Product End-of-Life Disassembly Instructions

Product Category: Workstation
Marketing Name / Model [List multiple models if applicable.]
HP Z8 G5 Workstation
FCLSA-2203A
FCLSA-2203B

Purpose: The document is intended for use by end-of-life recyclers or treatment facilities. It provides the basic instructions for the disassembly of HP Inc. products to remove components and materials requiring selective treatment, as defined by EU directive 2012/19/EC, Waste Electrical and Electronic Equipment (WEEE).

NOTE: Recyclers should sort plastic materials into resin streams for recycling based on the ISO 11469 plastic marking code on the plastic part. For any questions on plastic marking or identification of location of parts or components requiring selective treatment, please contact HP's Sustainability Contact.

1.0 Items Requiring Selective Treatment

1.1 Items listed below are classified as requiring selective treatment. An "X" in the list of components and parts indicates the product contains the component or part requiring selective treatment

Item Description	Components and parts requiring selective treatments	Quantity of items included in product
Printed Circuit Boards (PCB) or Printed Circuit Assemblies (PCA) with a surface greater than 10 sq cm	☒ Main board (MB) PCB*1 ☒ Solid state drive (SSD) PCB*2 ☐ Wireless WAN module (WWAN) PCB ☐ Touch module PCB ☒ Power supply PCB*1 ☒ External Keyboard (KB)*1 ☒ External Mouse*1 ☒ Graphic card PCB *1, ☒Transfer card*1, ☒ Switch card*1 ☒ PDB board PCB*1 ☒ Memory PCB*4 ☒ HDD PCB*1	15
Batteries, excluding Li-Ion batteries. This includes standard alkaline, coin or button style batteries	☒ RTC/CMOS battery ☐ Others: _____	1
Li-Ion batteries. Includes all Li-Ion batteries if more than one is provided with the product (such as a detachable notebook keyboard battery, etc.)	Li-ion battery(ies) are attached to the product by: ☐ screws ☐ snaps ☐ adhesive ☐ other. Explain _____	0

Item Description	Components and parts requiring selective treatments	Quantity of items included in product
Mercury-containing components. For example, mercury in lamps, display backlights, scanner lamps, switches, batteries		0
Liquid Crystal Displays (LCD) with a surface greater than 100 sq cm. Includes background illuminated displays with gas discharge lamps	☐ Panel LCD	0
Cathode Ray Tubes (CRT)		0
Capacitors / condensers (Containing PCB/PCT)		0
Electrolytic Capacitors / Condensers measuring greater than 2.5 cm in diameter or height	☒ Power Supply capacitor(s) or condenser(s)	4
External electrical cables and cords	☒ AC power cord ☐ Audio, video or data cables ☐ Other: _____	1
Gas Discharge Lamps		0
Plastics containing Brominated Flame Retardants (not including external electrical cables and cords, PCBs or PCAs already listed as a separate item above)		0
Components and parts containing toner and ink, including liquids, semi-liquids (gel/paste) and toner. Include the cartridges, print heads, tubes, vent chambers, and service stations.		0
Components and waste containing asbestos		0
Components, parts and materials containing refractory ceramic fibers		0
Components, parts and materials containing radioactive substances		0
Components containing chlorofluorocarbons (CFC), hydrochlorofluorocarbons (HCFC) or hydrofluorocarbons (HFC), hydrocarbons (HC)		0

2.0 Tools Required

List the type and size of the tools that would typically be used to disassemble the product to a point where components and materials requiring selective treatment can be removed.

Tool Description	Tool Size (if applicable)
Screwdriver	Philip #0
Screwdriver	Torx T8
Heatgun	N/A
Suction cup	N/A

3.0 Product Disassembly Process

3.1 List the basic steps that should typically be followed to remove components and materials requiring selective treatment including the required steps to remove the external enclosure.

1. Open and remove the access panel
2. Remove the CPU fan duct frame
3. Remove the PCI retainer
4. Press the latch and remove the memory duct
5. Pry it up with a screwdriver to separate the CPU fan duct cover from the CPU fan duct frame
6. Pry it up with a screwdriver to separate the CPU fan duct cover from CPU fan duct frame
7. Pry it up with a screwdriver to separate the PCI carrier cover from PCI retainer frame
8. Loosen the 2pcs screws and remove the PCI retainer
9. Disconnect the graphic card cable and remove the graphic card from MB
10. Press the clip and remove the transfer card
11. Loosen the 2pcs screws and remove the 2pcs SSD
12. Lift the latch and slide to the left (in the direction of rear IO) and remove the guide bracket
13. Remove the 4 pcs memories from MB
14. Disconnect the front upper chassis fan cable
15. Press the guide and remove the front upper chassis fan and fan guard
16. Remove the fan guard from fan
17. Detailed parts on the assembly of chassis front upper chassis fan guide assembly
18. Disconnect the PCIe power cables from PCIe fan guide
19. Disconnect the front middle chassis fan cable
20. Disconnect the front lower chassis fan cable
21. Press the guide and remove the PCIe fan guide from chassis
22. Remove the front middle chassis fan from fan guide
23. Remove the front lower chassis fan from fan
24. All the parts of PCIe fan guide
25. Loosen the HDD bracket
26. Remove the HDD bracket from the Chassis
27. Remove the HDD from HDD bracket by push out the HDD bracket
28. Detailed parts of HDD and HDD bracket
29. Disconnect the switch card cable
30. Remove the switch card from Chassis
31. Disconnect the ODD SATA/ Power cable from ODD
32. Remove the ODD from chassis
33. Loosen the screws(x2) of speaker and release speaker.
34. Disconnect the speaker cable from switch card
35. Release the front panel mount cable from clip
36. Disconnect the front panel mount cable from switch card
37. Release the front panel mount cable by push out 2 pins fixed front side in switch card tray
38. Release the front panel mount cable by push out 2 pins fixed black side in switch card tray
39. Loose the 4pcs switch card PCA screws and remove the switch card PCA
40. Remove the SD card reader carrier
41. Loosen the left and right side hooks of switch card panel
42. Loosen the 2pcs bottom side hooks of switch card panel
43. Detailed parts of switch card assembly
44. Remove ODD housing from chassis
45. Disconnect the CPU cooler cable from MB
46. Remove the CPU cooler from MB
47. Press the bottom and remove the CPU cooler from MB
48. Remove the CPU from the cooler
49. Remove the CPU from the carrier
50. Disconnect rear system fan cable from MB
51. Remove the rear system fan duct from hook
52. Remove the fan guard from fan

53. Detailed parts of system fan
54. Press the button and remove the heat sink
55. Disconnect all other cables from MB
56. Remove the MB from chassis
57. Remove the battery from MB
58. Remove the PCIe slot covers (x6) from chassis
59. Press the bottom and remove the 1pcs PSU
60. Release 2pcs latches of top bezel and remove it
61. Release clasp of front bezel on bottom side of chassis and remove the bezel
62. Disconnect the H1 power cable and blind mating SATA power cable
63. Cut off 4 pcs cable ties to fix power cable
64. Cut off 3pcs cable ties to fix power cable
65. Release the blind mating SATA connector from chassis
66. Unlock 4pcs screws of PDB and remove the PDB
67. Push up 2pcs inside latches to release hood sensor bracket from chassis.
68. Remove the left side plastic parts of corner bracket pocket by release the clasp
69. Remove the left side plastic parts of corner bracket pocket by release the clasp.
70. Unlock 4pcs screws front side handle.
71. Release 2pcs latches of front side handle pocket.
72. Remove the handle pocket and details of front side handle pocket
73. Unlock 2pcs screwsfront side handle
74. Release 3pcs latches of rear handle pocket
75. Remove the handle pocket and details of front side handle pocket
76. Unlock bottom side screw of ODD bracket cover
77. Remove the bottom side spring of ODD bracket cover
78. Unlock top side screw of ODD bracket cover and remove the ODD bracket cover
79. Use tool to unscrew five screws to loosen top cover.
80. Turn around top cover to unhook bottom chassis before top cover removal
81. Remove top cover from bottom chassis
82. Remove the cable tie
83. Disconnect fan cable connector and CN1`CN3`CN901A cable connector from PCBA
84. Use tool to unscrew ten screws to loosen PCBA& socket from bottom chassis
85. Remove PCBA away from bottom chassis
86. Use tool to unscrew four screws to loosen fan from bottom chassis
87. Remove the Mylar & thermal pad from bottom chassis cover by hand-pulling
88. Remove the Mylar& thermal pad from top cover by hand-pulling
89. Identity PCBA > 10 cm^2 for further treatment (main board: 308.09 cm^2).
90. Identity PCBA > 10 cm^2 for further treatment (EMI board:305.75 cm^2).
91. Identity PCBA > 10 cm^2 for further treatment (CAP board: 26.65 cm^2).

3.2 Location of components requiring selective treatment. The photos and/or graphics below identify the location of the parts or components requiring selective treatment within the main unit. For End-of-Life product disassembly instructions of external accessories including external power supply (EPS), external keyboard (KB) external mouse and external cables and cords, refer to the following URL: End-of-Life Product Disassembly Instructions (hp.com)

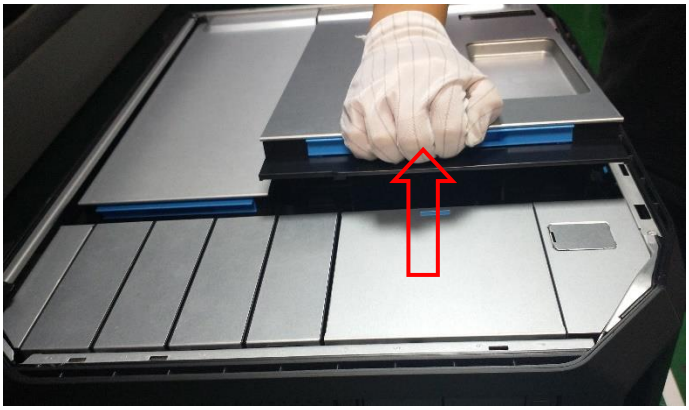
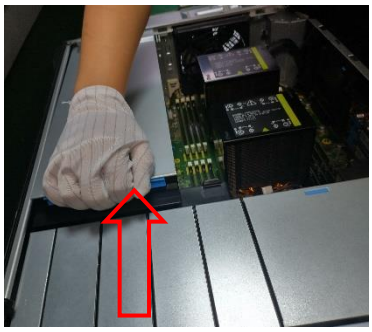
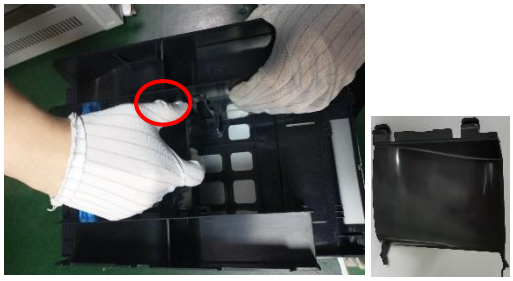
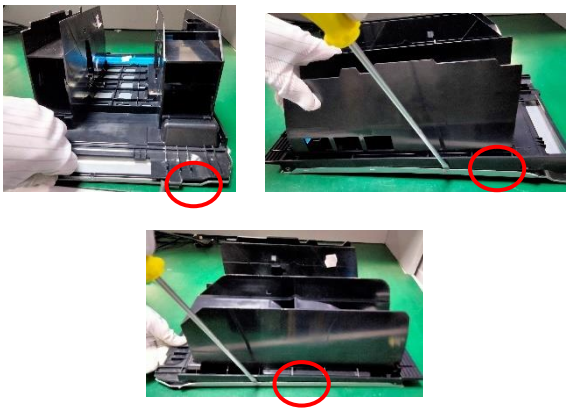
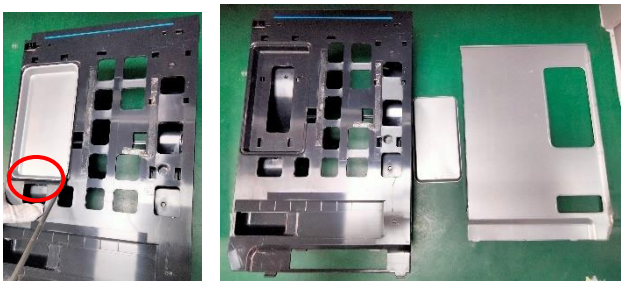
Figure1 Open and remove the access panel 	Figure2 Remove the CPU fan duct frame 
Figure3 Remove the PCI retainer 	Figure4 Press the latch and remove the memory duct。 
Figure5 Pry it up with a screwdriver to separate the CPU fan duct cover from the CPU fan duct frame 	Figure6 Pry it up with a screwdriver to separate the CPU fan duct cover from CPU fan duct frame. 

Figure7 Pry it up with a screwdriver to separate the PCI carrier cover from PCI retainer frame

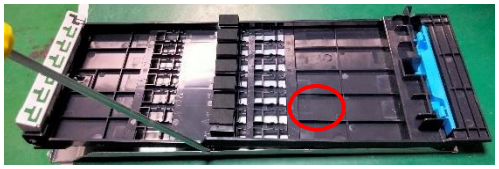




Figure8 Loosen the 2pcs screws and remove the PCI retainer





Figure9 Disconnect the graphic card cable and remove the graphic card from MB



Figure10 See below GFX PCB,



Figure11 Press the clip and remove the transfer card

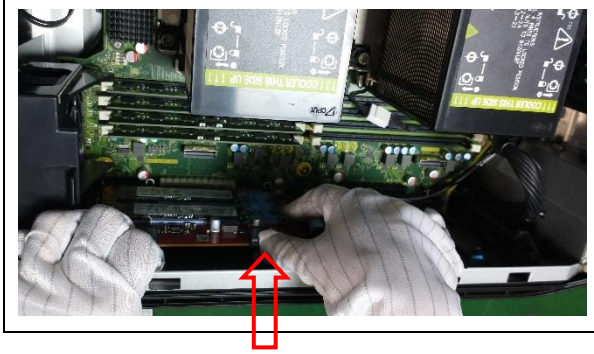


Figure12 Loosen the 2pcs screws and remove the 2pcs SSD.

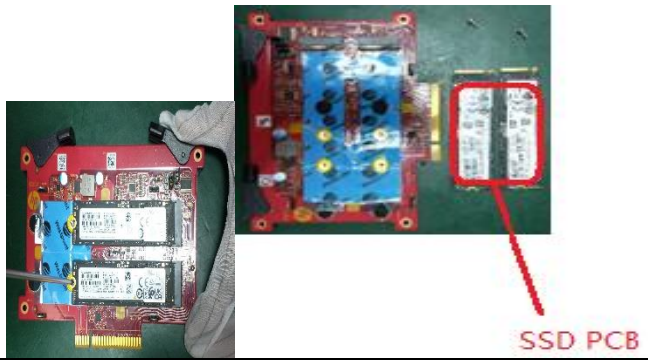


Figure13. Lift the latch and slide to the left (in the direction of rear IO) and remove the guide bracket

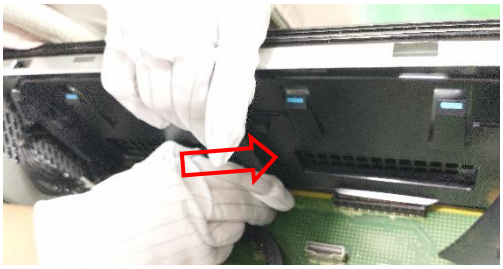




Figure14 Removed the 4 pcs memories from MB



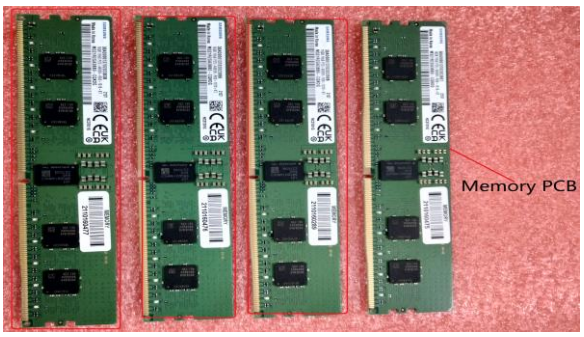


Figure15 Disconnect the front upper chassis fan cable.



Figure16 Press the guide and remove the front upper chassis fan and fan guard,

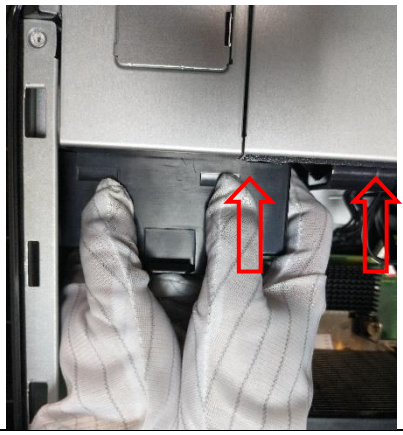


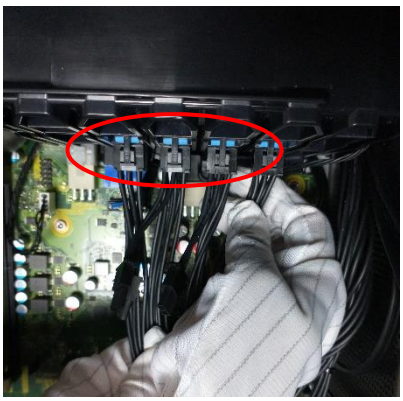
Figure16 Press the guide and remove the front upper chassis fan and fan guard, 	Figure16 Remove the fan guard from fan 
Figure17 Detailed parts on the assembly of chassis front upper chassis fan guide assembly.  	Figure18 Disconnect the PCIe power cables from PCIe fan guide 

Figure19 Disconnect the front middle chassis fan cable

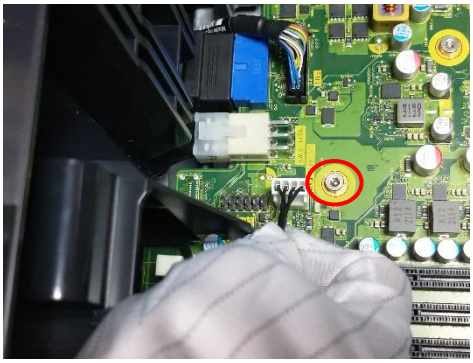


Figure20 Disconnect the front lower chassis fan cable

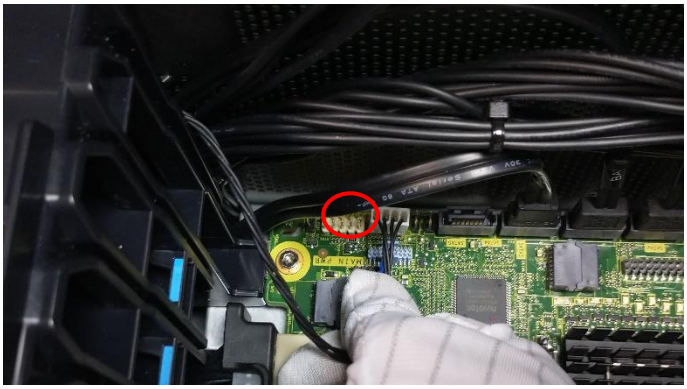


Figure21 Press the guide and remove the PCIe fan guide from chassis

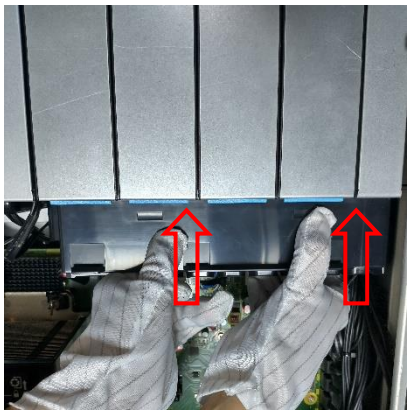
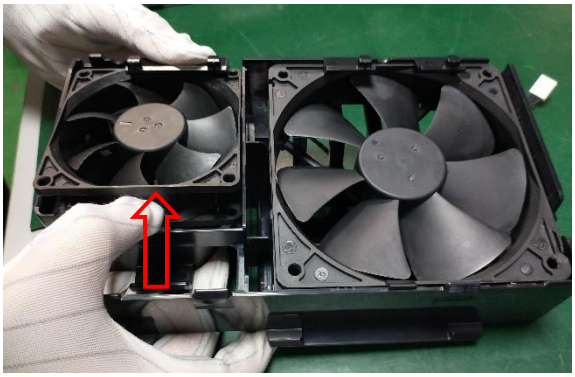


Figure22 Remove the front middle chassis fan from fan guide



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Figure23 Remove the front lower chassis fan from fan

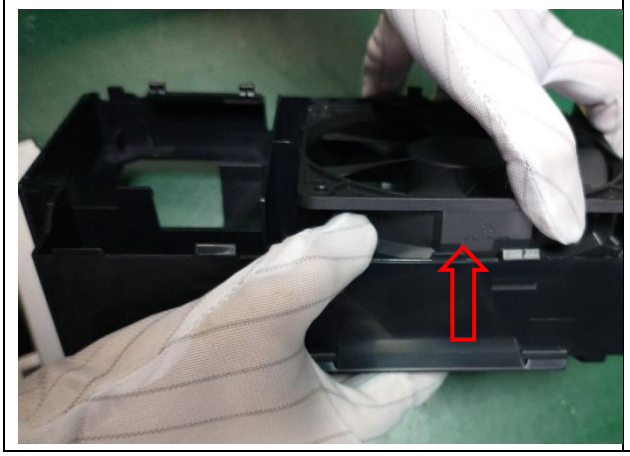


Figure24 All the parts of PCIe fan guide



Figure25 Loosen the HDD bracket

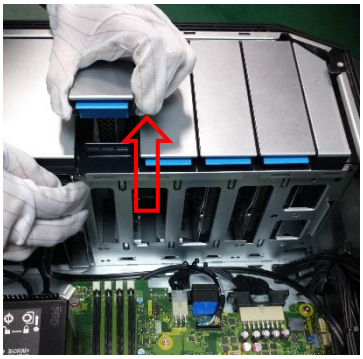


Figure26 Remove the HDD bracket from the Chassis



Figure27 Remove the HDD from the HDD Carrier by push out the HDD bracket.



Figure28 Detailed parts of HDD and HDD bracket



Figure29 Disconnect the switch card cable

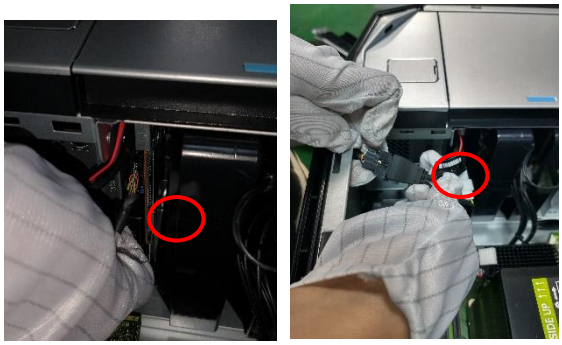


Figure30 Remove the switch card from Chassis.

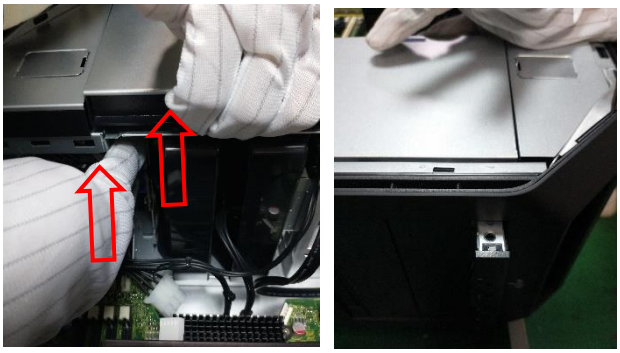


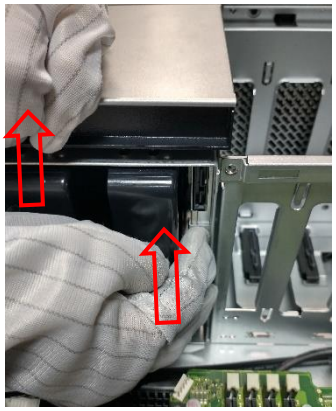
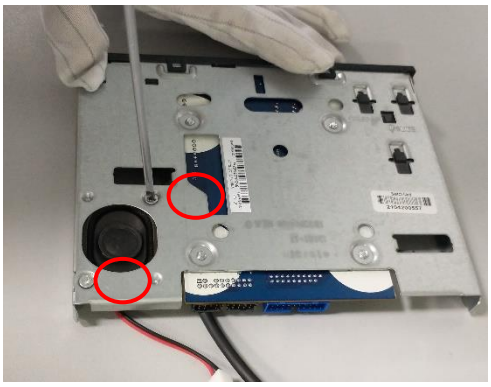
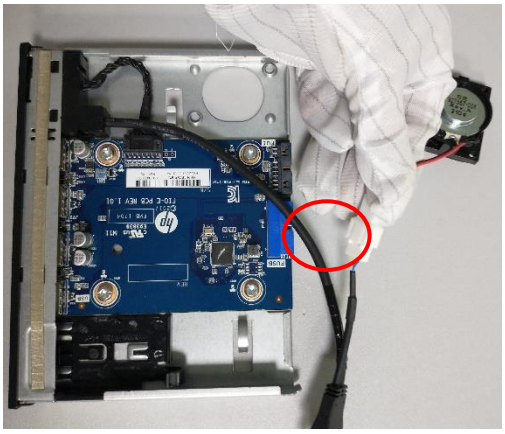
Figure31 Disconnect the ODD SATA/Power cable from ODD 	Figure32 Remove the ODD from chassis 
Figure33 Loosen the screws(x2) of speaker and release speaker. 	Figure34 Disconnect the speaker cable from switch card 
Figure35 Release the front panel mount cable from clip 	Figure36 Disconnect the front panel mount cable from switch card 

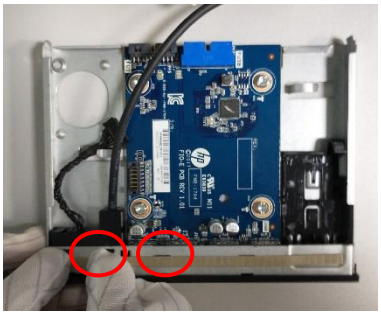
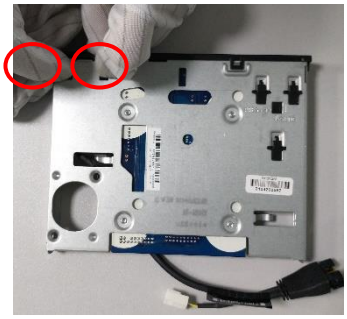
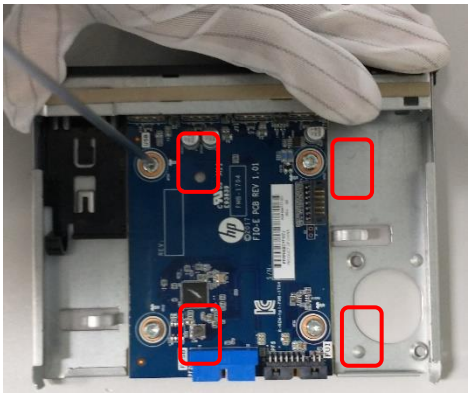
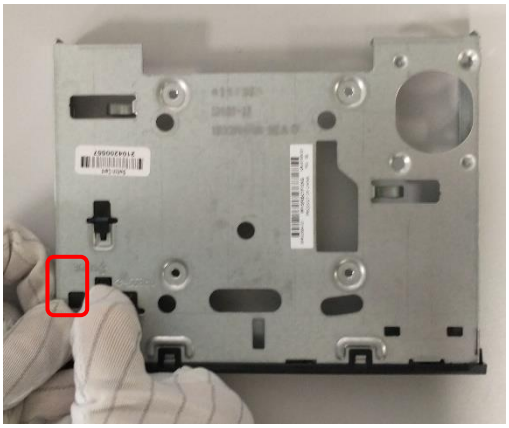
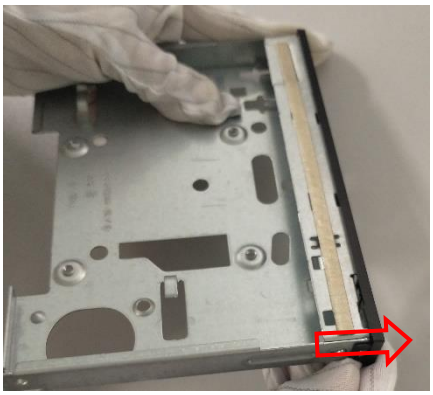
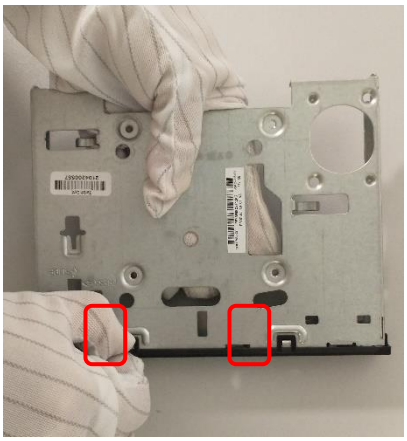
Figure37 Release the front panel mount cable by push out 2 pins fixed front side in switch card tray. 	Figure38 Release the front panel mount cable by push out 2 pins fixed black side in switch card tray. 
Figure39 Loose the 4pcs switch card PCA screws and remove the switch card PCA 	Figure40 Remove the SD card reader carrier 
Figure41 Loosen the left side and the right side hooks of switch card panel 	Figure42 Loosen the 2pcs bottom side hooks of switch card panel 

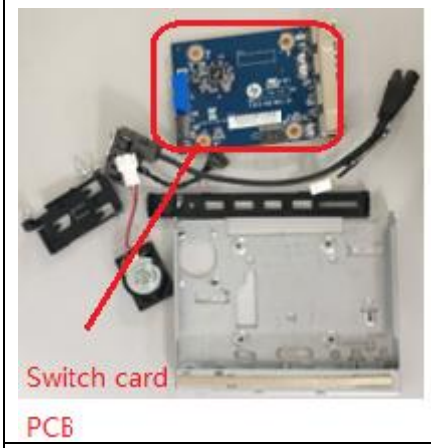
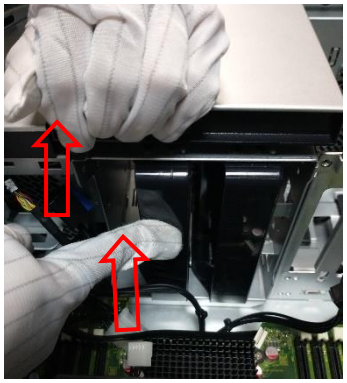
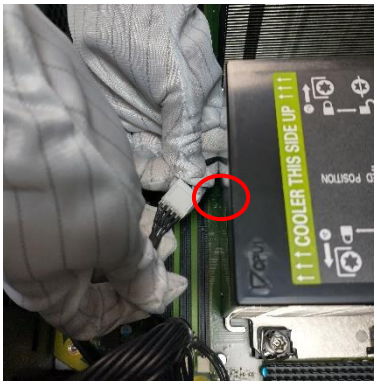
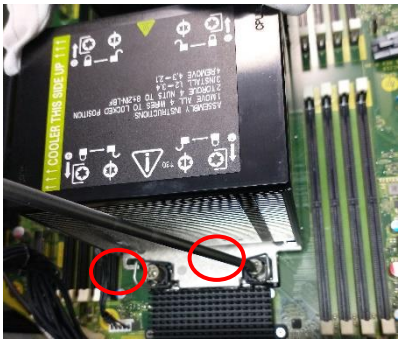
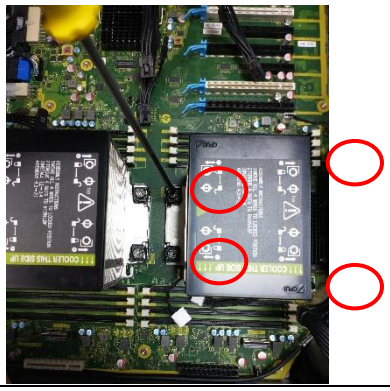
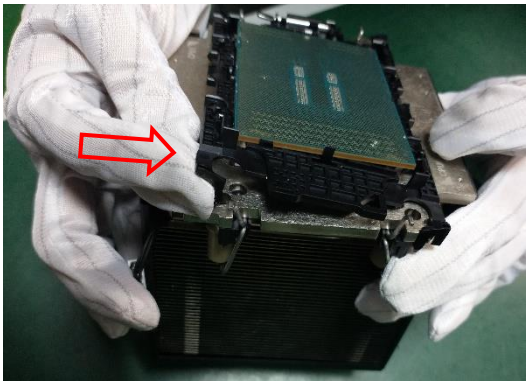
Figure43 Detailed parts of switch card assembly 	Figure44 Remove ODD housing from chassis 
Figure45 Disconnect the CPU cooler cable from MB 	Figure46 Remove the CPU cooler from MB 
Figure47 Press the bottom and remove the CPU cooler from MB. 	Figure48 Remove the CPU from the cooler 

Figure49 Remove the CPU from the carrier.

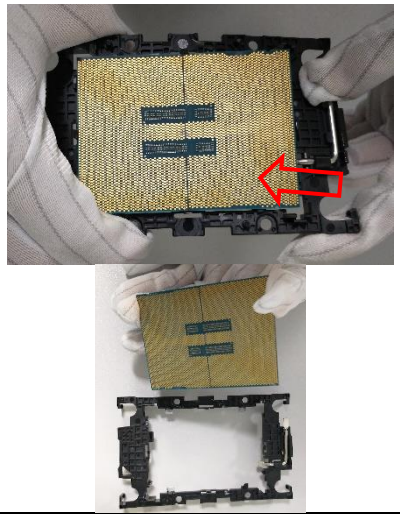


Figure50 Disconnect rear system fan cable from MB



Figure51 Remove the rear system fan duct from hook

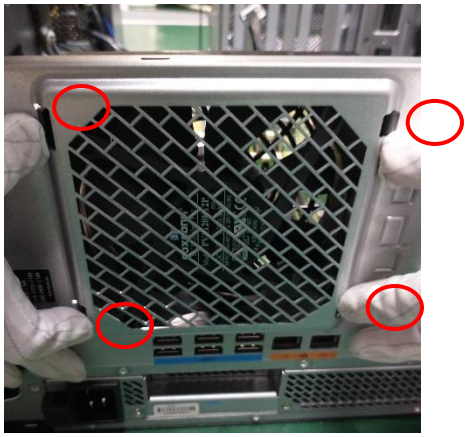


Figure52 Remove the fan guard from fan



Figure53 Detailed parts of system fan.



Figure54 Press the button and remove the heat sink

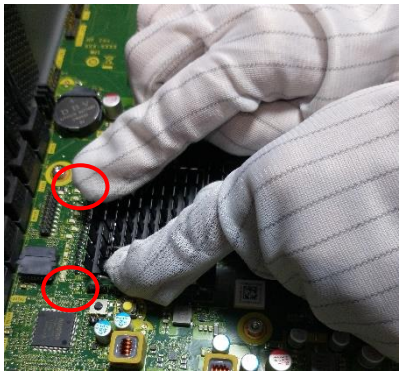


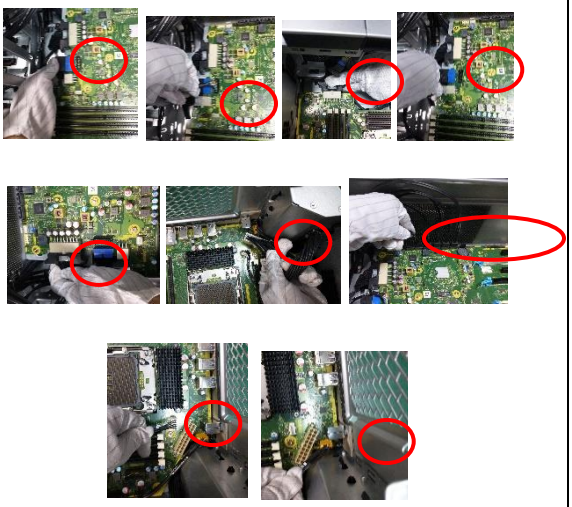
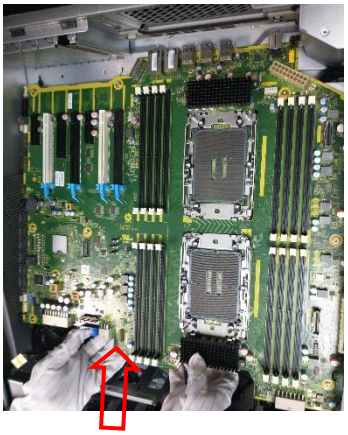
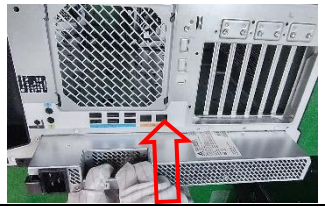
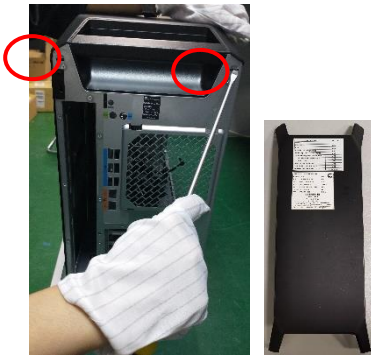
Figure55 Disconnect all other cables from MB 	Figure56 Remove the MB from chassis. 
Figure57 Remove the battery from MB.  	Figure58 Remove the PCIe slot covers (x6) from chassis. 
Figure59 Press the bottom and remove the 1pcs PSU.  	Figure60 Release 2pcs latches of top bezel and remove it. 

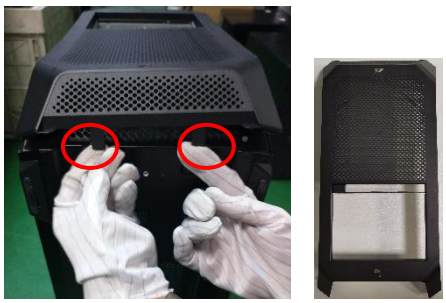
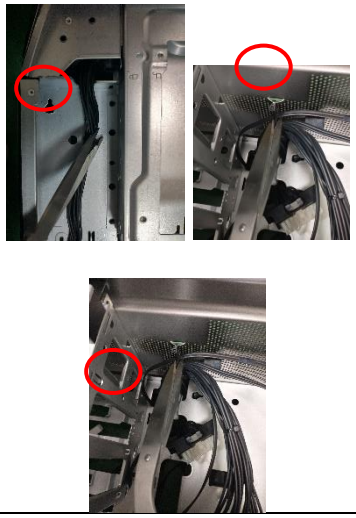
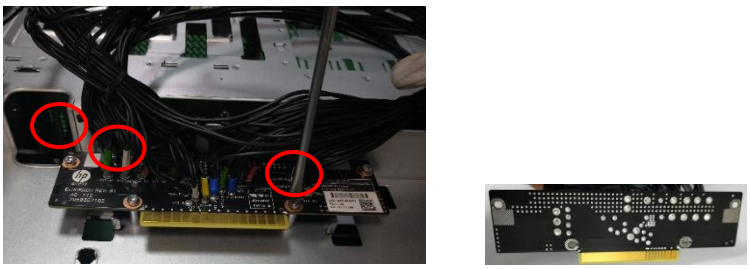
Figure61 Release clasp of front bezel on bottom side of chassis and remove the bezel 	Figure62 Disconnect the H1 power cable and blind mating SATA power cable 
Figure63 Cut off 4 pcs cable ties to fix power cable 	Figure64 Cut off 3pcs cable ties to fix power cable 
Figure65 Release the blind mating SATA connector from chassis 	Figure66 Unlock 4pcs screws of PDB and remove the PDB. See the right side PDB PCB picture. 

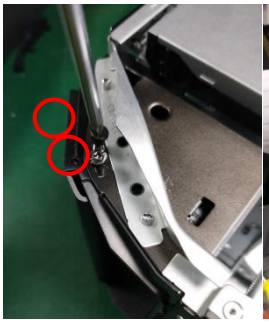
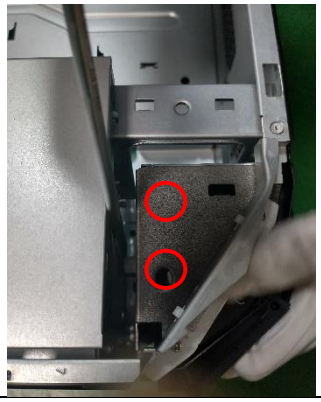
Figure67 Push up 2pcs inside latches to release hood sensor bracket from chassis. 	Figure68 Remove the left side plastic parts of corner bracket pocket by release the clasp  
Figure69 Remove the right side plastic parts of corner bracket pocket by release the clasp.  	Figure70 Unlock 4pcs screws front side handle.  
Figure71 Release 2pcs latches of front side handle pocket. 	Figure72 Remove the handle pocket and details of front side handle pocket 

Figure73 Unlock 2pcs screwsfront side handle.



Figure74 Release 3pcs latches of rear handle pocket

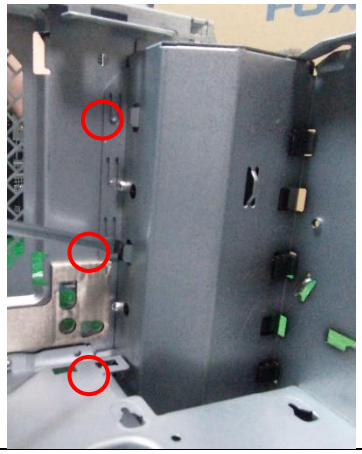


Figure75 Remove the handle pocket and details of front side handle pocket.

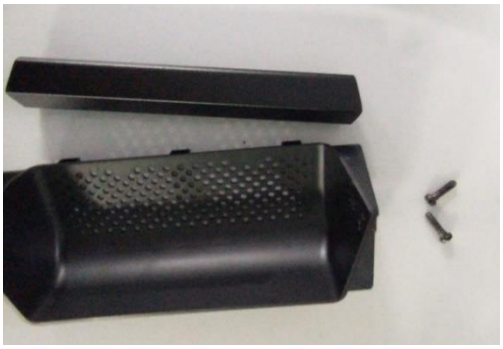


Figure76 Unlock bottom side screw of ODD bracket cover.

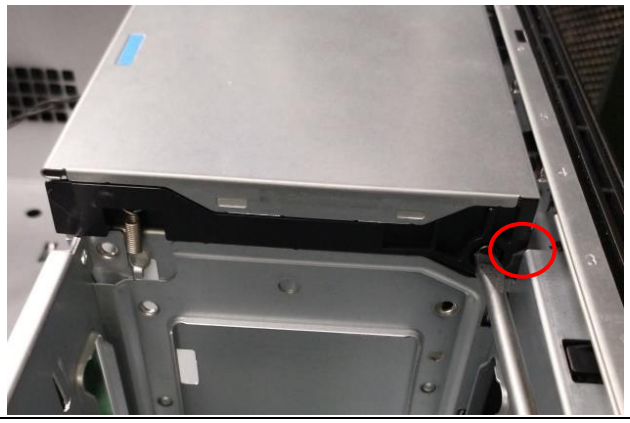


Figure77 Remove the bottom side spring of ODD bracket cover





Figure78 Unlock top side screw of ODD bracket cover and remove the ODD bracket cover





Figure79 Use tool to unscrew seven screws to loosen top cover.

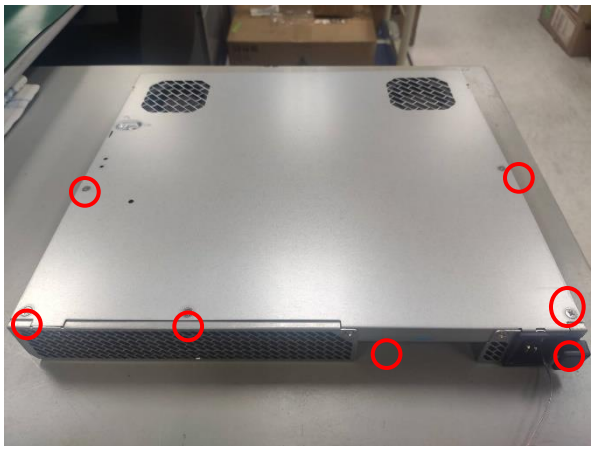


Figure80 Turn around top cover to unhook bottom chassis before top cover removal.

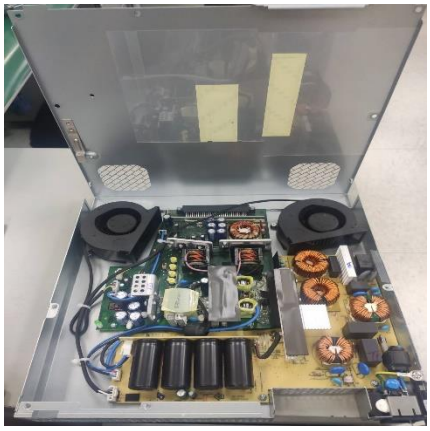


Figure81 Remove top cover from bottom chassis.

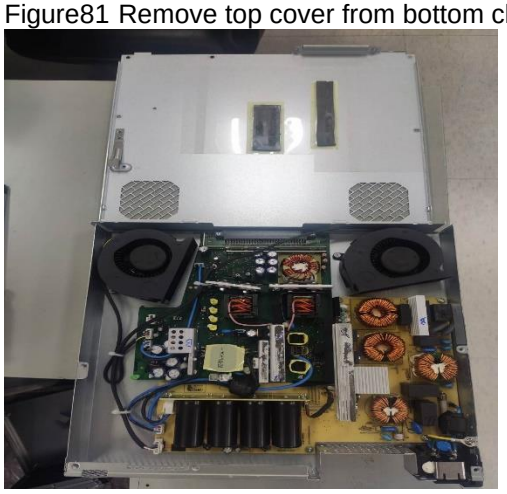


Figure82 Remove the cable tie.

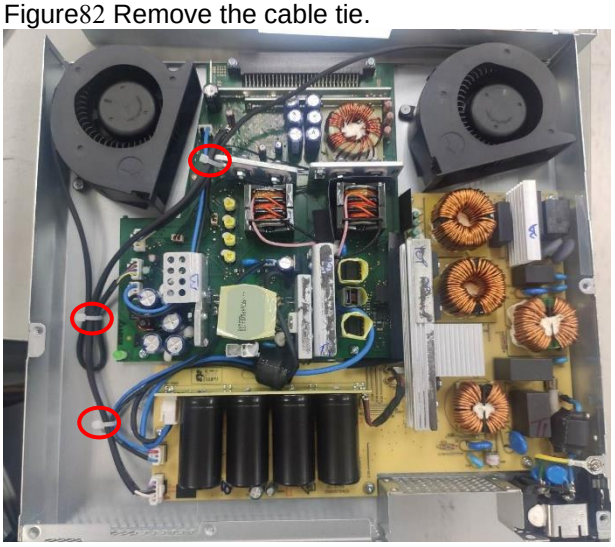


Figure83 Disconnect fan cable connector and CN1`CN3`CN901A cable connector from PCBA.

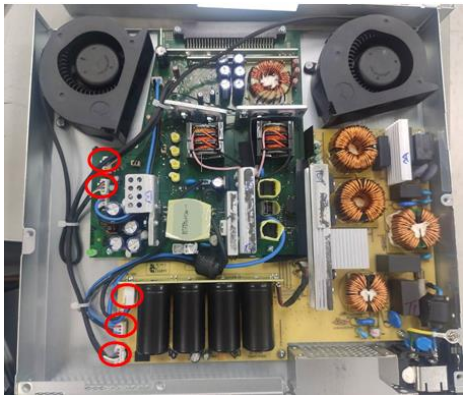


Figure84 Use tool to unscrew ten screws to loosen PCBA& socket from bottom chassis.

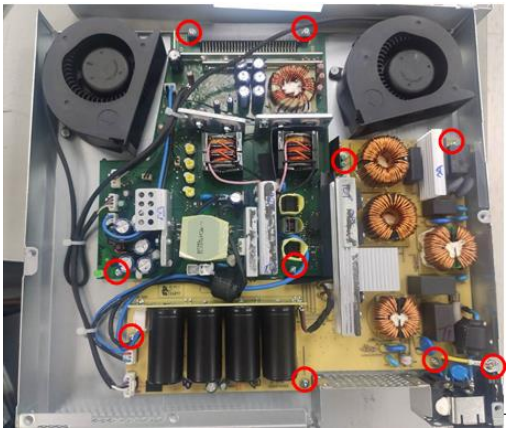


Figure85 Remove PCBA away from bottom chassis.

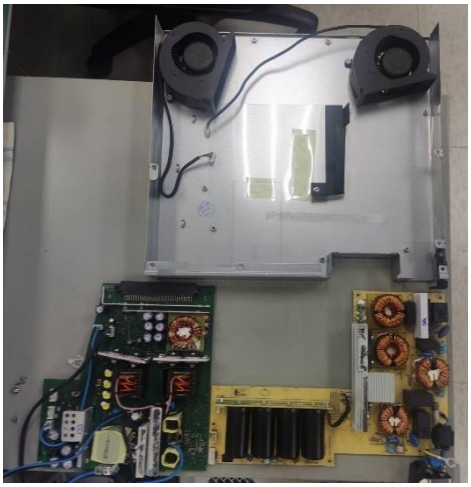


Figure86 Use tool to unscrew four screws to loosen fan from bottom chassis.

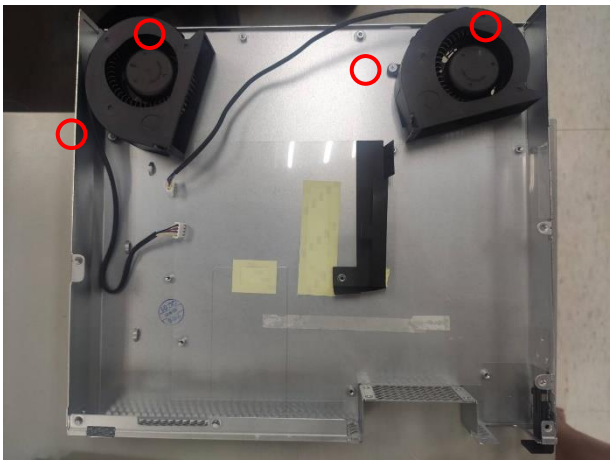


Figure87 Remove the Mylar & thermal pad from bottom chassis cover by hand-pulling.

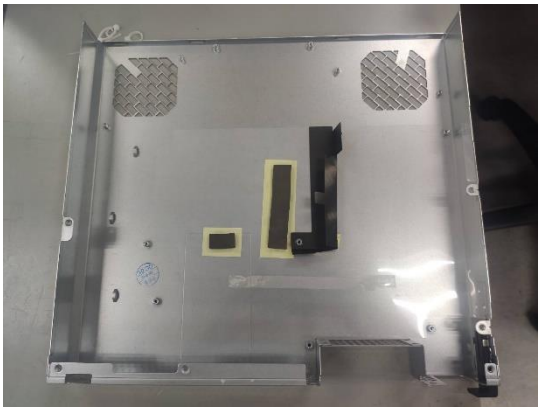


Figure88 Remove the Mylar& thermal pad from top cover by hand-pulling.

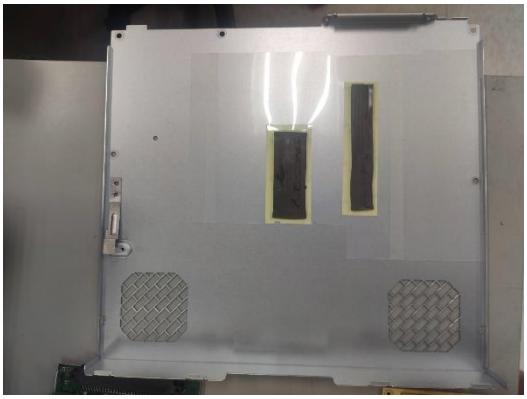


Figure89 Identity PCBA > 10 cm^2 for further treatment (main board: 308.09 cm^2).

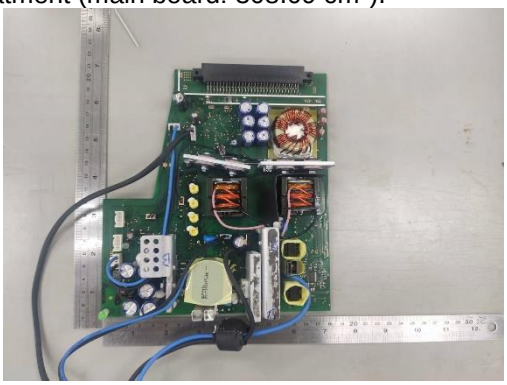


Figure90 Identity PCBA > 10 cm^2 for further treatment (EMI board:305.75 cm^2).

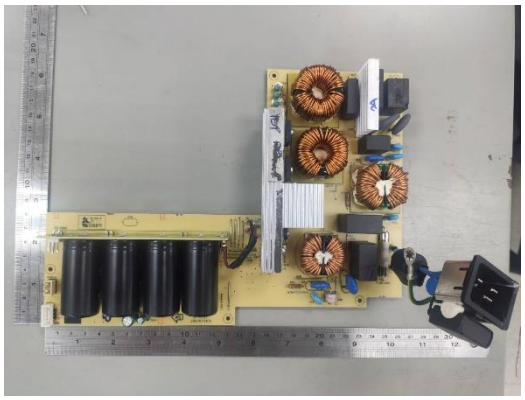


Figure91 Identity PCBA > 10 cm^2 for further treatment (CAP board: 26.65 cm^2). The fours CAP height is greater than 2.5 cm height 