



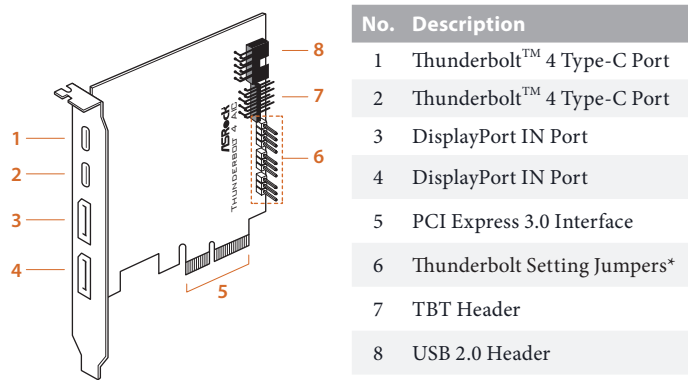
P/N: 15G062353000AK V1.0

ASRock Thunderbolt 4 AIC R2.0

Package Contents

- 1 x Quick Installation Guide
- 1 x Support CD
- 1 x TBT Header Cable
- 2 x DisplayPort Cables
- 1 x USB 2.0 Cable

Card Layout



*Thunderbolt Setting on **Intel** Platform:

		
Force_PWR1	PD_RESET_1	RTD3
2-3 Floating (Default)	2-3 Floating (Default)	None (Default)

*Thunderbolt Setting on **AMD** Platform:

		
Force_PWR1	PD_RESET_1	RTD3
2-3 Floating (Default)	None*	3-4 No RTD3*

*Be sure to move the jumper cap from PD_RESET_1 (pins 2-3) to RTD3 (pins 3-4).
For the limitation on the use of this add-in card on AMD platform, please visit
<https://www.asrock.com/mb/spec/product.asp?Model=Thunderbolt%204%20AIC%20R2.0#Specification>

Specifications

Platform	• Dimensions: 3.3-in x 4.1-in
Chipset	• Intel® JHL8540 Thunderbolt™ 4 Controller
External Connectors	• 2 x Thunderbolt™ 4 Type-C Ports (with up to 40Gbps bandwidth) * Supports daisy-chaining of up to five Thunderbolt™ devices * Supports USB PD 3.0 up to 9V@3A (27W) / 5V@3A (15W) charging • 1 x TBT Header • 2 x DisplayPort IN Ports • 1 x USB 2.0 Header
Interface	• PCIe Gen3x4 interface
Graphics	• Supports DisplayPort 1.4 with max. resolution 7680 x 4321@60Hz* * Max resolution support will depend on your VGA source.

Data Rate • Supports 40Gbps bi-directional bandwidth per channel with Thunderbolt™ 4 port

OS • Microsoft® Windows® 10 64-bit / 11 64-bit

*This add-in card is based on Intel’s reference design. However, the BIOS and hardware design of your motherboard may affect the function of Thunderbolt™ 4 Port on this card. We recommend using the supported motherboard models for Thunderbolt 4 AIC R2.0. Currently, eGPU thunderbolt box doesn’t support AMD GPU. Please check graphic card vendors for more information.

***For the latest list of compatible ASRock motherboard models, please visit www.asrock.com.**

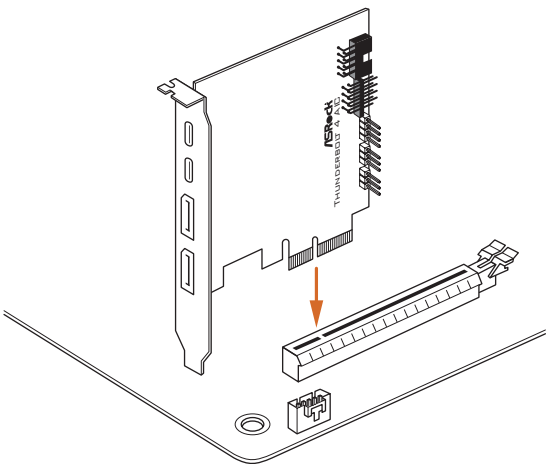


- 1. Intel® Thunderbolt™ 4 is backwards compatible with Thunderbolt™ 3 cables and devices. Please note that Thunderbolt™ and Thunderbolt™ 2 cables and devices are not supported.
- 2. The illustrations in this guide are for reference only. The motherboard layout may vary with models.

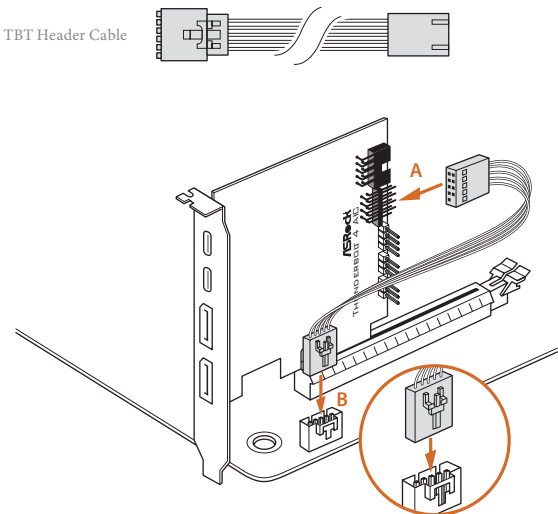
1 Installing the Thunderbolt 4 AIC R2.0

1. Power off the PC and unplug the power cord. Detach all other cables from the PC.
2. Remove the PC cover.
3. Align and insert the card into a PCI Express 3.0 slot on the motherboard. Press firmly until the card is securely seated in place.

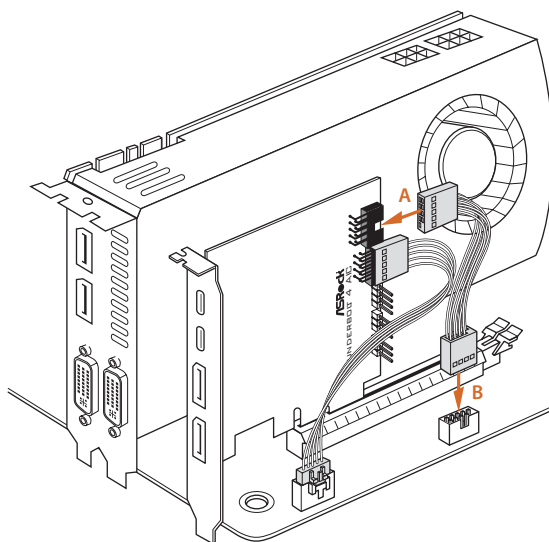
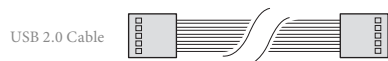
*To determine the slot in which to install the Thunderbolt 4 AIC R2.0, refer to the user manual that comes with your motherboard.



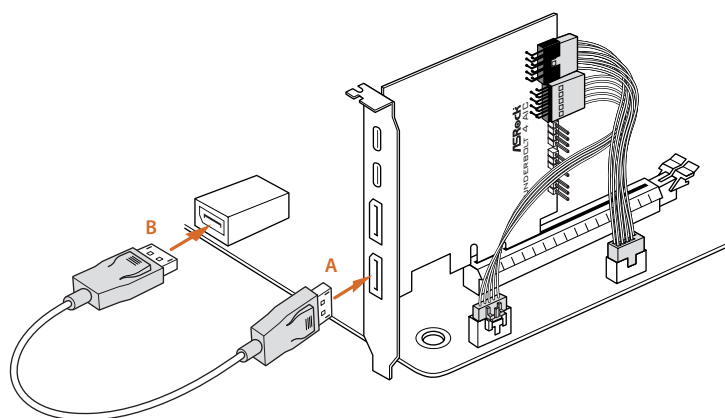
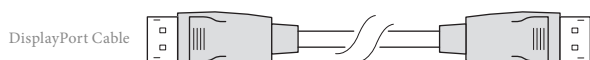
4. Connect one end of the TBT Header Cable to the **TBT Header (A)** on the Thunderbolt 4 AIC R2.0. Then connect the other end of the cable to the **Thunderbolt AIC Connector (TBT1) (B)** on the motherboard.



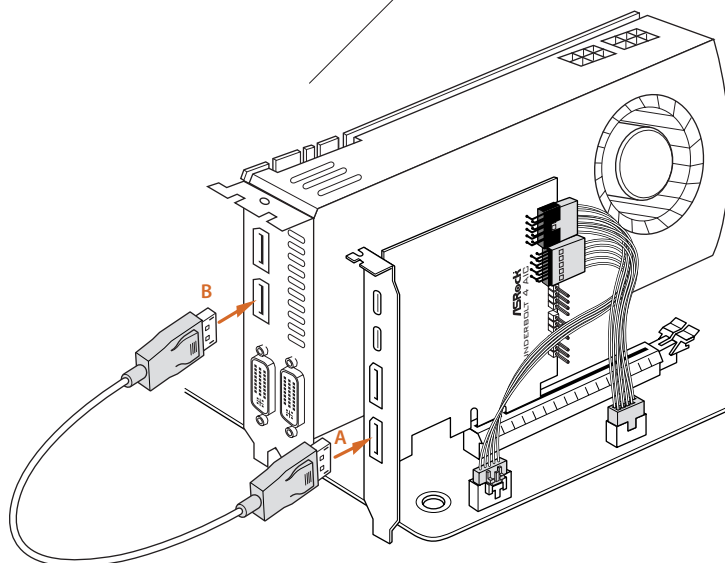
5. Connect one end of the USB 2.0 Cable to the **USB 2.0 Header (A)** on the Thunderbolt 4 AIC R2.0. Then connect the other end of the cable to the **USB 2.0 Header (B)** on the motherboard.



6. Connect one end of the DisplayPort Cable to the **DisplayPort IN Port (DP_1)** (A) on the Thunderbolt 4 AIC R2.0. Then connect the other end of the cable to the **DisplayPort Port (B)** on the motherboard's rear I/O panel or on the graphics card.

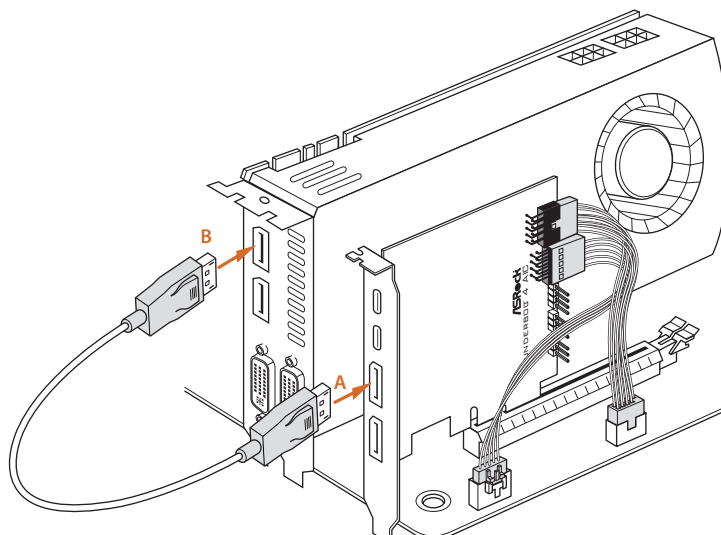


or



7. Connect one end of the DisplayPort Cable to the **DisplayPort IN Port (DP_2)** (A) on the Thunderbolt 4 AIC R2.0. Then connect the other end of the cable to the **DisplayPort Port (B)** on the graphics card.

*If you use a Thunderbolt™ Type-C monitor, make sure that you install the DisplayPort Cables into both **DP_1** and **DP_2** on the Thunderbolt 4 AIC R2.0.

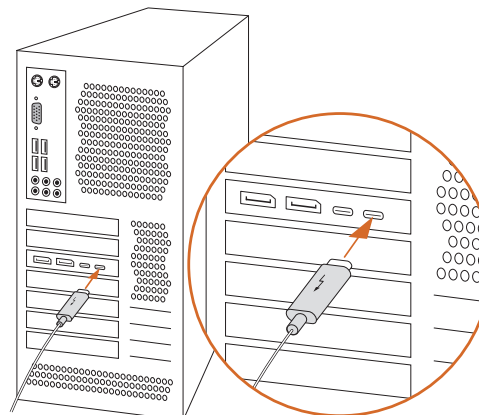
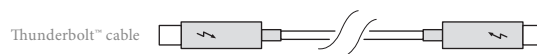


8. Replace the PC cover.
9. Reconnect the power cord and any other cables that were disconnected.
Then power on the PC.

2 Connecting the Thunderbolt™ Cable

Connect the Thunderbolt™ cable from your Thunderbolt-enabled device to the **Thunderbolt™ 4 Port** on the Thunderbolt 4 AIC R2.0.

* The Thunderbolt™ cable is not included in the package.



3 Enabling the Thunderbolt™ Function

After hardware installation is completed, enter the BIOS Setup, go to Advanced\Intel Thunderbolt and then enable the Intel® Thunderbolt™ function.

4 Installing the Thunderbolt Software in Windows

Place the Support CD into your CD-ROM drive and follow the on-screen instructions to complete the installation.

Compatible ASRock Motherboard Models (Intel 700 series, Intel 600 series and 500 series):

Motherboard Models	Supported PCIE slot
Z790 LiveMixer	PCIE4
Z790 Steel Legend WiFi	PCIE2
Z790 Pro RS WiFi	PCIE3
Z790 Pro RS	PCIE3
Z790 Pro RS/D4	PCIE3
Z790 Nova WiFi	PCIE2
Z790 Riptide WiFi	PCIE2
Z790 Lightning WiFi	PCIE4
Z790 PG Riptide	PCIE2
Z790 PG SONIC	PCIE2
Z790 PG Lightning	PCIE4
Z790 PG Lightning/D4	PCIE4
Z790M PG Lightning/D4	PCIE3
B760 Pro RS WiFi	PCIE3
B760 Pro RS	PCIE3
B760 Pro RS/D4	PCIE3
B760 Pro RS/D4 WiFi	PCIE3
B760M PG Lightning	PCIE2
B760M PG Lightning WiFi	PCIE2
B760M PG Lightning/D4	PCIE3
B760M Pro RS	PCIE2
B760M Pro RS/D4 WiFi	PCIE3
B760M Pro RS/D4	PCIE3
Z690 PG Velocita	PCIE5
Z690 EXTREME	PCIE4
Z690 EXTREME WiFi 6E	PCIE4
Z690 Steel Legend/D5	PCIE5
Z690 Steel Legend WiFi 6E/D5	PCIE5
Z690 Steel Legend	PCIE5
Z690 Steel Legend WiFi 6E	PCIE5
Z690 PG Riptide	PCIE3
Z690 Pro RS	PCIE5
Z690 Phantom Gaming 4	PCIE3
H670 Steel Legend	PCIE5
H670 PG Riptide	PCIE5
Z690 Phantom Gaming 4/D5	PCIE3
Z690M PG Riptide/D5	PCIE3
Z690M Phantom Gaming4	PCIE3
H670M Pro RS	PCIE3
B660 Pro RS	PCIE3
B660M Pro RS	PCIE3
B660M Phantom Gaming4	PCIE5
Z590 Extreme WiFi 6E	PCIE3
Z590 Extreme	PCIE3
Z590 Steel Legend WiFi 6E	PCIE3
Z590 Steel Legend	PCIE3
Z590M Phantom Gaming 4	PCIE3
Z590 Phantom Gaming 4/ac	PCIE3
Z590 Phantom Gaming 4	PCIE3
Z590 PG Velocita	PCIE4
Z590M Pro4	PCIE4
Z590 Steel Legend	PCIE3
Z590 Pro4	PCIE4
H570M Pro4	PCIE3
H570 Steel Legend	PCIE3
H570 Phantom Gaming 4	PCIE3
B560M Pro4/ac	PCIE3
B560M Pro4	PCIE3

Compatible ASRock Motherboard Models (AMD 600 series and 500 series):

Motherboard Models	Supported PCIE slot
X670E Steel Legend	PCIE3
X670E PG Lightning	PCIE3
B650E Steel Legend WiFi	PCIE2
B650E PG Riptide WiFi	PCIE3
B650 LiveMixer	PCIE2
B650 Pro RS	PCIE3
B650M PG Lightning	PCIE2
B650M PG Lightning WiFi	PCIE2
B650M PG Riptide WiFi	PCIE4
B650M PG Riptide	PCIE4
B650M Pro RS WiFi	PCIE2
B650M Pro RS	PCIE2
B650M-HDV/M.2	PCIE3
X570S PG Riptide	PCIE4
B550 PG Riptide	PCIE3

*For the updated information, please visit www.asrock.com.

*For the limitation on the use of this add-in card on AMD platform, please visit <https://www.asrock.com/mb/spec/product.asp?Model=Thunderbolt%204%20AIC%20R2.0#Specification>