

SKY-820V3 (Standard with NVMe) Quick Start Guide

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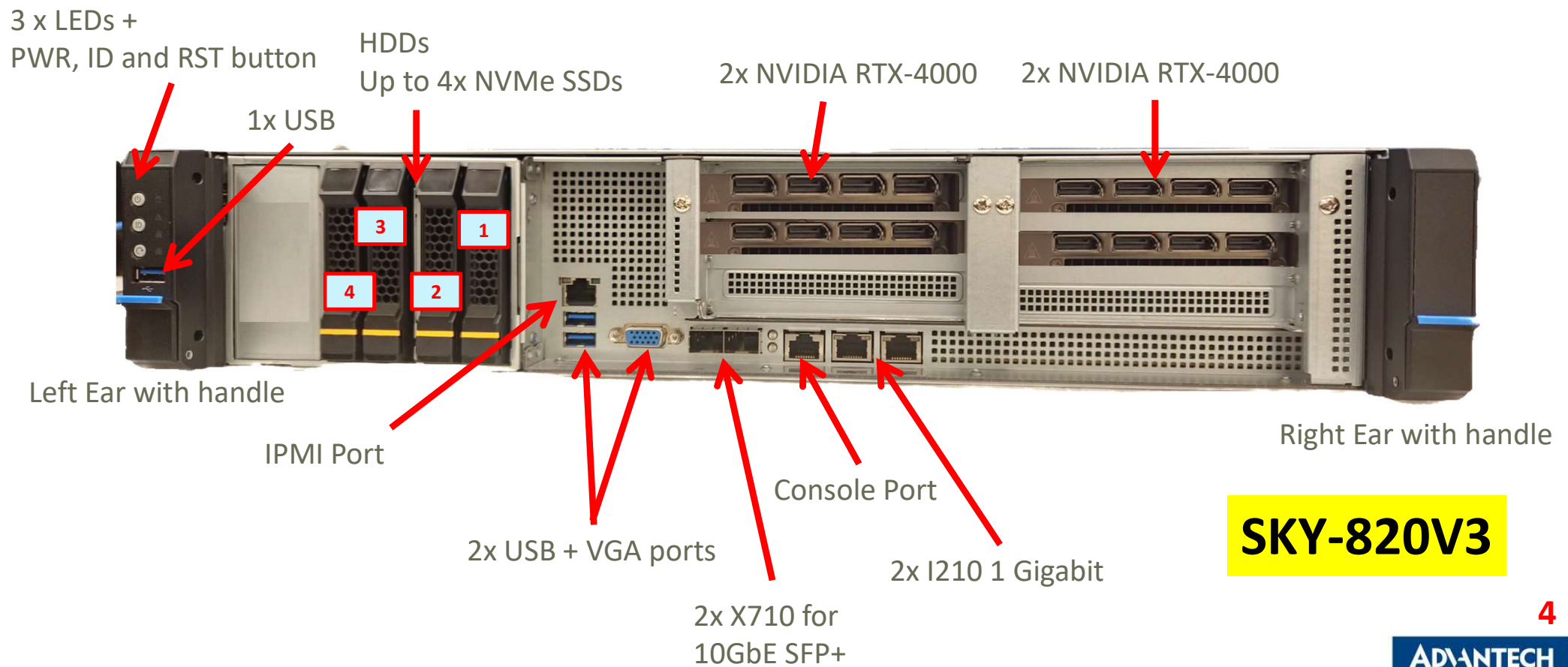
History

Version	Date	Handled by	Note
Draft	2024/04/12	Sam168.Chang	
1.0	2024/04/15	Sam168.Chang	DIMM population rule
1.5	2024/04/24	Sam168.Chang	DIMM table update
2.0	2025/04/25	Sam168.Chang	Revised Standard
2.5	2025/05/25	Sam168.Chang	With GPU cards / NVMe HD

Agenda

- ❑ System Front View & Ear Module Design Spec.
- ❑ System Rear View & PCIe Slots
- ❑ CPU location, DIMM slot ID & Population rule
- ❑ Access the BIOS via Monitor with VG port
- ❑ Operation System Installation through VGA port
- ❑ Access the Server via Console port
- ❑ BMC IP address configure from BIOS & Access via browser

Product Outlook – Front View

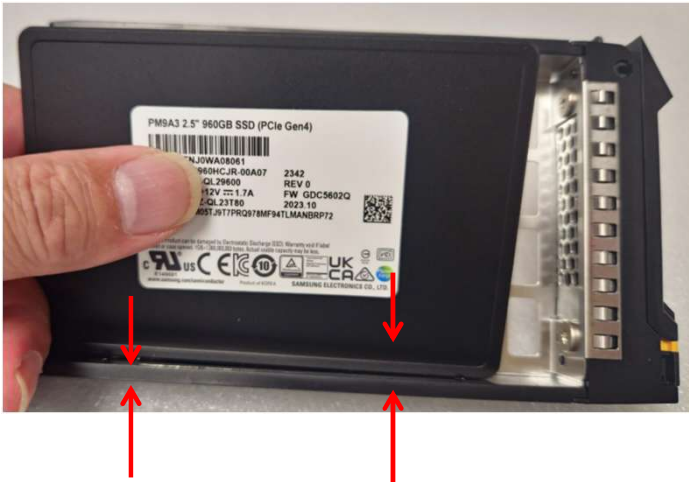


HDD LED



Item	LED	Color	Description	Condition
A	Power LED	n/a	Stay off	Fault
		Blue	Solid on	Present
		Green	Stay on	Access
B	Activity LED	Red	Solid on	Failure
			1Hz blink	Rebuild
			4Hz blink	Locate

Product Outlook – Assembly 2.5” HDD [1/2]



Step 1: 2.5” HDD side screw hole align HDD tray emboss feature at arrow position.

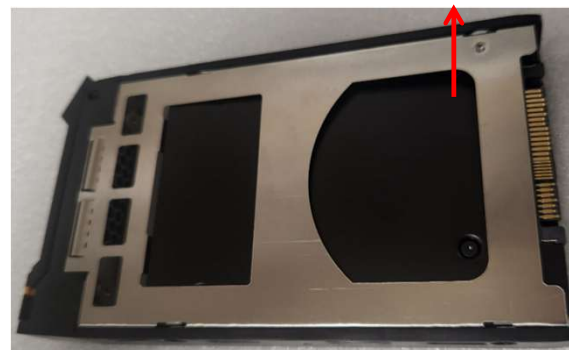


Step 2: Press HDD’s right side.

OK



NG



Step 3: Need check “SLIDE-HOLD_R” to keep flat.

Product Outlook – Remove 2.5” HDD [2/2]



Step 1: Hold HDD tray at HDD tray center.



Step 2: Press and twist HDD tray at arrow position.

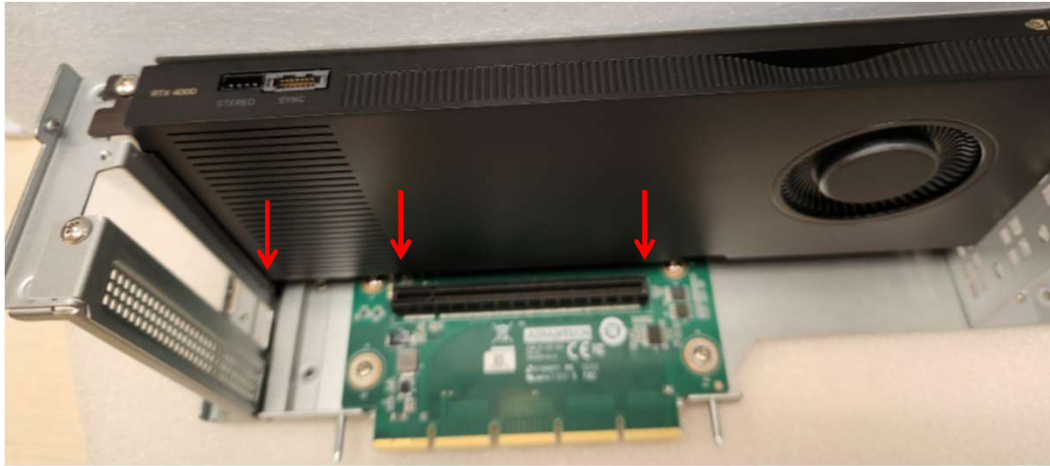


Step 3: Hold and Rotate from the HDD end side.



Step 4: Remove HDD from HDD tray.

Product Outlook – Assembly RTX-4000 [1/2]



Step 1: Align the GPU card with both the PCIe slot and the bracket hole, and insert it in the direction of the arrow.



Step 2: Use the same procedure for the second card, then finally secure the screws at the red-circled positions.

Product Outlook – Assembly RTX-4000 [2/2]



Step 3: Attach the GPU power cables to both cards.
Please pay attention to the connector's orientation; do not insert it upside down.

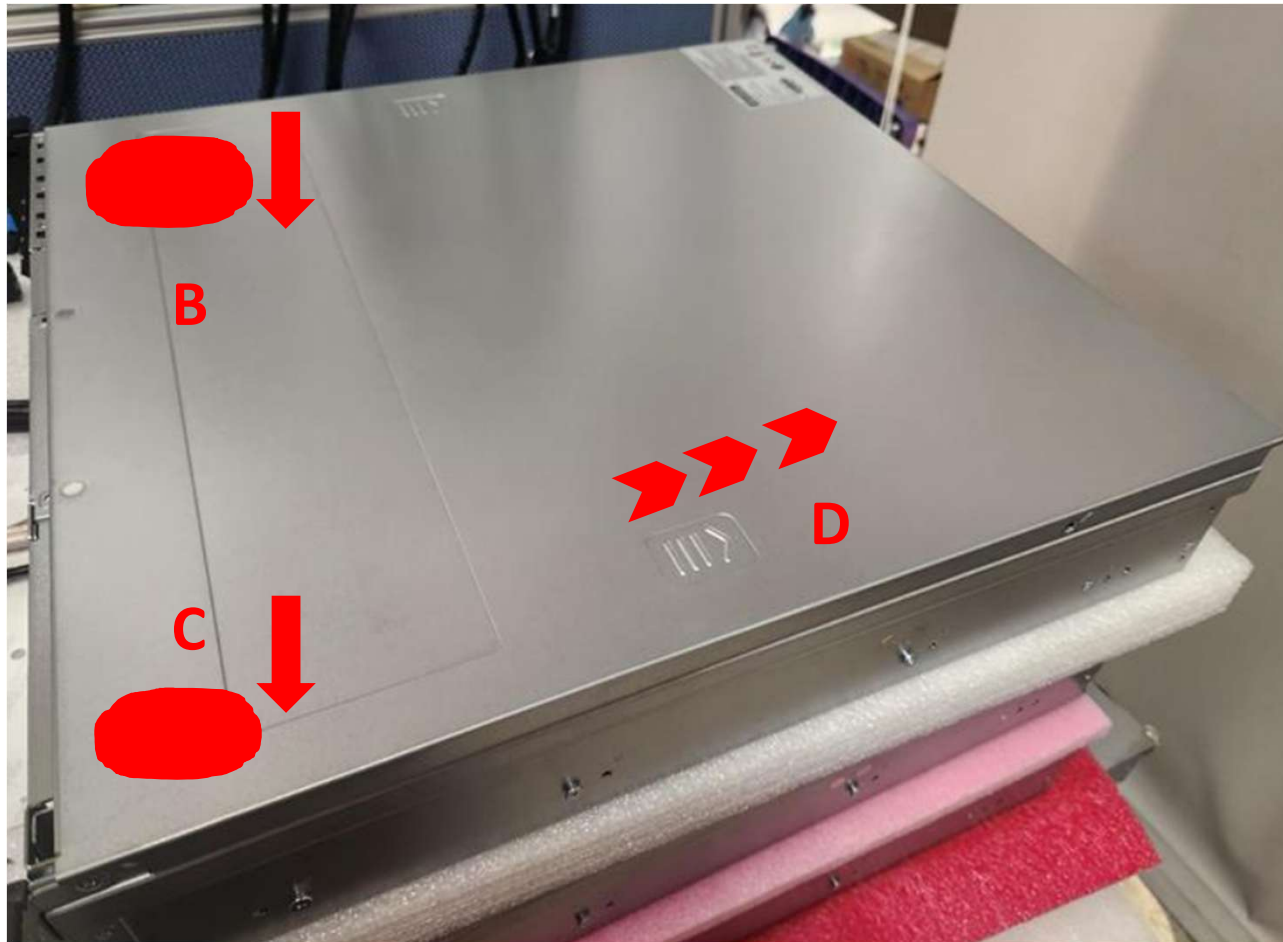


Remove the cards one at a time, in sequence:

1. Fully loosen the screws.
2. Unplug the cards from riser cage.
3. Detach each GPU power cable one by one

Note: Each connector has a locking latch.

Product Outlook – Assembly Cover



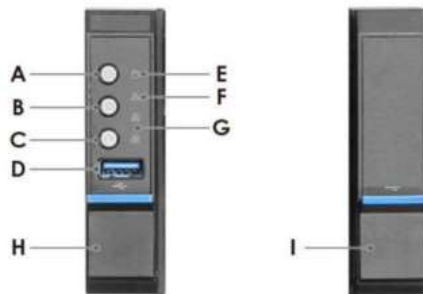
Step by Step

Step 1: Use plam press down cover on **B** & **C** area

Step 2: Follow the direction of **D** to open the cover

Ear Module Design Specification

- Left Ear Design



Label	Icon	Indicator, button or connector
A		Power Button
B		UID Button
C		Reset Button
D		USB3.0
E		HDD Activity LED
F		System Alarm LED
G		LAN1, LAN2 Activity LED
H		Rack Handle (Left)
I		Rack Handle (Right)

LED	State	Color	Description [↵]
Power LED [↵]	On	Blue	System is turned on [↵]
	Off	Off	System power off [↵]
UID [↵]	On	Blue	Unit being identified [↵]
	Off	Off	No identification request
Status LED [↵]	Blinking	Red	Hardware monitor fail (Note 1)
	Off	Off	No failure [↵]
HDD LED [↵]	On	Amber	When HDD is present
	Blinking	Amber	When HDD is busy [↵]
	Off	Off	When HDD is not present, or present but not busy
LAN1 / LAN2 LED [↵]	On	Green	When Ethernet is link up [↵]
	Blinking	Green	When networking is active [↵]
	Off	Off	When Ethernet is not linked up [↵]

Product Outlook – Rear View

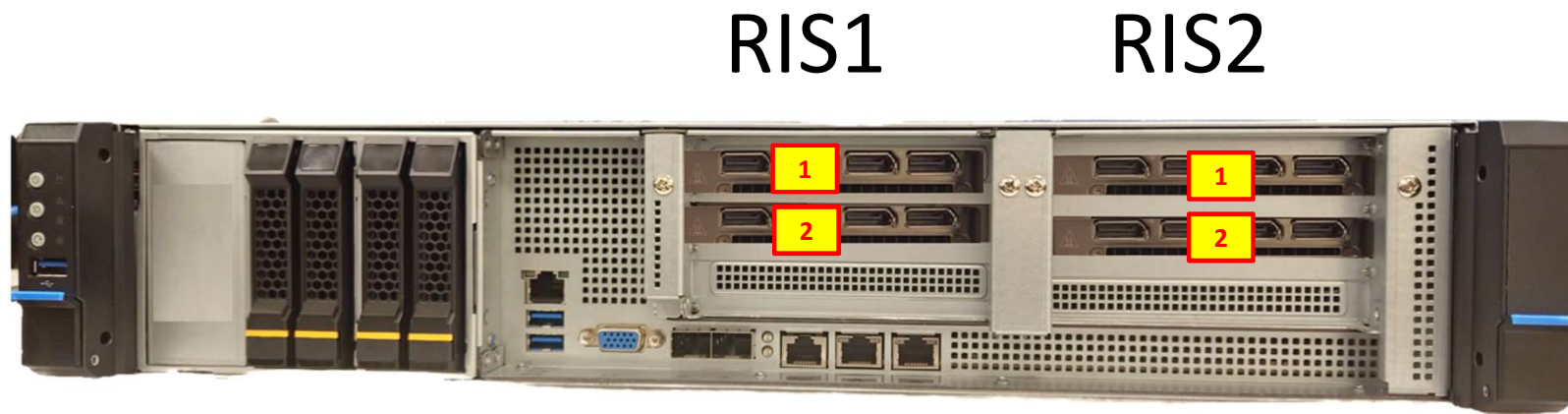
4x 8038 Hot-swappable Fans



2x ACBEL R1CA2801A redundant power supply

SKY-820V3 PCIe Slots

- PCIe Slots ordering, top to down.



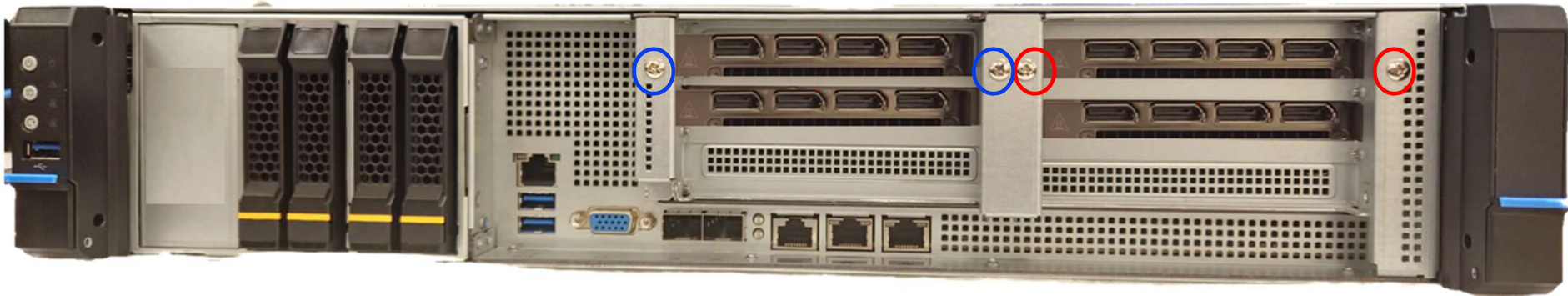
BMC Sensor

RISER1_PRSENT	56h	ok	11.0	Device Present
RISER1-TMP	57h	ok	11.0	29 degrees C
RIS1_PCIE1_PRSENT	58h	ok	11.0	Device Present
RIS1_PCIE2_PRSENT	59h	ok	11.0	Device Present
RISER2_PRSENT	5Ah	ok	11.1	Device Present
RISER2-TMP	5Bh	ok	11.1	29 degrees C
RIS2_PCIE1_PRSENT	5Ch	ok	11.1	Device Present
RIS2_PCIE2_PRSENT	5Dh	ok	11.1	Device Present

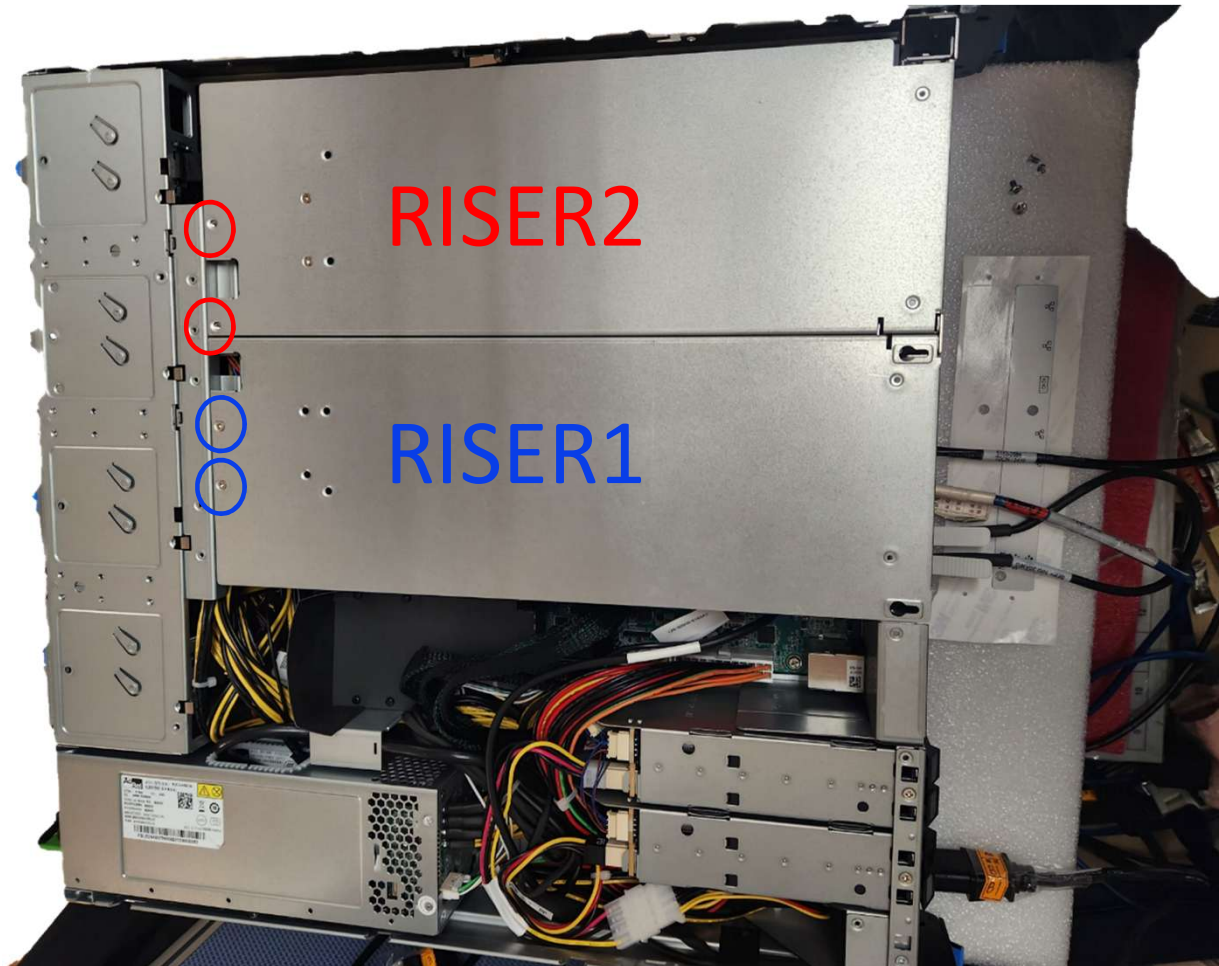
Riser Cage Assembly [1/2]

RISER1

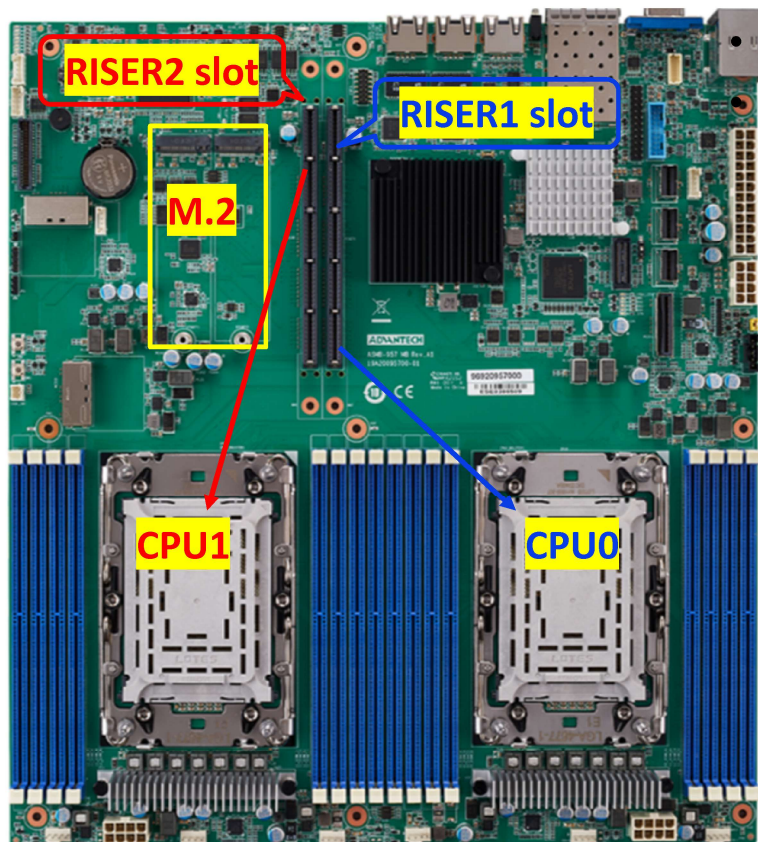
RISER2



Riser Cage Assembly [1/2]



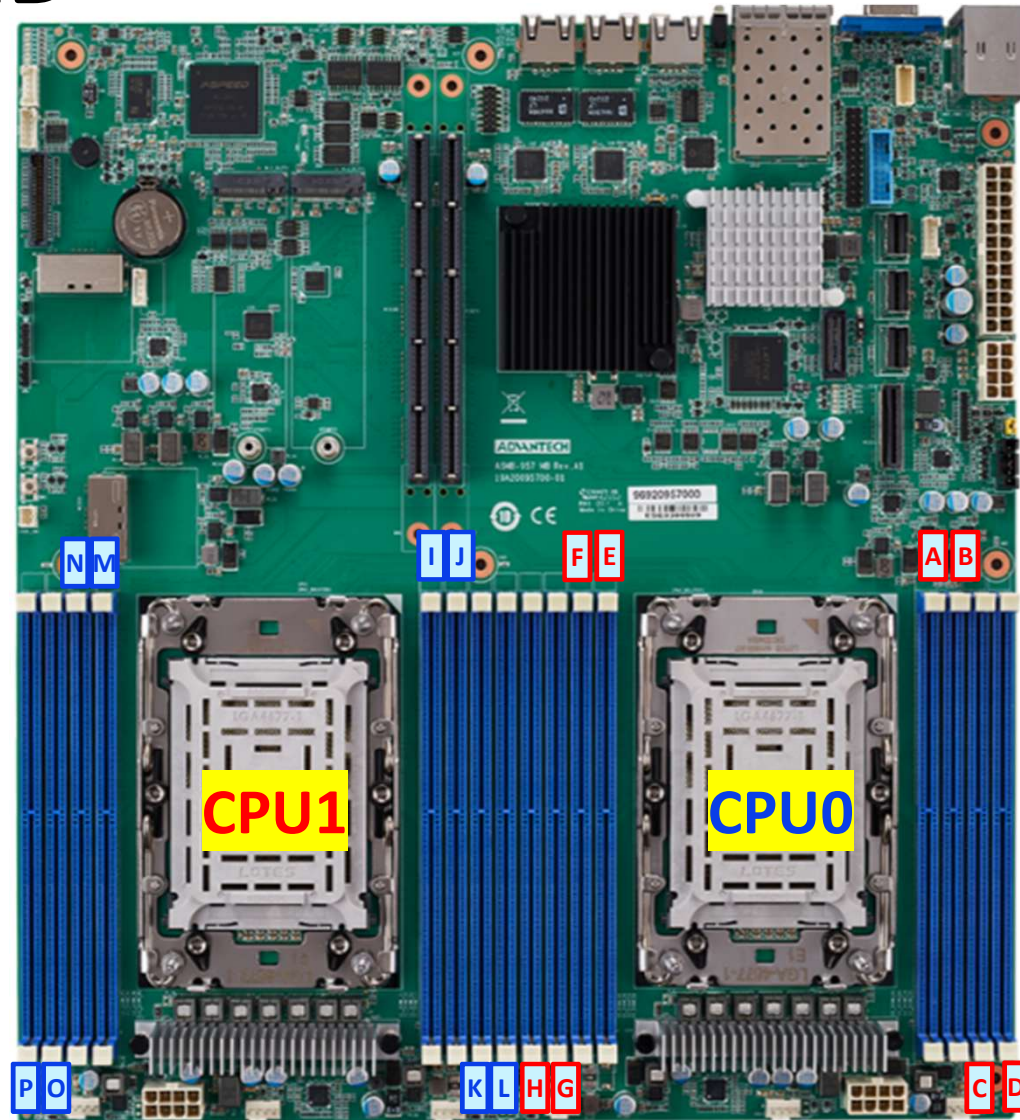
CPU / M.2 / Riser slot location



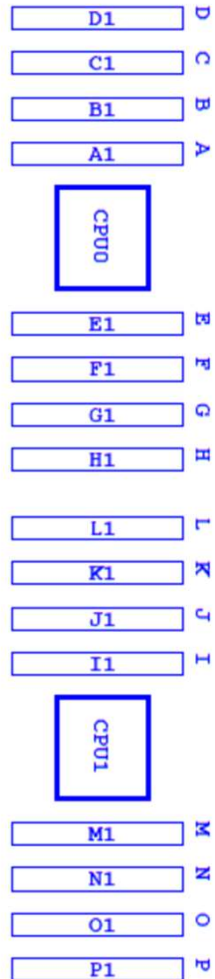
Multi-socket Intel systems shall be populated with identical CPUs
[Intel® Processor Installation Support for Desktops and Servers](#)


LGA4189_Boxed_Xeon.pdf

DIMM Slot ID

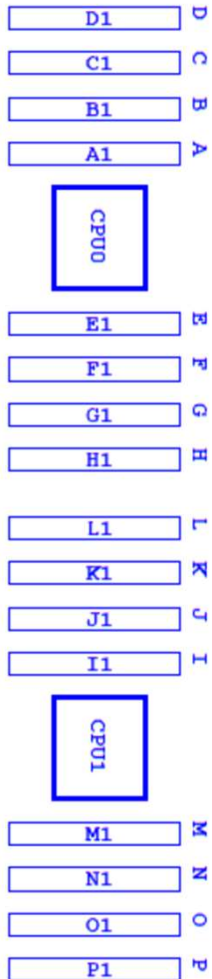


DIMM Population rules [1/2]



DIMM Configuration with dual CPU																	
Channel		CPU0							CPU1								
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
DIMM Numbers	2	V								V							
			V								V						
						V								V			
							V								V		
	4	V						V		V						V	
				V		V						V		V			
	8	V		V		V		V		V		V		V		V	
		V		V	V	V	V	V		V		V	V	V	V	V	
	12	V	V	V		V		V	V	V	V	V		V		V	V
			V	V	V	V	V		V		V	V	V	V	V		V
		V	V		V		V	V	V	V	V		V		V	V	V
		V	V		V		V	V	V	V	V		V		V	V	V
	16	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V

DIMM Population rules [2/2]



iMC#	iMC3				iMC2					iMC0				iMC1			
	Chan 1 (7/H)		Chan 0 (6/G)		Chan 1 (5/F)		Chan 0 (4/E)			Chan 0 (0/A)		Chan 1 (1/B)		Chan 0 (2/C)		Chan 1 (3/D)	
DDR5	Slot0	Slot1	Slot0	Slot1	Slot0	Slot1	Slot0	Slot1		Slot1	Slot0	Slot1	Slot0	Slot1	Slot0	Slot1	Slot0
1								DDR5			DDR5						
2													DDR5				
4				DDR5							DDR5						
6				DDR5			DDR5				DDR5						
8				DDR5			DDR5				DDR5						
12				DDR5			DDR5				DDR5						
16				DDR5			DDR5				DDR5						

iMC#	iMC3				iMC2					iMC0				iMC1			
	Chan 1 (7/P)		Chan 0 (6/O)		Chan 1 (5/N)		Chan 0 (4/M)			Chan 0 (0/I)		Chan 1 (1/J)		Chan 0 (2/K)		Chan 1 (3/L)	
DDR5	Slot0	Slot1	Slot0	Slot1	Slot0	Slot1	Slot0	Slot1		Slot1	Slot0	Slot1	Slot0	Slot1	Slot0	Slot1	Slot0
1								DDR5			DDR5						
												DDR5					
						DDR5											
2				DDR5							DDR5						
4				DDR5							DDR5					DDR5	
6				DDR5							DDR5					DDR5	
	DDR5			DDR5							DDR5		DDR5			DDR5	
	DDR5			DDR5							DDR5		DDR5			DDR5	
8	DDR5			DDR5							DDR5		DDR5			DDR5	
12	DDR5			DDR5	DDR5			DDR5	DDR5		DDR5	DDR5		DDR5	DDR5		DDR5
	DDR5	DDR5		DDR5				DDR5	DDR5		DDR5	DDR5		DDR5	DDR5		DDR5
16	DDR5	DDR5	DDR5	DDR5	DDR5	DDR5	DDR5	DDR5	DDR5		DDR5	DDR5	DDR5	DDR5	DDR5	DDR5	DDR5

Access the BIOS via Monitor with VGA port [1/2]

There are 3 ways to access platform for OS image installation

- VGA port for OS in TXT & GUI mode
- Console port for OS in TXT only
- BMC Web for OS in TXT & GUI mode

Following pages will introduce page by page.



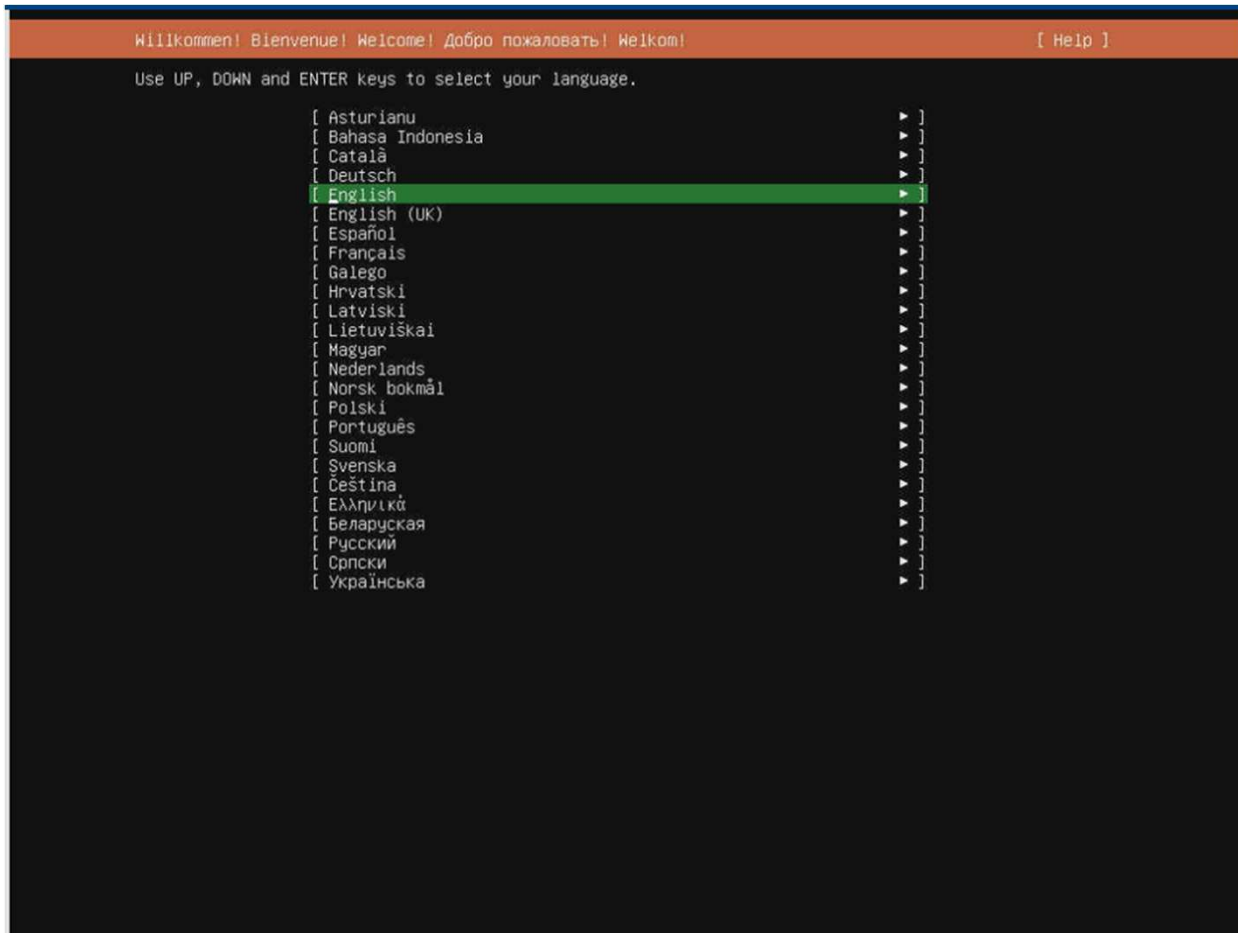
*Picture depicted the connector of VGA D-Sub 9.
VGA output in Front Panel*

❑ 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

Operation System installation from VGA Port [2/2]

Connect D-Sub 9 via VGA cable to Monitor and USB port to keyboard and mouse

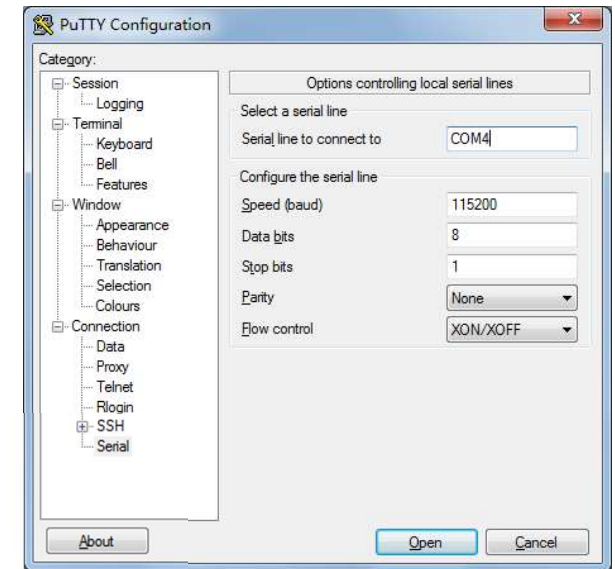
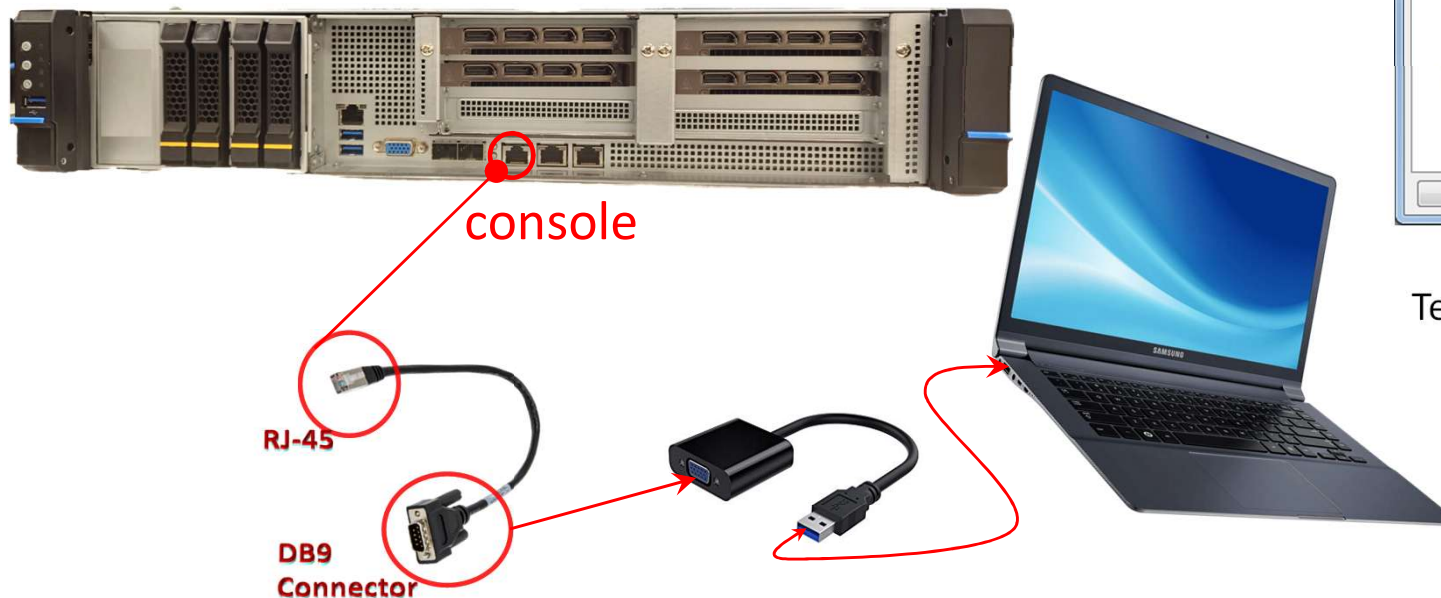


Access the server via Console port [1/2]

Terminal settings

❑ Step#2 – Access the device

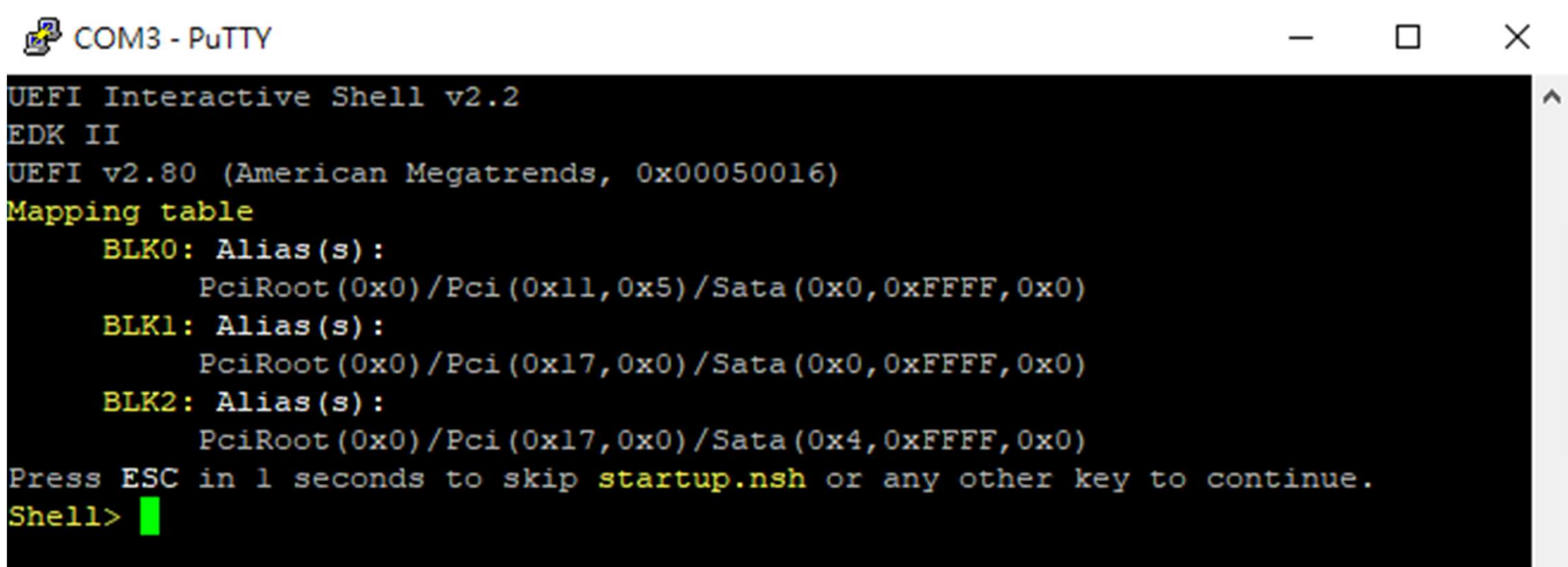
- Prerequisite:
 - ✓ Console cable and PC + Terminal(like PuTTY)
- Connect the PC to the server console



Terminal Setting:

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

Access the server via Console port [2/2]



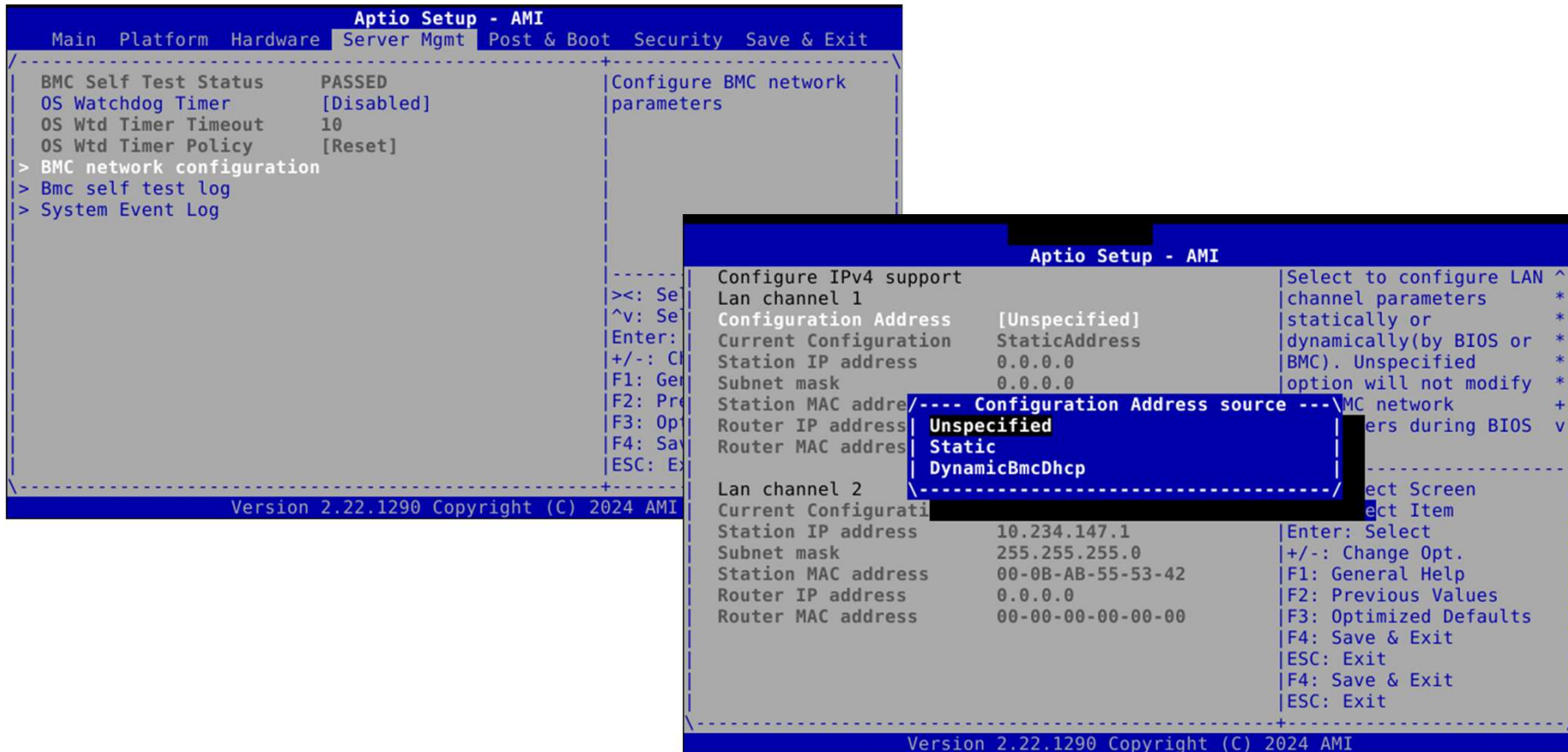
```
COM3 - PuTTY
UEFI Interactive Shell v2.2
EDK II
UEFI v2.80 (American Megatrends, 0x00050016)
Mapping table
  BLK0: Alias(s):
        PciRoot(0x0)/Pci(0x11,0x5)/Sata(0x0,0xFFFF,0x0)
  BLK1: Alias(s):
        PciRoot(0x0)/Pci(0x17,0x0)/Sata(0x0,0xFFFF,0x0)
  BLK2: Alias(s):
        PciRoot(0x0)/Pci(0x17,0x0)/Sata(0x4,0xFFFF,0x0)
Press ESC in 1 seconds to skip startup.nsh or any other key to continue.
Shell> █
```

Picture depicted successfully server access via console if no OS installed

BMC IP address configure from BIOS [1/2]

Setup BMC IP Address

Press **DEL** after boot up to enter BIOS, and select "**Server Mgmt**" page, then "**BMC network configuration**".

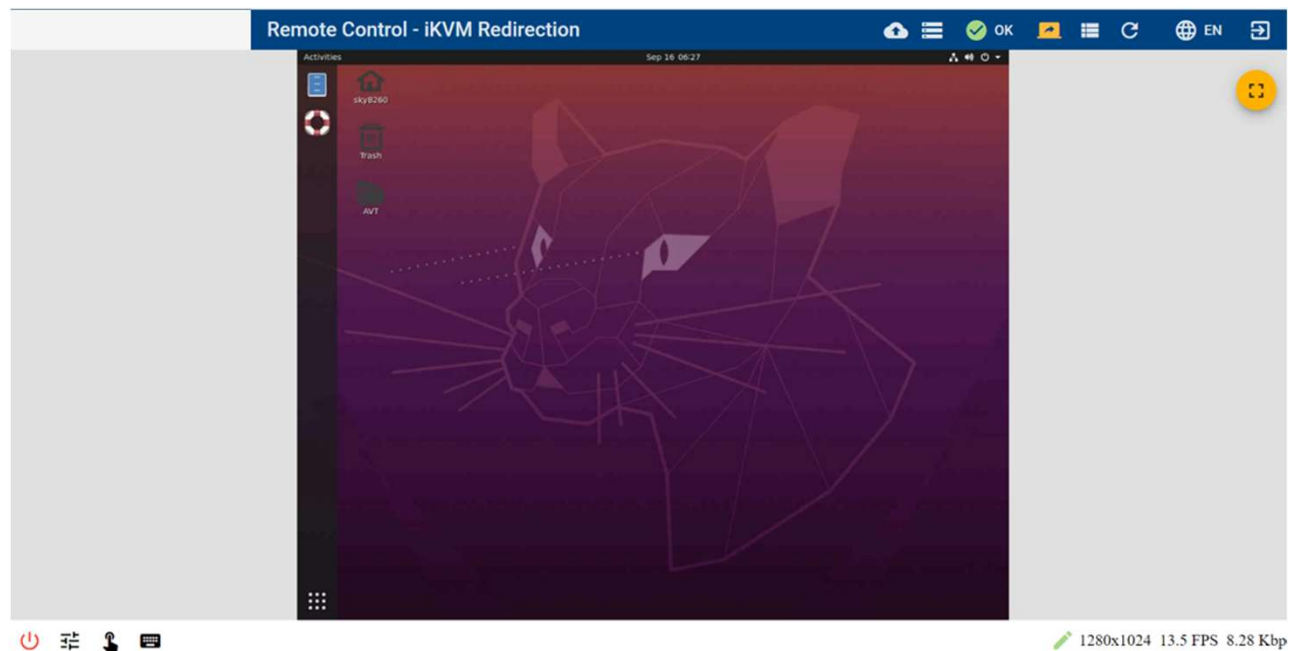


BMC access via browser [2/2]

After completing the steps above (BMC Web ip configured via either Bios or iptool), open your favorite browser
the enter the webui ip as below: <https://BMCIP>

The default login credentials by default:

- User: **administrator**
- Password: **advantech**



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