEMBLY
- MOTOR

- MAIN BOARD ASSEMBLY - PCBA (8 + 128GB)
- REAR CAMERAS
- FRONT CAMERA
- BATTERY
- MAIN FPC
- COAXIAL CABLE (137.5 MM)
- COAXIAL CABLE (143.5 MM)
- SUB BOARD ASSEMBLY- SUB PCBA (MAIN)
- SUB BOARD ASSEMBLY- SUB PCBA - ANTENNA

- BRACKET PANEL UP
- BRACK PANEL - MAGCONN
- NFC ANTENNA
- SUB BOARD ASSEMBLY - SUB PCBA – FLASH
- SIM TRAY

- SPEAKER
- BRACKET PANEL DOWN

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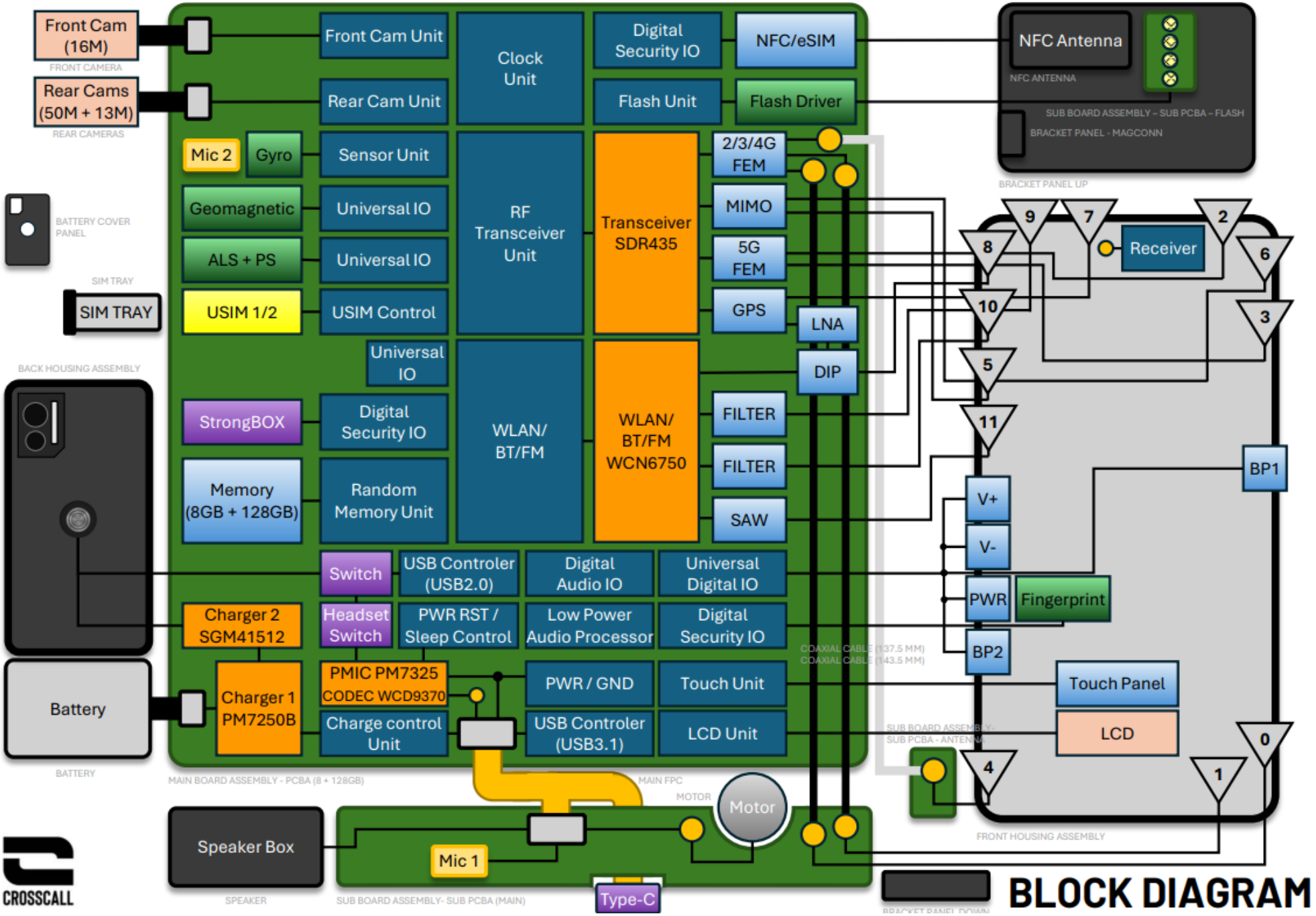

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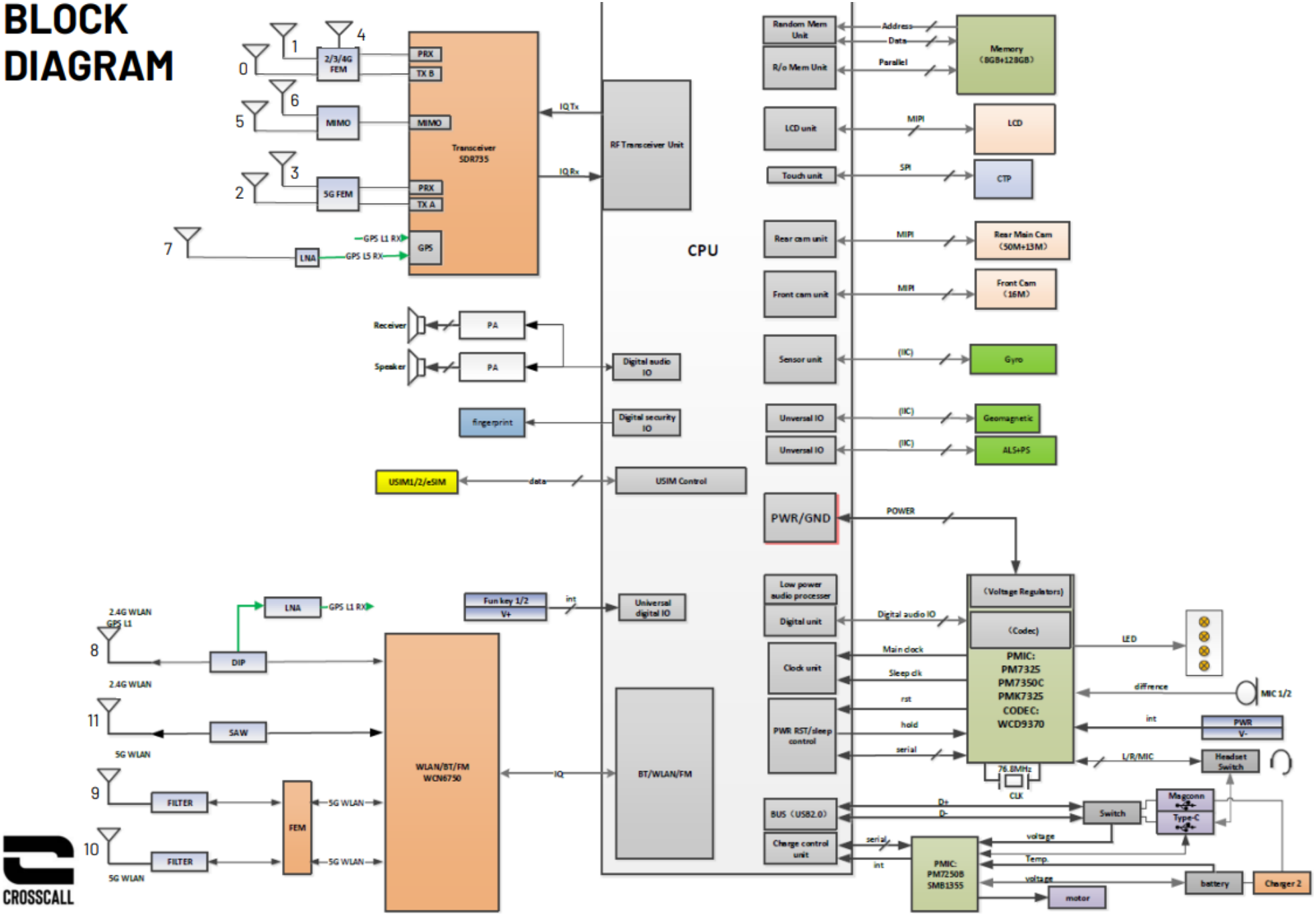
BLOCK DIAGRAM



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