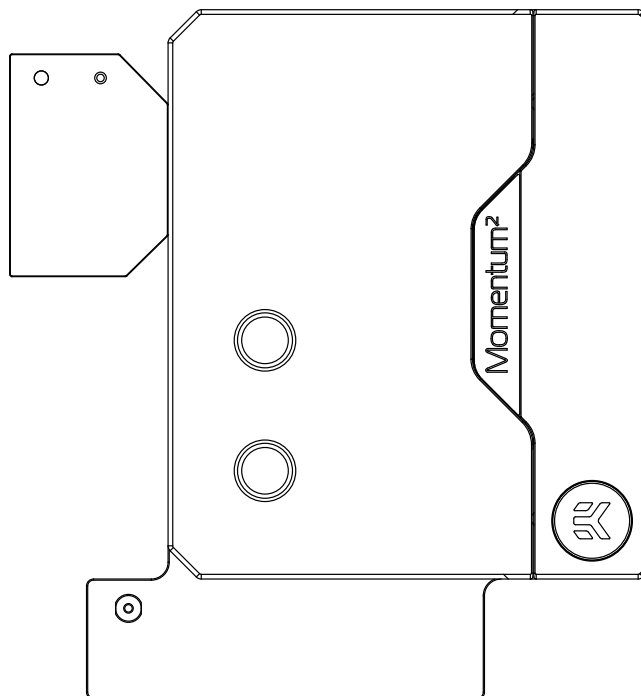# EK-Quantum
Momentum^2 ROG Strix X570-i Gaming D-RGB

MONOBLOCK

Momentum^2

This product is intended for installation only by expert users. Please consult with a qualified technician for installation. Improper installation may result in damage to your equipment. EK Water Blocks assumes no liability whatsoever, expressed or implied, for the use of these products, nor their installation. The following instructions are subject to change without notice. Please visit our website at www. ekwb.com for updates. Before installation of this product please read the important notice, disclosure, and warranty conditions printed on the back of the box.

Before you start using this product, please follow these basic guidelines:

Please carefully read the manual thoroughly before beginning the installation process!

Please remove your motherboard from the computer to assure the safest mounting process in order to prevent any possible damages to your CPU and/or motherboard's circuit board (PCB).
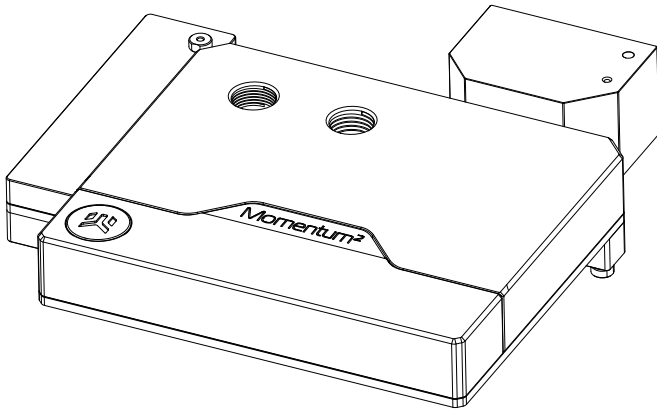
The EK- Fittings require only a small amount of force to screw them firmly in place since the liquid seal is ensured by the rubber o-ring gaskets.

The use of quality, market-proven corrosion inhibiting coolants is always strongly recommended for any liquid cooling system.
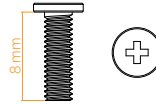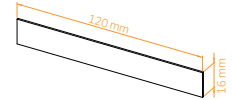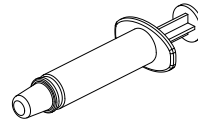
TABLE OF CONTENTS

BOX CONTENTS

EK-Quantum Momentum² ROG Strix X570-i Gaming D-RGB
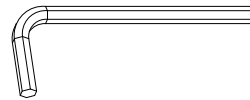
M2.5x8 AX1 Screw (2 pcs)

8 mm

Thermal Pad F 1.0 mm
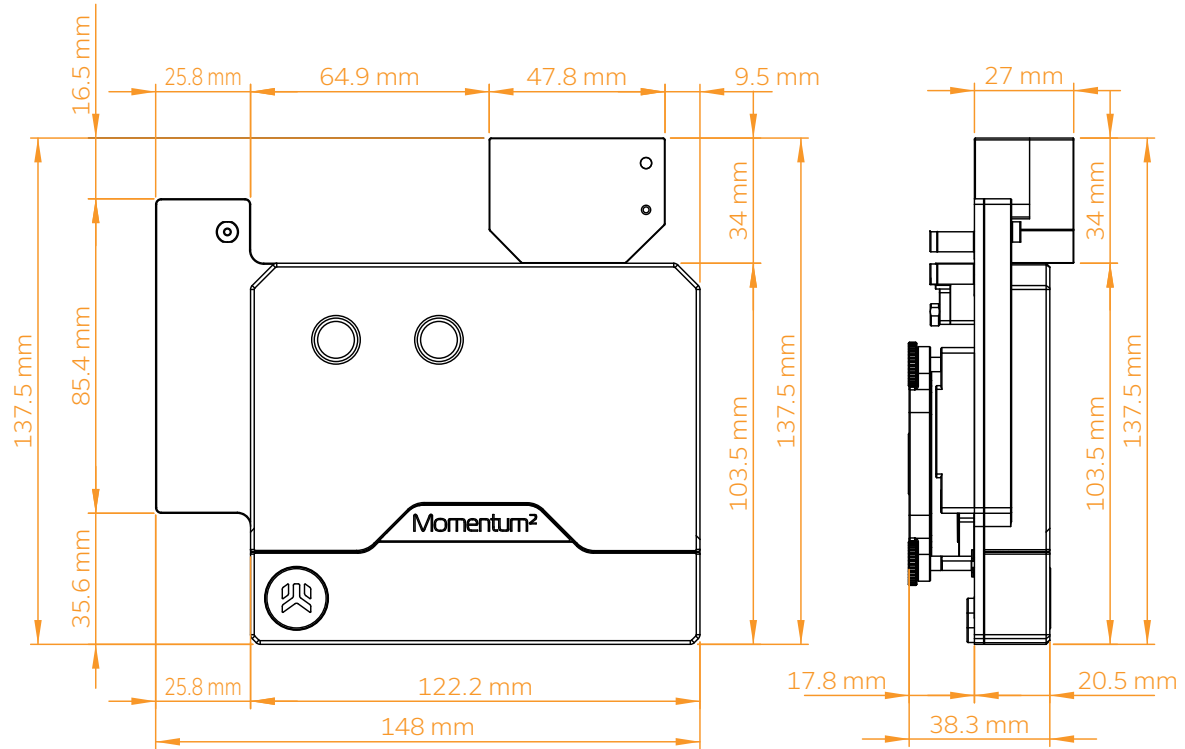120 x 16 mm (3 pcs)

120 mm

16 mm
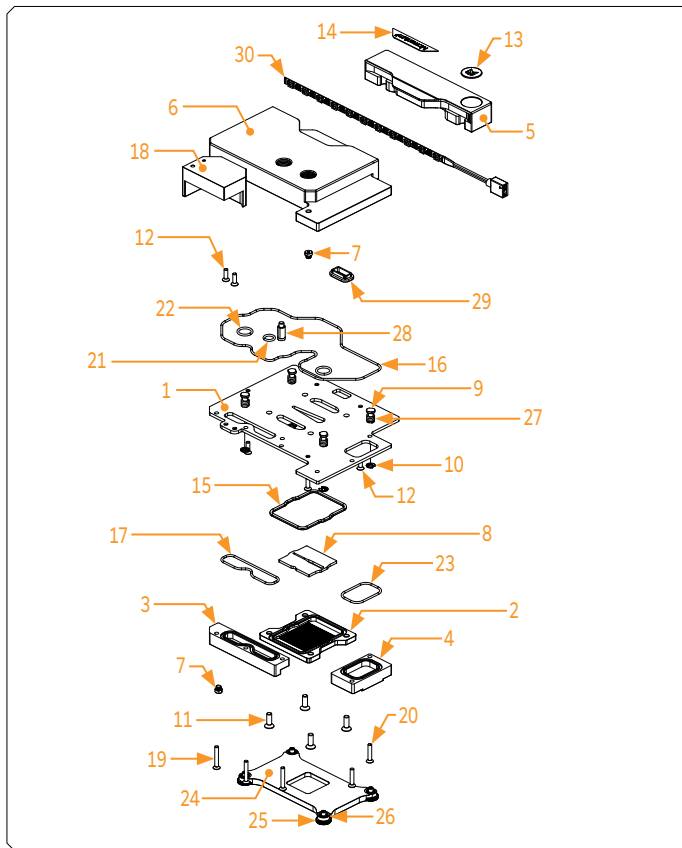
Thermal Grease (1 pc)

Allen Key 2.5 mm (1 pc)
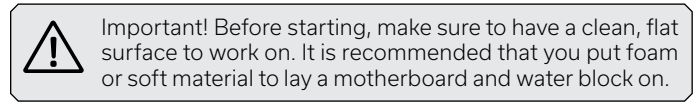
Allen Key 2 mm (1 pc)

WATER BLOCK DIMENSIONS

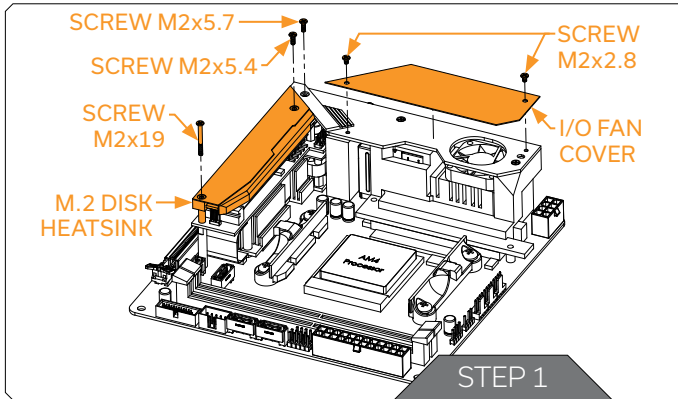# TECHNICAL SPECIFICATIONS AND WATER BLOCK PARTS

| Position	EAN	Description	Quantity
1	104436	Monoblock	1
2	103912	Coldplate (Nickel)	1
3	104435	Coldplate W (Nickel)	1
4	104433	Coldplate S (Nickel)	1
5	104438	TOP Acetal	1
6	104437	TOP Plexi	1
7	100258	Standoff M4/M2 x 2.5	2
8	103933	Jet Plate	1
9	103953	Mounting Screw	4
10	9033	Lock Washer 3.2 DIN6799	4
11	100500	Screw M4x12 DIN7991 INOX	4
12	8252	Screw M3x10 7991DIN INOX	6
13	100663	EK Badge	2
14	104444	Mylar Sticker	1
15	104773	OR - Coldplate	1
16	104439	Main OR	1
17	104440	OR 136.5X1.5	1
18	104431	IO Cover Mount	1
19	104771	Screw M3x20 7991DIN - INOX	3
20	8209	Screw M3x16 7991DIN -INOX	2
21	104774	OR - Small	1
22	123456	OR - 10x1.5	2
23	5123	OR 27x1.5	1
24	104450	Backplate	1
25	103956	Mounting Nut	4
26	104587	Spring Steel 1x7	4
27	8706	Spring M4x16mm 8kg (16x7.8)	4
28	8553	Standoff M4/M2.5 x 12.1	1
29	105248	LED cable protection	1
30	101946	LED Strip	1

PREPARING THE MOTHERBOARD

SCREW M2x5.7
SCREW M2x5.4
SCREW M2x19
M.2 DISK HEATSINK
SCREW M2x2.8
I/O FAN COVER
STEP 1

M.2 DISK HEATSINK
M.2 HEATSINK CONNECTOR
SSD M.2 DISK (IF INSTALLED)
SCREW M2x2.8
STEP 2

⚠ Important! Before starting, make sure to have a clean, flat surface to work on. It is recommended that you put foam or soft material to lay a motherboard and water block on.

STEP 1
Remove all the marked screws and I/O fan cover shown on image (STEP 1)

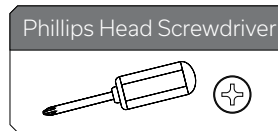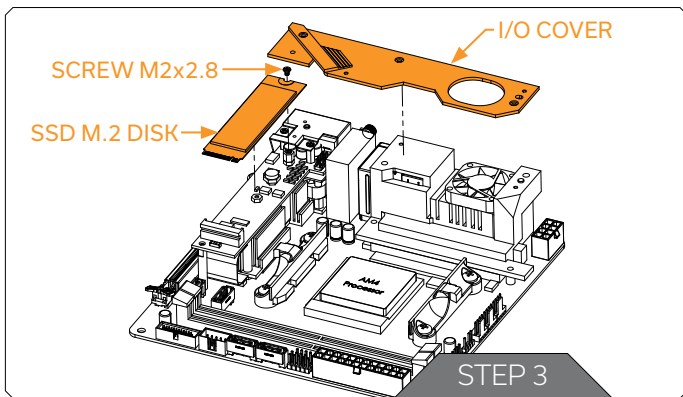For this step, you will need:

Phillips Head Screwdriver
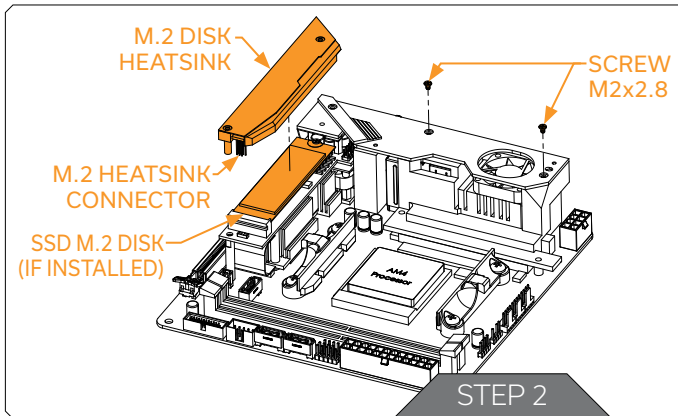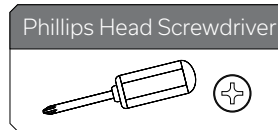
STEP 2
After removing the I/O Cover, unscrew two (2) M2x2.8 screws and carefully pull up the M.2 heatsink straight up.

Do not twist or bend the M.2 heatsink connector.

Be careful not to damage the M.2 heatsink connector!

For this step, you will need:
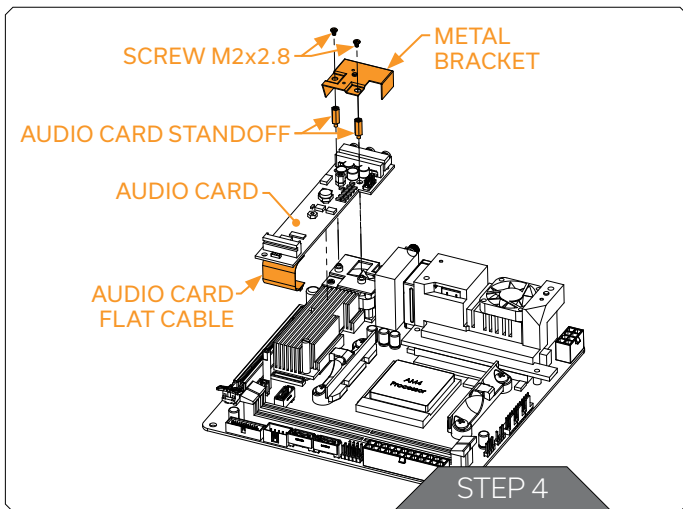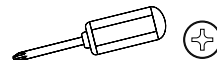
Phillips Head Screwdriver

STEP 3
Unscrew one (1) M2x2.8 Screw and remove the SSD M.2 disk (if installed). Remove the I/O cover plate.

For this step, you will need:

Phillips Head Screwdriver

STEP 4
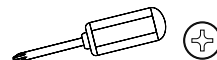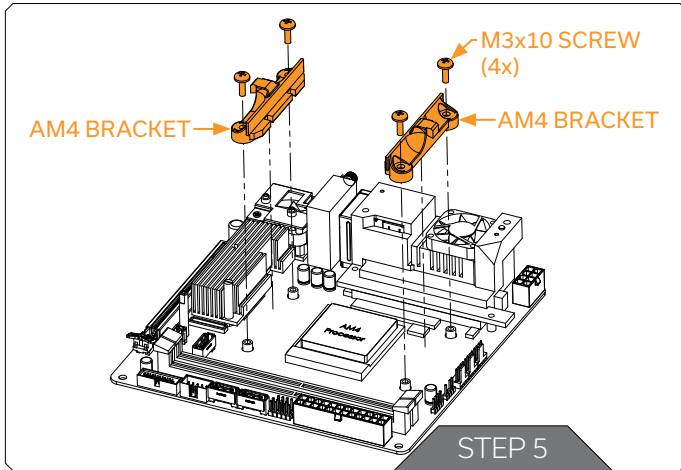Remove all the marked screws and standoffs shown on image (STEP 4). Remove the Audio card and disconnect a flat Audio card cable.

For this step, you will need:

Phillips Head Screwdriver

AM4 BRACKET
M3x10 SCREW (4x)
AM4 BRACKET
STEP 5

STEP 5

Unscrew four (4) M3x10 Screws and remove two (2) AM4 brackets.

For this step, you will need:

Phillips Head Screwdriver
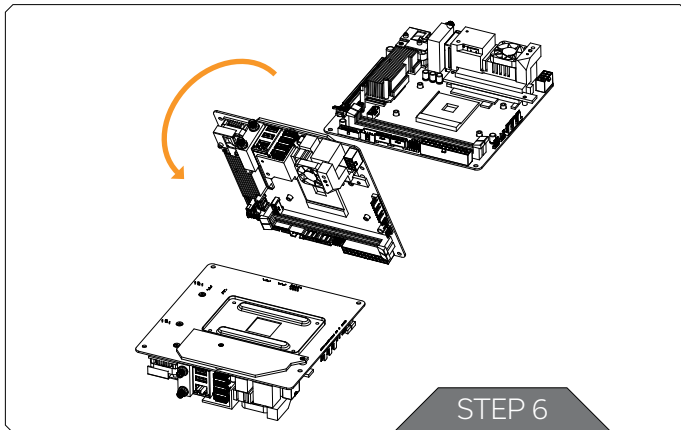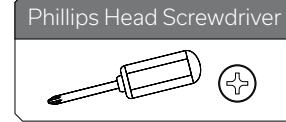
STEP 6

STEP 6

Turn the motherboard upside down.
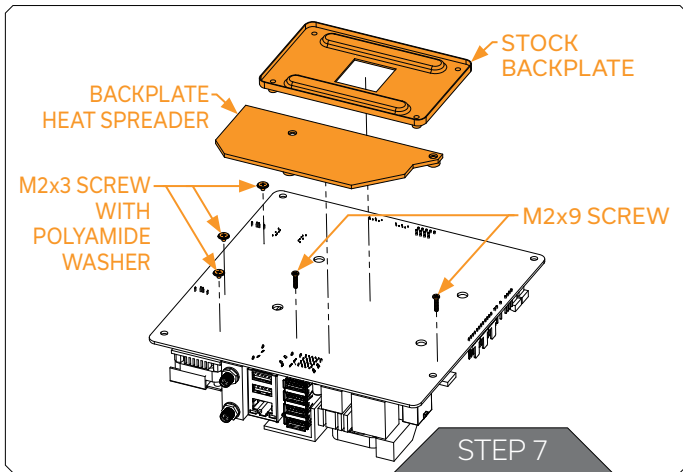
STEP 7

Unscrew two (2) M2x9 Screws, remove the Backplate heat spreader, and the Stock backplate. Unscrew three (3) M2x3 Screws with a Polyamide washers.

For this step, you will need:

Phillips Head Screwdriver
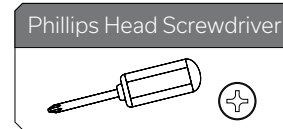
STEP 8

Unconnect fan cables of Cooler block 1 and Cooler block 2 from the motherboard. After disconnecting both fans, remove Cooler block 1 and Cooler block 2.

CUTTING AND PLACING THERMAL PADS

Thermal Pad F – 1.0 mm (120 x 16 mm)

16 mm

120 mm

1 mm

F1

F1

AM4 Processor
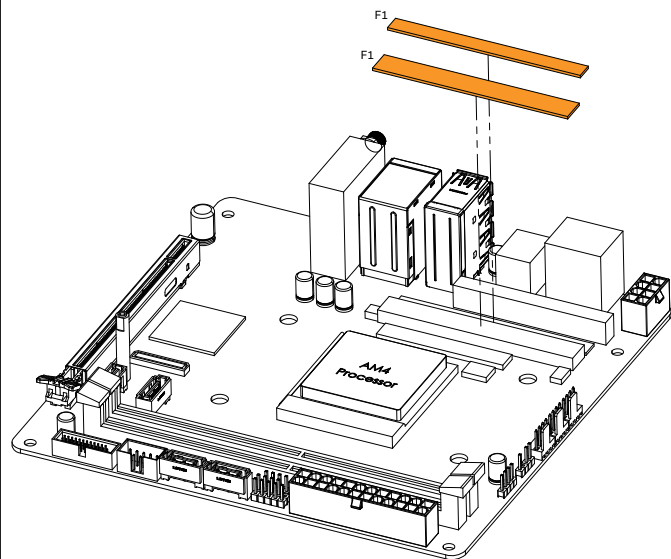
F1 Thermal Pad - 120 x 16 x 1.0 mm

STEP 1

STEP 1

EK-Momentum[2] ROG Strix X570-i Gaming D-RGB water block comes with Thermal Pads that have to be cut into smaller pieces to cover all the regulation area (Mosfet) on the motherboard.

EK made sure to provide you with more than an adequate quantity of Thermal Pads to complete this Step.
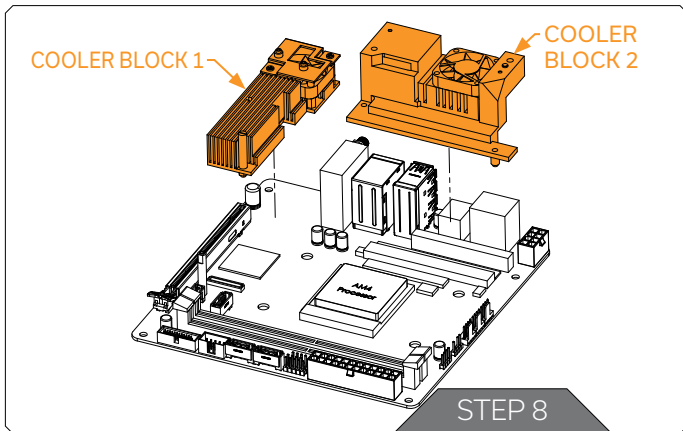
⚠️ Please remove the protective foil from both sides of the thermal pads prior to installation!

Replacement thermal pads:
Thermal PAD F 1.0 mm - (120 x 16 mm) – 3830046996732

For this step, you will need:

Scissors
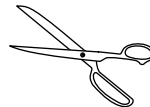
APPLYING THERMAL COMPOUND

THERMAL GREASE
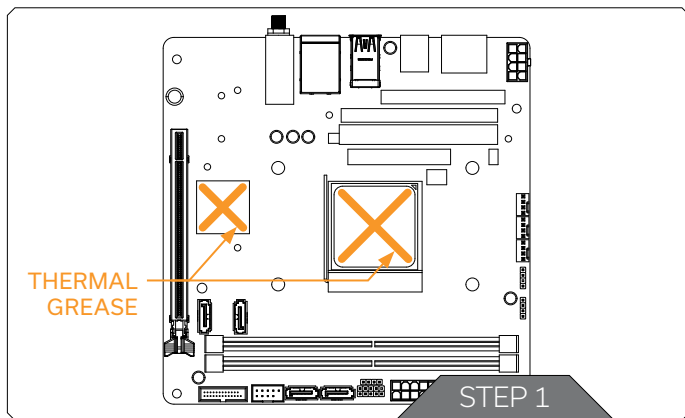
STEP 1

STEP 1

Apply the enclosed EK-TIM Ectotherm thermal grease (thermal compound) on the CPU heat spreader – IHS – and other necessary components as shown in the image. The layer of the thermal compound must be thin and even in thickness over the entire surface.

⚠️ The excessive or uneven application of thermal grease may lead to poor performance!

For this step, you will need:

Thermal Grease
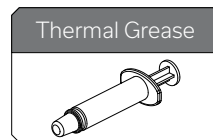
PREPARING THE WATER BLOCK FOR INSTALLATION

MS-VELOCITY² BACKPLATE

MS - VELOCITY² MOUNTING NUT (4x)

TURN ANTI-CLOCKWISE TO UNSCREW

MS - VELOCITY² MOUNTING SCREW (4x)
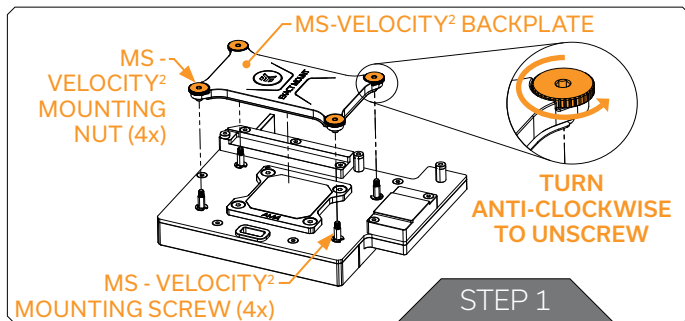
STEP 1

STEP 1

Unscrew four (4) Velocity² mounting nuts (turn them in an anti-clockwise direction to unscrew). Remove the Exact Mount Velocity² Backplate.

ATTACHING THE WATER BLOCK
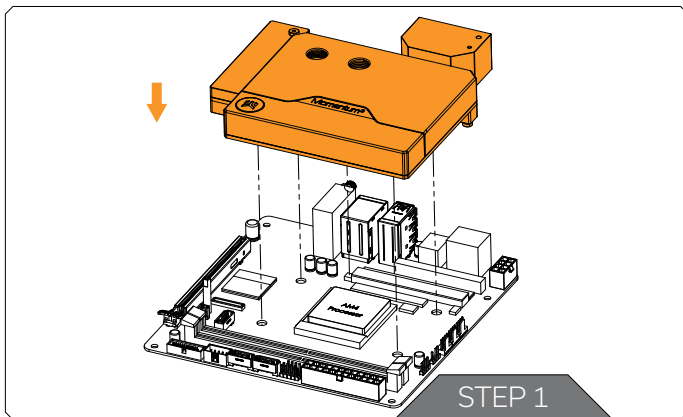
STEP 1

STEP 1
Carefully place the water block onto the motherboard and align four (4) mounting screws with four (4) holes on the motherboard.

STEP 2

STEP 2
Hold the water block and the motherboard and turn them upside down.

STEP 3 diagram

1

3

BACKPLATE HEATSPREADER

4

EXACT MOUNT BACKPLATE

2

M2.5x8 SCREW

M2x9 SCREW

TURN CLOCKWISE TO SCREW

STEP 3

STEP 3

Align the Backplate heat spreader with holes on the motherboard and tighten it with one(1) stored screw M2x9 and one (1) mounting screw M2.5x8 AX1 (Shown in the image). After attaching the backplate, align the Velocity^2 Backplate with Velocity^2 Mounting Screws. Turn the Velocity^2 mounting nuts in the clockwise direction according to the numerical order shown in the image.
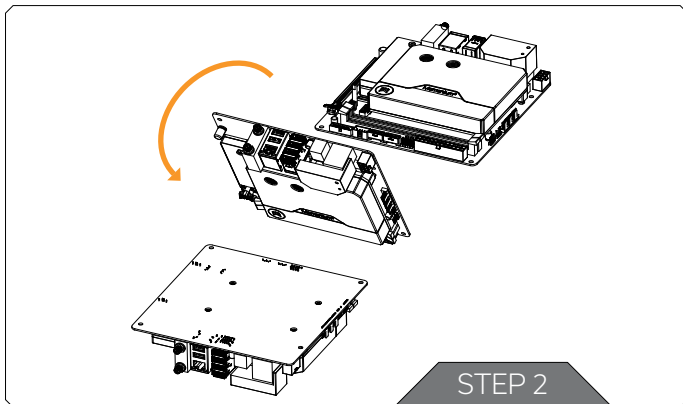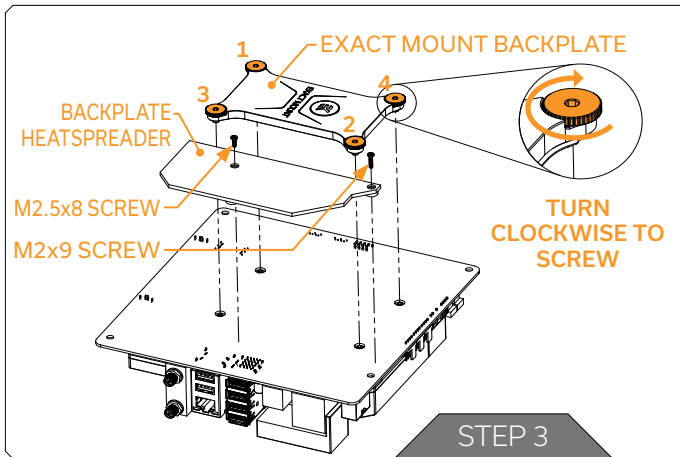
Do not use excessive force!

Do not use a moment higher than 0.6 Nm!

For this step you will need:

Phillips Head Screwdriver

STEP 4 diagram

SHEET METAL BRACKET

SCREW M2x2.8

AUDIO CARD STANDOFF

AUDIO CARD

WATER BLOCK STANDOFF

AUDIO CARD FLAT CABLE

MOTHERBOARD AUDIO CONNECTOR

MOTHERBOARD STANDOFF
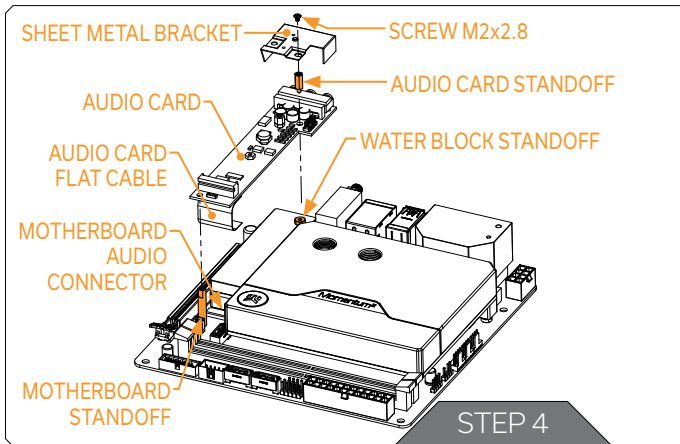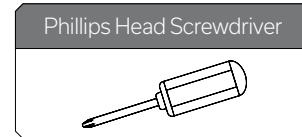
STEP 4

STEP 4

Place the Audio card on the motherboard standoff and water block standoff. Tighten the Audio card standoff into the Water block standoff. Connect the Audio card flat cable. Put the metal bracket on the Audio card standoff and tighten it with one (1) M2x2.8 Screw.

SCREW M2x5.4

SCREW M2x5.7

SCREW M2x19

IO COVER PLATE

SCREW M2x2.8
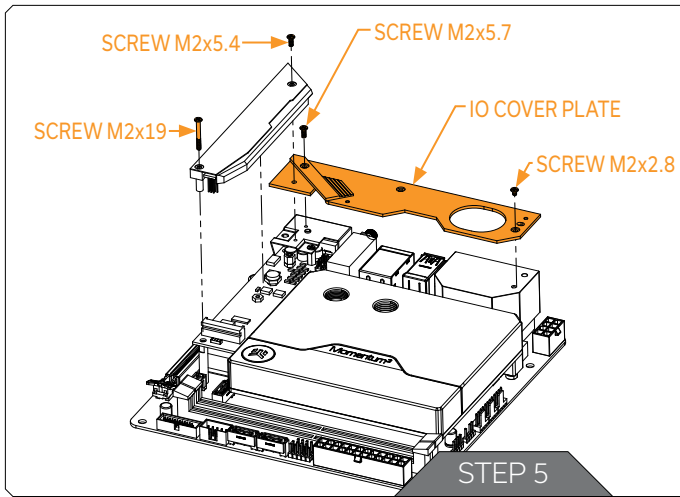
STEP 5

STEP 5

Position the I/O cover plate on the water block and metal bracket. Tighten the M2x2.8 and M2x5.7 Screws. Put M.2 disk heatsink straight down on the Audio card and connect the Audio card connector. Tighten the M.2 disk heatsink with M2x19 and M2x5.4 Screws.

Do not twist or bend the M.2 heatsink connector! Be careful not to damage the M.2 heatsink connector!

SCREW M2x2.8

SCREW M2x2.8
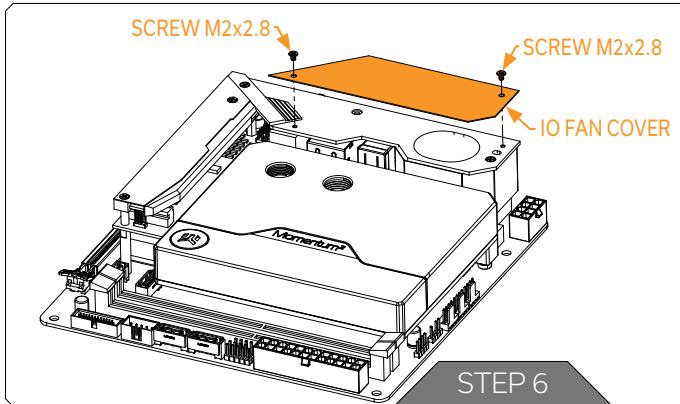
IO FAN COVER

STEP 6

STEP 6

Place the I/O fan cover on the I/O cover plate and tighten it with two (2) M2x2.8 Screws.

FITTINGS AND TUBING

IN

OUT

TUBING
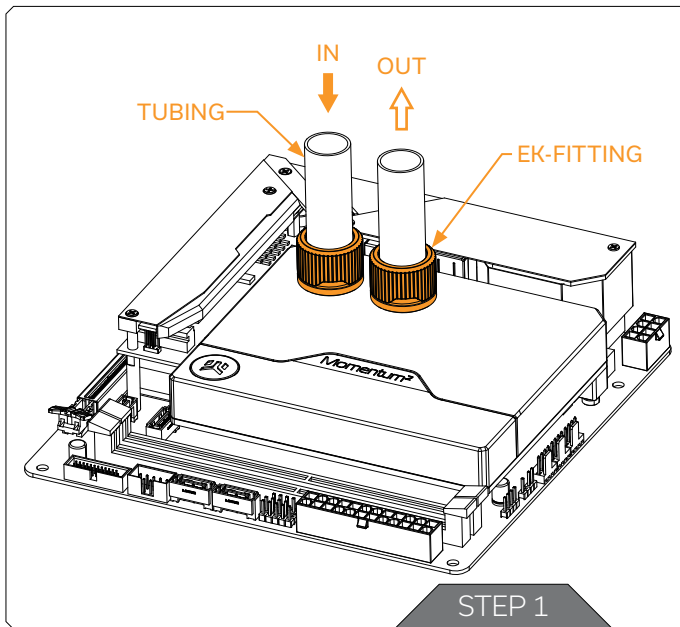
EK-FITTING

STEP 1

STEP 1

Screw-in two (2) G1/4 threaded male fittings. Attach the liquid cooling tubes and connect the water block to the cooling loop.

EK recommends using EK fittings with all EK water blocks.

⚠ CAUTION: When using connectors other than EK fittings, pay special attention to the length of the fittings' male G1/4″ thread – 5mm is the maximum G1/4″ thread length allowed!

For this step, you will need:

EK-Loop Multi Allen Key

CONNECTING THE D-RGB LED STRIP

D-RGB HEADER

RGB HEADER

STEP 1

STEP 1

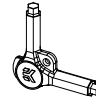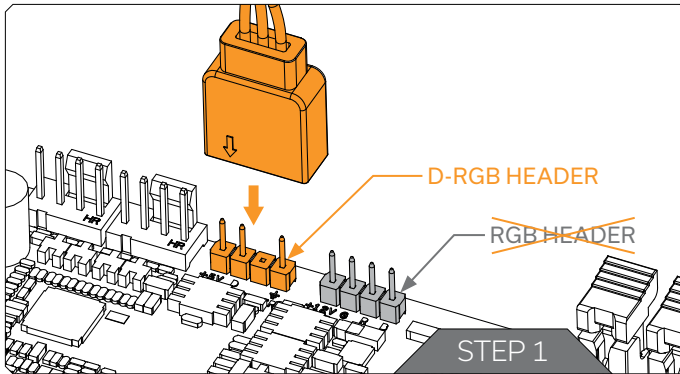Plug the **3-pin connector** of the distribution plate D-RGB LED light to the **D-RGB HEADER** on the motherboard. The LED will work if the pin layout on the header is as follows: **+5V, Digital, Empty, Ground**.

⚠ Please ensure that the arrow indicated on the connector is plugged into the +5V line as indicated on your motherboard. If you put the LED Diode to the 12V RGB HEADER you can damge the LEDs. Failure to do so will damage your motherboard or LED strip.

TESTING THE LOOP

To make sure the installation of EK components was successful, we recommend you perform a leak test for 24 hours. When your loop is complete and filled with coolant, connect the pump to a PSU outside of your system. Do not connect power to any of the other components. Turn on the PSU and let the pump run continuously. It is normal for the coolant level to drop during this process as air collects in the distribution plate. Inspect all parts of the loop, and in the eventuality that coolant leaks, fix the issue and repeat the testing process. Ensure that all hardware is dry before the system is powered on in order to prevent any damage.

WARRANTY

Our products are warranted against defects of materials and quality for a period of 24 months, starting with the date of delivery to the end-user. During this period, products will be repaired or have parts replaced at our discretion, provided that 1) the product is returned to the agent from whom it was purchased; 2) the product has been purchased by the end-user and has not been used for commercial purposes; 3) the product has not been misused, handled carelessly, or used in a manner other than the way described in the instructions manual. This warranty does not confer rights other than those expressly set out above and does not cover any claims for consequential loss or damage. This warranty is offered as an extra benefit and does not affect your statutory rights as a consumer. This warranty is voided if the product comes in contact with aggressive UV additives or other improper liquids. EK water blocks are sealed with a warranty-voiding circular label, proving the water block has withstood a pressure leak test. Removing the label will void the leak-free guarantee, but not the guarantee on the product itself. Any other RMA issues can be reported to EK Customer Support at **www.ekwb.com/support** for further analysis.

SUPPORT AND SERVICE

In case you need assistance or wish to order spare parts or a new mounting mechanism, please contact:
https://www.ekwb.com/customer-support/

For spare parts orders, refer to the page with "TECHNICAL SPECIFICATIONS AND WATER BLOCK PARTS" where you can find the EAN number of each part you might need.

Include the EAN number with quantity in your request. Mounting Mechanism EAN can be found under "BOX CONTENTS"

Thermal pads are readily available in the EK shop

SOCIAL MEDIA

EKWaterBlocks

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EKWBofficial

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