

# Installation and mounting manual for EK-SB ASUS M6G water block

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 web site at <u>www.ekwb.com</u> for updates. Before installation of this product please read important notice, disclosure and warranty conditions printed on the back of the box.

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

- 1. Please carefully read the manual before through before beginning with the installation process!
- 2. Please remove your motherboard from the computer to assure safest mounting process in order to prevent any possible damages to your CPU and/or motherboard's circuit board (PCB).
- 3. The EK High Flow and EK-PSC type 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.
- 4. The use of quality, market proved corrosion inhibiting coolants is always strongly recommended for any liquid cooling system.

# STEP 1: GENERAL INFORMATION Sample photo of ASUS Maximus VI Gene STEP 2: PREPARING YOUR MOTHERBOARD Image: Step 2: PREPARING YOUR MOTHERBOARD 1. REMOVING STOCK COOLER. Remove all encircled screws. There are 2 screws on the back of the motherboard that needs to be removed in order to remove the factory installed SB heat sink. Image: Step 2: PREPARING YOUR MOTHERBOARD 1. REMOVING STOCK COOLER. Remove all encircled screws. There are 2 screws on the back of the motherboard that needs to be removed in order to remove the factory installed SB heat sink. Image: Step 2: PREPARING YOUR MOTHERBOARD 1. REMOVING STOCK COOLER. Remove all encircled screws. There are 2 screws on the back of the motherboard that needs to be removed in order to remove the factory installed SB heat sink. Image: Step 2: PREPARING YOUR MOTHERBOARD 1. REMOVING STOCK COOLER. Remove all encircled screws. There are 2 screws on the back of the motherboard that needs to be removed in order to remove the factory installed SB heat sink. Image: Step 2: PREPARING YOUR MOTHERBOARD 1. REMOVING STOCK COOLER. Remove all encircled screws. There are 2 screws on the back of the motherboard that needs to be removed in order to remove the factory installed SB heat sink. Image: Step 2: PREPARING Your Motherboard 1. REMOVING STOCK COOLER. Remove all encircled screws. There are 2 screws on the back of the motherboard that needs to be removed in order to remove the factory installed SB heat sink. Image: Step 2: Preparing Your Motherboard 1. REMOVING STOCK COOLER. Remove and the factory installed SB heat sink.

2. CLEANING THE PCB. Carefully detach the original stock cooler after removing **all** screws securing it to the board. Wipe off the remains (by using non–abrasive cloth or *q*-*tip*, as shown on sample photo) of the original thermal compound until the components and circuit board are completely clean. EKWB recommends the use of denatured alcohol for removing TIM leftovers.



### **STEP 3: PREPARING YOUR WATER BLOCK**

1. PLACING SB BLOCK ON MOTHERBOARD. Place the SB part of the water block with preinstalled 2.5mm standoffs kit gently to the motherboard or vice versa. Make sure that mounting holes are aligned. Skip to STEP 4 on how to fasten the water block to the motherboard using the enclosed screws and washers.

**Important notice:** When the water-block is mounted <u>only one full-length</u> PCI-Express (PCIe) slot is usable.



3. APPLYING THERMAL COMPOUND. Apply thermal compound (not included): lightly coat the Intel Z87 (PCH) with electrically non-conductive thermal grease – for example Arctic Cooling MX-2 <sup>™</sup>, MX-4 <sup>™</sup> or GELID GC-Extreme <sup>™</sup> thermal grease. EKWB recommends to apply thermal grease in Rice sized dot for best performance (see sample picture).



### STEP 4: ATTACHING BLOCK TO MOTHERBOARD

Prior to fastening the screws please make sure the mounting holes on the motherboard's circuit board are aligned with the water block.

**<u>SB block</u>**: Use two (2) M3x4 DIN7985 and two (2) washers. Do not use excessive force when tightening the screws!

Use the enclosed screws and washers as shown in picture below:



6. POSITIONING FITTINGS AND CONNECTING TO WATER CIRCUIT

Attach the liquid cooling tubes and

**STEP 5: CHECKING FOR CONTACTS** 

Temporarily remove the water Block to / check for uniform surface contact between the block and the components. Note the pattern of contact on a piece of paper. Then repeat steps 3 and 4 to reattach the block applying more or less pressure to the areas where you have found it necessary.

Chip die thermal grease imprint



connect the water-block(s) into the cooling circuit. EKWB recommends using EK-CSQ compression fittings with the EK-SB ASUS M6G series water block. You can use any opening as an inlet/outlet port. Plan your tubing routing in advance!



REQUIRED TOOLS:	
philips screwdriver and thermal grease	

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# Installing **EK-SB ASUS M6G** on to the ASUS Maximus VI Hero motherboard.

### **STEP 1: GENERAL INFORMATION** Sample photo of ASUS Maximus VI Hero



2. CLEANING THE PCB. Carefully detach the original stock cooler after removing all screws securing it to the board. Wipe off the remains (by using non-abrasive cloth or q-tip, as shown on sample photo) of the original thermal compound until the components and circuit board are completely clean. EKWB recommends the use of denatured alcohol for removing TIM leftovers.



### **STEP 3: PREPARING YOUR WATER BLOCK**

PLACING STANDOFFS ON THE BLOCK. Originally the water block comes with preinstalled 2.5mm standoffs, this configuration only applies for the ASUS MAXIMUS VI GENE motherboard.

Brass standoffs are obligatory in order to attach this water block to the printed circuit board of the motherboard. Make sure that the alignment of the 2.5mm standoffs are like shown on the photo (2, 3).

**1**.Remove the standoff (encircled below):



### **STEP 5: CHECKING FOR CONTACTS**

Temporarily remove the water block to check for uniform surface contact between the block and the components. Note the pattern of contact on a piece of paper. Then repeat steps 3 and 4 to reattach the block

**2.**Mount standoffs to the SB block (encircled below):

Tightening

the standoff:



Please use the encased key

**3** Placing SB block on the motherboard:



Chip die thermal grease imprint

# **STEP 2: PREPARING YOUR MOTHERBOARD**

1. REMOVING STOCK COOLER. Remove all encircled screws. There are 4 screws on the back of the motherboard that needs to be removed in order to remove the factory installed SB heat sink.



3. APPLYING THERMAL COMPOUND. Apply thermal compound (not included): lightly coat the Intel Z87 (PCH) with electrically non-conductive thermal grease - for example Arctic Cooling MX-2 <sup>™</sup>, MX-4 <sup>™</sup> or GELID GC-Extreme <sup>™</sup> thermal grease. EKWB recommends to apply thermal grease in Rice sized dot for best performance (see sample picture).



### **STEP 4: ATTACHING BLOCK TO MOTHERBOARD**

Prior to fastening the screws please make sure the mounting holes on the motherboard's circuit board are aligned with the water block.

**<u>SB block</u>**: Use four (4) M3x4 DIN7985 and four (4) washers. Do not use excessive force when tightening the screws!

Use the enclosed screws and washers as shown in picture below:



# 6. POSITIONING FITTINGS AND CONNECTING TO WATER CIRCUIT

Attach the liquid cooling tubes and connect the water-block(s) into the cooling circuit. EKWB recommends using EK-CSQ compression fittings with the EK-SB ASUS M6G series water block. You can

**EK-CSQ** fitting





use any opening as an inlet/outlet port. Plan your tubing routing in advance!





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