

The background is a soft-focus photograph of a desk. In the center, there is a black pen holder with a silver pen standing upright. To the left, a portion of a wooden desk or shelf is visible. The lighting is warm and diffused, creating a bokeh effect with light-colored vertical and horizontal lines.

**IIPRO**

***Product Teardown Report***  
***iPhone 7***  
***Apple***



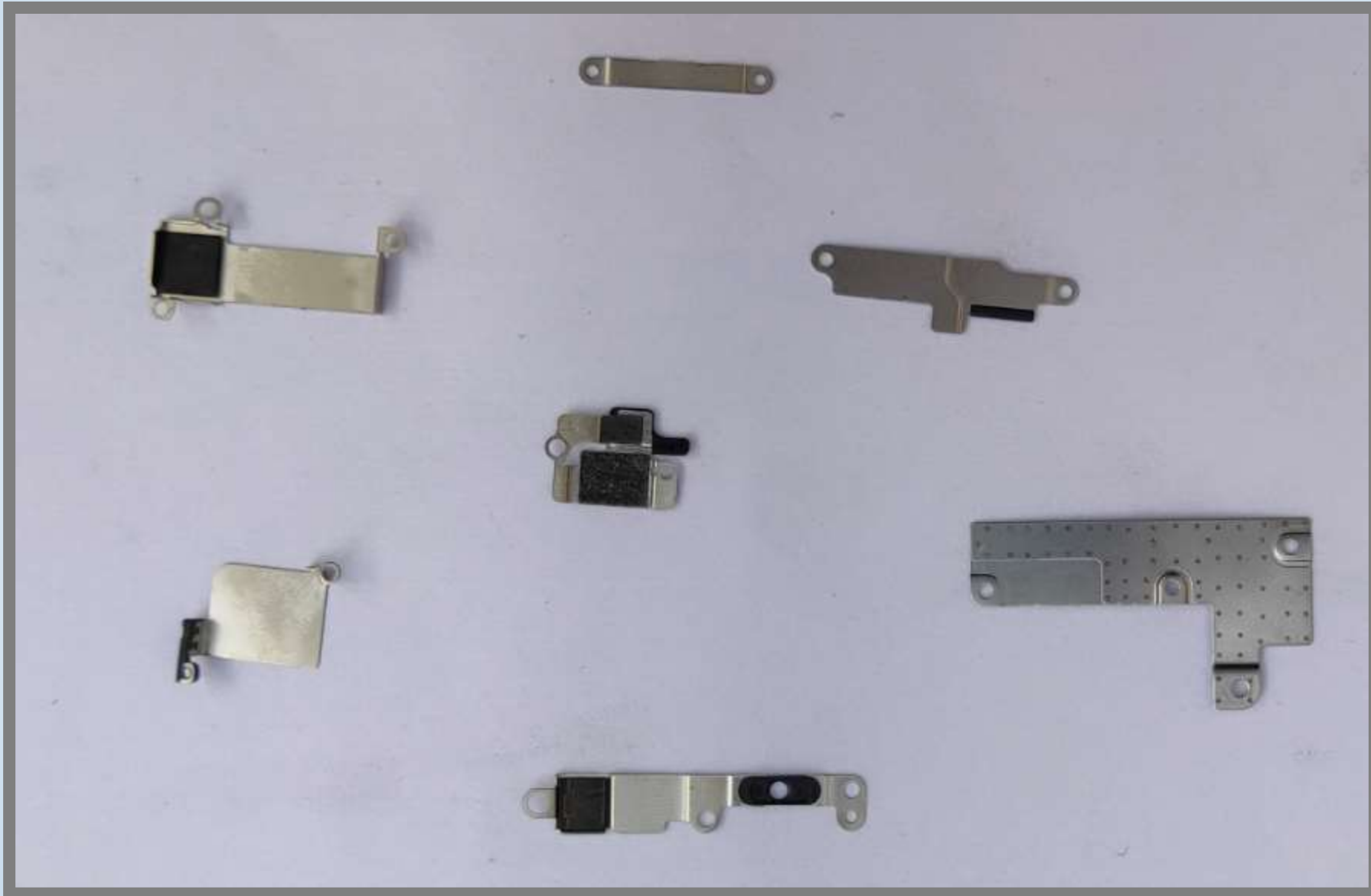
This view shows the first look into iPhone 7 after removing 3.4mm pentalobe screws that are located near charging connector of iPhone 7.

Sides of display panel of iPhone 7 are heated to decouple display part from rear case. The iPhone 7 opens like a book, and the display panel is connected to logic board using 3 connector cables.

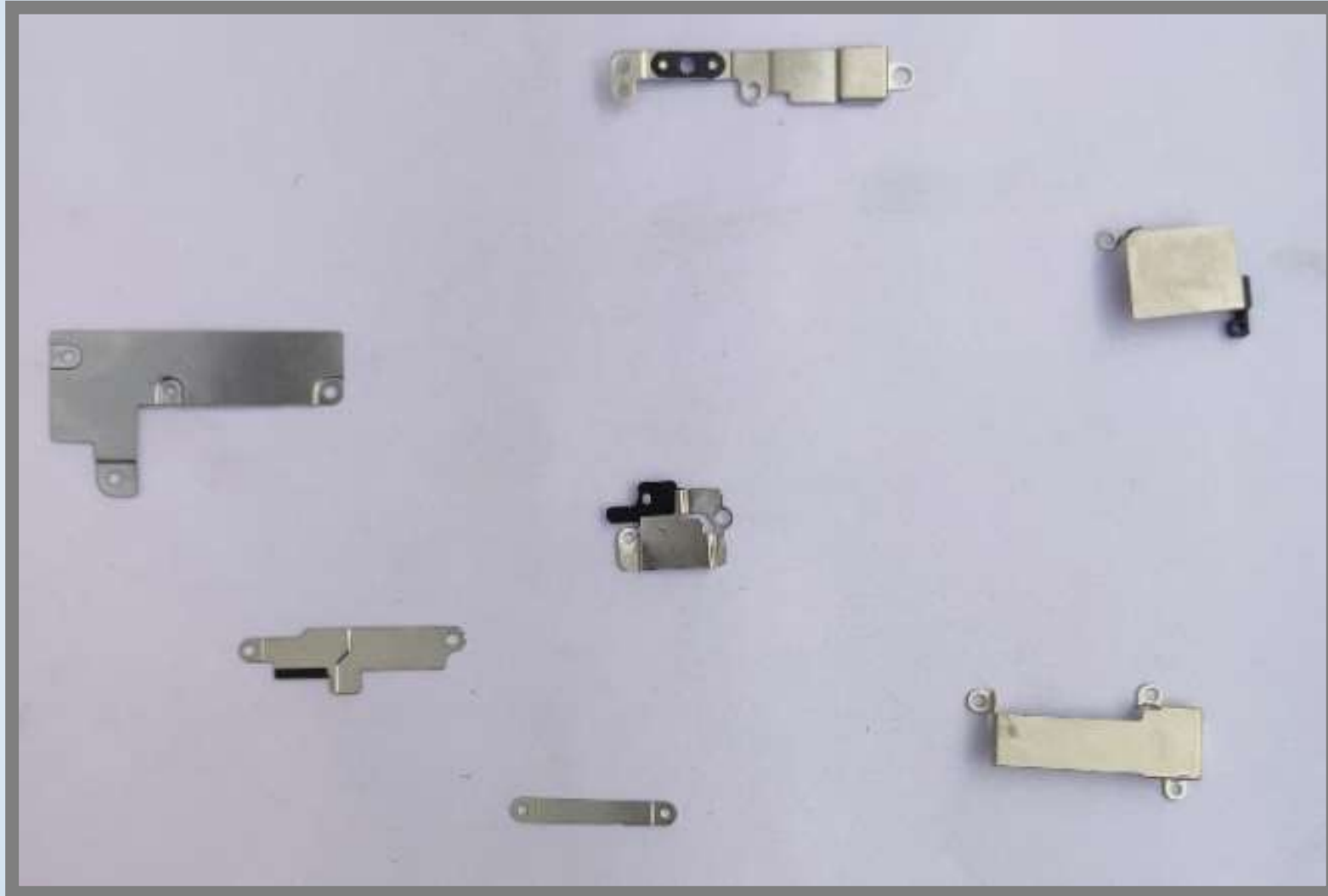
As the next step, two brackets that cover upper display flex cable and lower display flex cable are removed using screw-driver, and cables are carefully removed to separate the display part from the rear part of the iPhone 7.



## Brackets – Inner View



## Brackets – Outer View





## Brackets



Ear Speaker Bracket

Upper display Cord cover bracket



Home button bracket

Rear camera bracket

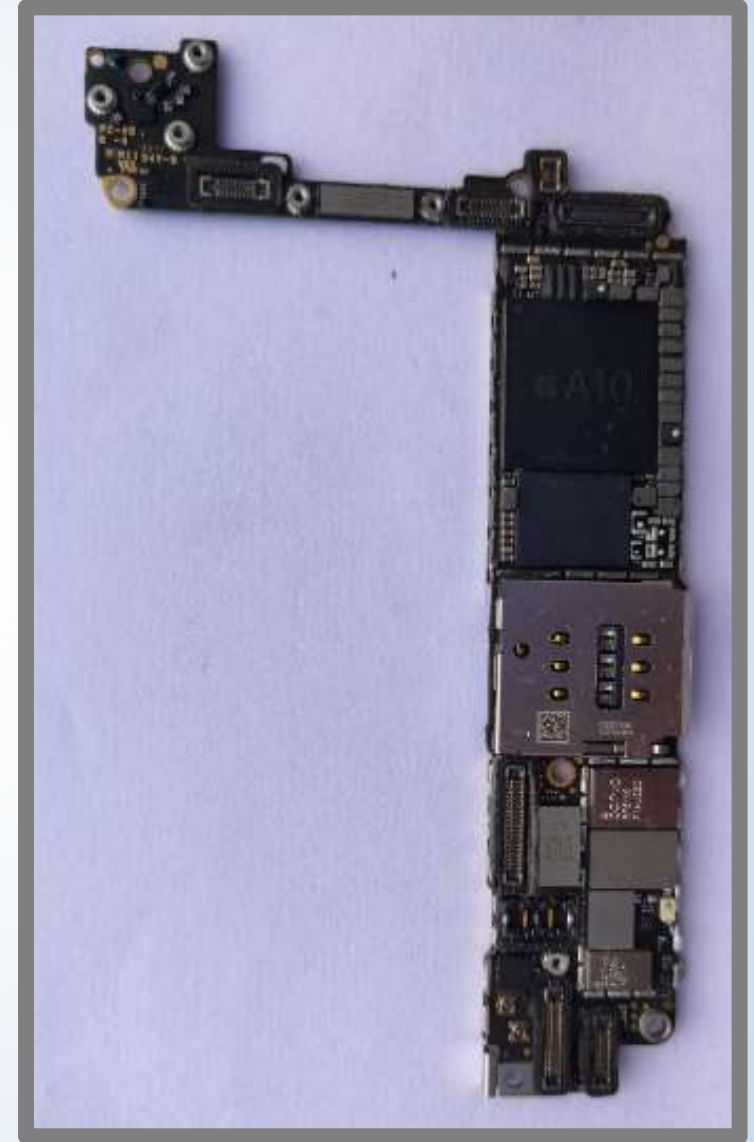
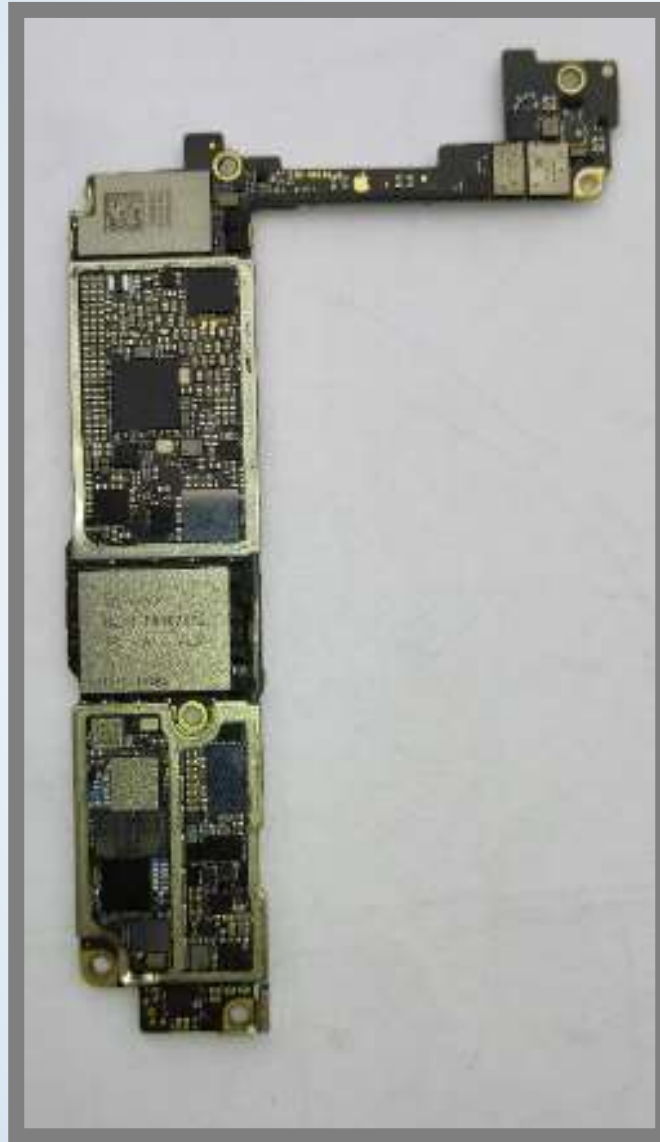


Wi-fi Antenna brackets

Lower Display Cord Cover Bracket



# Logic Board



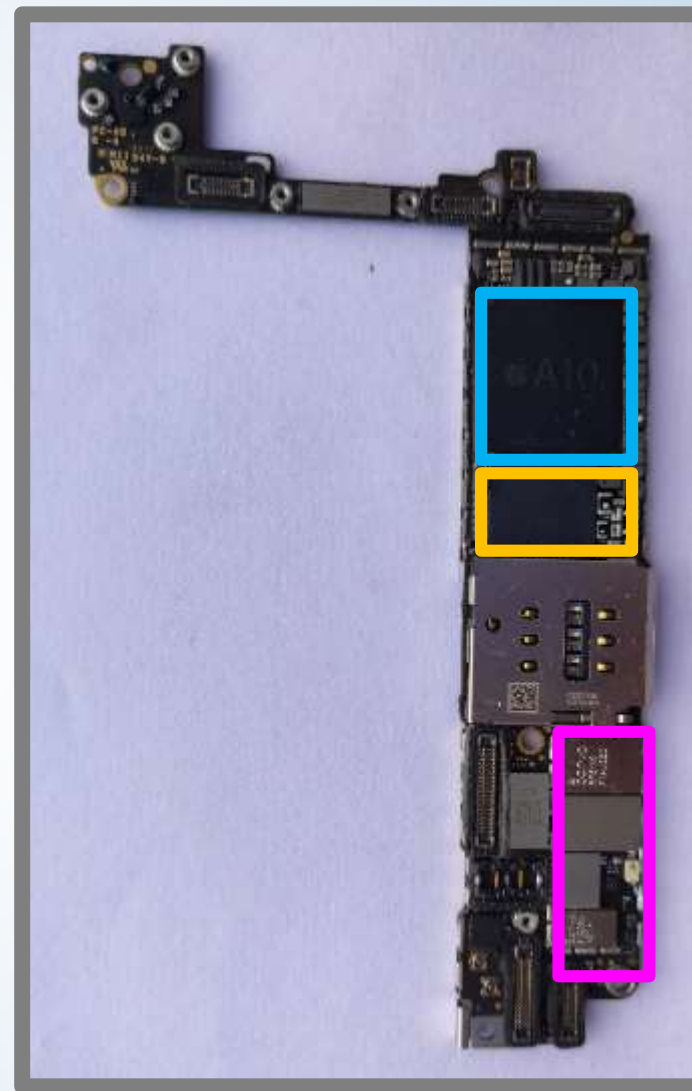
## Logic Board

Apple A10 Fusion is a 64-bit ARM-based system on a chip (SoC), designed by Apple Inc. and manufactured by TSMC

CPU(s)	2× Hurricane + 2× Zephyr CPU(s) with 3MB L2 cache
Number of Cores	4 cores clocked at 2.3GHz max
Architecture	ARMv8-A architecture
Lithography	16nm lithography
GPU	PowerVR Series 7XT GT7600 Plus with 670MHz core clock speed  DirectX 12, Vulkan 1.0, OpenGL, OpenCL API(s)

RF Front End

On-Board Storage





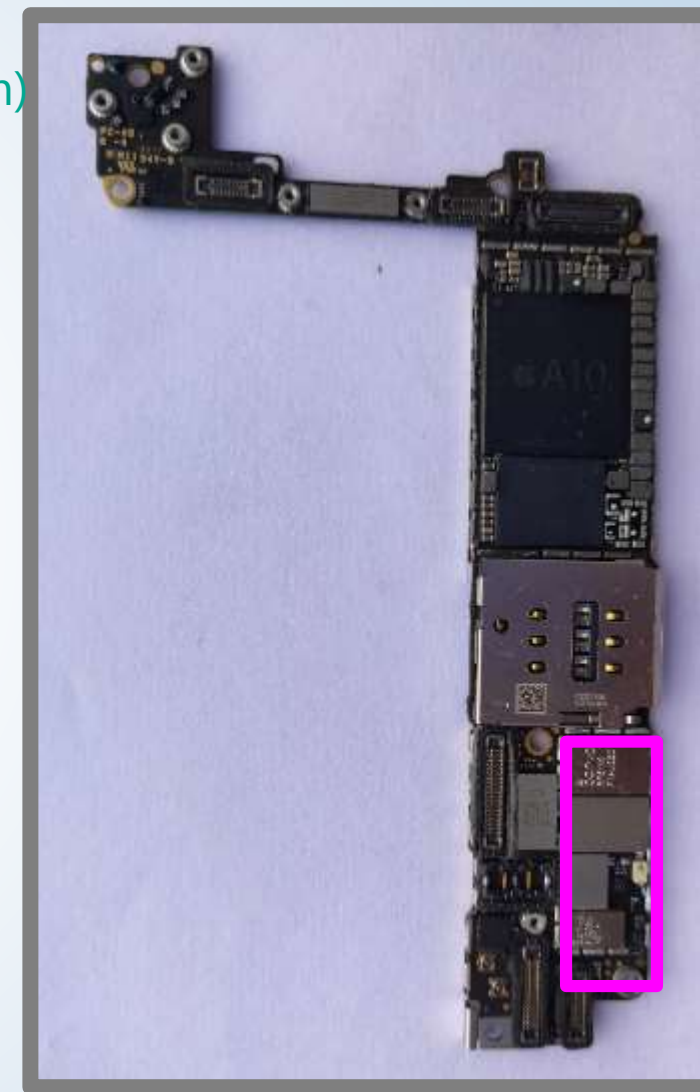
## Logic Board- RF Section

High Band PAM: Part No. AFEM-8060 manufactured by Avago (Broadcom)

Mid Band PAM: Part No. AFEM 8050 manufactured by Avago(Broadcom)

Low Band PAM: Part no. RFS110, manufactured by Qorvo

PMIC: Part No. 81003M, manufactured by Qorvo



## Logic Board

Wifi Module : Part No. USI170412, Manufactured by Murata

NFC chip Model No. PN67V, manufactured by NXP Semiconductor

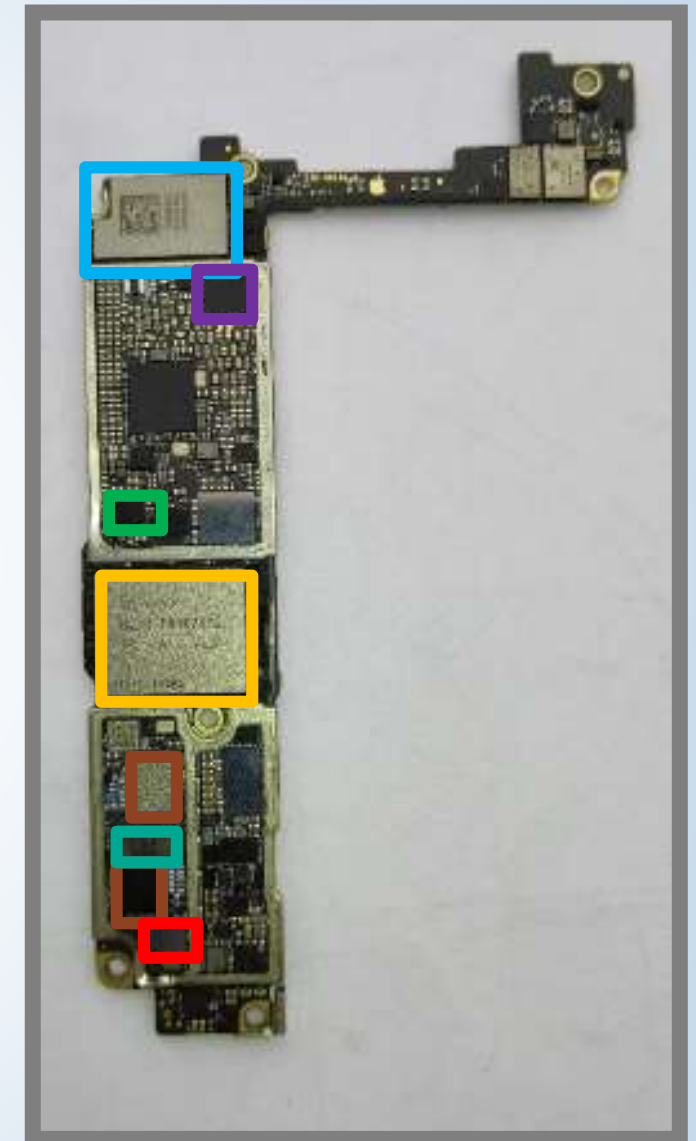
Power Management IC: Part No. PMB6826 manufactured by Intel

Flash memory : SK Hynix [part no.H2301T8QKBYS] fabricated in 15-nm technology

RF Transceiver : PMB 5750 Intermediate frequency IC manufactured by Intel

Filter Banks: Part No. D5313 & D5325 manufactured by TDK

GPS Chip: Model No. BCM47734, manufactured by Broadcom

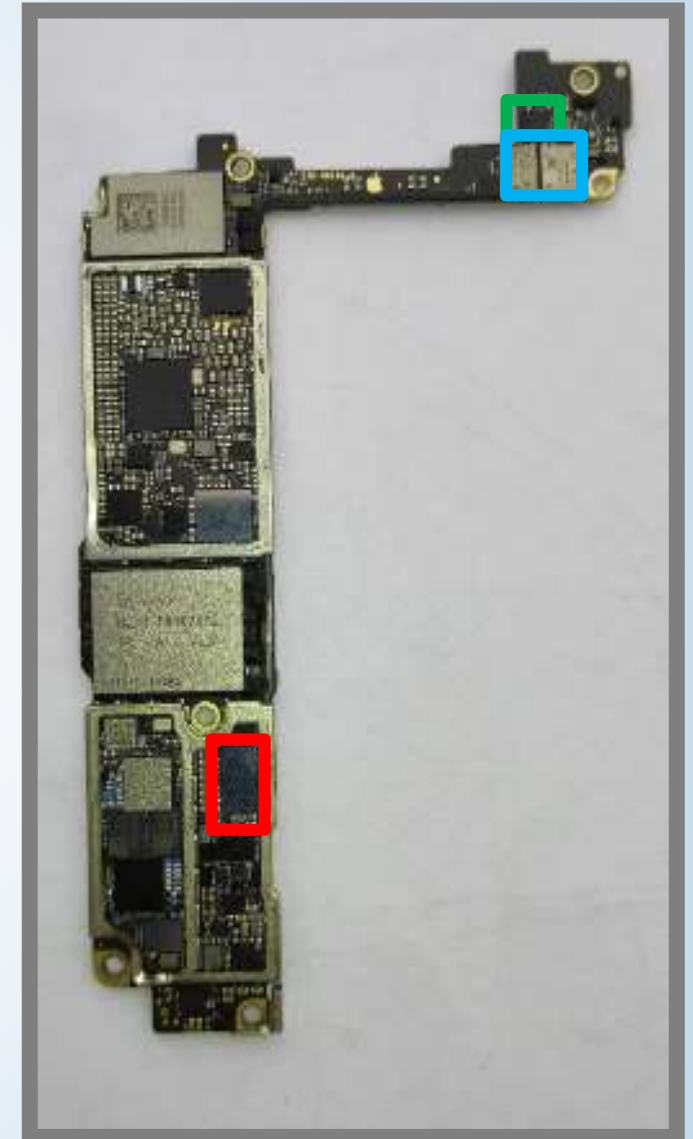


## Logic Board

Antenna Switches: Part No. SKY13702-20 & SKY13703-21,  
manufactured by Skyworks

Broadcom's film bulk acoustic resonator (FBAR)  
duplexers, Part No. DFI621

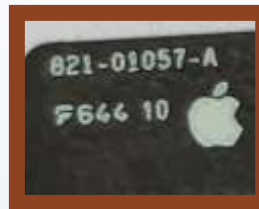
Audio IC : Part No. 338S00220 that uses Apple/Cirrus  
Logic 338S00105 Audio Codec



## Display flex cable

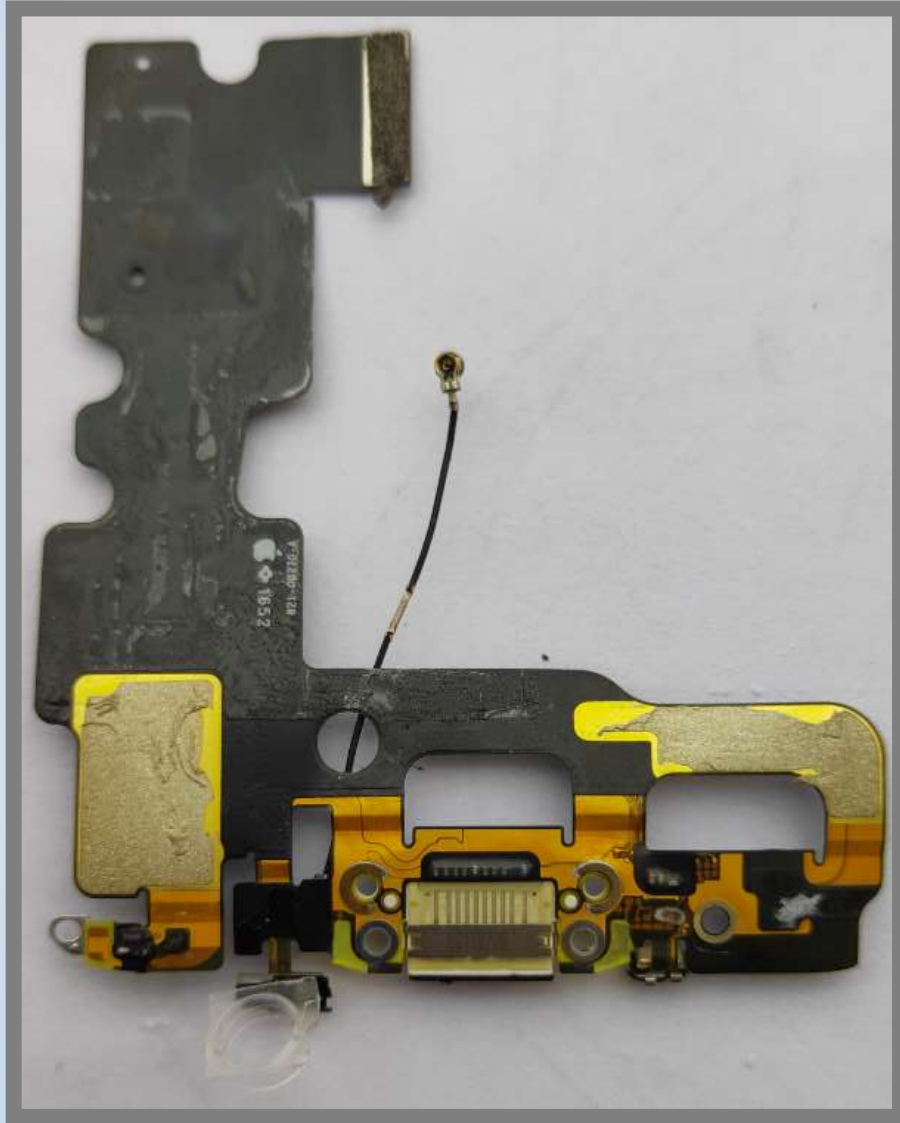


LCD and Digitizer FPC  
Connector





## Charging connector flex cable

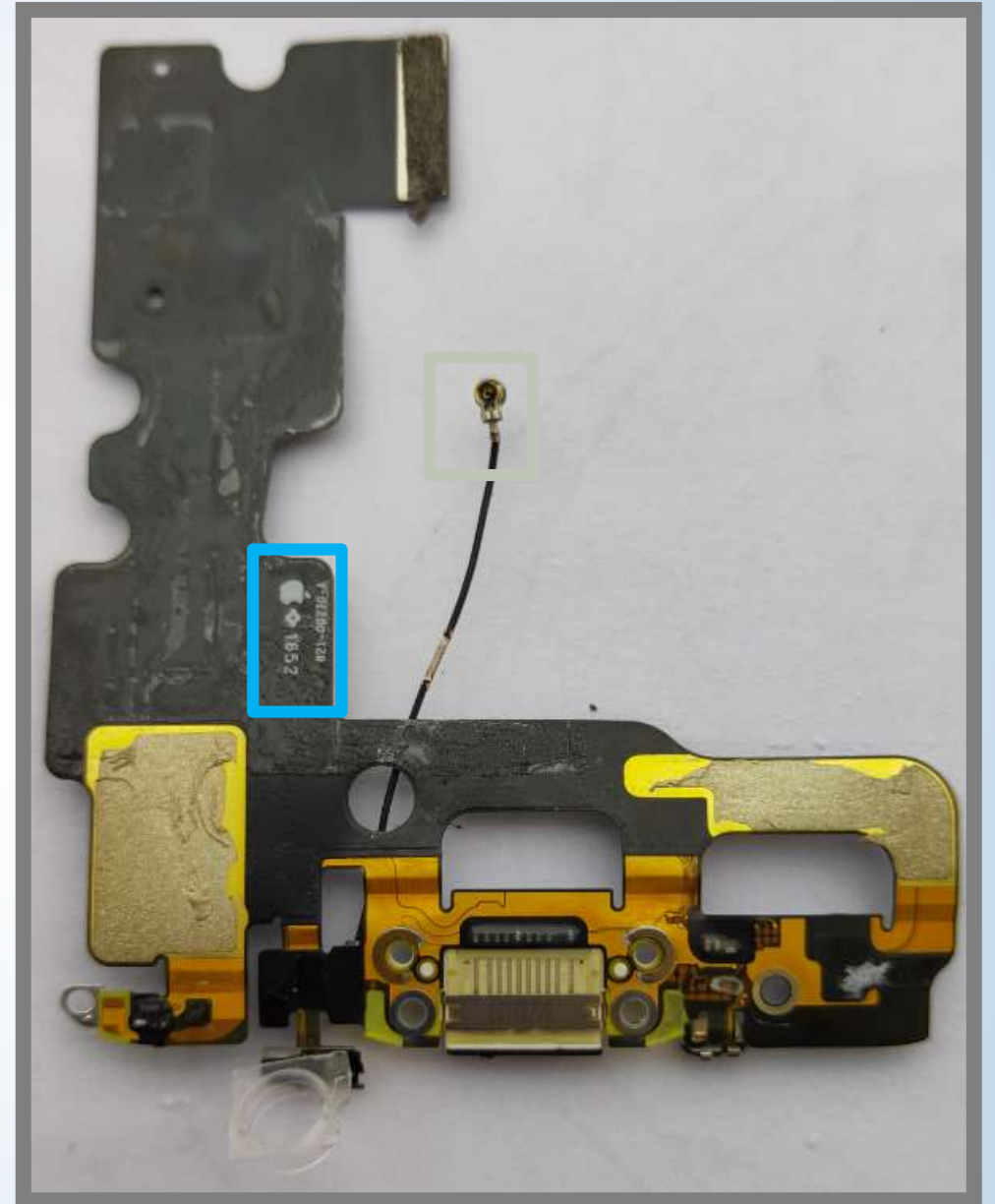




## Charging connector flex cable



Antenna Head



## Charging connector flex cable

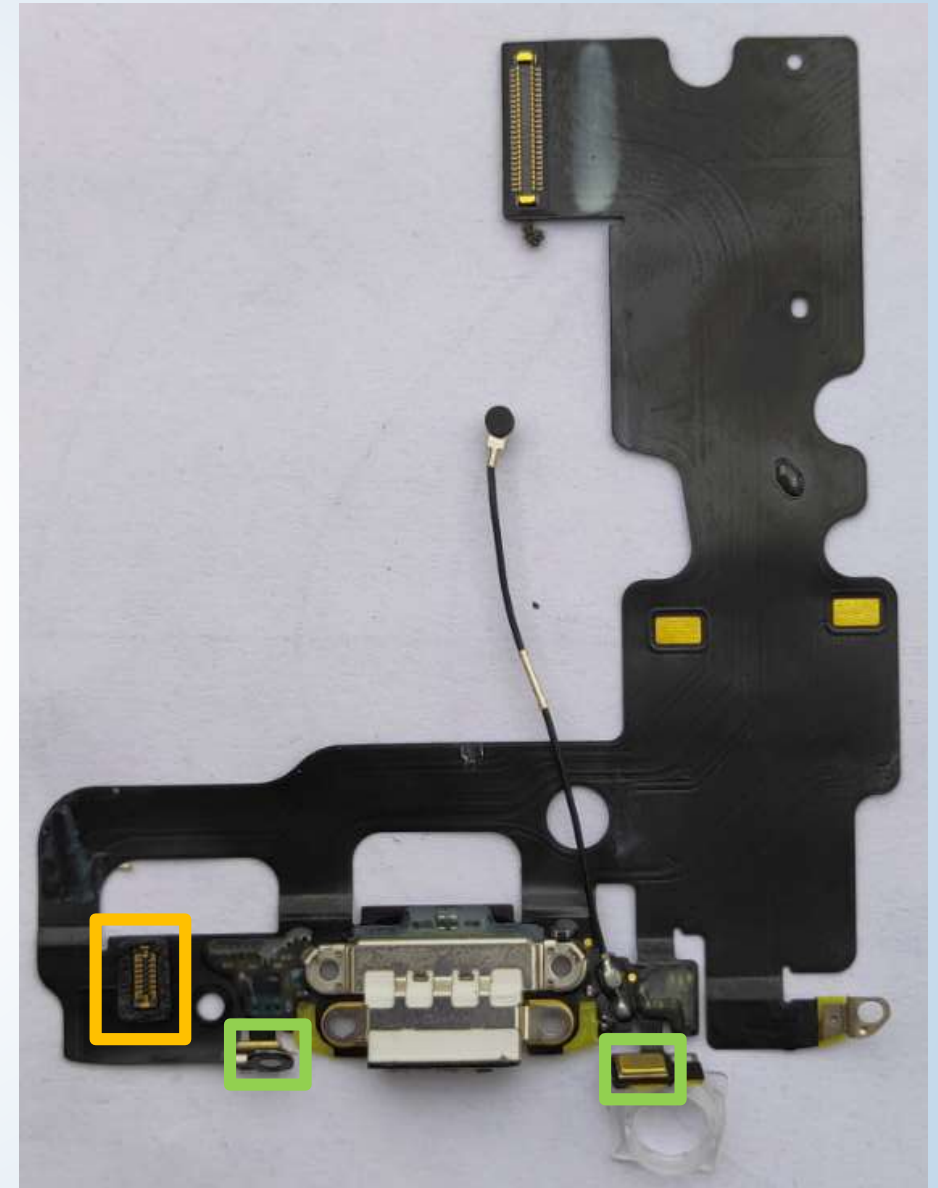


Antenna

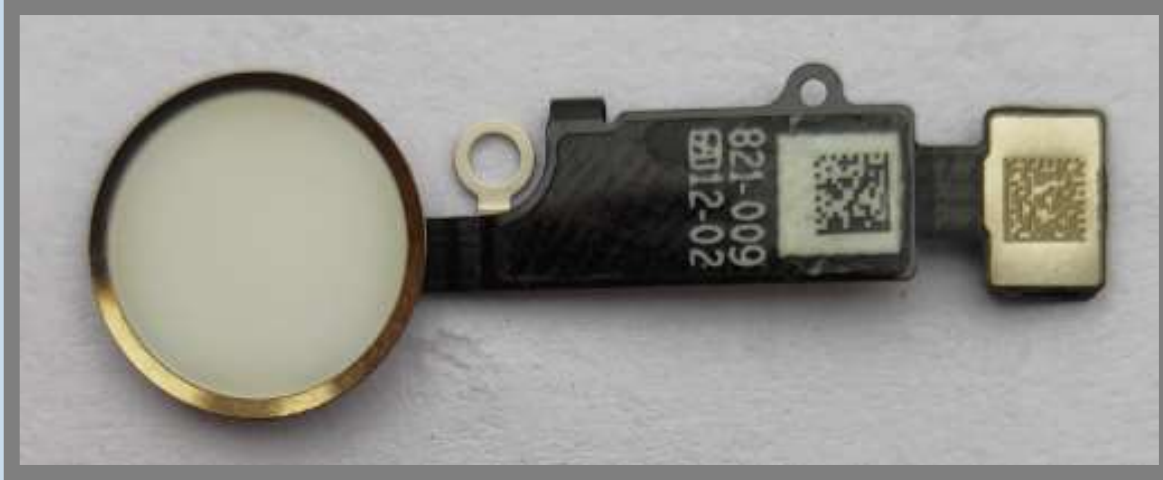
Microphone



Taptic Engine Connection Port

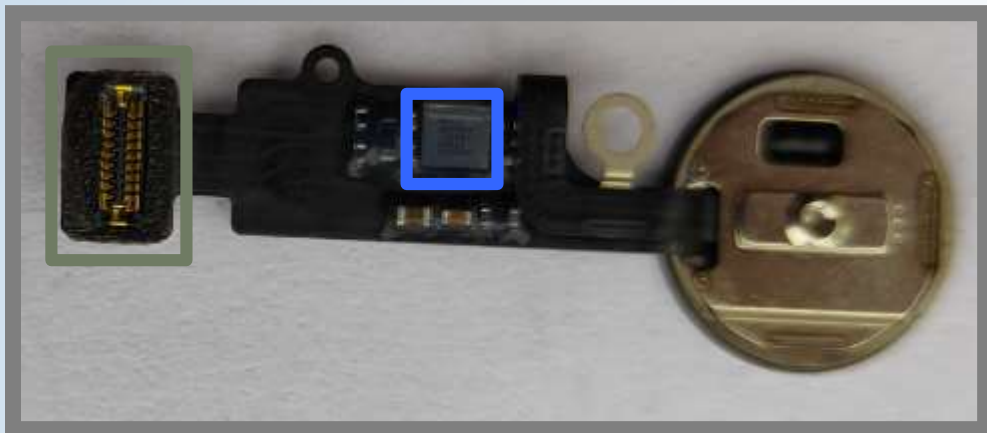


## Home button



The newly introduced static force sensitive home button for iPhone 7. It uses Apple's own "Taptic Engine" to interact with users.

## Home button



Home Button Controller



Home button Connector to logic board



## Ear Speaker





## Ear Speaker



Ear Speaker back view with spring connectors



Contact pads to connect Proximity Light Sensing Flex cable with integrated front camera



## Proximity light sensor flex cable with integrated front camera



Contact pads for ear speaker



Velcro Adhesive



## Proximity light sensor flex cable with integrated front camera



7 MP, f/2.2, 32mm front camera





## Main Camera



Apple's iSight 12 MP, f/1.8 aperture, 28mm (wide), 1/3", phase-detect auto focus,  
Optical Image Stabilization rear camera

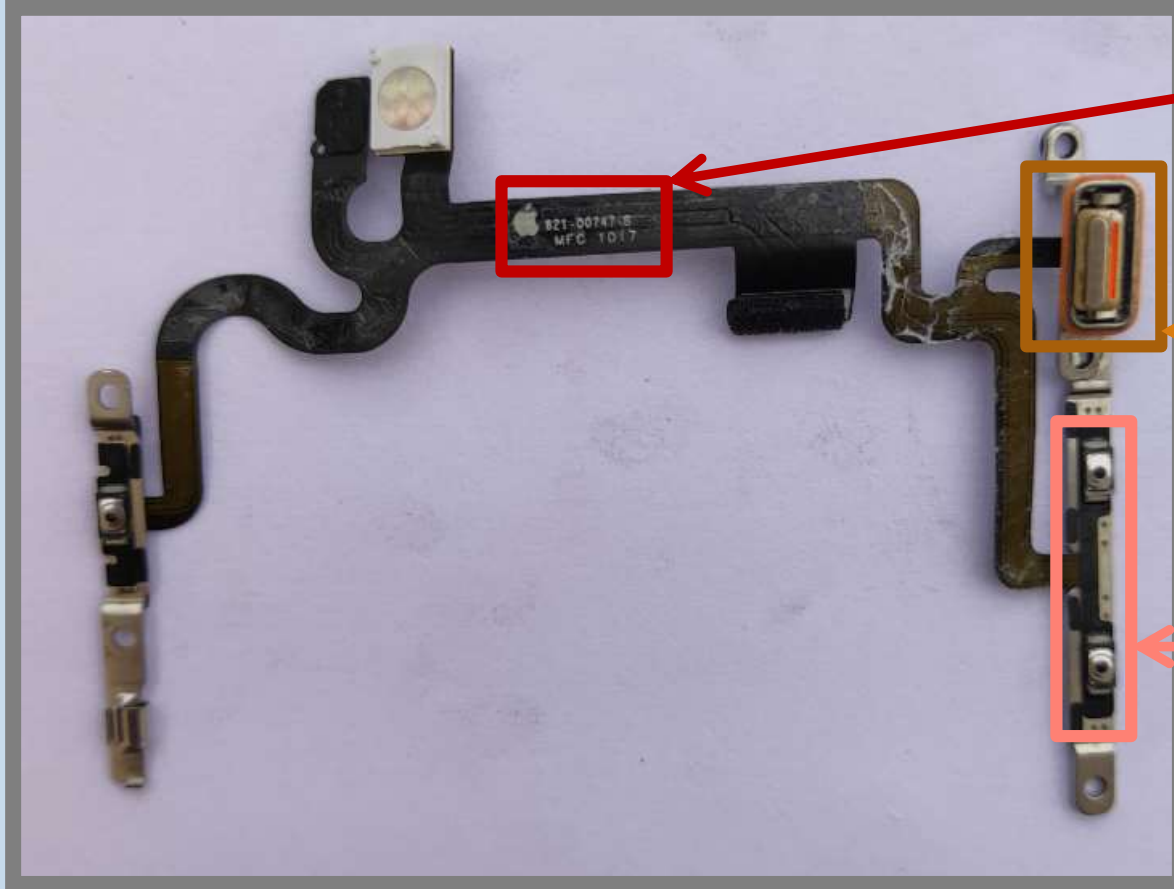
## Taptic Engine

Taptic Engine is Apple's own processor to implement haptic feedbacks for static home button, and can be programmed by external apps to provide haptic feedback.





## Flash Flex Cable



Ring Silent  
Button

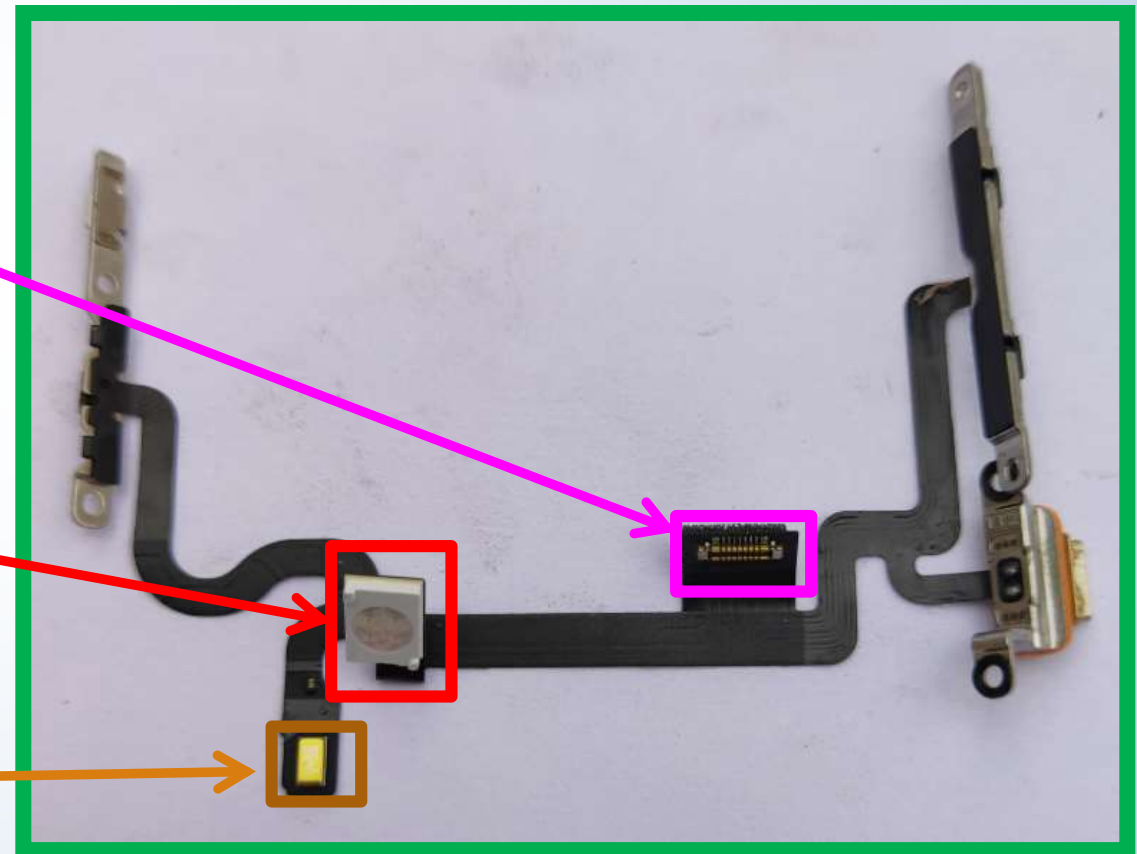
Volume Control Button

# Flash Flex Cable

Connection to Logic Board

Flash light

Microphone



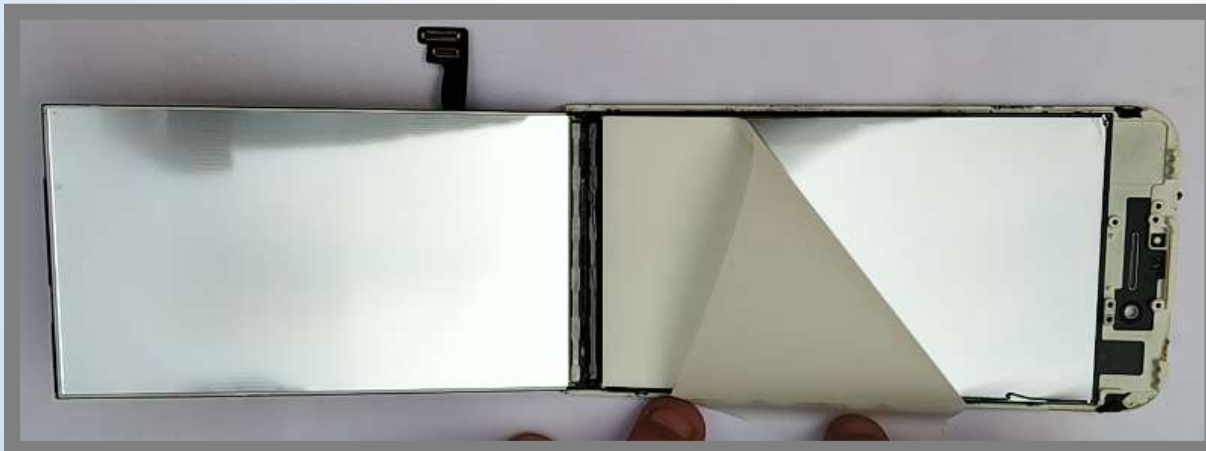
## LCD Metal Shield



Metal Thermal Plate as Heat  
Shield for LCD



## Inside Display



## Inside Display

2 layers of Prisms to concentrate light so that they are more pointed toward screen. Often termed as "brightness enhancers".

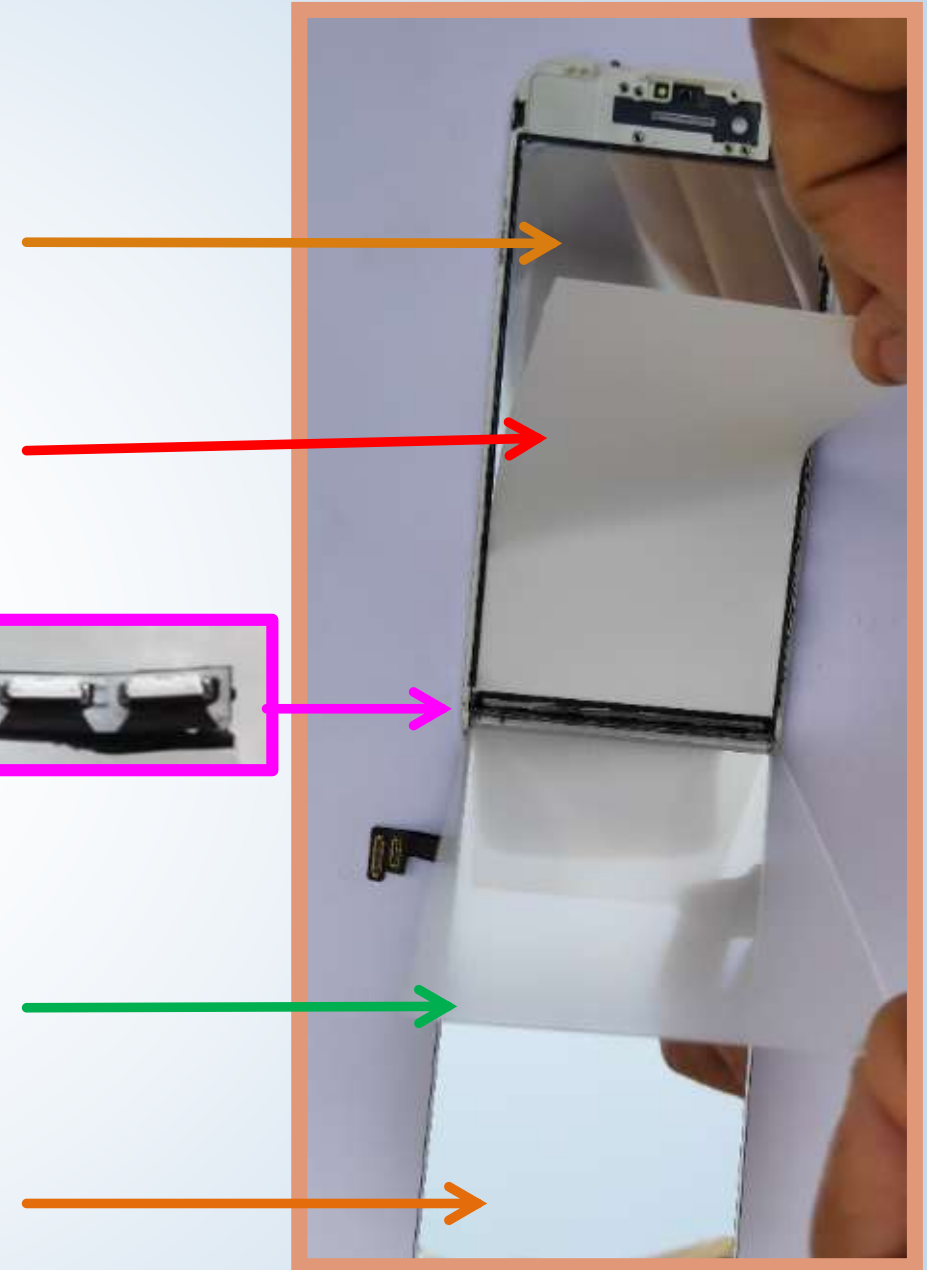
Diffusion film to mask any imperfection in light guide plate, and to provide uniformity to light waves.

8 LED's acting as Light Source.



Patterned light guide plate made up of plastic material to evenly disperse light from top to bottom. The light bounces around inside of it and hit on the dots (Pattern) to get light waves bouncing towards screen

Reflector sheet to reflect all light of backlight through front of the screen to prevent any light escaping from the back.





# Battery



## Battery

1960 mAh, 3.8 V (7.45 Wh) unit



## About IIPRD

IIPRD is a premier and well-established Intellectual Property (IP) Asset Management Firm focusing on Comprehensive IP/Patent Support Services ranging from Patent Searching, Patent Prosecution/Preparation, to Litigation/Licensing Support Global Corporates and Law Firms. We can be reached at [iiprd@iiprd.com](mailto:iiprd@iiprd.com) and our details can be seen at [www.iiprd.com](http://www.iiprd.com). We can also be reached at +91-120-4296878 or + 1-202-600-4308

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