

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 www.ekwb.com 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:

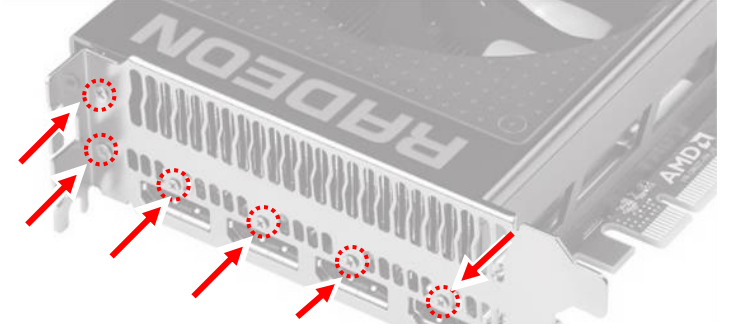
1. Please carefully read the manual before through before beginning with the installation process!
2. Please remove your motherboard from the computer to assure safest mounting process in order to prevent any possible damages to your CPU and/or motherboard's circuit board (PCB).
3. The EK-HFB and EK-ACF 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 corrosion inhibiting coolants is always recommended for any liquid cooling system.

STEP 1: GENERAL INFORMATION. Sample photograph of AMD Radeon R9 Nano graphics card



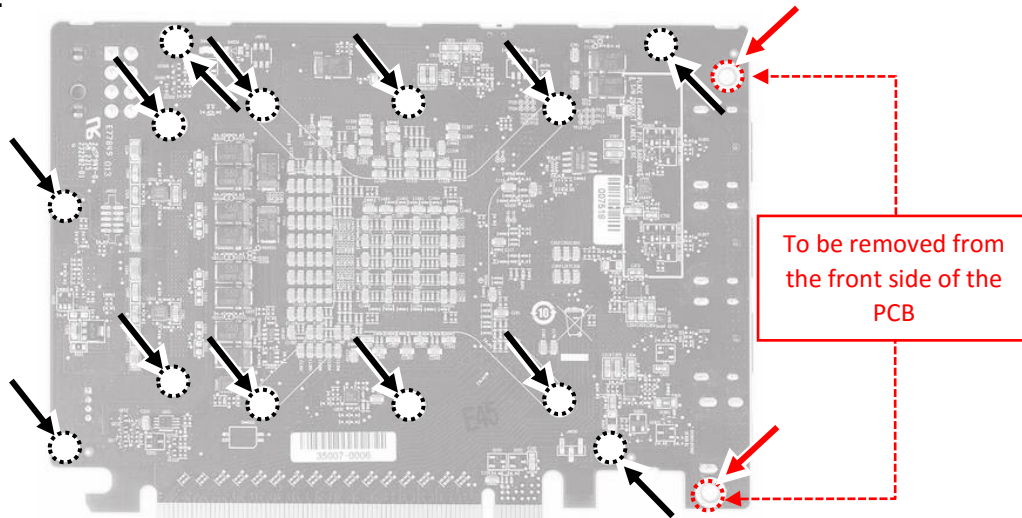
STEP 2: PREPARING YOUR GRAPHIC CARD.

1. REMOVING STOCK COOLER and BRACKET: Remove encircled screw on the bracket using Philips head screwdriver, including the four smaller ones above each DP/HDMI video outputs.

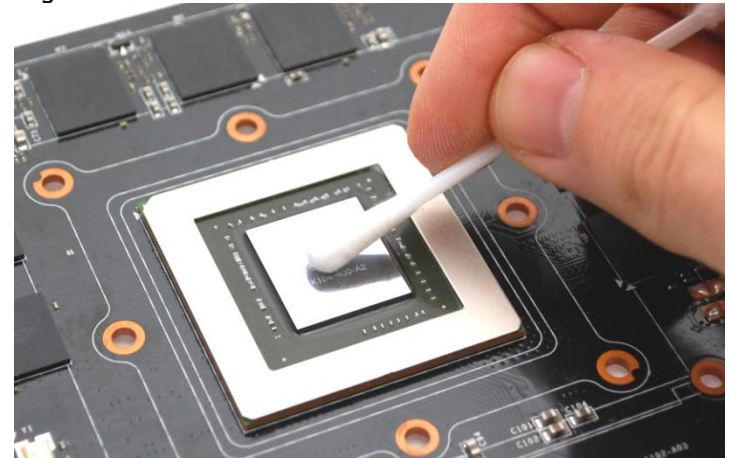


STEP 2 cont.: PREPARING YOUR GRAPHIC CARD

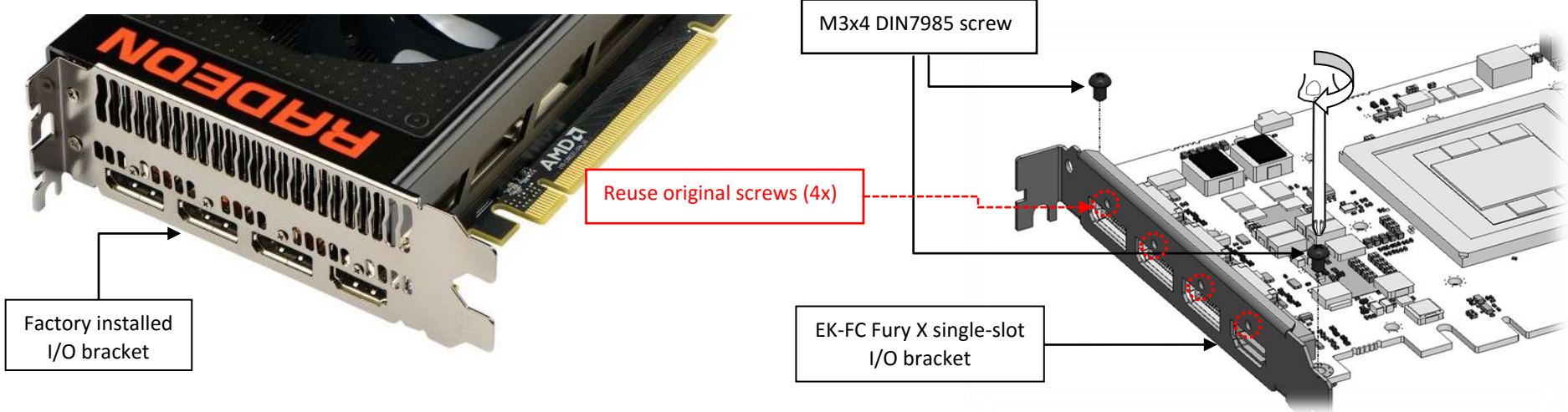
2. REMOVING STOCK COOLER. Remove all encircled screws. All heat sink assembly screws should be removed, including self-adhesive washers on both sides of the PCB (if present). There are up to 15 screws on the back and front of the graphics card. After you remove the fan housing do not forget to unplug the fan.



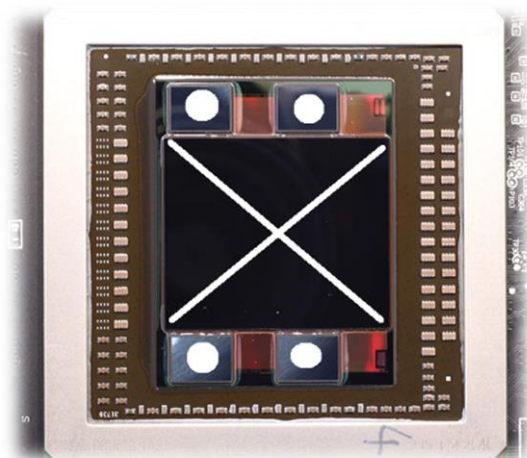
3. CLEANING THE PCB. Carefully detach the original stock cooler after removing **all** screws securing it to the board. Wipe off the remains (by using non-abrasive cloth or *qtip*, as shown on sample photo) of the original thermal compound until the components and circuit board are completely clean.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



4. REPLACING THE ORIGINAL I/O BRACKET. When all four (4) screws, securing DP/HDMI outputs to the original 2-slot I/O bracket (see STEP 2.1) as well as two screws from the front side of the PCB (see STEP 2.2) have been removed the original bracket should come off. Replace the original I/O bracket with enclosed EK-FC Fury X single-slot I/O bracket. Re-install four original screw to corresponding hole above DP/HDMI outputs. Finalize installation by secure the new I/O bracket to the circuit board with Philips head screwdriver using enclosed M3x4 DIN7985 screws.



5. APPLYING THERMAL COMPOUND. Apply thermal compound: lightly coat AMD chip (GPU + HBM stack) with enclosed EK-TIM Ectotherm™ thermal grease. EKWB recommends to apply thermal grease on GPU in cross form for best performance (see sample picture). Apply dot of TIM on each HBM module die (4 pcs) as shown on picture below:

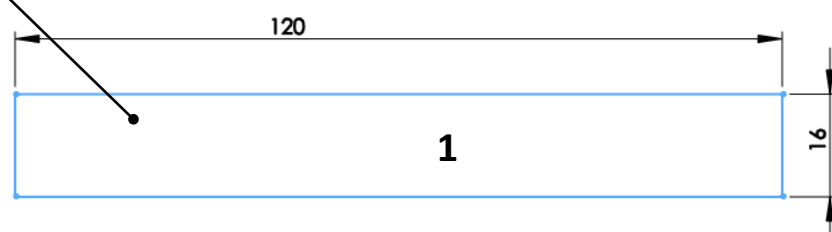


6. CUTTING THERMAL PADS. This water block comes with thermally conductive pads (thermal pads), some of which may already be pre-cut. Others have to be cut to smaller pieces in order to cover all the VRM components such as MOSFETs and IC drivers.

PLEASE REMOVE THE PROTECTIVE FOIL FROM BOTH SIDES OF THE THERMAL PADS PRIOR TO INSTALLATION.

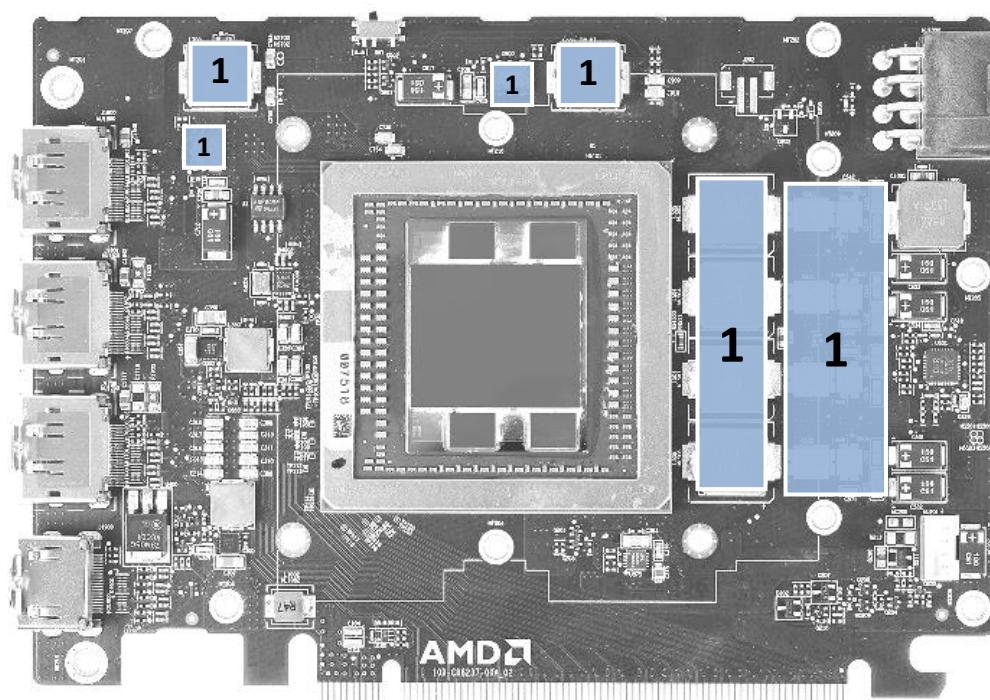
Replacement thermal pads: Thermal PAD F 0,5mm - (120x16mm)

1: Thermal PAD F 0,5mm - (120x16mm)
(for VRM):

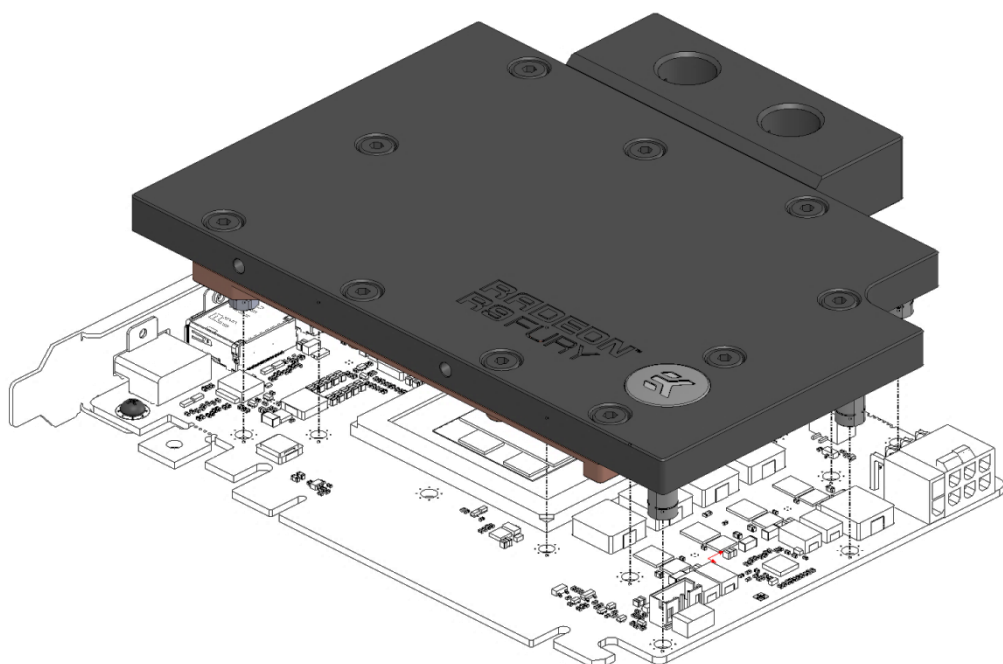


STEP 3: INSTALLING WATER BLOCK

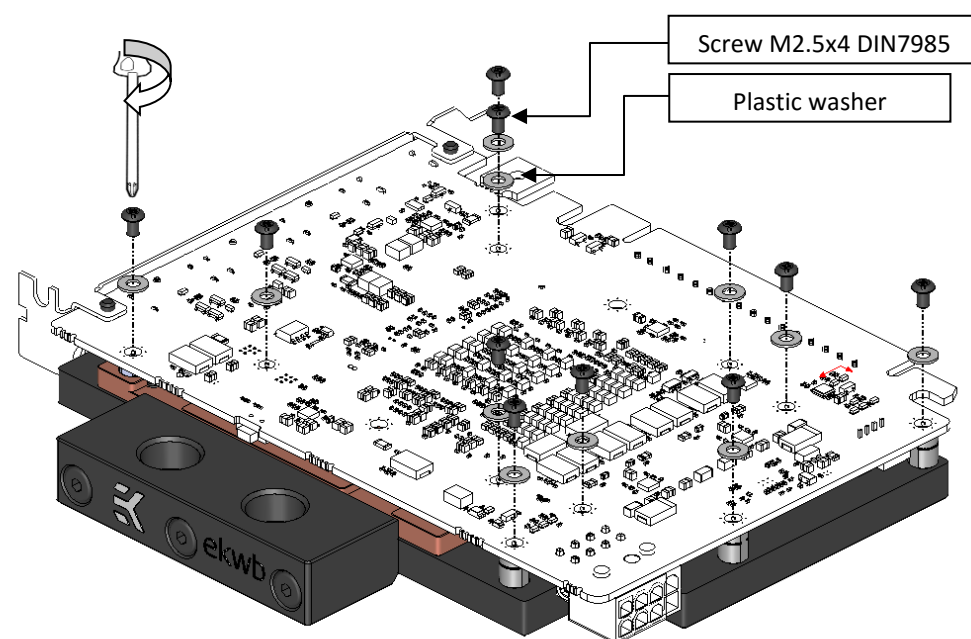
1. PLACING THERMAL PADS ON PCB. Place thermal pads on the circuit board as shown on the picture below. Refer to numbering in STEP2.6 when applying thermal pads of different sizes or thicknesses. EK made sure to provide customers with more than adequate quantity of thermal pads to complete this step.



2. PLACING BLOCK TO GRAPHIC CARD. Carefully position the water block with preinstalled 2.5mm standoffs on to the graphics card. During this process please make sure you align mounting holes on PCB with holes on the water block. Also pay attention not to use too much force by pressing block down to PCB. Chip dies are prone to cracking.



3. ATTACHING BLOCK TO GRAPHIC CARD. By using Philips screwdriver, screw in enclosed M2.5x4 DIN7985 screws. EK recommends start screwing the screws around the GPU core first using Philips head screwdriver and continue outwards. Always use a plastic washer underneath each and every screw!



STEP 4: CHECKING FOR CONTACTS

Temporarily remove the water block to check for uniform surface contact between the block and the components, pay special attention to the VRM section of the graphics card. Check whether the water block makes contact with the VRM. Then repeat sub-steps in previous section to re-attach the block. **In case you fail to obtain good contact, please check again your thermal pad thickness or contact our support service.**

STEP 5: INSTALLATION OF FITTINGS AND TUBING

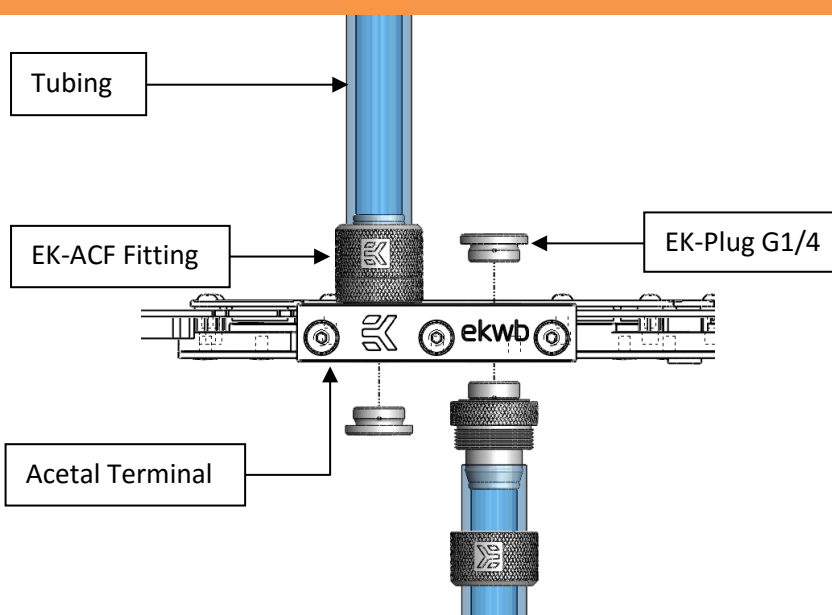
Screw in the two G1/4 threaded male fittings. Attach the liquid cooling tubes and connect the water-block(s) into the cooling circuit. **EKWB recommends using EK-ACF fittings with the EK-FC Fury Nano series water blocks.**

When using fittings, other than compression type please ensure the tubes are securely attached to the barb/fittings. Use hose clamps or an appropriate substitute.

EK recommend to use LEFT side port as an inlet port for best performance. However this water block also operates flawlessly with reversed water flow.

CAUTION: In case of using connectors other than EK-ACF series compression fittings or EK-HFB barb fittings, take special attention to the length of the fittings' male G1/4" thread.

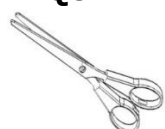
5mm is the maximum allowed G1/4" thread length!



STEP 6: INSERTING CARD IN YOUR PC CASE

Carefully lift your graphics card with installed block and insert it in your PC's motherboard PCI-express expansion slot. Please bear in mind that your graphics card is probably heavier than when it was equipped with original heat sink fan assembly. One needs to be very careful when handling the graphics card. Avoid all un-needed manipulation of the VGA/water block assembly that might damage your card or water block during final installation.

REQUIRED TOOLS AND MOUNTING SCREWS:



scissors



philips screwdriver