

3.17. Riser Boards

3.17.1. Removing a Riser Board

Follow these steps to remove a riser board:

1. Remove the top cover from the server. See “3.3.1. Removing a Top Cover” on page 55.
2. Remove the expander assembly. See “Removing a K2V4 Expander Bracket” on page 44.
3. Remove the K2T-QB. See “Removing a K2V4 Card” on page 48.
4. Remove the screws securing the riser board.
5. Flip the riser board and remove the riser board as shown in the following illustration.

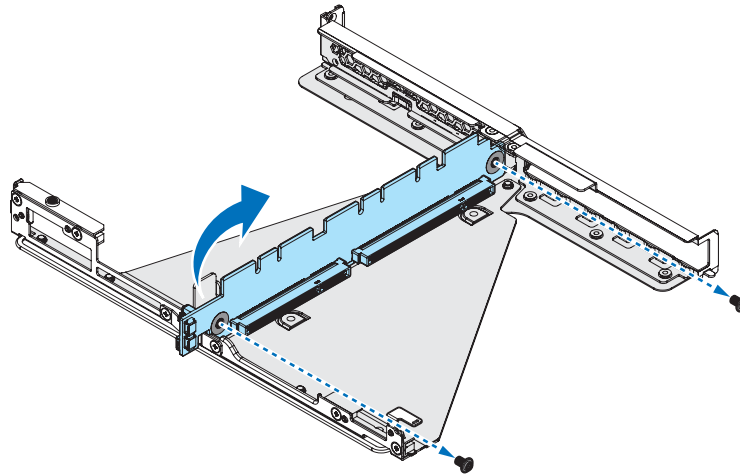


Figure 70. Removing a Riser Board

3.17.2. Installing a Riser Board

Follow these steps to install a riser board:

1. Angle and insert the riser board into the butterfly bracket as shown in the following illustration.
2. Flip down the riser board and make sure the holes on the riser board are aligned with the holes on the butterfly bracket.
3. Secure the riser board with the screws.

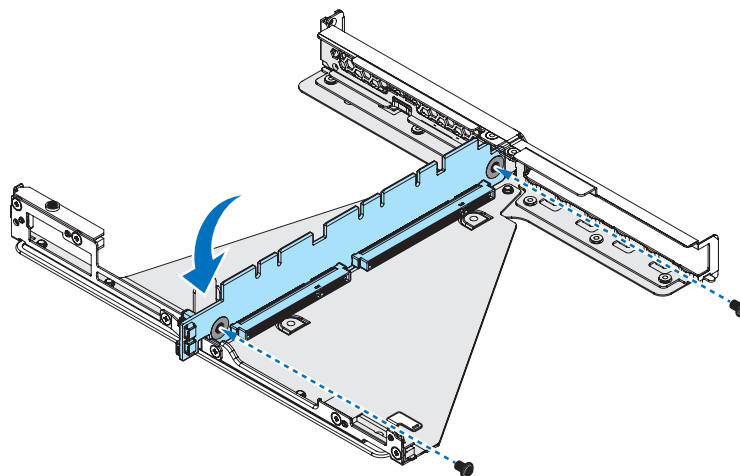


Figure 71. Installing a Riser Board

4. Install the K2T-QB. See “Installing a K2V4 Card” on page 49.
5. Install the expander assembly. See “Installing a K2V4 Expander Bracket” on page 45.
6. Replace the top cover on the server. See “Installing a Top Cover” on page 11.

3.18. Heat Sinks

3.18.1. Removing a Heat Sink



CAUTION:

ESD protection must be worn during procedure to avoid damaging components.

Components may be hot to the touch. A cooling period is necessary before attempting to touch the heat sink or heat pipes.

Follow these steps to remove a heat sink:

1. Remove the top cover from the server. See “Removing a Top Cover” on page 10.
2. Loosen the eight screws in a sequential order.
3. Grasp the heat sink and lift it in tandem to avoid damaging the components or the heat pipes.

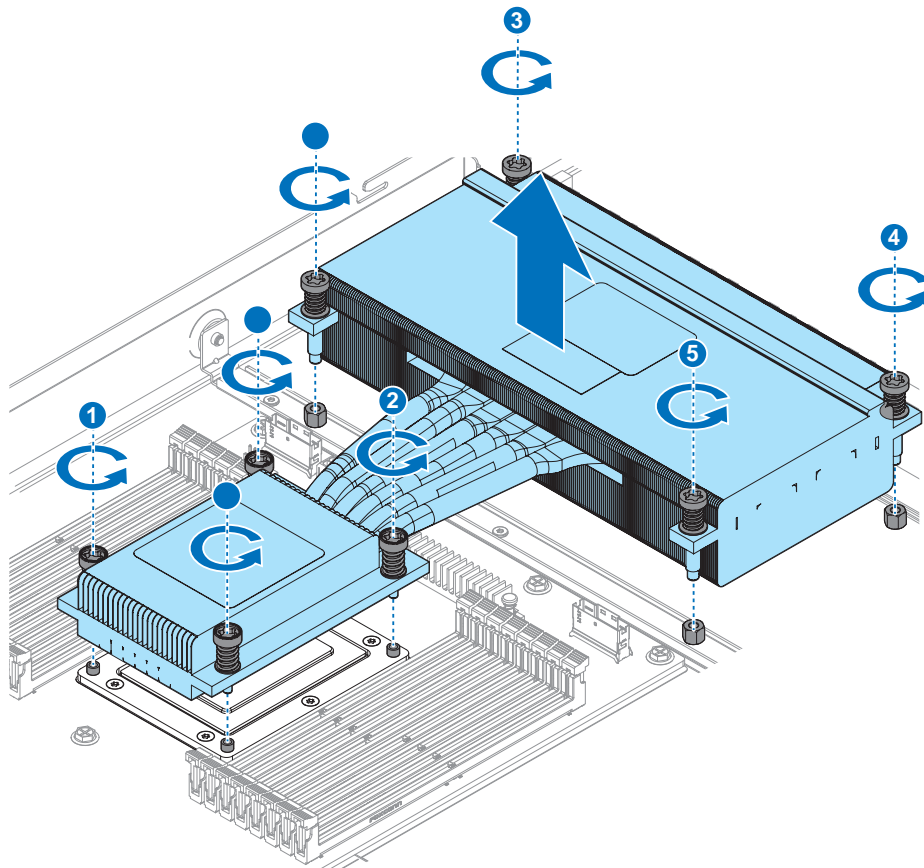


Figure 72. Removing a Heat Sink

4. Place the assembly on a clean work surface.

Note:

The remains of the thermal pad may be present under the heat sink. Make sure the thermal pad is not placed where it can touch the resting surface.

3.18.2. Installing a Heat Sink



CAUTION:

Do not apply an excessive amount of thermal compound to prevent damage to the mainboard.

ESD protection must be worn during procedure to avoid damaging components.

Follow these steps to install a heat sink:

1. For this step make sure to grasp the heat sink to prevent damage to the modules or the heat pipes. Align the heat sink over the mainboard. There are screw posts to be used as guides matching the location of the captive screws on the heat sink.
2. At a slight angle, first seat the MOON module over the server tray. Make sure the screws are seated over the screw posts on the server tray.
3. Gently lower the raised heat sink over the main processor until it is correctly seated in place.
4. Tighten the eight retaining screws clockwise, in the order shown, to secure the heat sink.

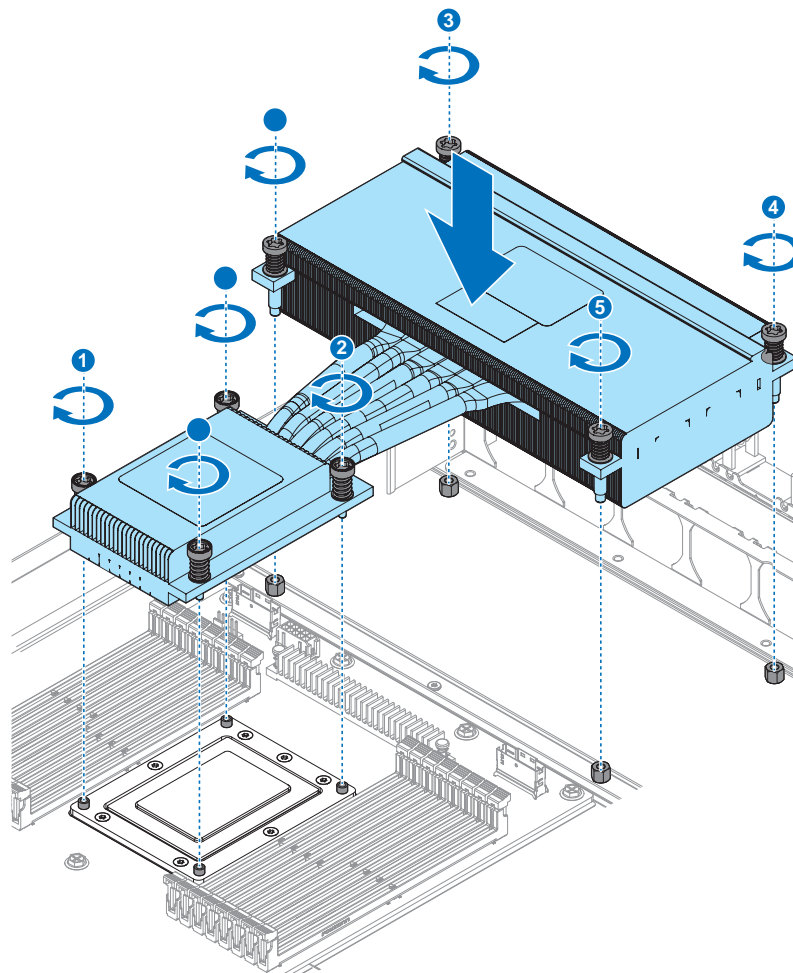


Figure 73. Installing a Heat Sink

5. Replace the top cover on the server. See “Installing a Top Cover” on page 11.

3.19. Memory Modules

3.19.1. Memory Configuration

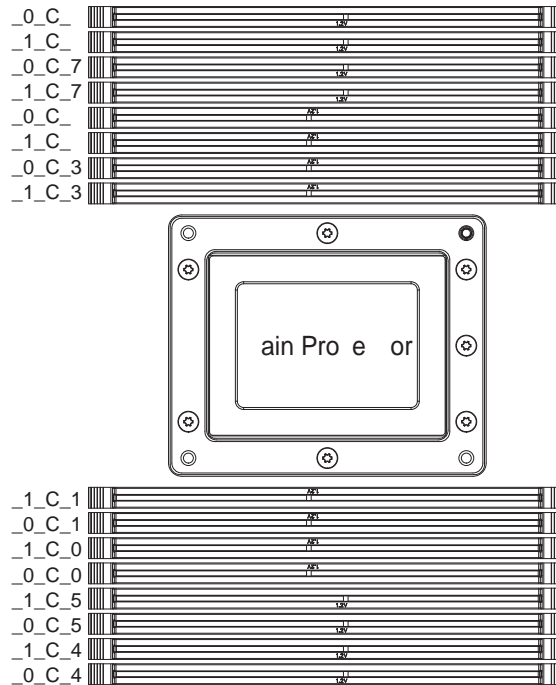


Figure 74. Memory Configuration

3.19.2. Removing a Memory Module

Follow these steps to remove a memory module:

1. Remove the top cover from the server. See “Removing a Top Cover” on page 10.
2. Push the locking latches of the DIMM slot downwards and outwards to eject the memory module.
3. Remove the memory module.

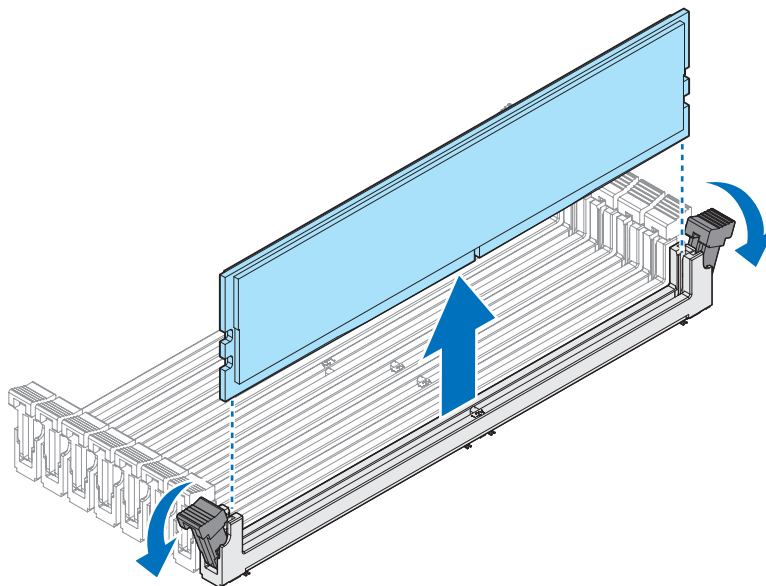


Figure 75. Removing a Memory Module

4. Repeat the steps for the remaining memory module.

3.19.3. Installing a Memory Module

Follow these steps to install a memory module:

1. Pull the locking latches of the DIMM slot outwards.
2. Place the memory module in the socket so the notch and obstruction are aligned.
3. Press the edge connector of the memory module into the slot. Press down firmly so that the locking latches of the DIMM slot are levered upwards to secure the memory module.

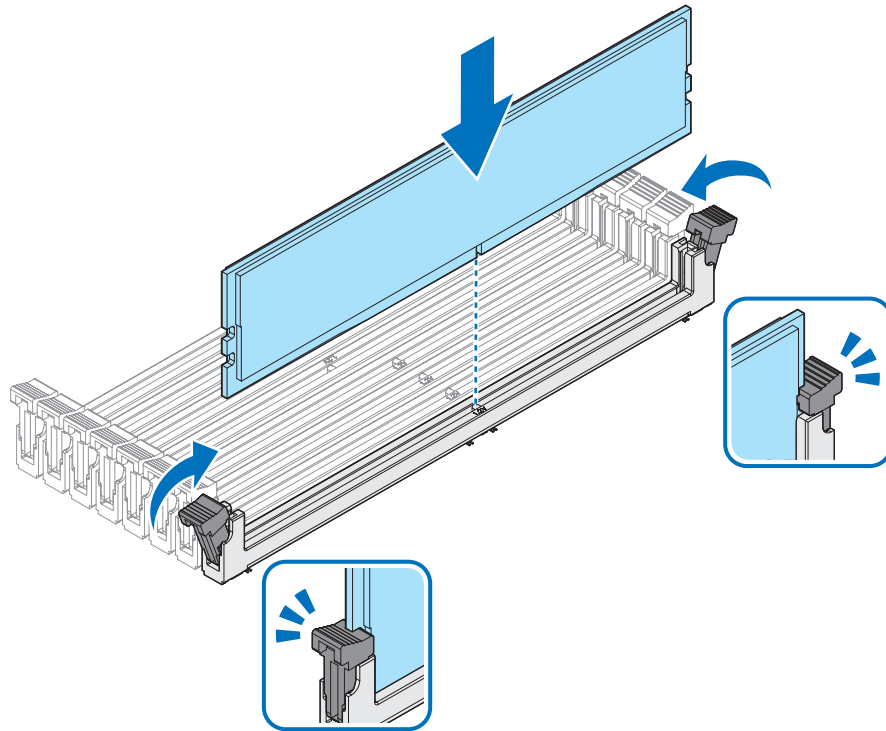


Figure 76. Installing a Memory Module

4. Repeat the steps for the remaining memory module.
5. Replace the top cover in the server. See “Installing a Top Cover” on page 11.

3.20. Mainboards

3.20.1. Removing a Mainboard

**CAUTION:**

When removing any component, wear a properly grounded static strap to prevent static discharge.

Follow these steps to remove a mainboard:

1. Remove the top cover from the server. See “Removing a Top Cover” on page 10.
2. Remove the expander assembly. See “Removing a K2V4 Expander Bracket” on page 44.
3. Remove the heat sink. See “Removing a Heat Sink” on page 56.
4. Remove the memory module. See “Removing a Memory Module” on page 58.
5. Disconnect all cables from the mainboard.
6. Remove the screws securing the mainboard.
7. Lift the front of the mainboard and pull it away from the rear of the system. Make sure the I/O ports clear the chassis before lifting the mainboard.
8. Remove the mainboard.

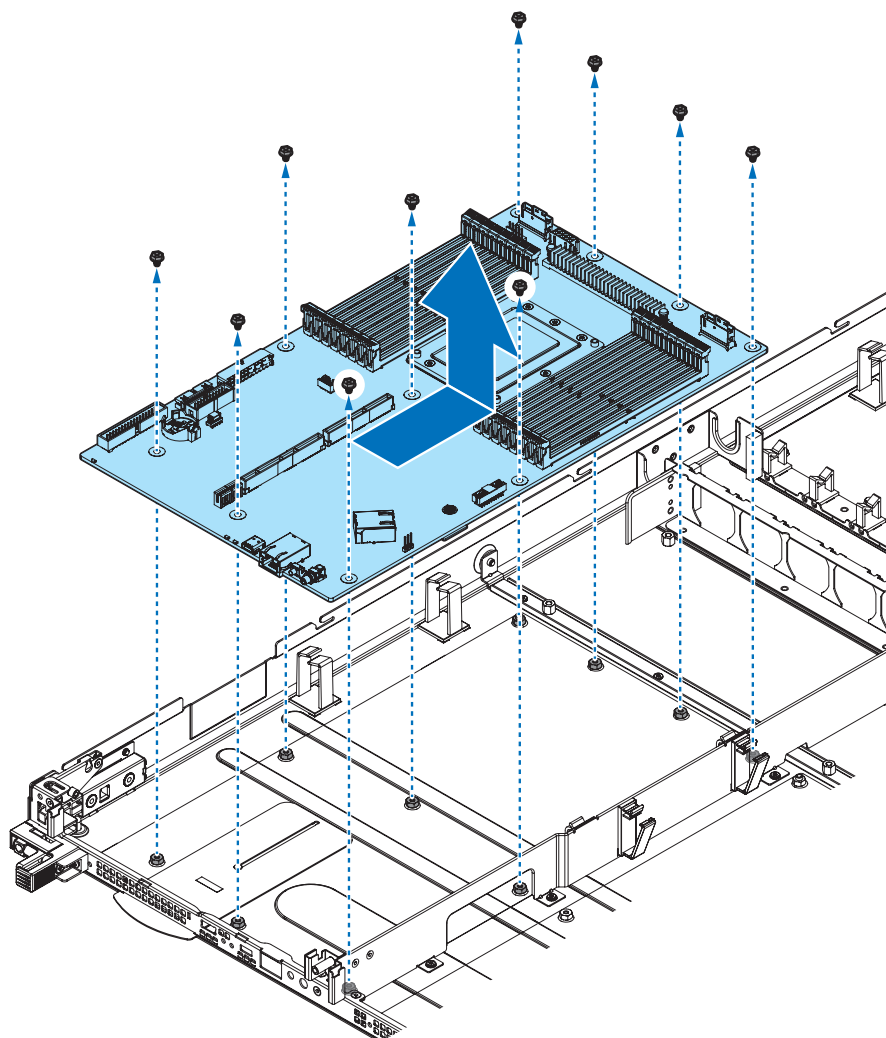


Figure 77. Removing the Mainboard

3.20.2. Installing a Mainboard

**CAUTION:**

When removing any component, wear a properly grounded static strap to prevent static discharge.

Follow these steps to install a mainboard:

1. Align the I/O ports on mainboard with the slots on the chassis.
2. Slide the mainboard into position. Make sure the I/O ports are seated correctly.
3. Lower the mainboard onto the chassis. Make sure the screw holes on the mainboard and chassis are aligned.
4. Secure the mainboard with the screws.

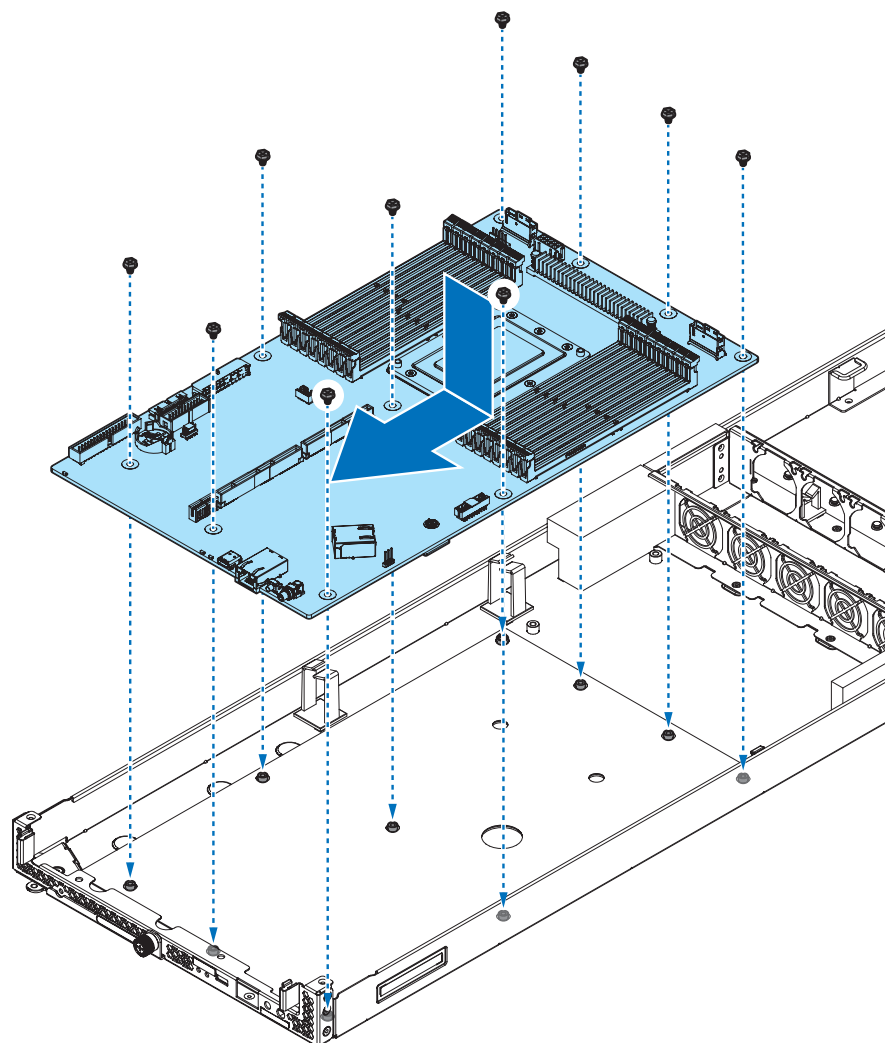


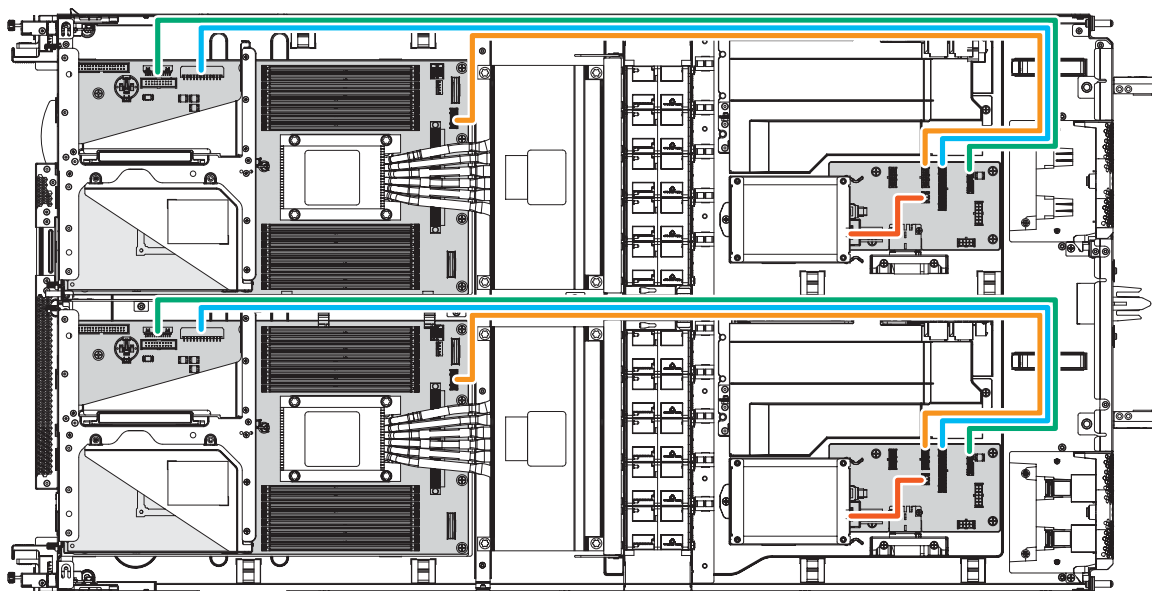
Figure 78. Installing the Mainboard

5. Perform the cable connections.
6. Install the memory module. See “Installing a Memory Module” on page 59.
7. Install the heat sink. See “Installing a Heat Sink” on page 57.
8. Install the expander assembly. See “Installing a K2V4 Expander Bracket” on page 45.
9. Replace the top cover on the server. See “Installing a Top Cover” on page 11.

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Cabling

4.1. Power Cable and Signal Cable



— CBL_SATA Power Cable (Amphenol : RST15-1051)

— CBL_P B Si eban Cable (Amphenol : R - 1 4)

— CBL_ B Power Cable 10 pin (Amphenol : R - 01)

— CBL_ B Power Cable 4 pin (Amphenol : R - 00)

Figure 79. Cable Routing

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Connector

5.1. Power Distribution Board

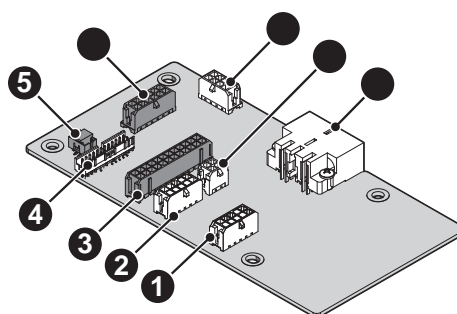


Figure 80. Power Distribution Board Connector

Table 5. Power Distribution Board Connector

No	Item	No	Item
1	Fan power connector	2	MB power connector (10-pin)
3	MB power connector (24-pin)	4	Sideband connector
5	Hold-up module sideband connector	6	Interposer power connector
7	Hold-up module power connector	8	SATA SSD power connector
9	Busbar power connector		

5.2. Interposer Board

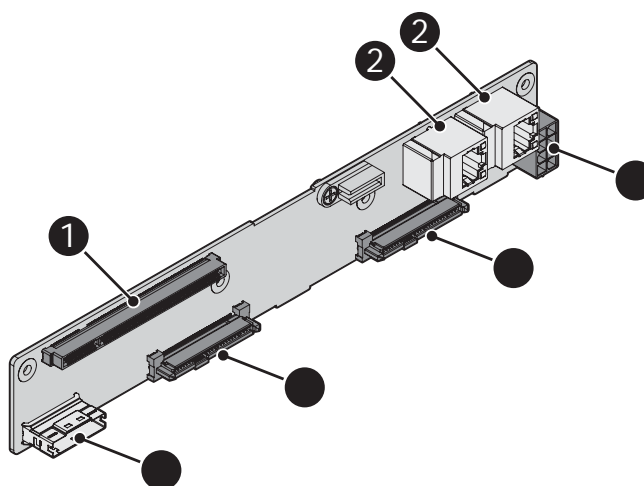


Figure 81. Interposer Board Connector

Table 6. Interposer Board Connector

No	Item	No	Item
1	Primary Cooledge connector	2	RJ45 x 2
3	Power connector	4	NVMe U.2 connector x 2
5	Slimline SAS connector		

5.3. Riser Board

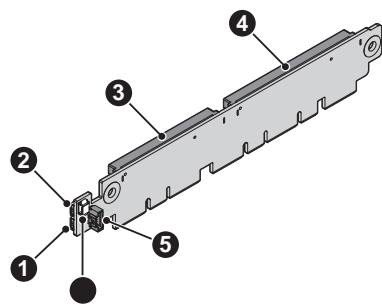


Figure 82. Riser Board Connector

Table 7. Riser Board Connector

No	Item	No	Item
1	Primary Cooledge connector	2	Secondary Cooledge connector

5.4. K2V4

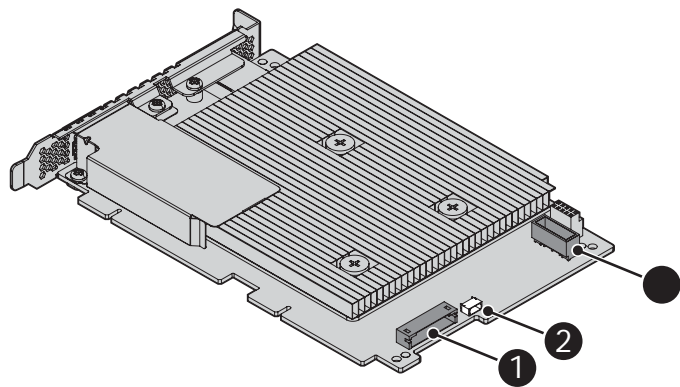


Figure 83. K2V4 Connector

Table 8. K2T-QB Connector

No	Item	No	Item
1	Power connector	2	BMC UART connector
3	SATA connector		

5.5. Trusted Platform Module

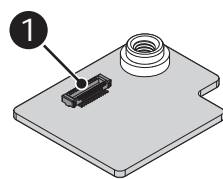


Figure 84. Trusted Platform Module Connector

Table 9. Trusted Platform Module Connector

No	Item	No	Item
1	TPM connector		

5.6. Near-Field Communication Module

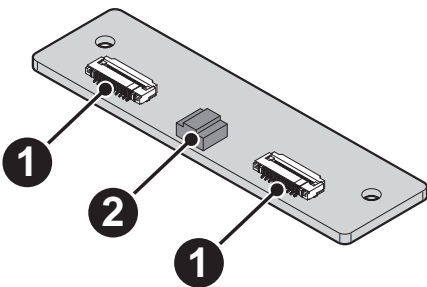


Figure 85. Near-Field Communication Module Connector

Table 10. Near-Field Communication Module Connector

No	Item	No	Item
1	FFC connector	2	I2C connector

5.7. Near-Field Communication Reader

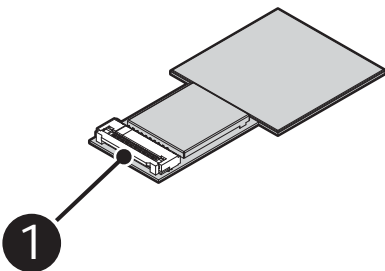


Figure 86. Near-Field Communication Reader Connector

Table 11. Near-Field Communication Reader Connector

No	Item	No	Item
1	FFC connector		

5.8. Atlas Key Board

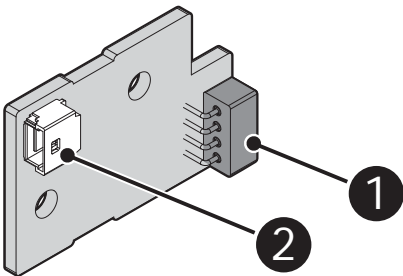


Figure 87. Atlas Key Board Connector

Table 12. Atlas Key Board Connector

No	Item	No	Item
1		2	

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Mainboard

6.1. Mainboard Jumpers

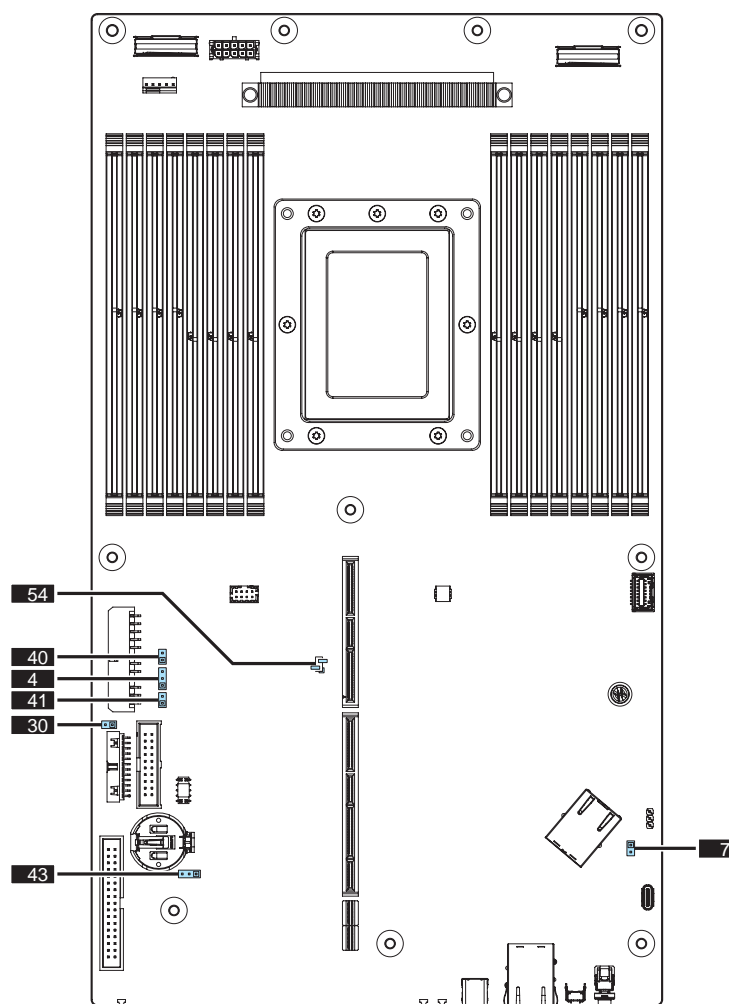


Figure 88. Mainboard Jumpers

Table 13. Mainboard Jumpers

Header	Jumper Setting	Default	Function Description
J54	N/A	V	UEFI_SEL select signal. Default not assemble jumper on J54.
	JP(1-2)		When assemble jumper on J54, force UEFI_SEL to LOW.
J40	N/A	V	Reserve main processor RESET_PWRUP_N path from CPLD. Default not assemble jumper on J40.
	JP(1-2)		When assemble jumper on J40, main processor RESET_PWRUP_N source is from CPLD.
J42	JP(1-2)	V	Main processor SPI flash WP signal. Default assemble JP42 on J42 pin 1-2, normal operation.
	JP(2-3)		Assemble JP42 on J42 pin 2-3, enable HW WP#.

Header	Jumper Setting	Default	Function Description
J41	N/A	V	Boundary scan header/jumper. Default not assemble jumper on J41.
	JP(1-2)		A jumper is required to set the main processor into reset during the test. Once the test is done, need to remove the jumper.
J30	N/A	V	Reserve for some ARM debuggers have open-drain TRSTn. Default not assemble jumper on J30.
	JP(1-2)		Reserve for some ARM debuggers have open-drain TRSTn.
J43	JP(1-2)	V	uC SPI flash WP signal. Default assemble JP43 on J43 pin 1-2, normal operation.
	JP(2-3)		Assemble JP43 on J43 pin 2-3, enable HW WP#.
J7	N/A	V	JTAG chain buffer enable signal from CPLD. Reserve header for debug. Default not assemble jumper on J7.
	JP(1-2)		When assemble jumper on J7, connect JTAG_BMC_EN_N to GND, force to set JTAG chain from Mobo.

Specifications

7.1. Specifications

Table 14. Specifications

Component	Description
CPU	Carmel processor, DDR4, 48 PCIe lanes Gen4, 225W
Storage	<ul style="list-style-type: none"> ▶ Up to 2 x SATA SSD ▶ Up to 4 x NVMe SSD
Memory	DDR4 <ul style="list-style-type: none"> ▶ 16 x DDR4 DIMMs per processor ▶ Supports ECC RDIMM, 3200 MHz, max support 1024G
Server Management Controller	iBMC Aspeed AST2500 with a dedicated 1G LAN port
I/O Connectors	<ul style="list-style-type: none"> ▶ RJ45 for BMC (management port) x 1 ▶ USB type-C (UART port only)
Board size	374.3 x 215.25 mm (14.5 x 8.47 in.), 16 layers
Add-on card	Up to 2 x K2V4 + 2 x K2C-AB module

7.2. SKU Configuration

SKU	Memory
SEDONA41-42	16GB x 8 (1 DPC)
SEDONA43-44	32GB x 8 (1 DPC)
SEDONA45-46	64GB x 8 (1 DPC)
SEDONA47-48	64GB x 16 (2DPC)

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Appendix

8.1. RoHS

設備名稱：伺服器/Sled Server Equipment name				型號（型式）：Sedona Type designation (Type)		
單元Unit	限用物質及其化學符號 Restricted substances and its chemical symbols					
	鉛Lead (Pb)	汞Mercury (Hg)	鎘Cadmium (Cd)	六價鉻 Hexavalent chromium (Cr ⁺⁶)	多溴聯苯 Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)
機箱/檔板	—	○	○	○	○	○
機械部件 (風扇、散熱 器等)	—	○	○	○	○	○
電路板組件	—	○	○	○	○	○
電線/連接 器	—	○	○	○	○	○
電源設備	—	○	○	○	○	○
儲存裝置 (硬碟、光碟 機等)	—	○	○	○	○	○
配件	—	○	○	○	○	○

備考1. “超出0.1 wt %”及“超出0.01 wt %”係指限用物質之百分比含量超出百分比含量基準值。

備考2. “○”係指該項限用物質之百分比含量未超出百分比含量基準值。

備考3. “—”係指該項限用物質為排除項目。

報檢義務人

鴻海精密工業股份有限公司

新北市土城區中山路66號