Reverse engineering online challenge

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I chose an Asus Transformer Pad TF101 with removable keyboard to take apart and explore. I was interested in seeing the differences between a tablet and a laptop. I am enrolled in the gen yes program at my school and already explore the chrome books we use and I help repair them.

there's a lot of components in the tablet itself such as GPS and Wi-Fi cables which I found interesting because usually they just piggyback off of each other but in this case they both have their own separate antenna wires; it also has a FM radio chip that I found surprising to find considering you usually expect a FM chip to be in a radio not in a tablet. another weird thing about this specific model is the fact that it uses a video chip in place of the main CPU chip. It also has a spot for a 3g card which is a modem that allows a computing device to access the Internet wirelessly through a cellular provider's 3G network. The tablet also has a ton of jumpers (a pair of prongs that are electrical contact points set into the computer motherboard or an adapter card), Capacitors (An electronic component that stores an electric charge and releases it when required), inductors (the energy storage device in many switched-mode power supplies to produce DC current.), and resistor (An electrical component that limits or regulates the flow of electrical current). There also was an Ambient light senser which I thought was neat. An Ambient light senser senses the amount of ambient light present, and appropriately dim the device's screen to match it. It does this to help protect the users' eyes. Front and back camera was something I found interesting because they were so small that you could put both side by side and they would still fit in the space of a dime and yet they could take a high-quality picture. But even after all this amazing tech I was sad that I couldn’t find a flux capacitor.

one of the things that I learned during this challenge is that unlike the laptop the tablet had multiple boards in it I'm used to just seeing one motherboard versus identifying seven or eight different pieces it was also cool to see the keyboard had its own set of motherboards in it as well I am thinking about computer hardware as a future career and this is helping me lean more towards it over programming.


Picture 1
1
3
2
4
1
5
6
7

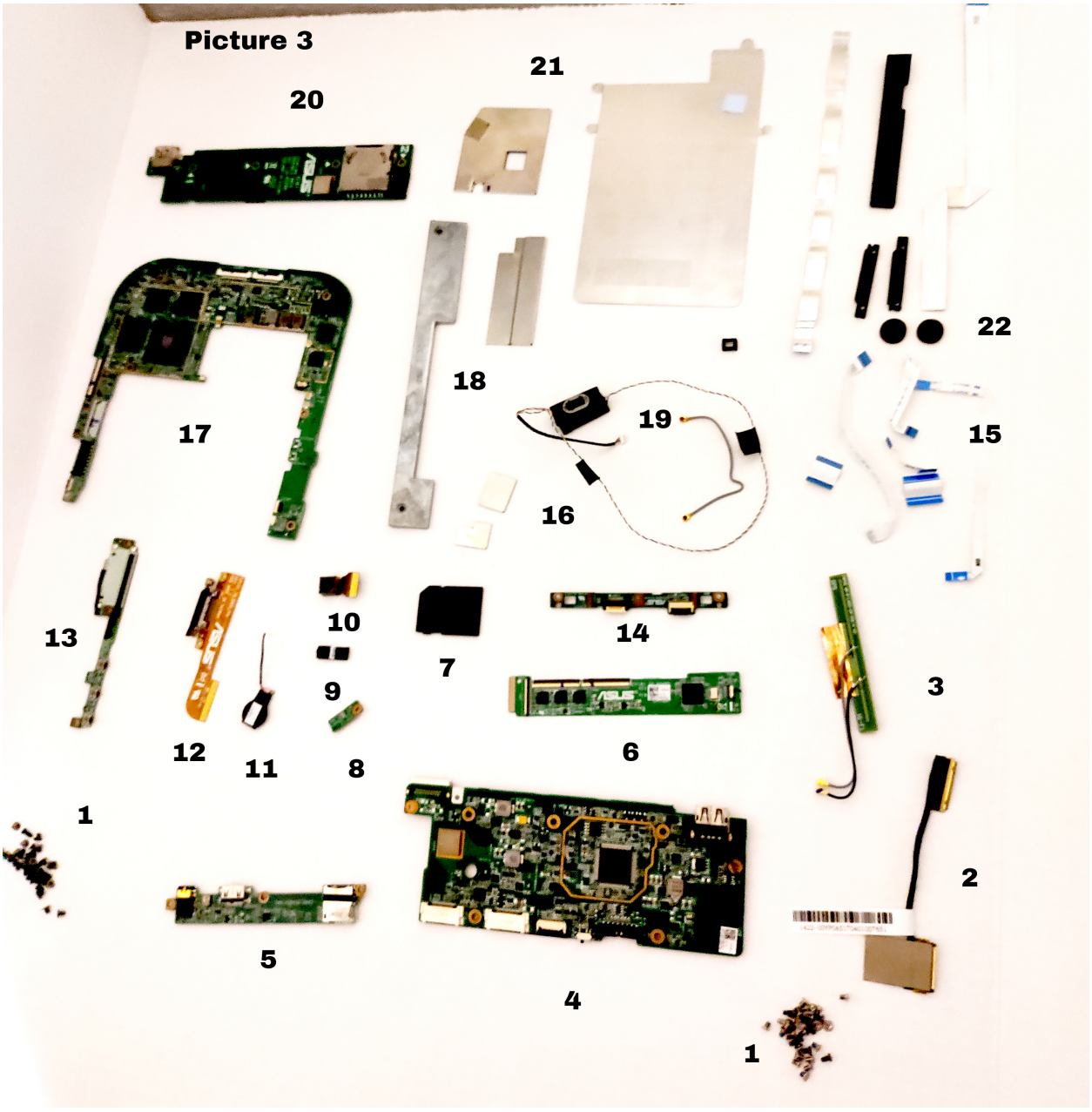
picture 1

1 battery
2 screen outer layer
3 screen outer layer
4 keyboard
5 screen backing
6 keyboard backing
7 keyboard hinge


Picture 2
3
1
2
4
1
5
6
7

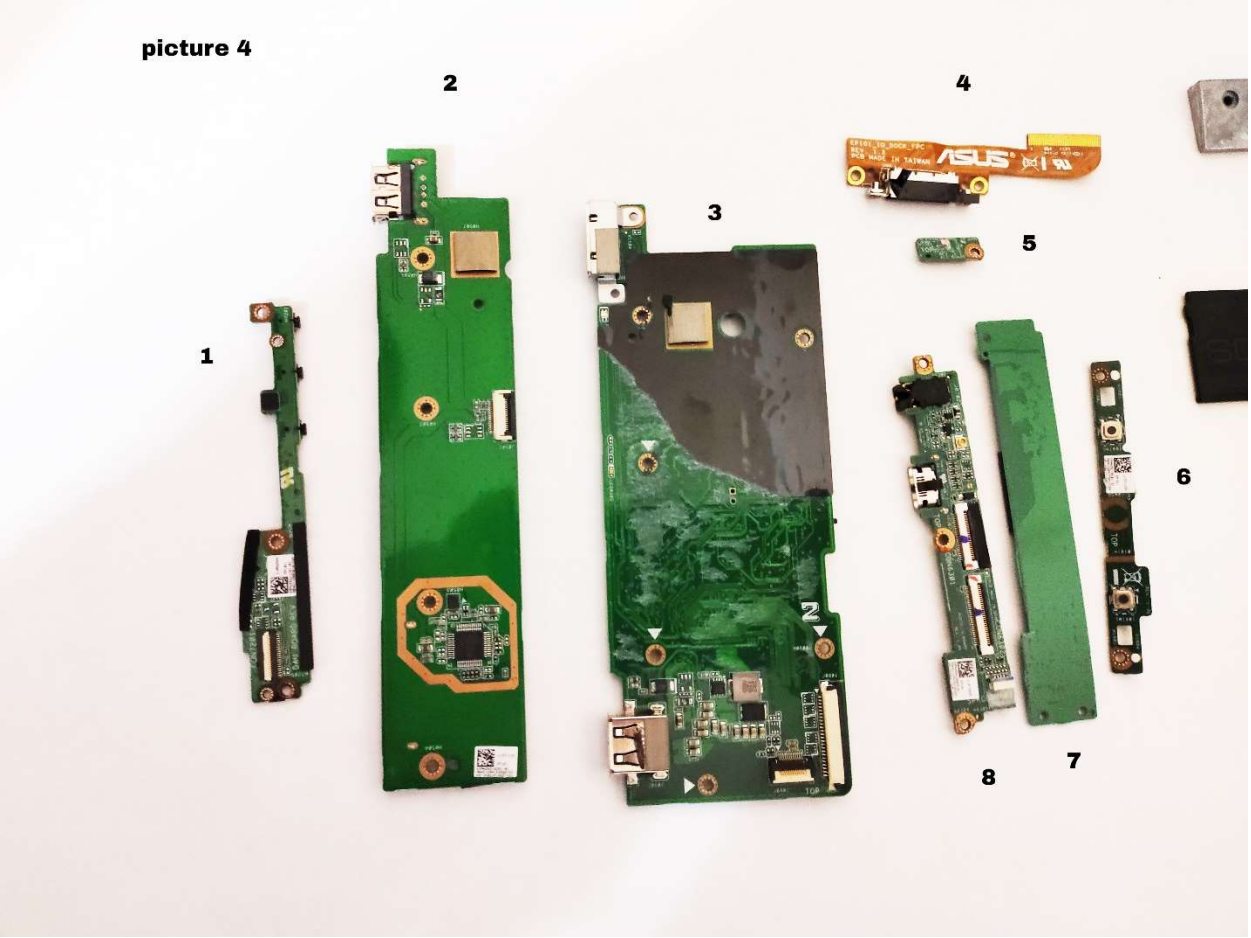
picture 2
battery

1. screen outer layer
2. screen outer layer
3. keyboard
4. screen backing
5. keyboard backing
6. keyboard hinge


Picture 3
20
21
22
17
18
19
15
16
13
10
14
7
3
12
11
9
6
1
8
2
5
4
1

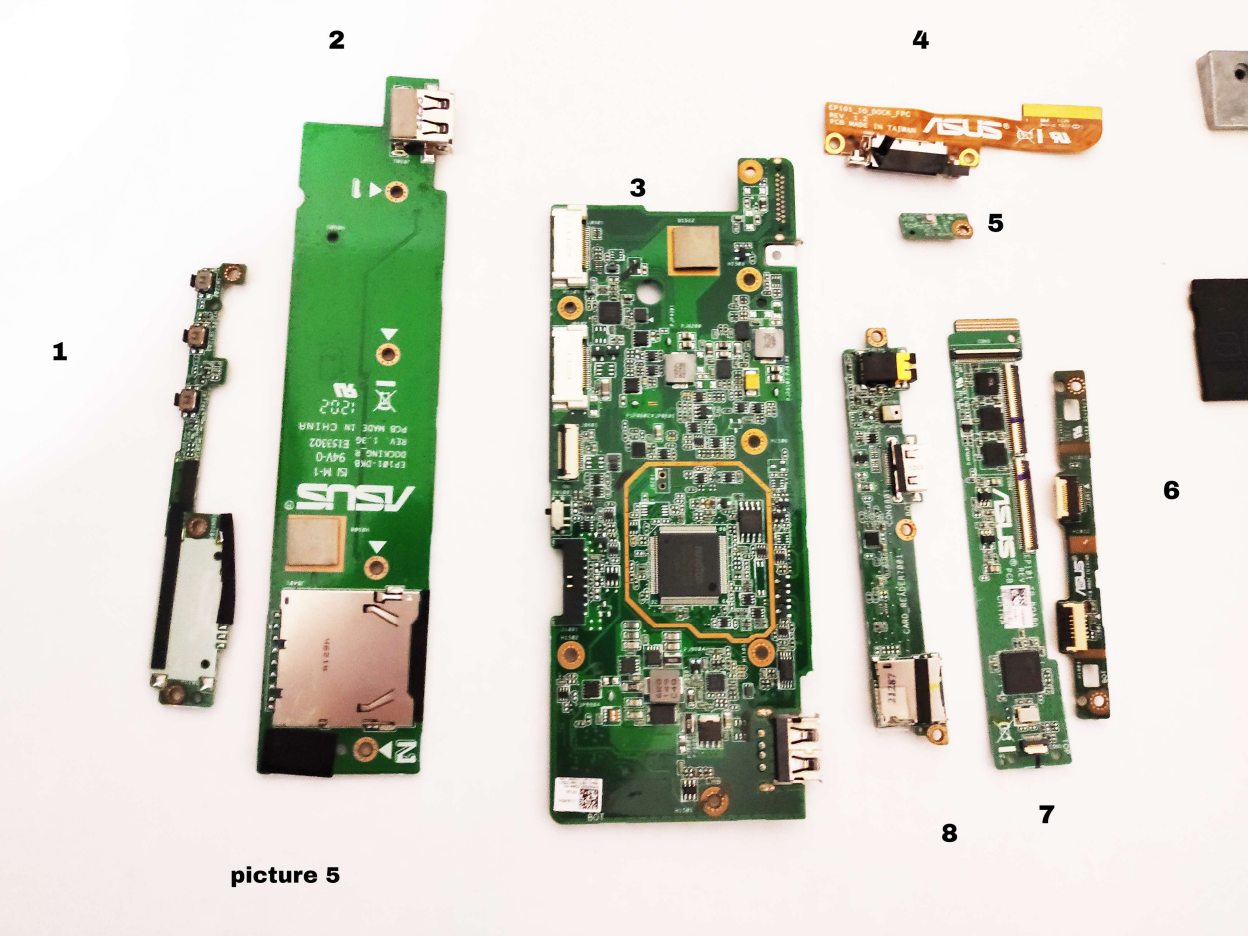
picture 3

1. screws
2. lvds cable
3. wifi and gps antenas
4. keyboard motherboard
5. audio jack/mini hdmi/micro sd card reader
6. display driver
7. fake plastic sd/sd space holder
8. small electric board
9. front camera
10. back camera
11. backup battery
12. charging port
13. volume up and down and power button
14. left and right mouse buttons
15. ribbin cabels
16. mini protective covers
17. tablet motherboard
18. metal weight
19. left and right speaker
20. sd reader/usb port
21. protetive plate covers
22. computer feet and spacers



picture 4

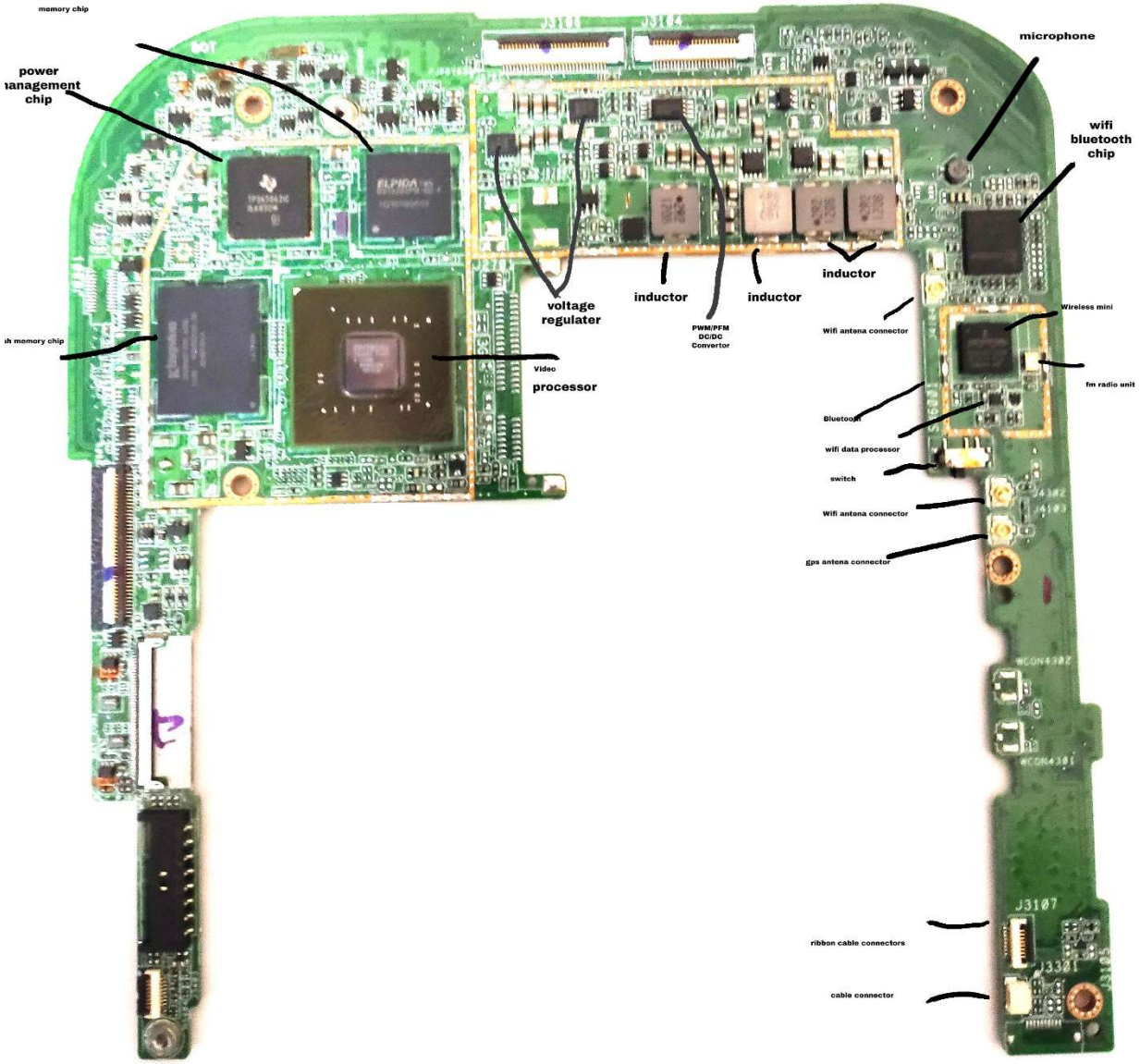
1 volume up and down and power button
2 sd reader/usb port
3 display driver
4 charging port
5 small electric board
6 left and right mouse buttons
7 small electric board
8 audio jack/mini hdmi/micro sd card reader



picture 5

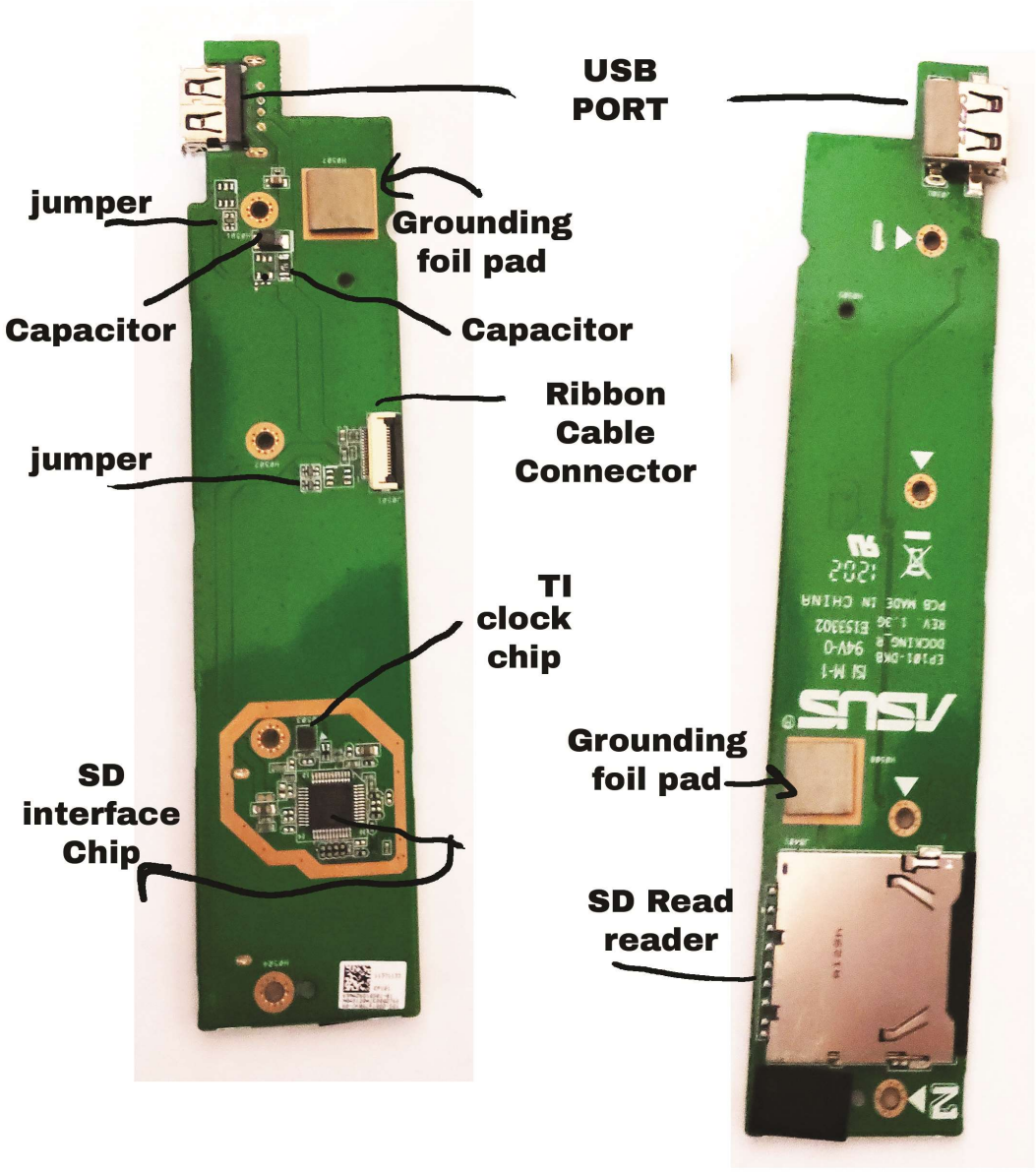
picture 5

1 volume up and down and power button
2 sd reader/usb port
3 display driver
4 charging port
5 small electric board
6 left and right mouse buttons
7 small electric board
audio jack/mini hdmi/micro sd card
8 reader


memory chip
power
anagement
chip
microphone
wifi
bluetooth
chip
inductor
inductor
inductor
voltage
regulater
PWM/PFM
DC/DC
Convertor
Wifi antena connector
Wireless mini
fm radio unit
ih memory chip
Video
processor
Bluetooth
wifi data processor
switch
Wifi antena connector
gps antena connector
J3107
J3301
ribbon cable connectors
cable connector

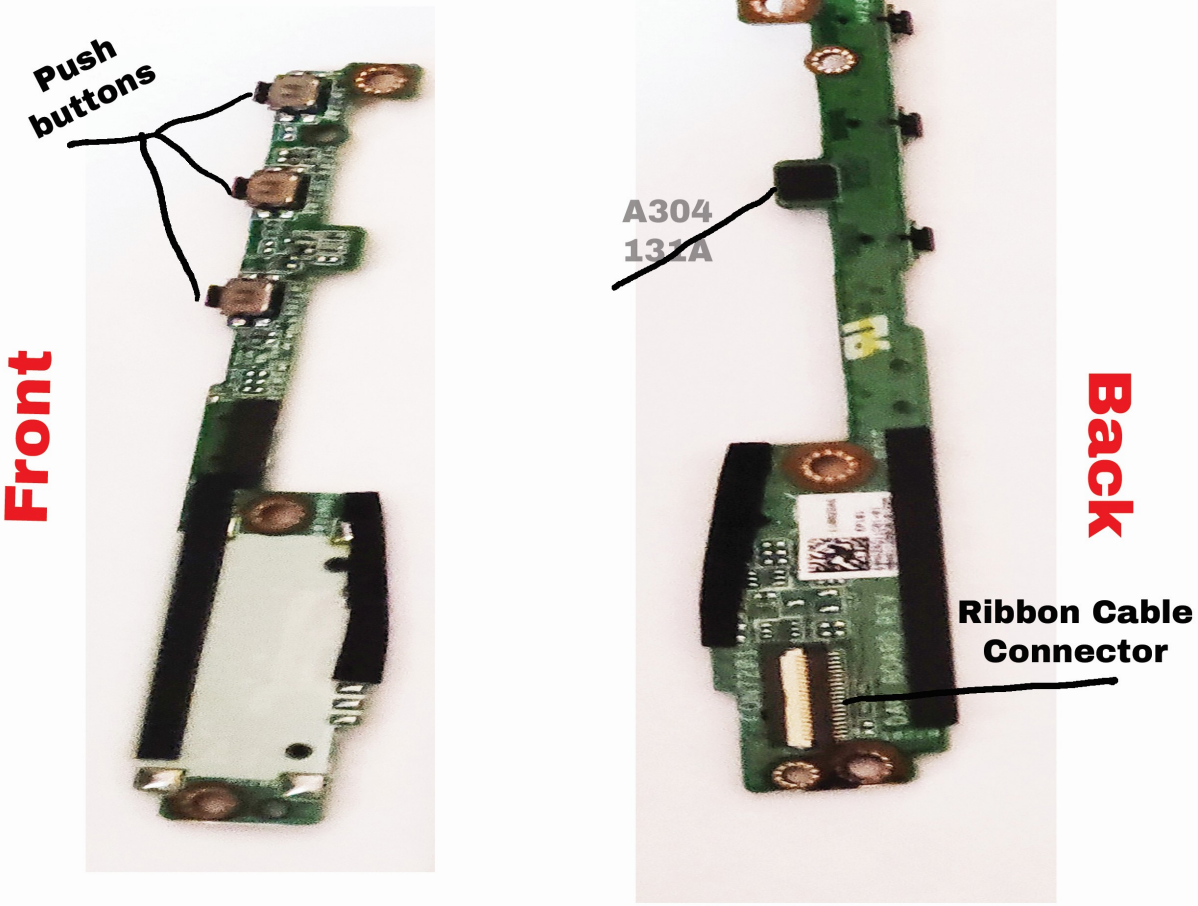
Picture 6

Picture 9



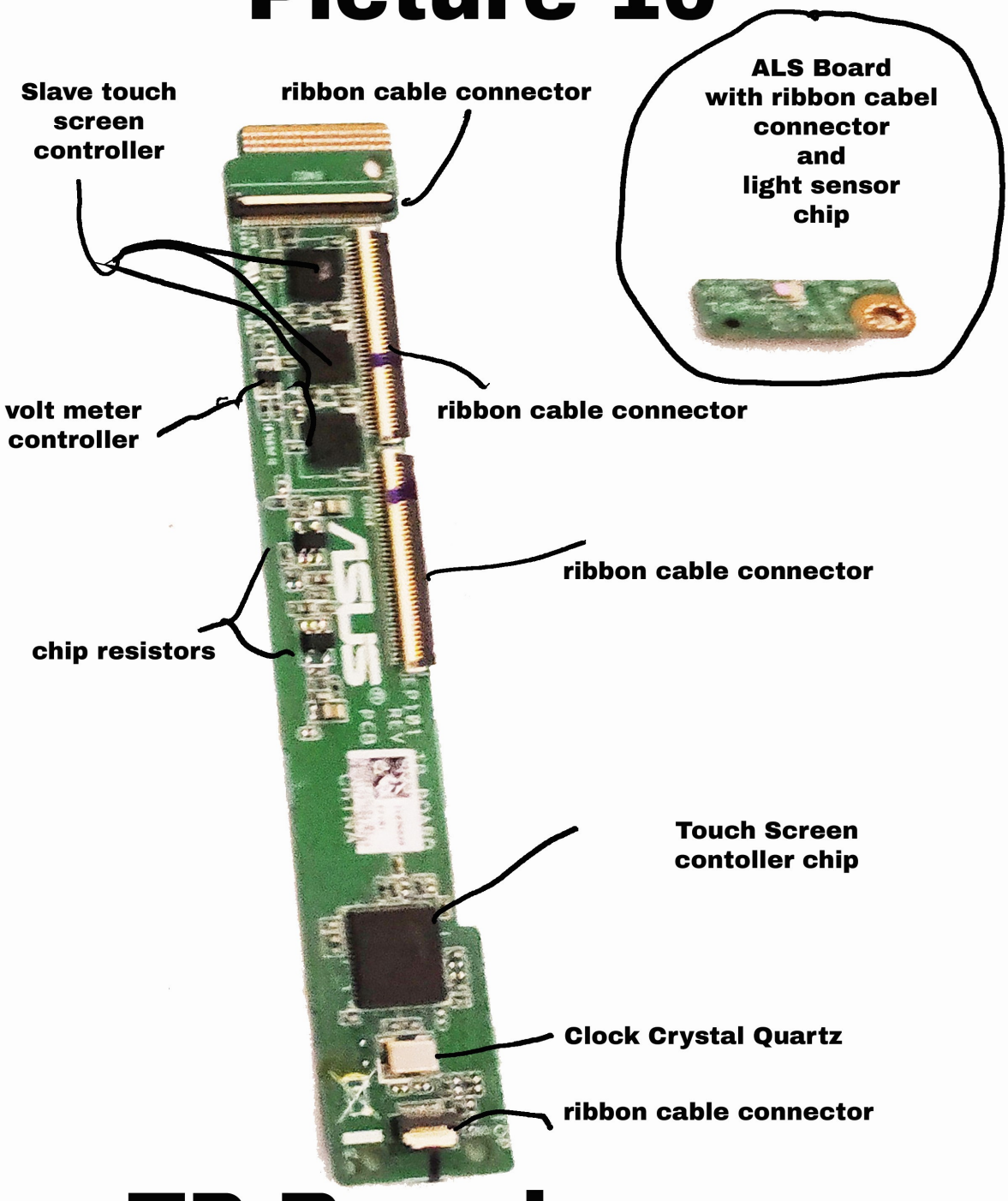
Docking Reader Board

Picture 8



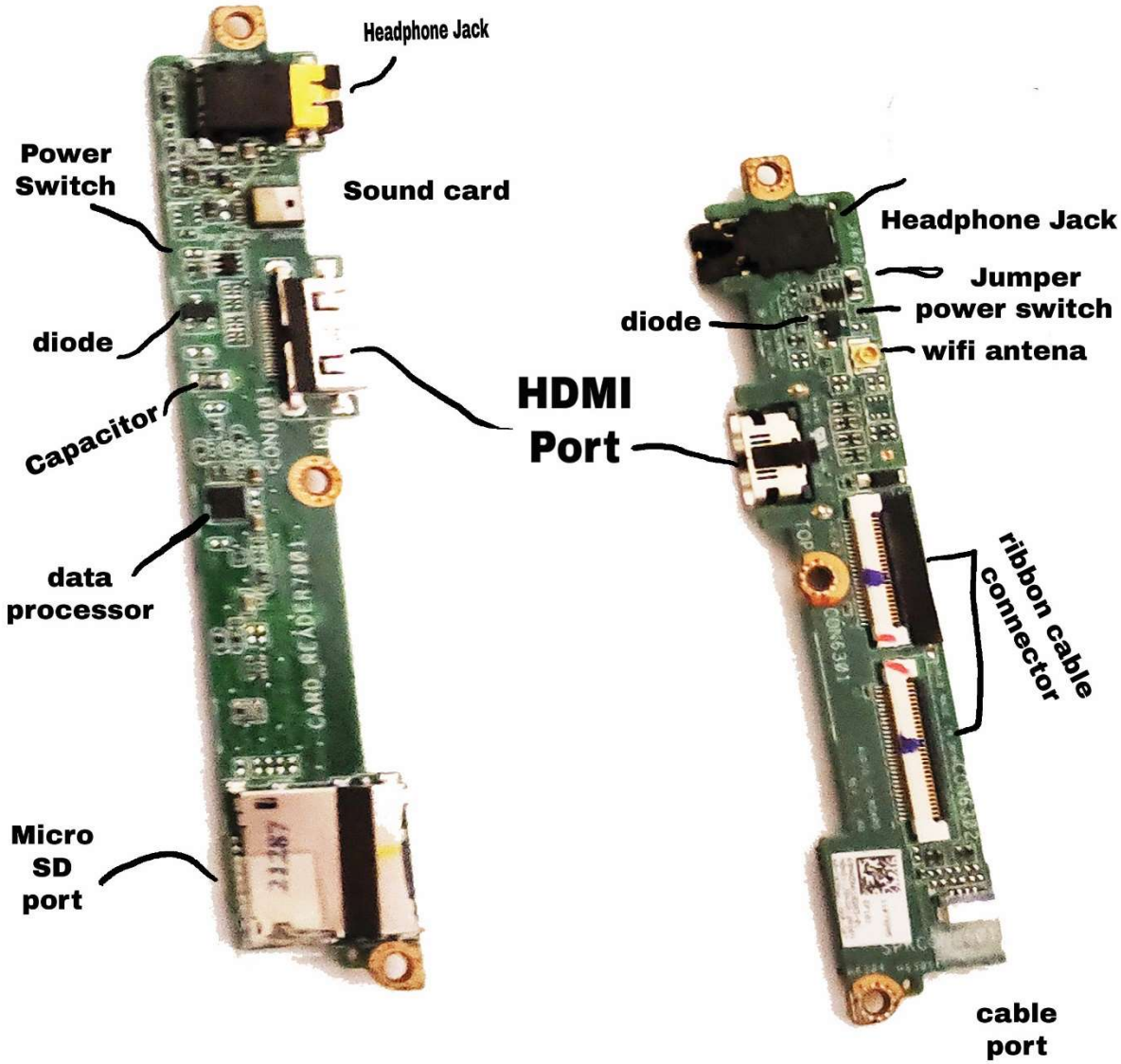
DAU Board

Picture 10



TP Board

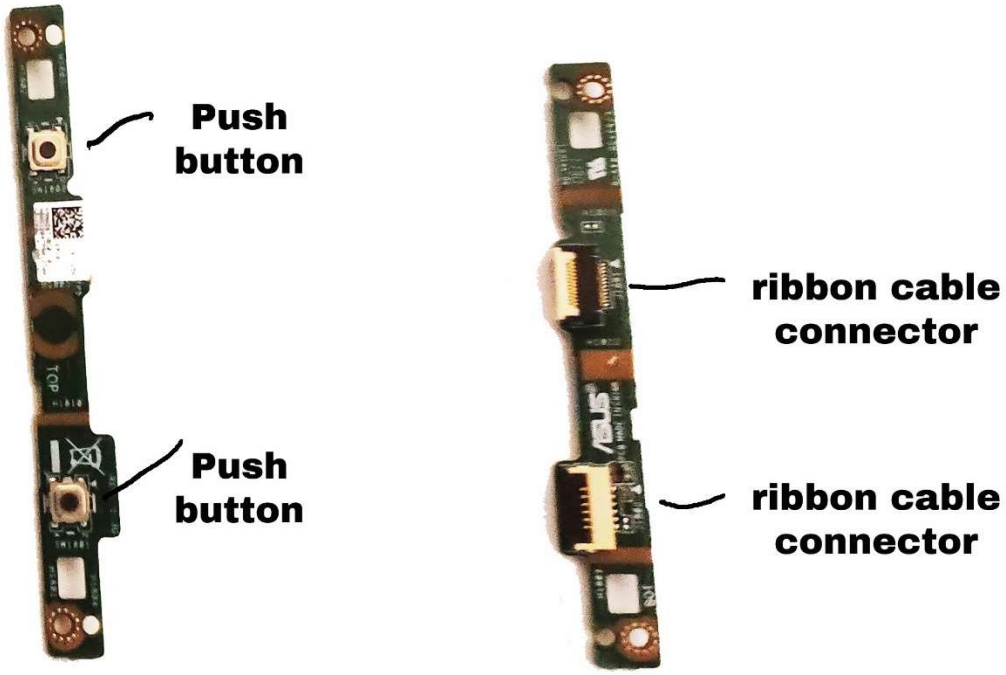
Picture 11



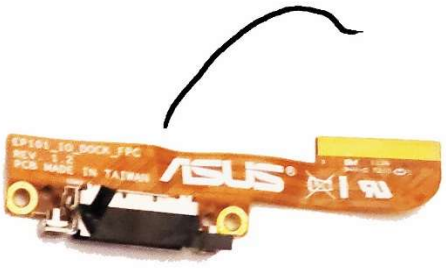
Card reader and audio Board

Picture 12

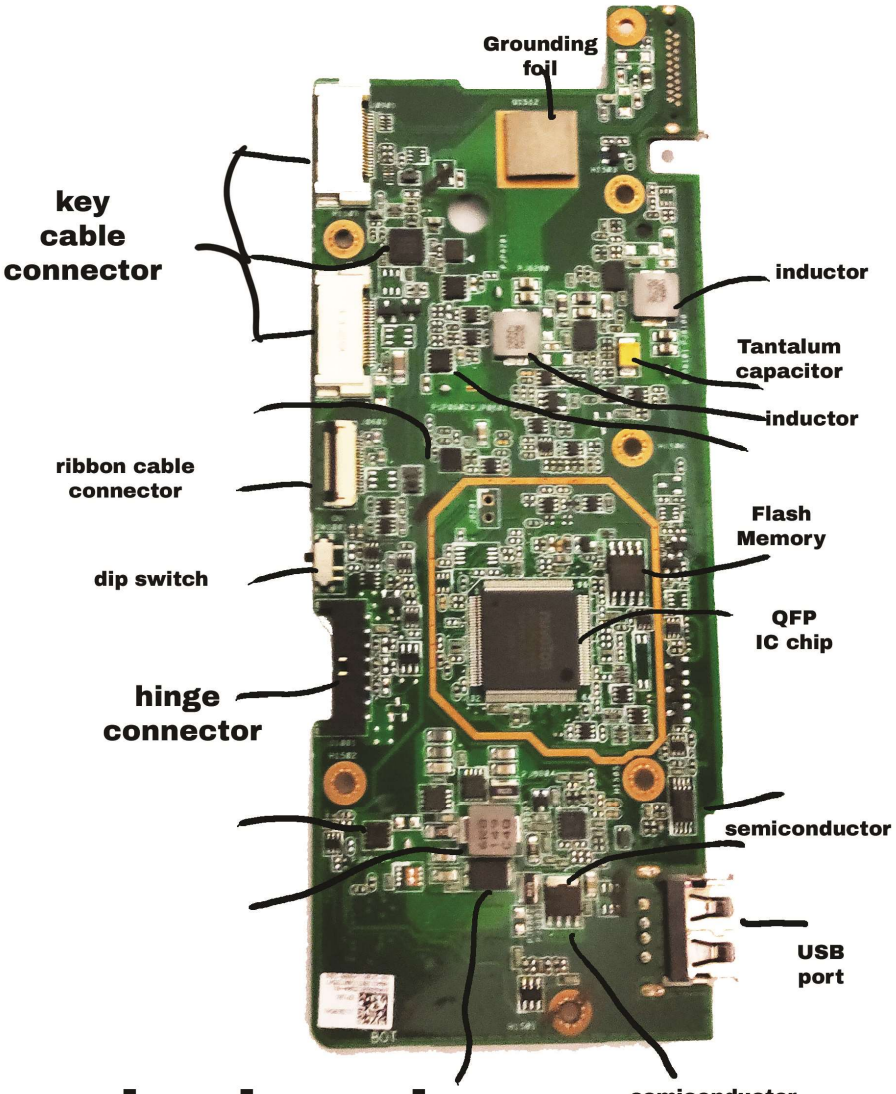
Volume board



Charging Port



Picture 13



keyboard mother board