ADVANTECH

Enabling an Intelligent Planet

FWA-6183 QSG

Cloud-IoT Business Group

05/27 , 2024

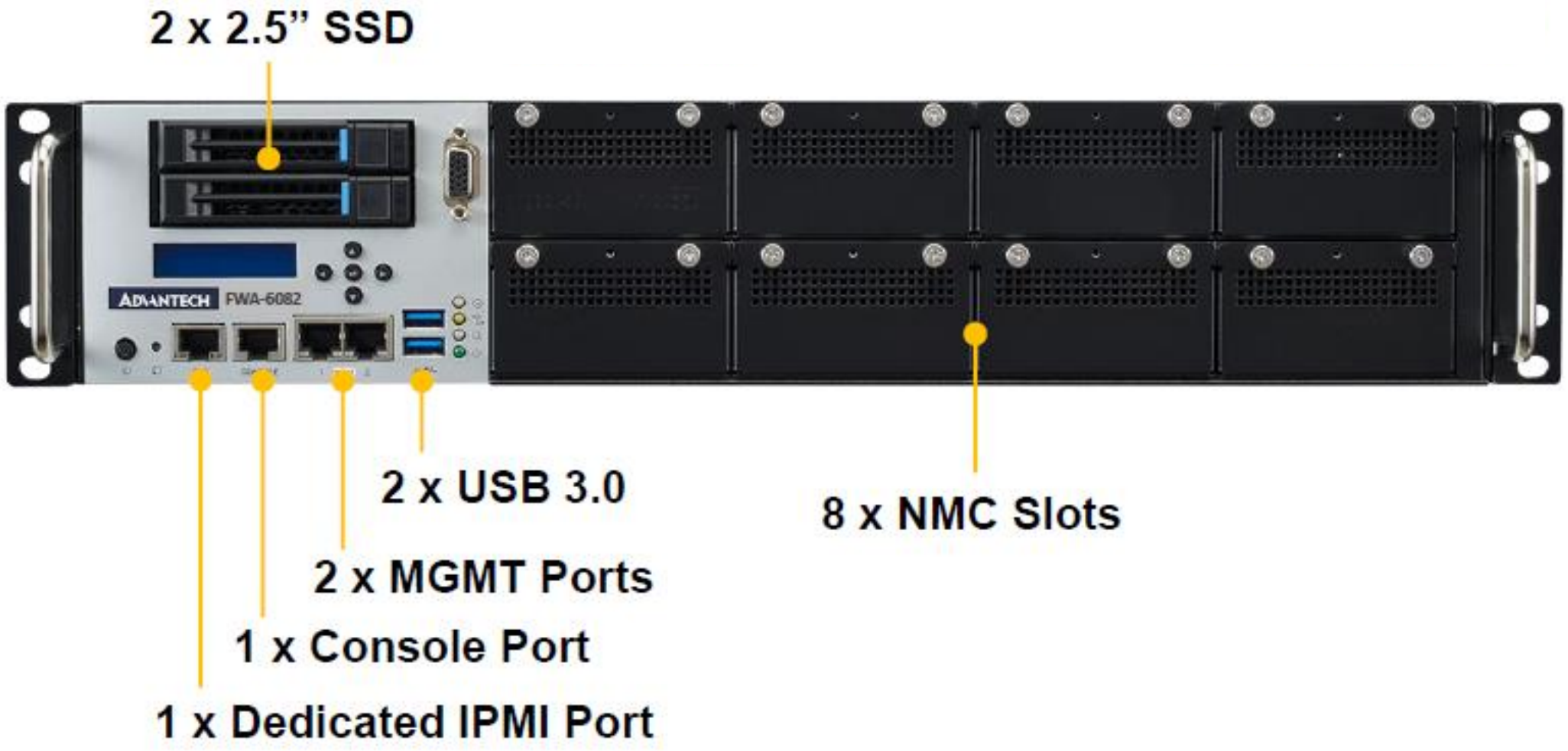
History

Version	Date	Handled by	Note
V01	2024/05/27	Alan.Ku	1st release

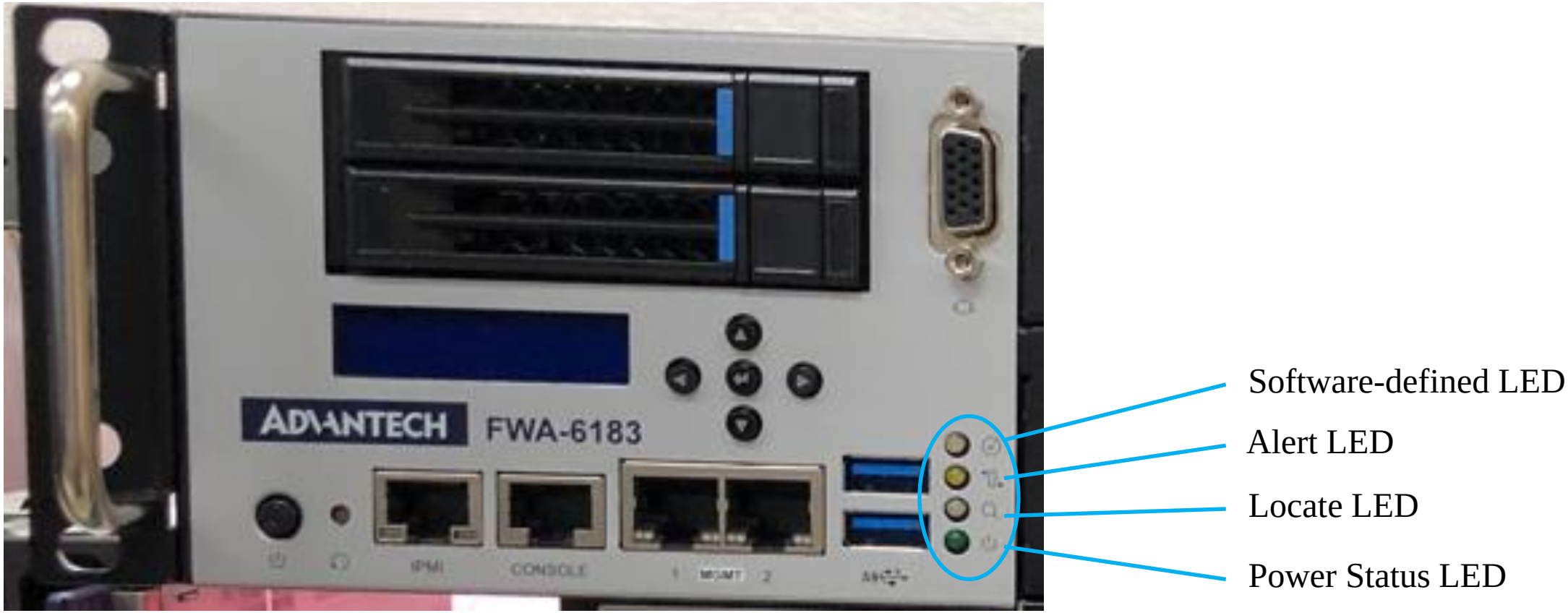
Agenda

- ❑ Server Front Side
- ❑ Server Rear Side
- ❑ DIMMs Population
- ❑ Access the device via console
- ❑ WebUI Access
- ❑ OS installation

Server Front Side [1/12] – Overview



Server Front Side [2/12]- System LEDs



Server Front Side [3/12]-Storage Swap

- ❑ Step #1 Press the button.

- ❑ Step #2 Grab the tray handle and pull it evenly towards you.

Server Front Side [3/12]-Storage Swap

- Step #3 Install the drive with four screws contained in the disk screw kit.

- Step #4 Insert the tray into the disk bay until the drive engages with the connector on the HDD backplane. Then, click the handle back to the tray.

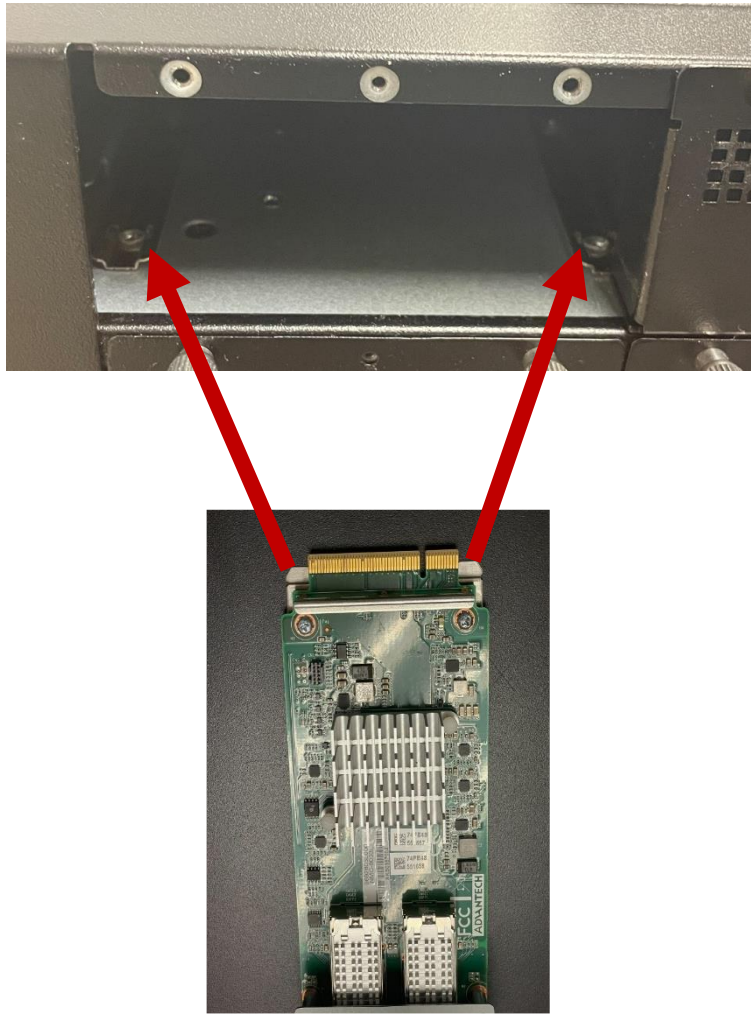
Server Front Side [4/12]- Remove NMC card

❑ Step #1 Loosen screws.

❑ Step #2 Pull toward you.

Server Front Side [5/12]- Install NMC card

❑ Step #1 Align NMC bottom plate to guiding slide rails.



❑ Step #2 Tighten screws.

Server Front Side [6/12]- Remove top cover

❑ Step #1 Remove 3 screws.

System left side.

System right side.

System rear side.

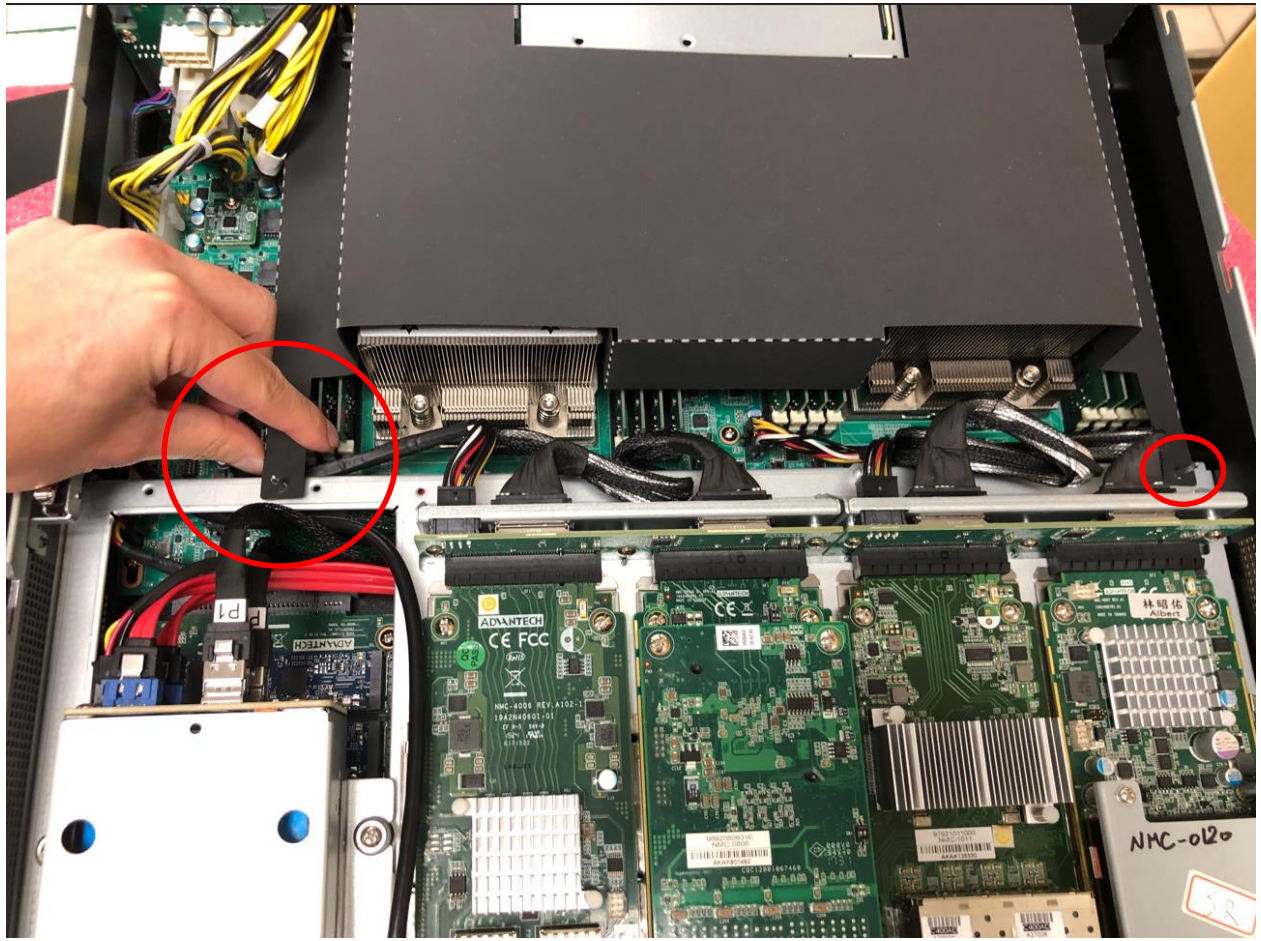
Server Front Side [6/12]- Remove top cover

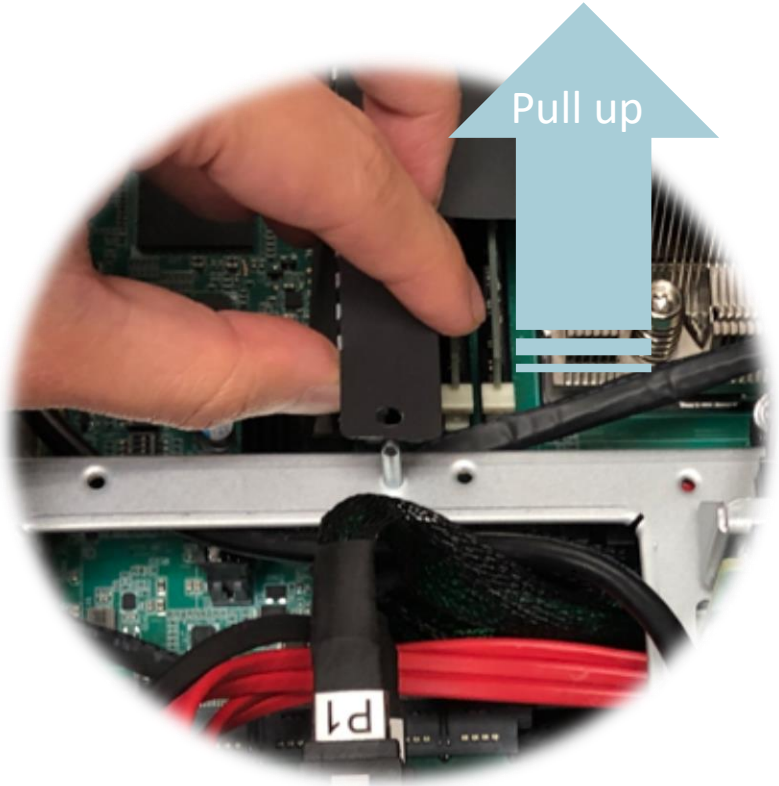
- Step #2 Push top cover from front to rear, then remove it.

Top down without top cover.

Server Front Side [7/12]- Remove air duct

❑ Step #1 Slightly pull up air duct on both side till it out of guiding pins.



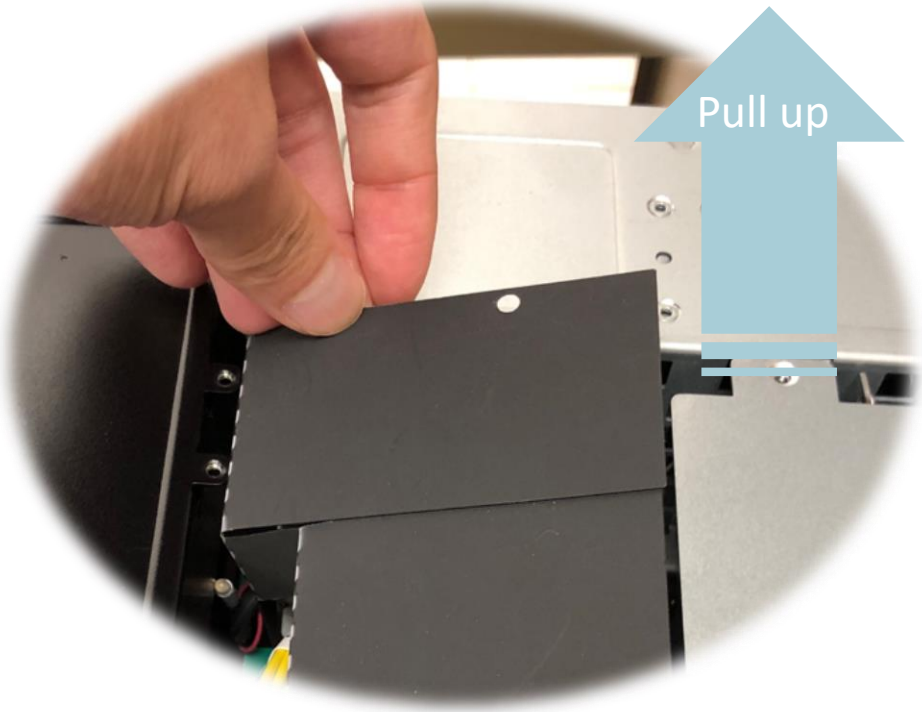


Server Front Side [7/12]- Remove air duct

❑ Step #2 Slightly push backward and remove air duct from the guiding pin.

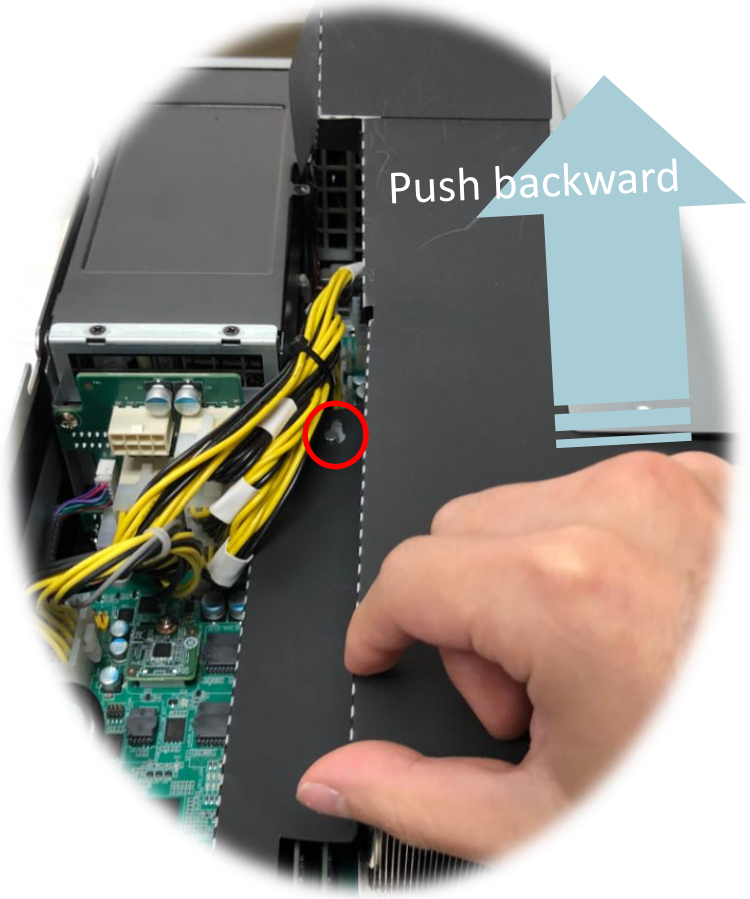
Server Front Side [7/12]- Remove air duct

❑ Step #3 Slightly pull up air duct away from the guiding pin.



Server Front Side [7/12]- Remove air duct

❑ Step #4 Slightly push backward and remove air duct from the guiding pin.

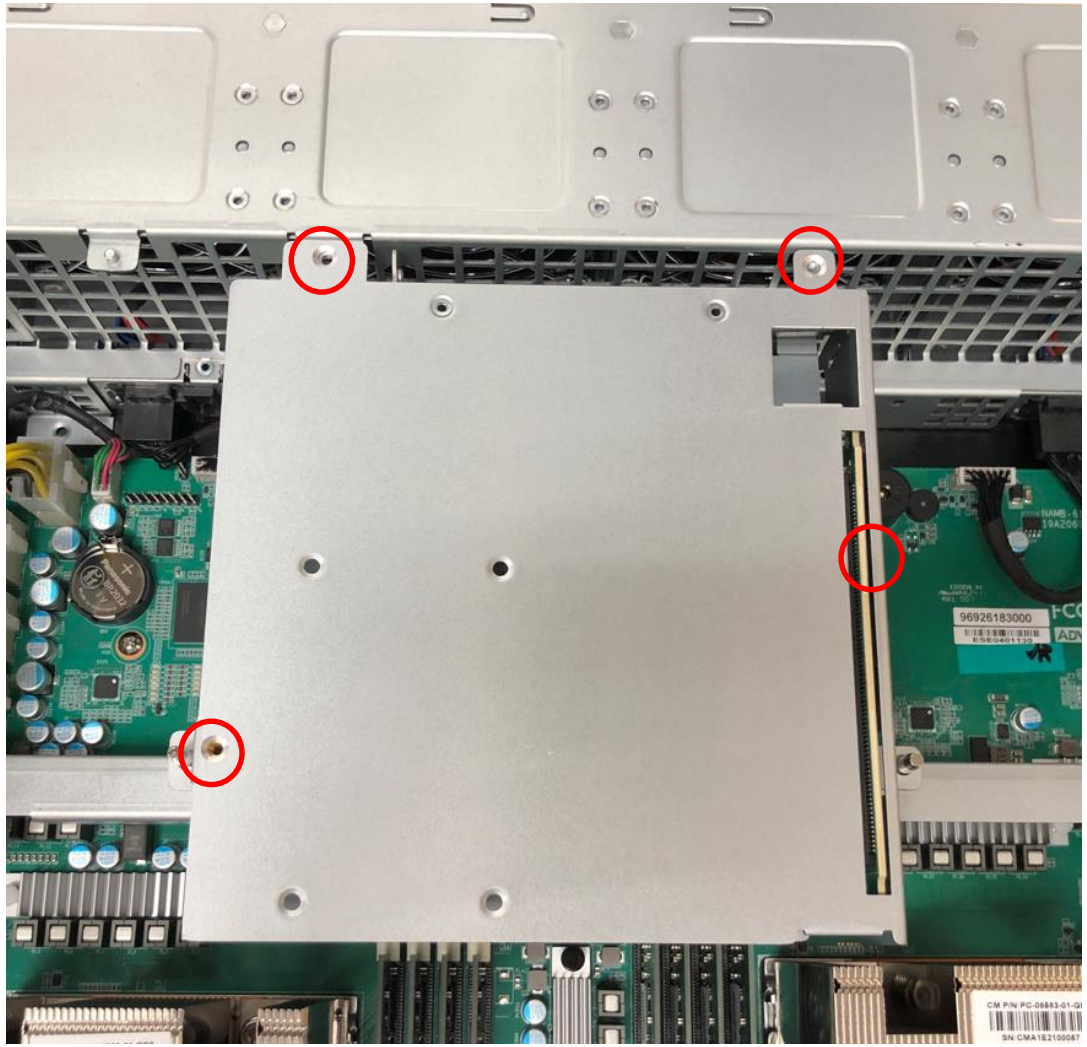


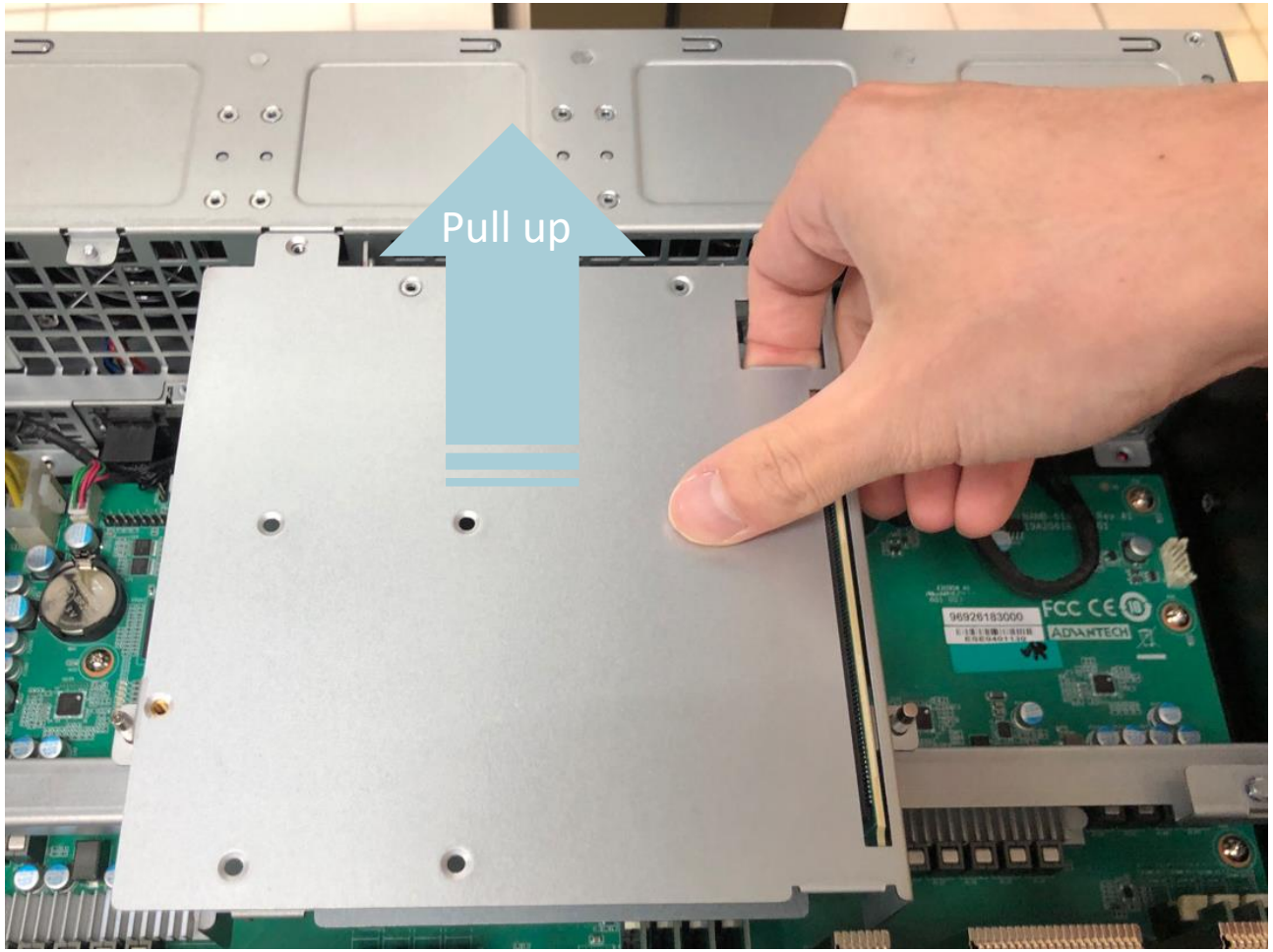
Server Front Side [7/12]- Remove air duct

- Step #5 Would see DIMM slots and CPU sockets when air duct removed.

Server Front Side [8/12]- Remove PCIe cage

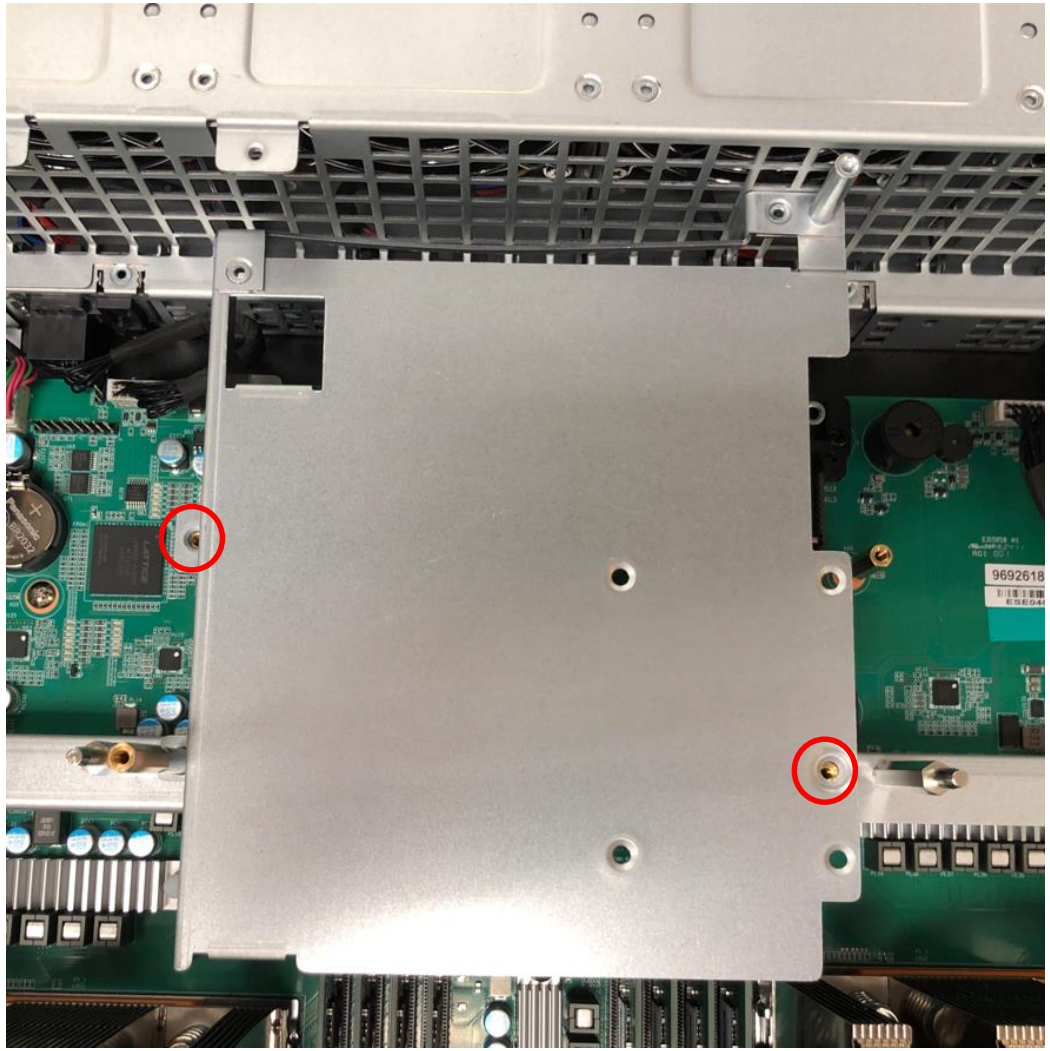
❑ Step #1 Remove four screws and pull up top cage.

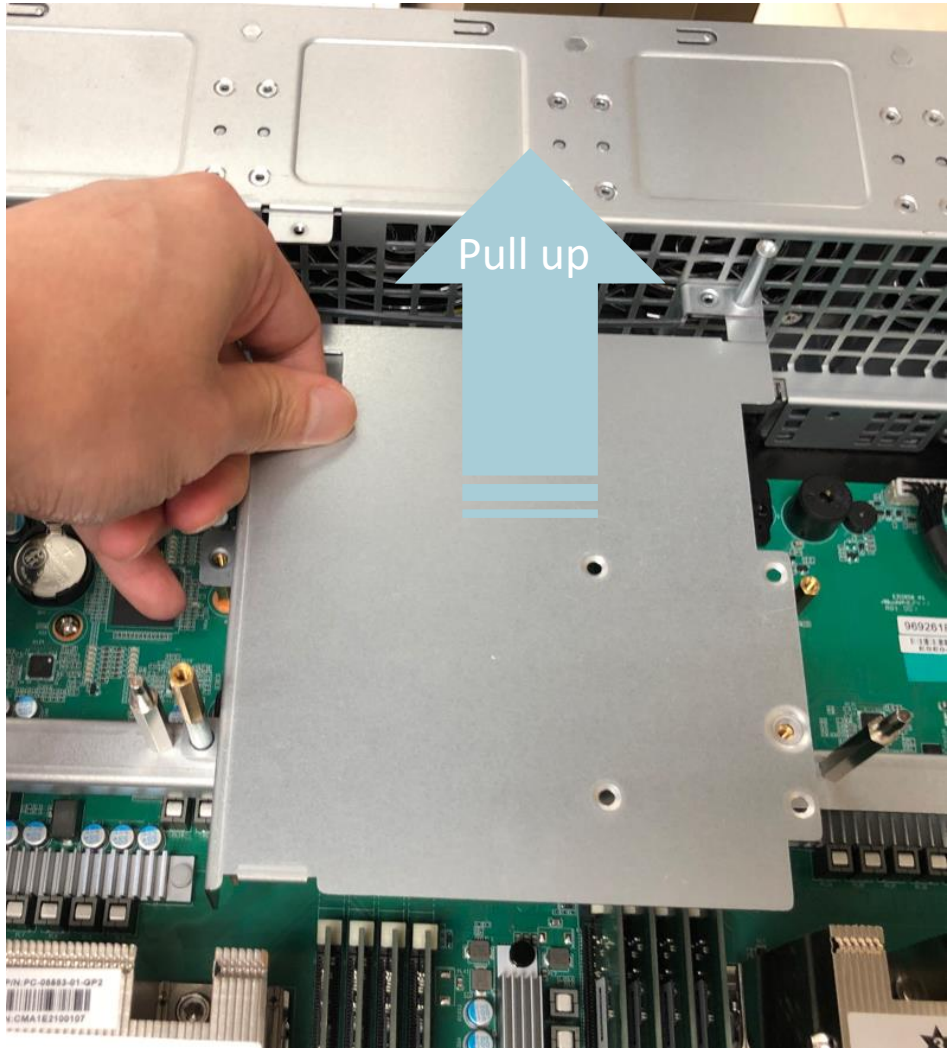




Server Front Side [8/12]- Remove PCIe cage

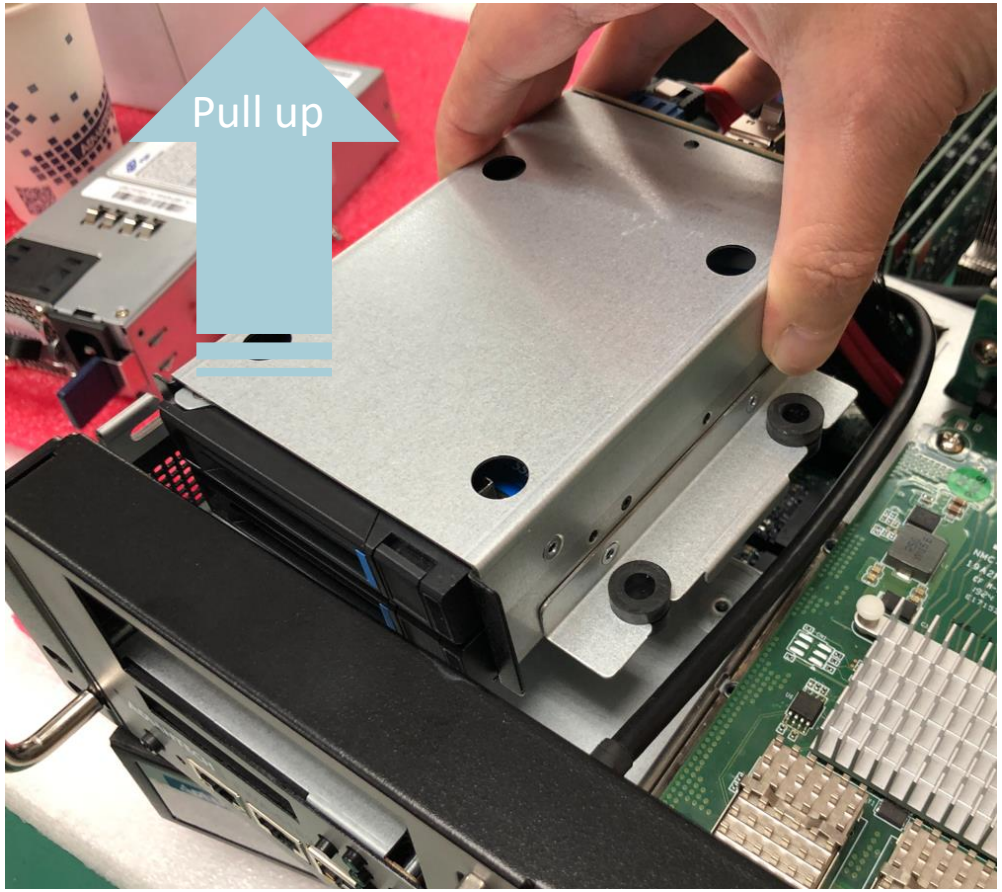
❑ Step #2 Remove two screws and pull up second cage.





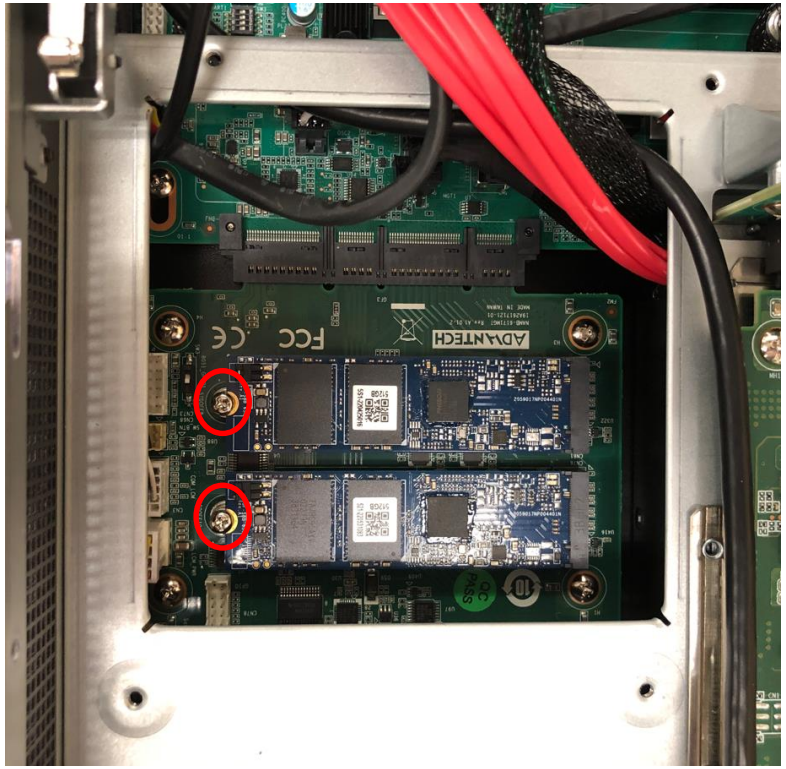
Server Front Side [9/12]- Install M.2 disk

❑ Step #1 Remove screws and pull up 2.5’ disk cage.



Server Front Side [9/12]- Install M.2 disk

❑ Step #2 Slightly hang backward 2.5’ disk cage. Tighten screws after install M.2 disks.

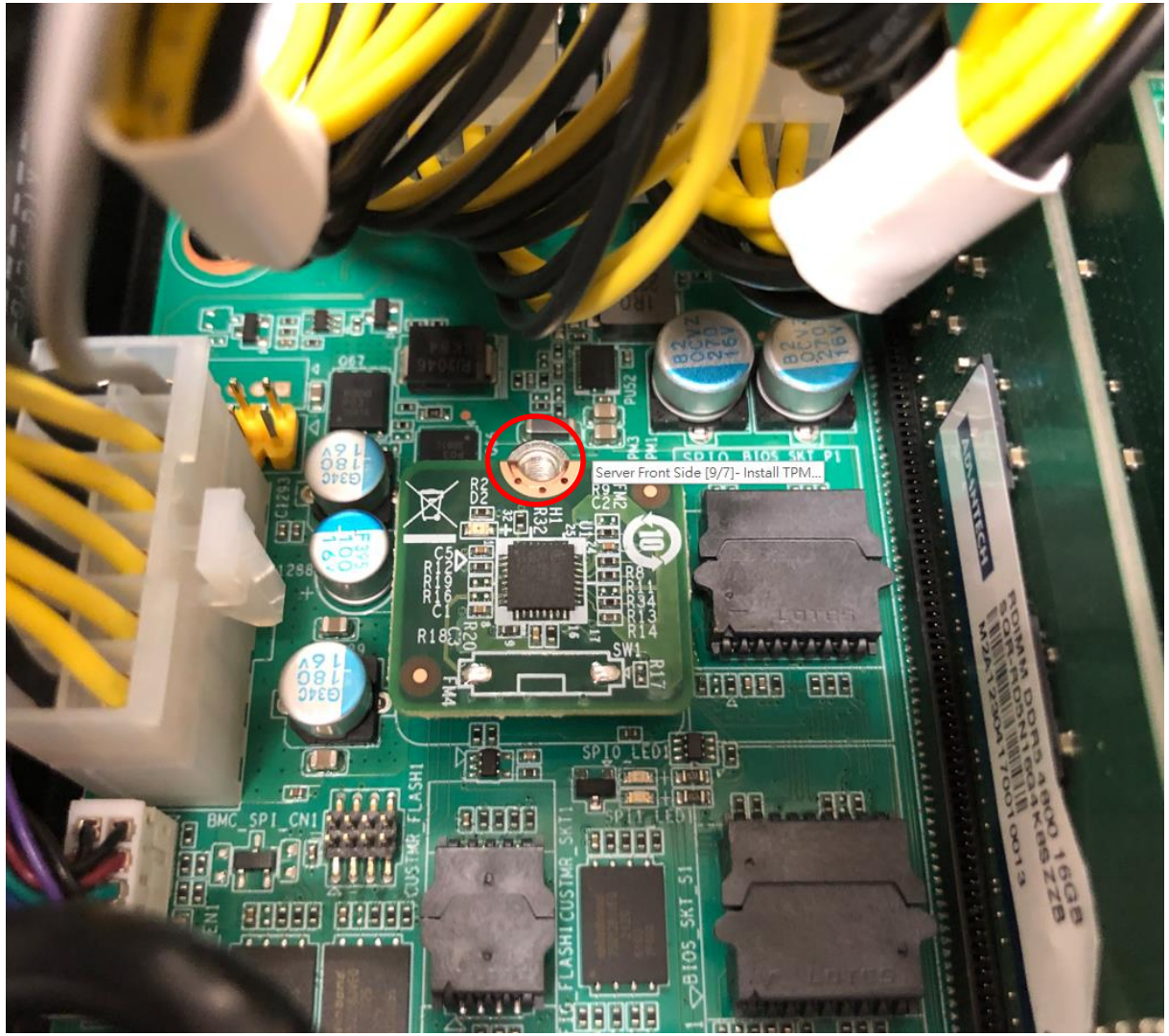


Server Front Side [9/12]- Install TPM module

❑ Step #1 Align connector from TPM module to the pin header on motherboard.

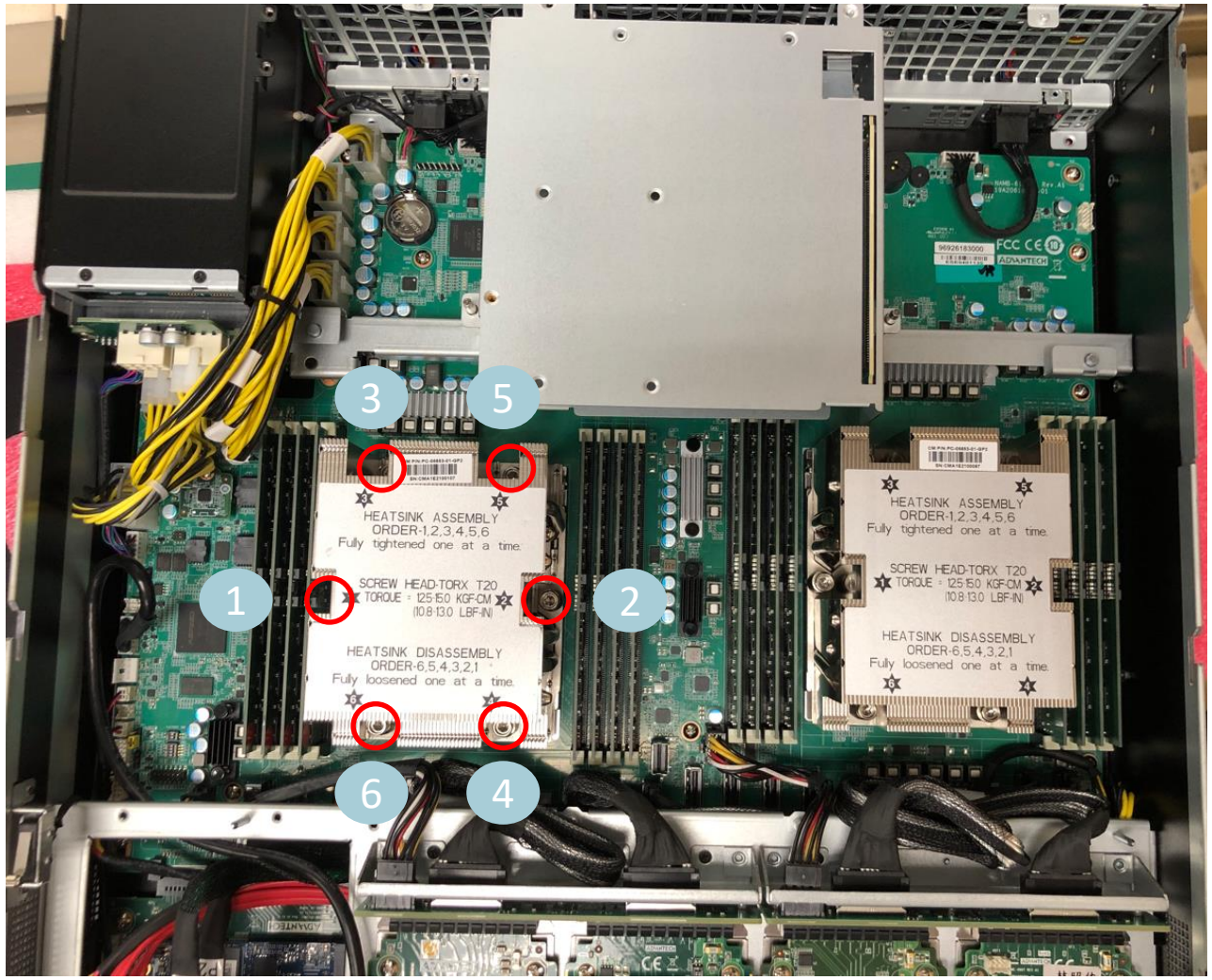
Server Front Side [9/12]- Install TPM module

- Step #2 Tighten the screw after installation.



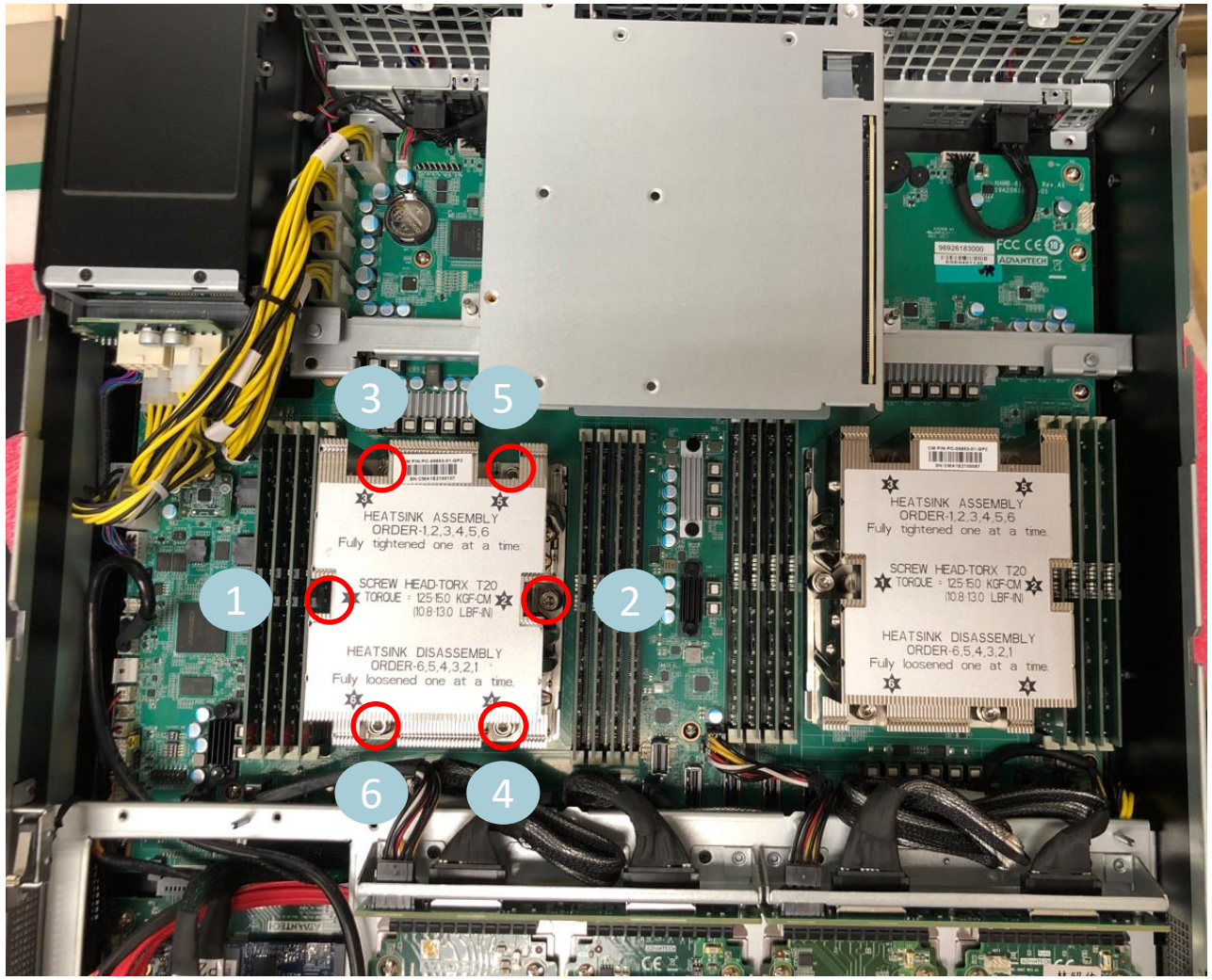
Server Front Side [10/12]- Remove CPU heatsink

- Step #1 Use T20 screwdriver. Fully loosen one at a time. ORDER-6,5,4,3,2,1.



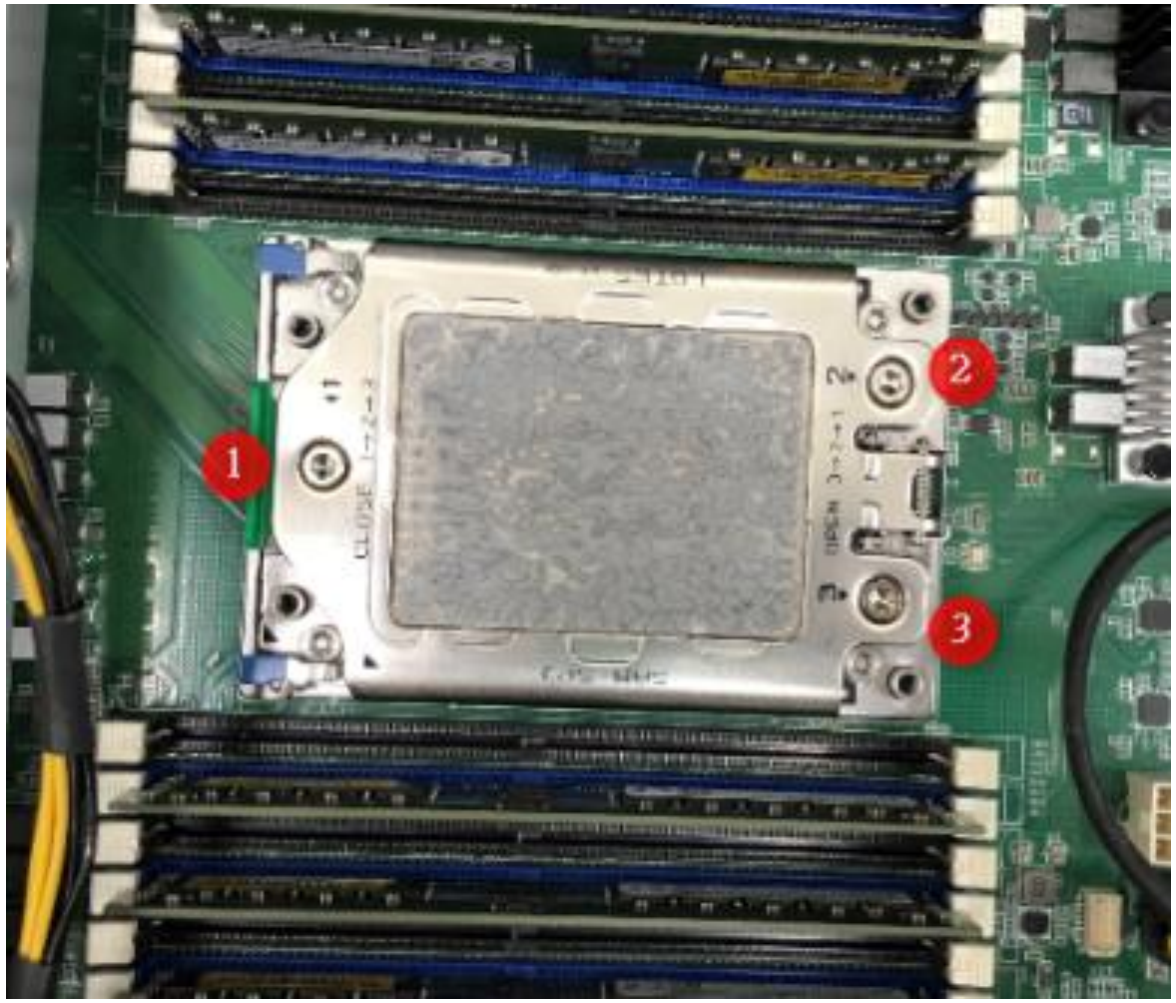
Server Front Side [11/12]- Install CPU heatsink

❑ Step #1 Use T20 screwdriver. Fully tighten one at a time. ORDER-1,2,3,4,5,6.



Server Front Side [12/12]- Remove/Install CPU

- Step #1 Follow number 3 to 1 unlocking CPU socket via screwdriver T20, reverse numbers when lock the socket back.

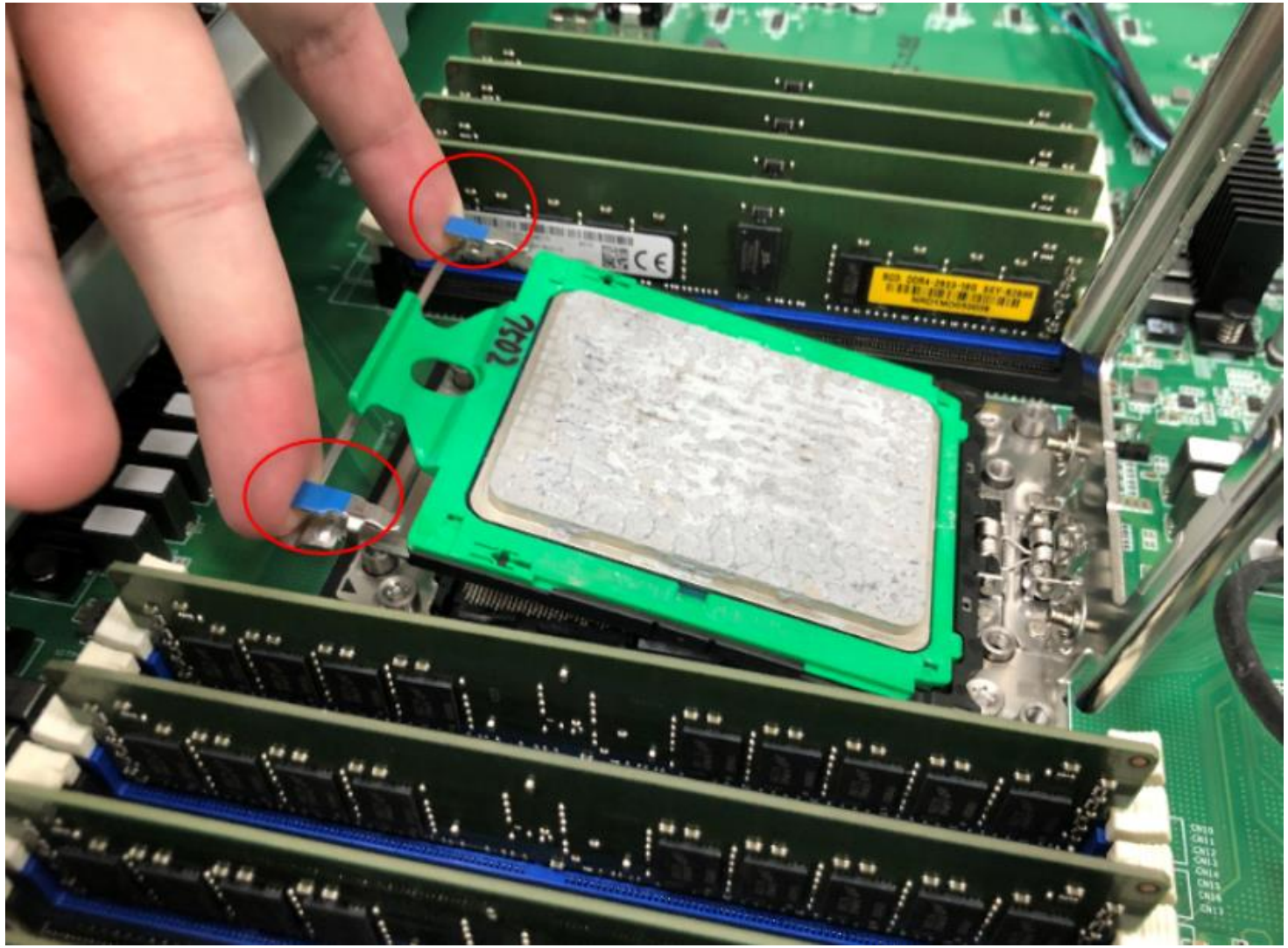


- AMD: How to Install AMD EPYC™ Processors.

https://www.youtube.com/watch?v=qDB5ht47iKg

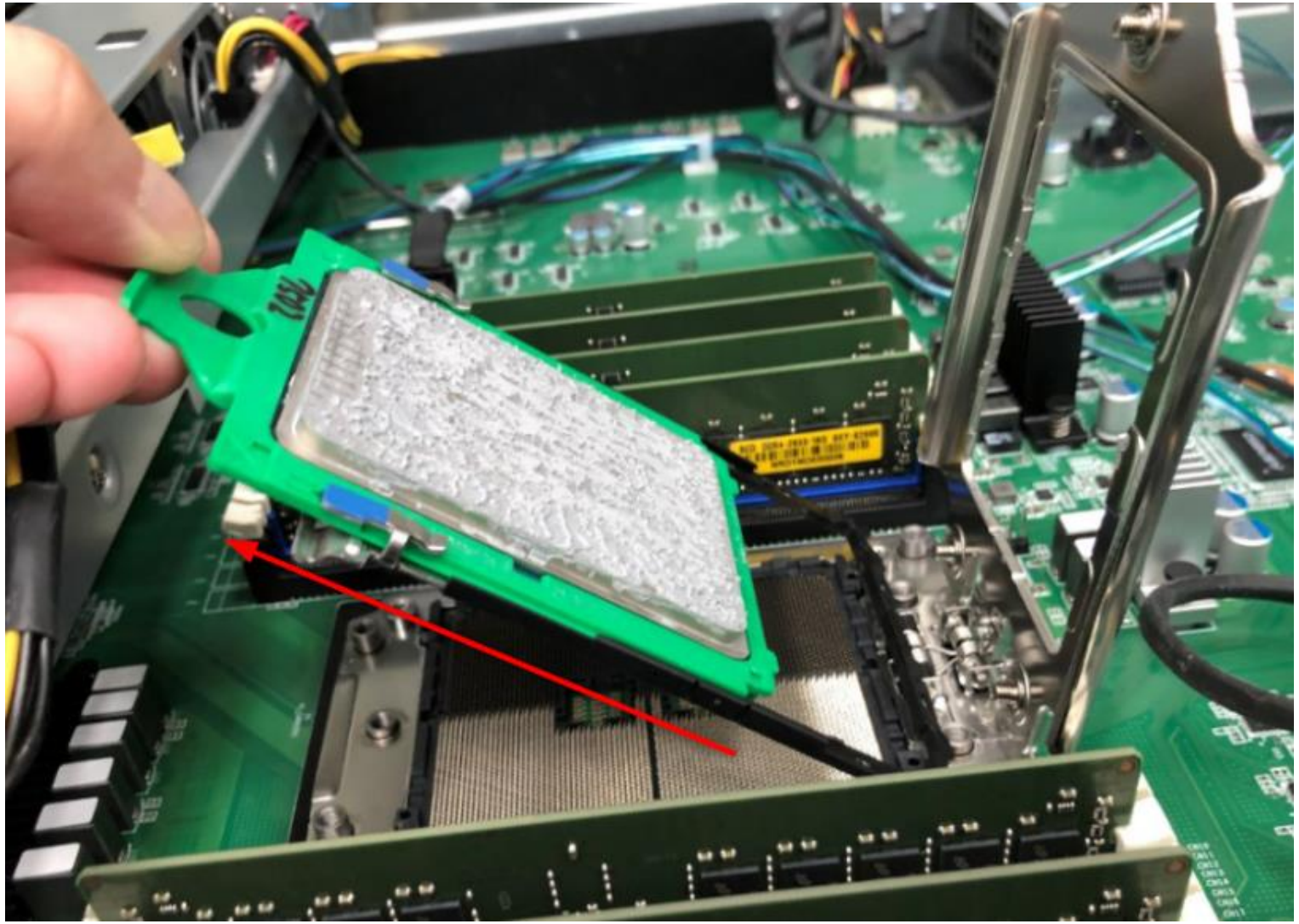
Server Front Side [12/12]- Remove/Install CPU

❑ Step #2 Slightly pull up from blue lockers.



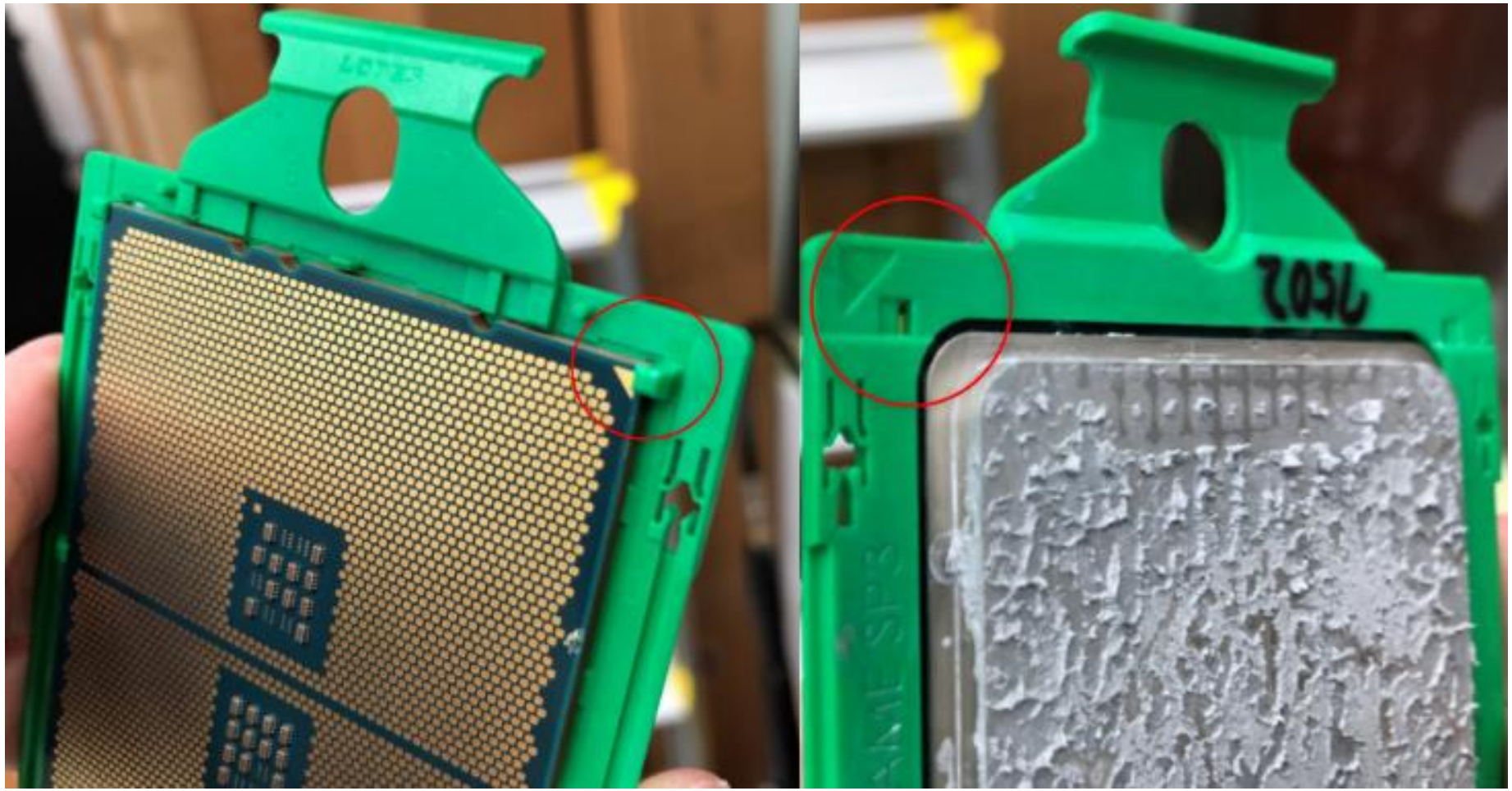
Server Front Side [12/12]- Remove/Install CPU

❑ Step #3 Pull out CPU carrier from tray.



Server Front Side [12/12]- Remove/Install CPU

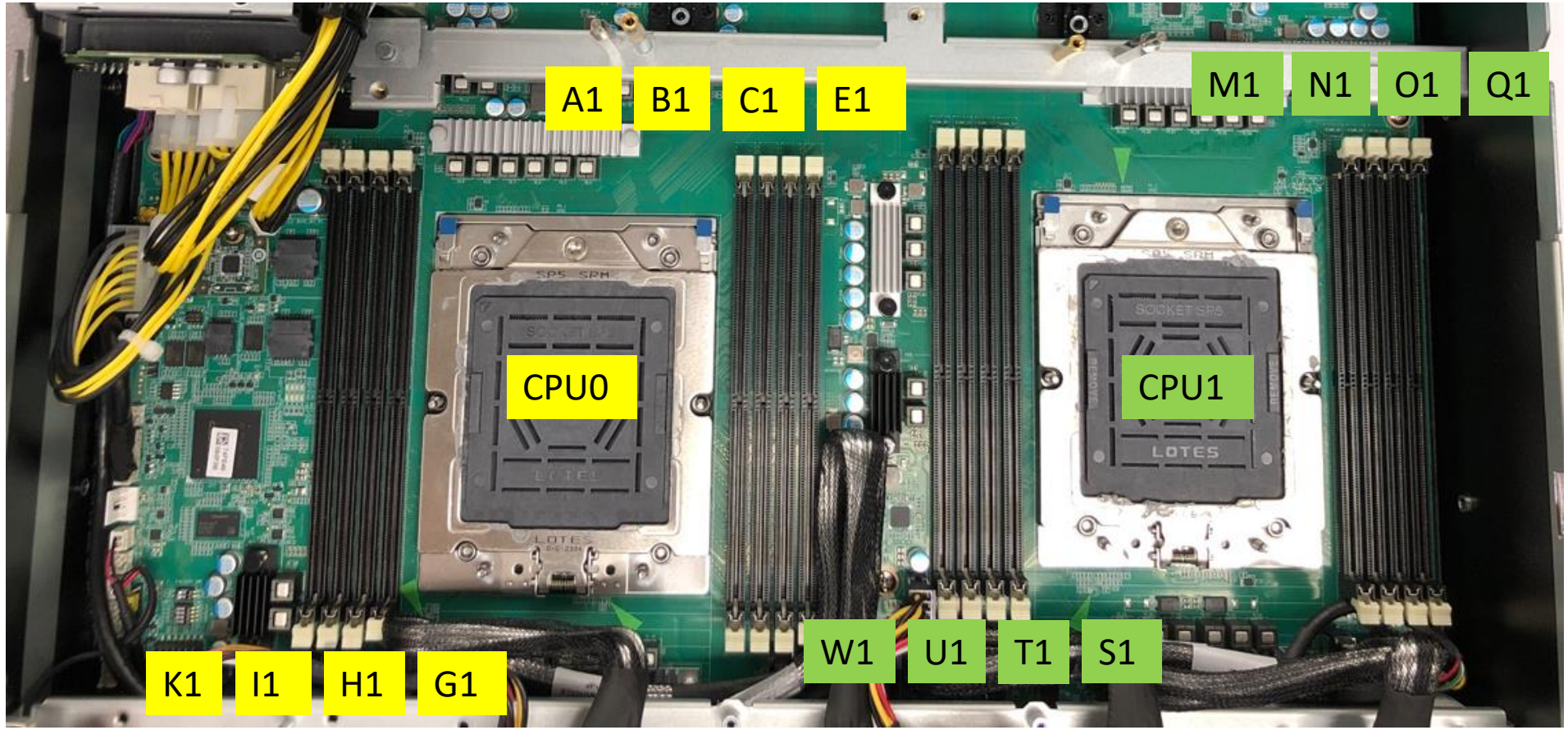
- Step #4 Replace CPU from the holder, make sure CPU arrow sign align to CPU holder when assemble it back.



Server Rear Side

DIMMs Population [1/5]- Notes

System Rear



System Front

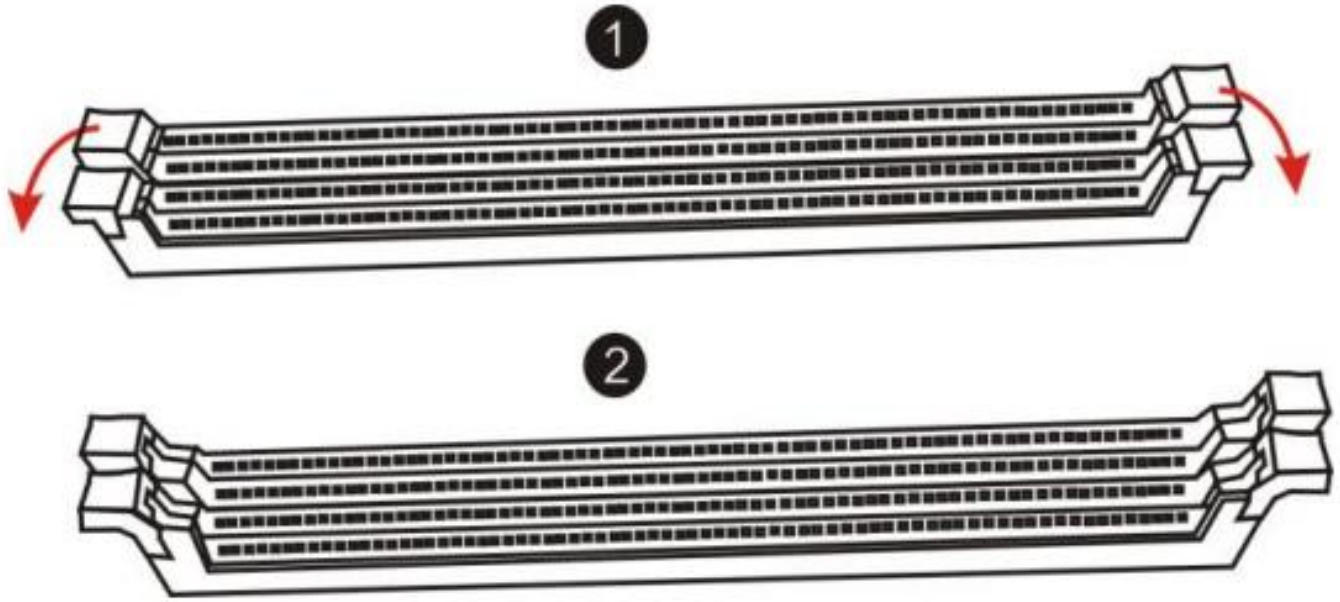
DIMMs Population [2/5]- Notes

- AMD EPYC™ 9004 Series Memory Population Recommendations
https://www.amd.com/content/dam/amd/en/documents/epyc-technical-docs/user-guides/amd-epyc-9004-ug-memory-population-recommendations.pdf

CPU1	W1	U1	T1	S1		M1	N1	O1	Q1
CPU0	K1	I1	H1	G1		A1	B1	C1	E1
1						DDR5			
2				DDR5		DDR5			
4		DDR5		DDR5		DDR5		DDR5	
6		DDR5	DDR5	DDR5		DDR5	DDR5	DDR5	
8	DDR5	DDR5	DDR5	DDR5		DDR5	DDR5	DDR5	DDR5

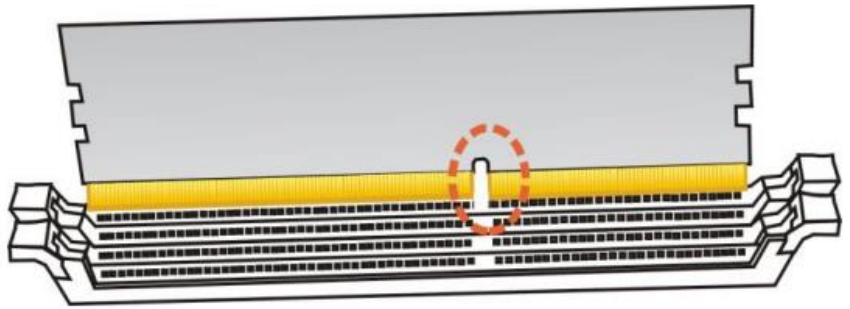
DIMMs Population [3/5]- Opening DIMM latches

❑ Step#1 – Open the latches on the left and right sides of the DIMMs by turning it outwards as indicated by the arrows below:

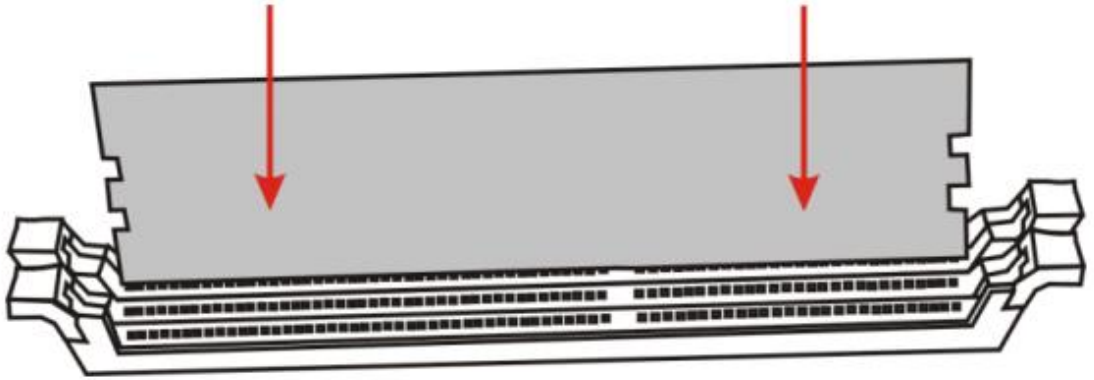


DIMMs Population [4/5]- DIMM Key Alignment

- Step#2 – Select DIMM orientation so that the keys in the DIMM module and socket match.



- Step#3 – Insert the DIMM from the top using the guide rails on the left and right of the DIMM sockets.



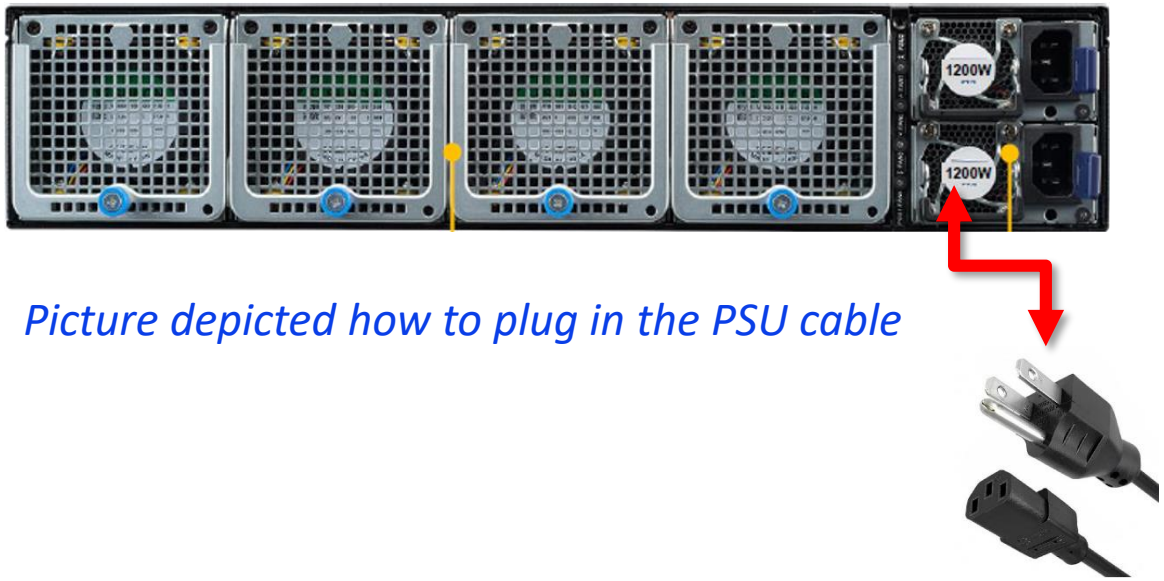
DIMMs Population [5/5]- fixing DIMM in the Socket

❑ Step#4 – Put your thumbs near the right and left end of the DIMM and press down the DIMM evenly until the white latches fully close with a click.

❑ Step#5 – Please install windshield cover & riser module in system after CPU & DIMM module Installation finish, and closes cover.

Access the device via Console [1/3]

- Step#1 – Power on the device
  - Prerequisite:
    - ✓ Get AC 100-240V @ 50-60Hz, full range.
  - Device will boot:
    - ✓ Correct behavior: you can hear FAN rotating in maximum speed for a while then down and also the Power LEDs should light up.

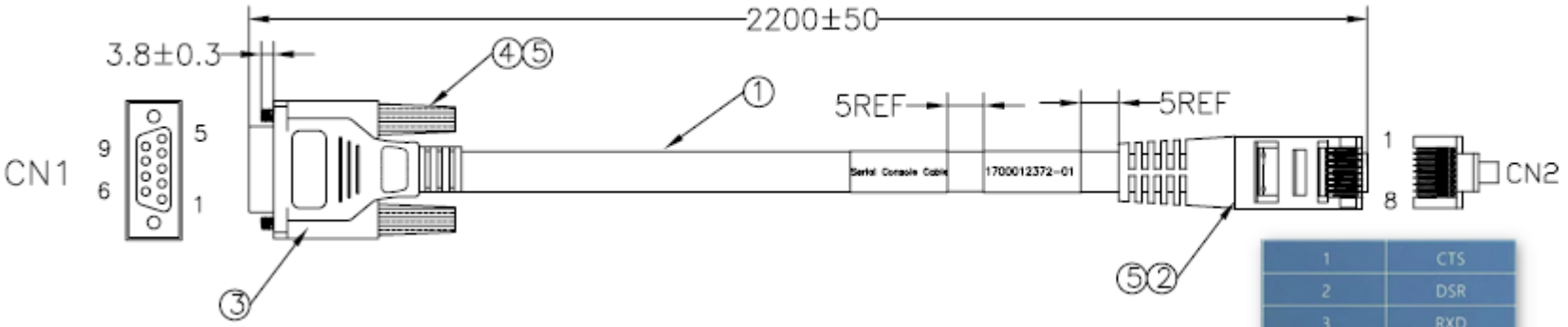


Picture depicted how to plug in the PSU cable

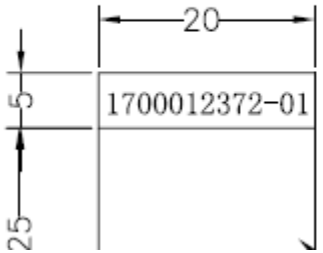
Picture depicted the light color while device booting

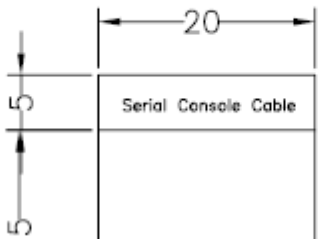
Access the device via Console [2/3]

❑ Step#2 – prepare a console cable, check pin definition of RJ45 as below.



1	CTS
2	DSR
3	RXD
4	GND
5	GND
6	TXD
7	DTR
8	RTS





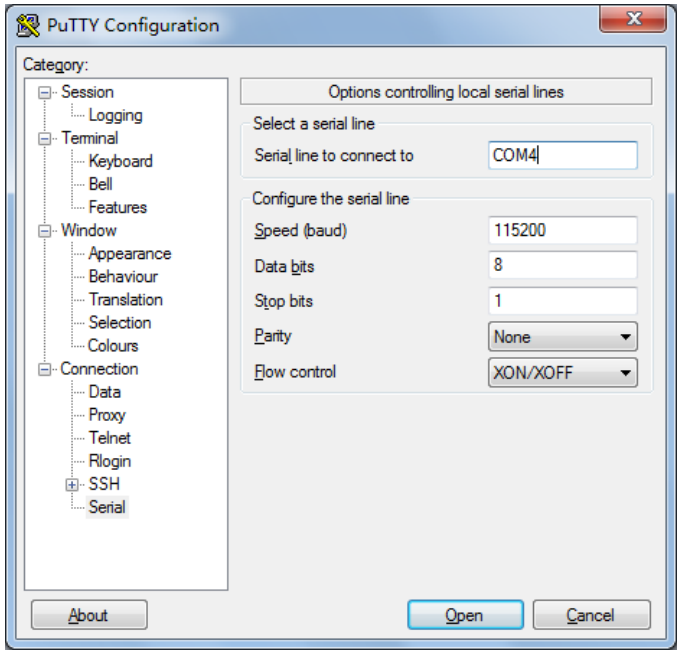
WIRE LIST

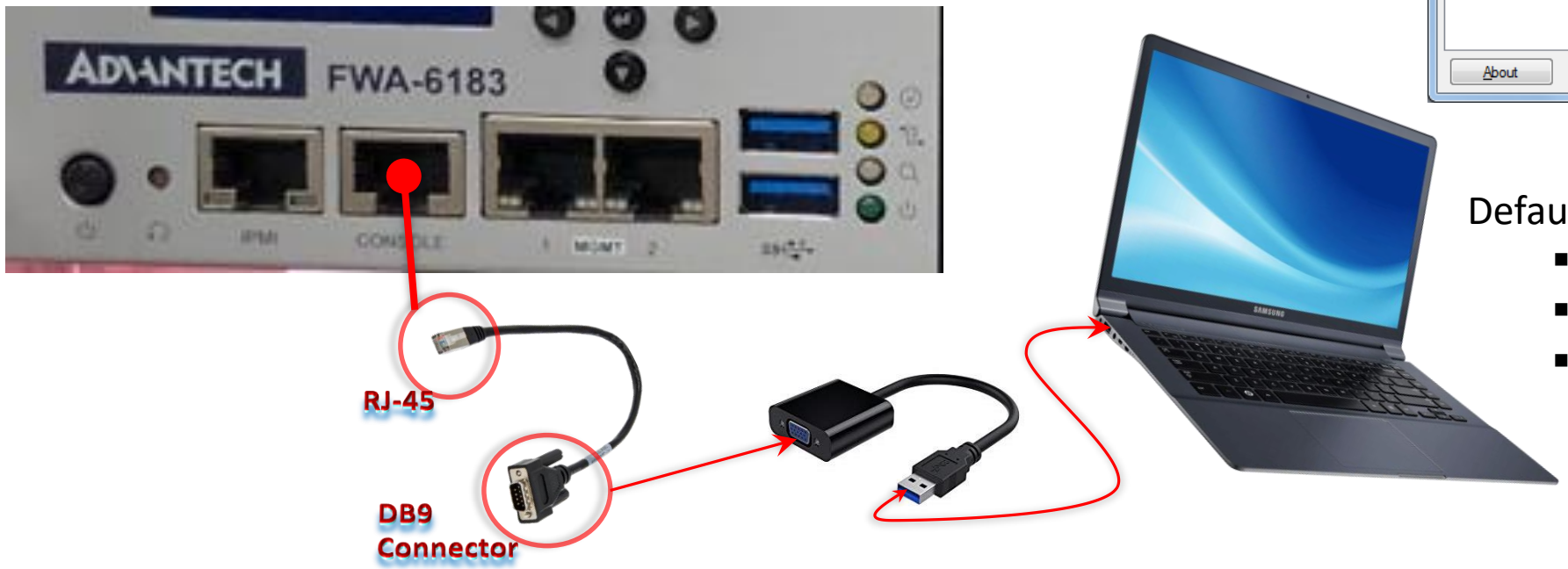
CN1	CN2	COLOR
2	3	White/Orange
3	6	Orange
4	7	White/Green
5	4	Green
6	2	White/Blue
7	8	Blue
8	1	White/Brown
9	5	Brown

Access the device via Console [3/3]-

- Step#3 – Access the device.
  - Prerequisite:
    - ✓ Console cable and PC + Terminal
  - Connect the PC to the server console.

Terminal settings

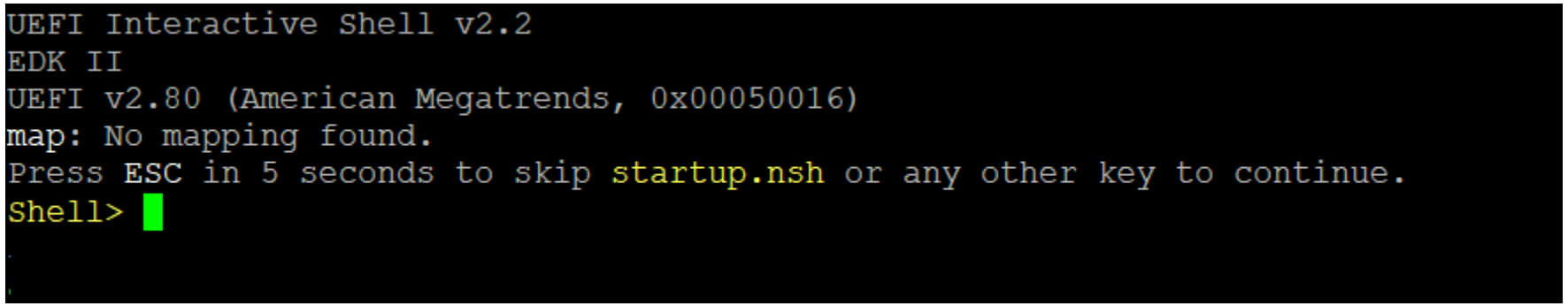




Default BIOS baud-rate Setting:

- Baud rate: 115200
- Data bits : 8
- Stop bits: 1

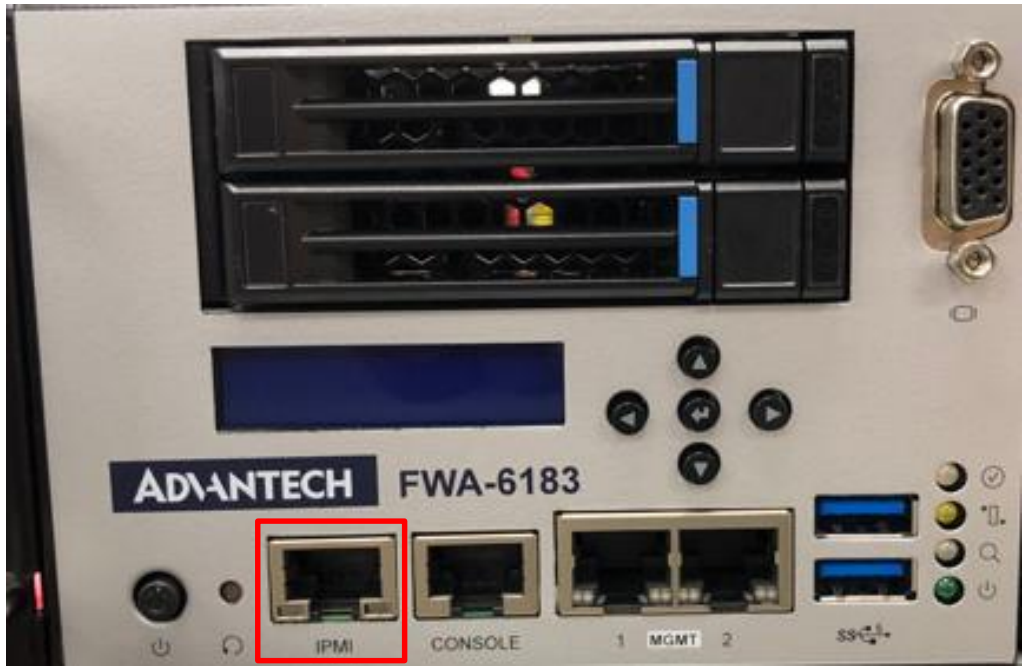
Access the device via Console



Picture depicted successfully server access via console

WebUI access

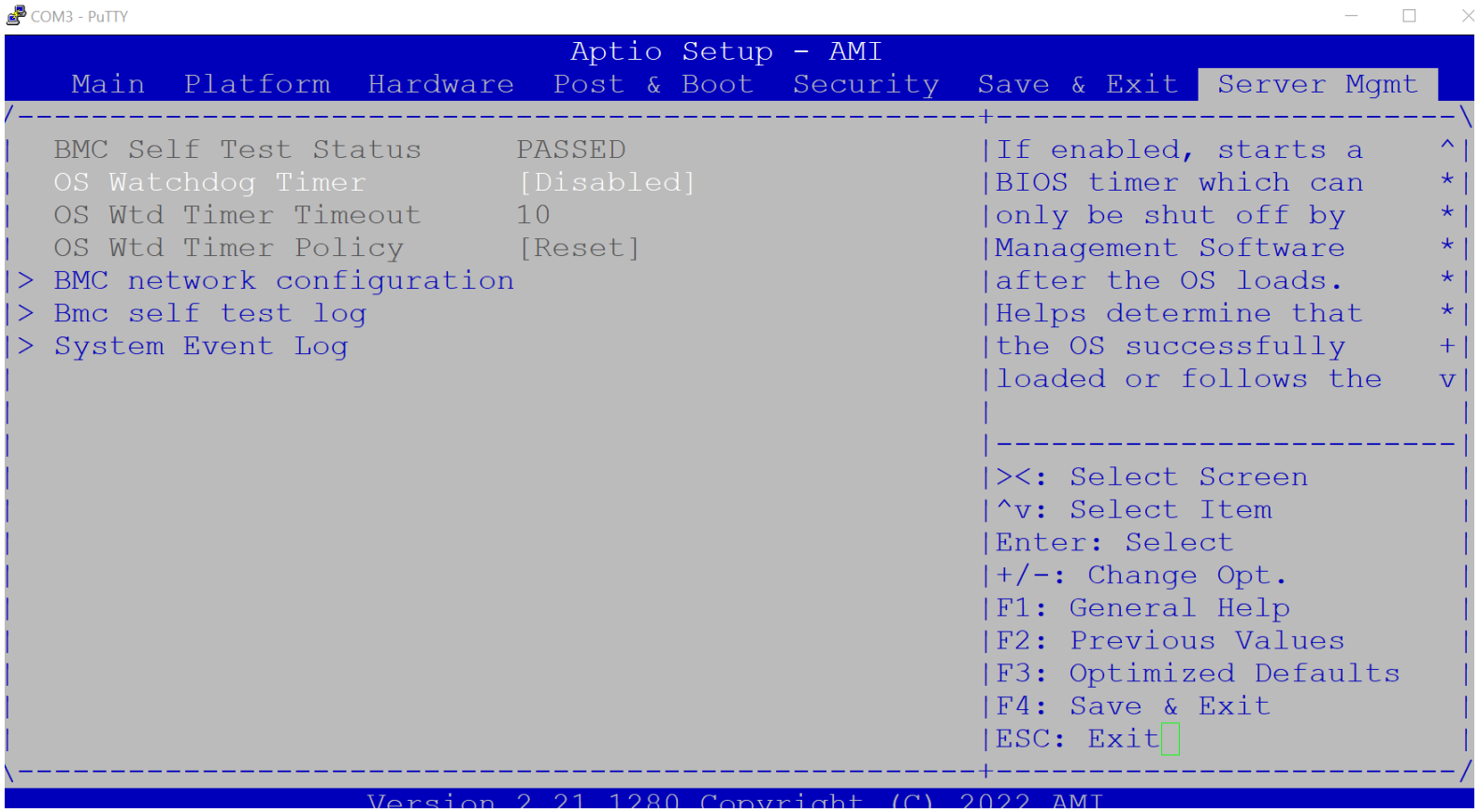
- In order to access the WebUI, we need to configure the IP address. In this part, we will describe how to set up WebUI IP address via BIOS



BMC LAN channel #1

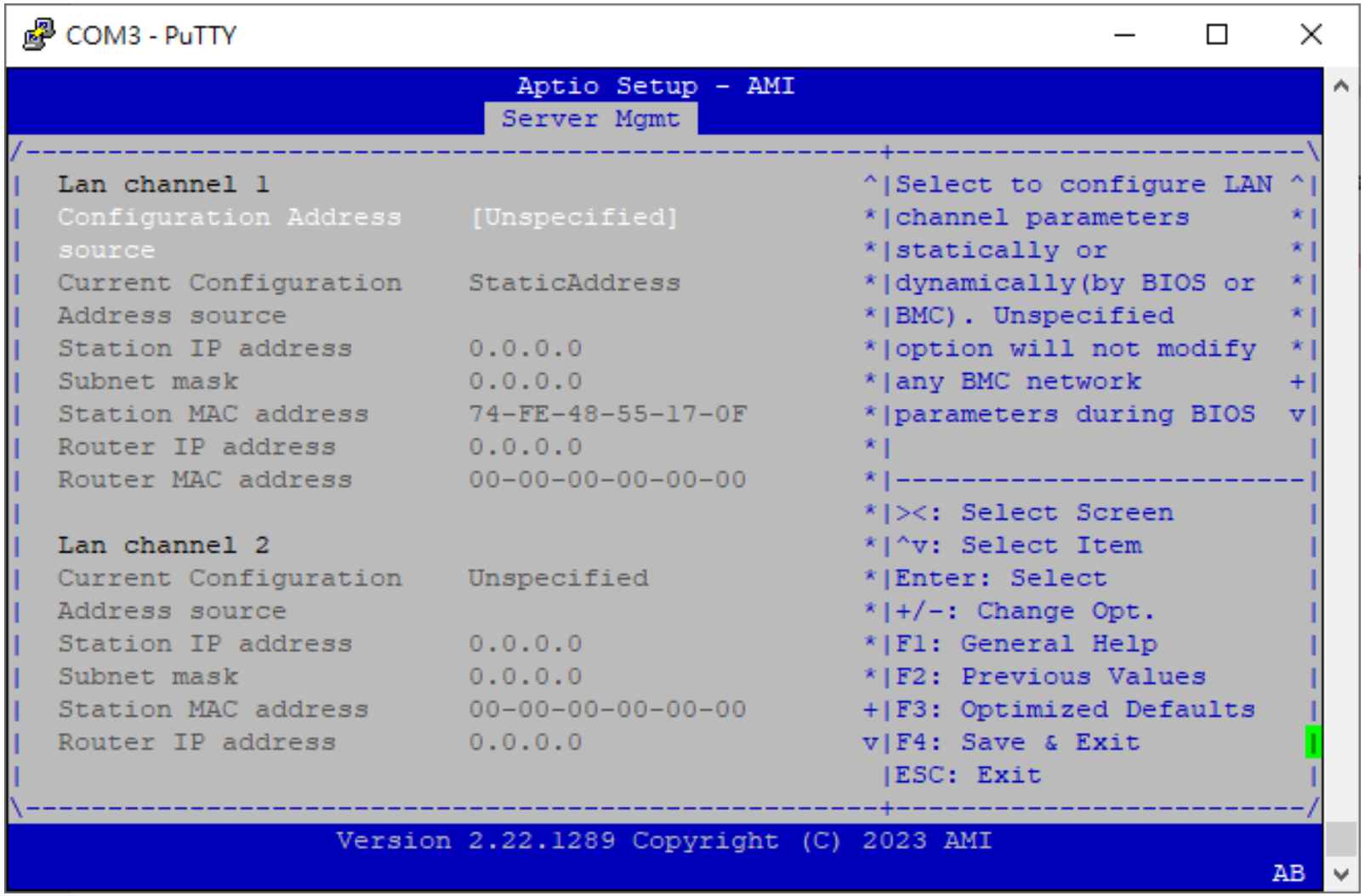
WebUI [1/3]- Configure BMC IP from BIOS

- Step#1- Press **DEL** after boot up to enter BIOS, select "**Server Mgmt**" page, and Choose "**BMC network configuration**"



WebUI [2/3]- Configure BMC IP from BIOS

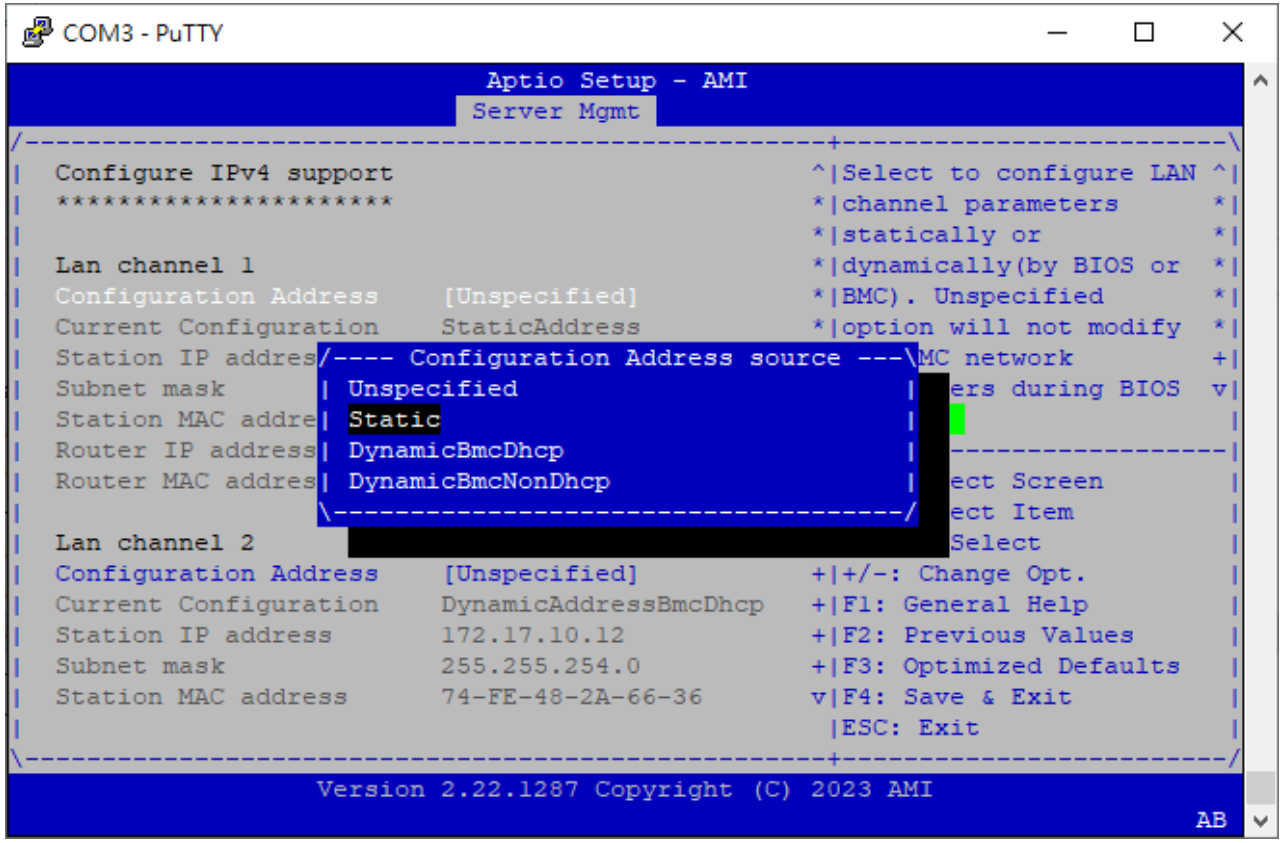
- Step#2- login “--BMC network configuration—” page



WebUI Configure BMC IP from BIOS

- Step#3- Set "**Configuration Address**" -> "**Static**", and then **key in the IP address and subnet mask**.

*You could also choose DHCP as well to obtain an IP address from your DHCP server.



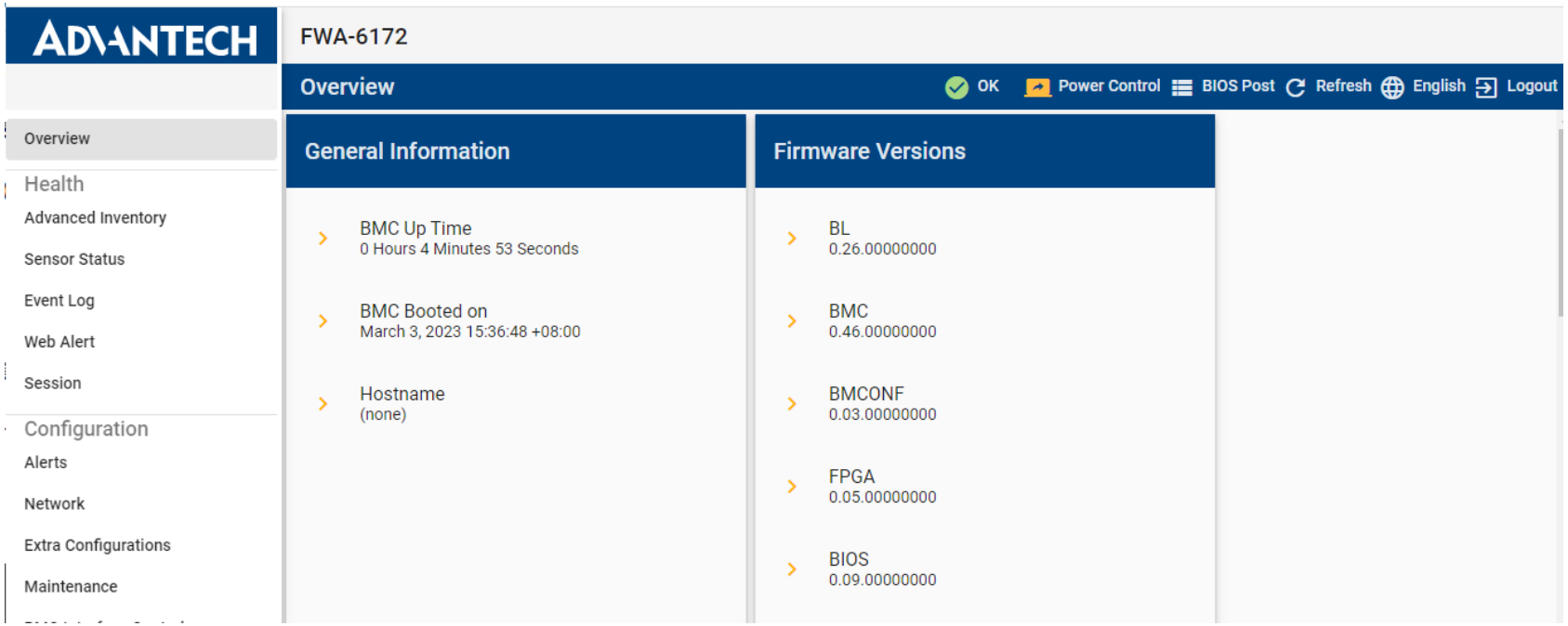
- Step#4- Save and Exit

WebUI access from browser

After completing the steps above (WebUI IP configured via either BIOS or ipmitool), open your favorite browser the enter the WebUI IP as below: https://BMCIP

The default login credentials:

- User: administrator
- Password: advantech



Node Explorer User Manual
https://www.advantech.com/support/details/manual?id=1-1MU1KB1

OS installation

You could install your OS by following one of the below methods:

Method #1- Via Console Redirection

Reference: https://advantech-ncg.zendesk.com/hc/en-us/articles/360017541092-How-to-install-Linux-in-non-VGA-system-with-console-redirection

Method #2- Via BMC Web UI

Reference: https://advantech-ncg.zendesk.com/hc/en-us/articles/360047012912-How-to-install-operating-system-remotely-through-BMC-Web-UI-Remote-Storage-

Go Together,

We Go Far and Grow Big