



INTEL

AMD

Dear customer,

Thank you very much for choosing the Noctua NH-P1.

The NH-P1 is Noctua's first passive CPU cooler and has been custom-designed for fanless operation from ground up: In enclosures with good natural convection, its six heat pipes and thick, widely spaced heat sink fins enable it to cool modern high-end CPUs with low to moderate heat dissipation completely passively.

Please take a look at our setup guidelines in order to make sure that you will get optimal results.

Enjoy your Noctua NH-P1!

Yours sincerely,



Roland Mossig, Noctua CEO

Caution: In order to get optimal results when building passively cooled systems using the NH-P1, it is important to follow some general guidelines.

Please refer to the following page for detailed guidelines and recommendations on how to set up your system for best results: <https://noctua.at/en/nh-p1-setup-guidelines>.

The NH-P1 strictly requires either a fanless PC case with good natural convection, an open benchtable type setup or a PC case with fans in order to achieve its full performance. We offer a list of recommended cases for completely fanless systems using the NH-P1: <https://noctua.at/en/nh-p1-recommended-cases>.

While the NH-P1 provides first-rate performance for a passive cooler, it is not suitable for overclocking or CPUs that create high heat loads. Please note that the TDP (Thermal Design Power) rating or amount of heat dissipation that the cooler can handle not only depends on the chassis and various other factors such as ambient temperature or other components inside the system, but also generally varies from CPU model to CPU model.

For this reason, we don't give a general TDP specification but rather refer to our CPU compatibility list where we indicate which heat load the cooler can be expected to support on a particular CPU in a fully optimised setup (see our setup guidelines): <https://noctua.at/en/nh-p1/cpucomp>.

If necessary, Noctua recommends adding a near-inaudible 120mm fan like the NF-A12x25 LS-PWM to the heatsink for improved performance headroom.

This manual will guide you through the installation process of the SecuFirm2™ mounting system step by step.

Prior to installing the cooler, please consult the compatibility centre on our website (ncc.noctua.at) and verify that the cooler is fully compatible with your motherboard, CPU, RAM and case. Please also make sure that there are no compatibility issues with any other components.

Double check that the heatsink and fan clips do not make contact with the VGA card, other PCIe cards, motherboard heatsinks or any other components.

Noctua cannot be held responsible for any damage or losses caused by compatibility issues.

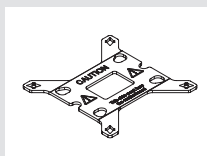
Should you encounter any difficulties, please check the FAQs on our website (faq.noctua.at) and don't hesitate to contact our support team at support@noctua.at.

Multilingual versions of this manual are available on our website: www.noctua.at/manuals

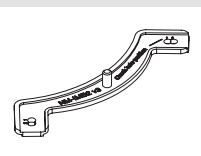
INTEL

LGA1851, LGA1700,
LGA1200 & LGA115x

Required mounting parts:



1x NM-IBP4
backplate



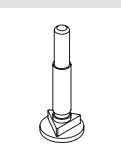
2x NM-IMB2
mounting bars



4x NM-ICS1
clip-on spacers



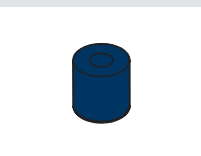
4x NM-ITS1-TX
thumb screws



4x NM-IBT5
bolts



4x NM-IPS1
black plastic spacers for
LGA1200/115x



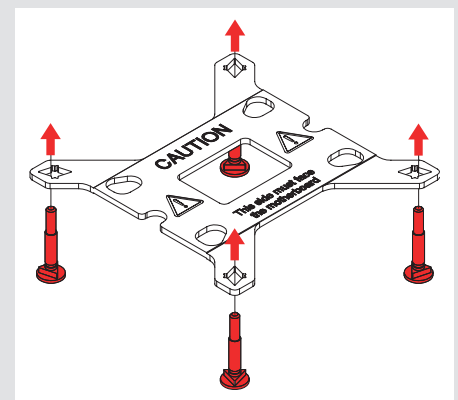
4x NM-IPS3
blue plastic spacers for
LGA1851/1700

1 Removing the motherboard

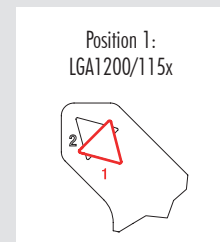
If you would like to use the cooler on an assembled system and your case does not have a cut-out at the rear side of the motherboard tray, you must first remove the motherboard from the case in order to be able to install the supplied backplate.

2 Setting up the backplate

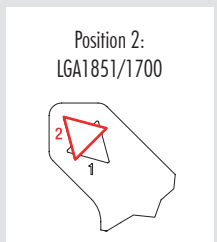
First, identify the side of the backplate that should face the motherboard (marked with caution signs). Then choose the appropriate hole spacing for your socket and insert the four bolts into the backplate from the opposite side (marked with model name, SecuFirm2™ branding and numbers for hole spacing) at the appropriate position.



Use hole position 1 for LGA1200/LGA115x (LGA1150, LGA1151, LGA1155, LGA1156) and hole position 2 for LGA1851/LGA1700:

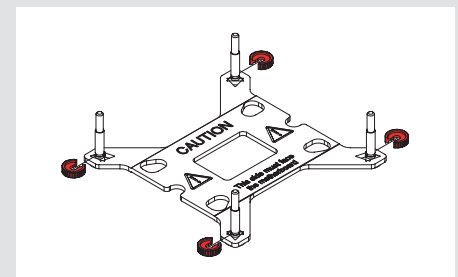


Position 1:
LGA1200/115x

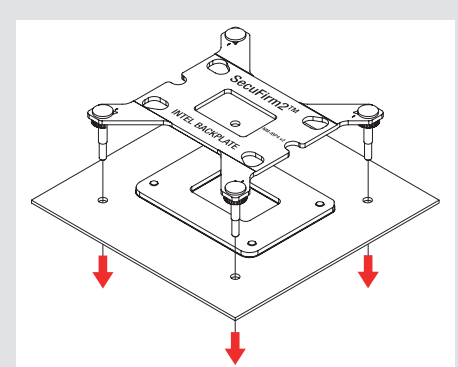


Position 2:
LGA1851/1700

Fix the bolts using the NM-ICS1 clip-on spacers.



3 Attaching the backplate



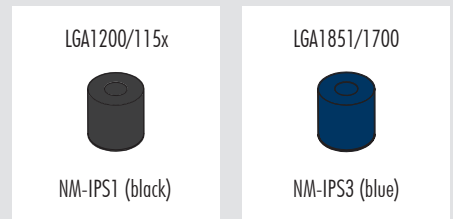
Caution: The supplied backplate will install over the motherboard's stock backplate, so the motherboard's stock backplate must not be taken off.

Place the backplate on the rear side of the motherboard so that the bolts protrude through the mounting holes.

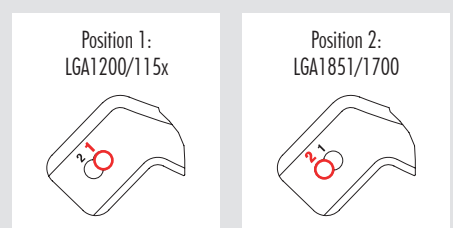
4 Installing the mounting bars

Please first choose the correct set of plastic spacers and the correct set of holes on the mounting bars according to whether you are using an LGA1200/LGA115x (LGA1150, LGA1151, LGA1155, LGA1156) or an LGA1851/LGA1700 socket motherboard.

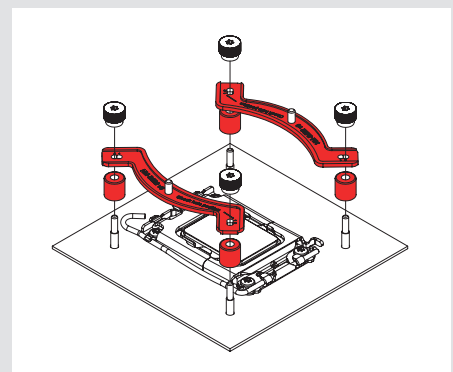
Use the black NM-IPS1 plastic spacers for LGA1200/LGA115x (LGA1150, LGA1151, LGA1155, LGA1156) and the blue NM-IPS3 spacers for LGA1851/LGA1700.



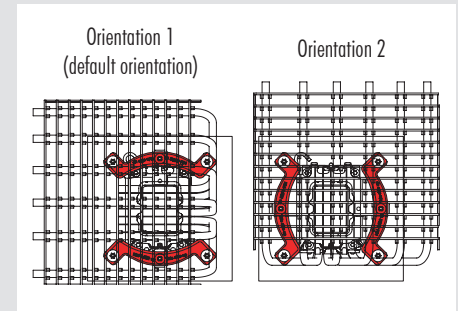
Use hole position 1 for LGA1200/LGA115x (LGA1150, LGA1151, LGA1155, LGA1156) and hole position 2 for LGA1851/LGA1700 :



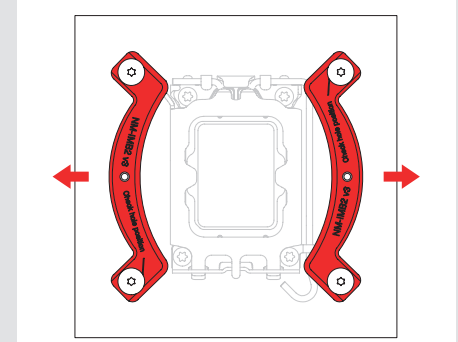
Put the plastic spacers onto the bolts of the backplate, then add the mounting bars.



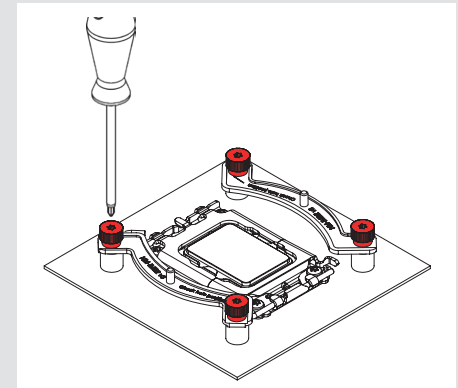
Caution: Choose the alignment of the mounting bars according to the desired final orientation of the cooler.



Caution: Make sure that the curved sides of the mounting bars are pointing outwards.



Fix the mounting bars using the four NM-ITS1-TX thumb screws.



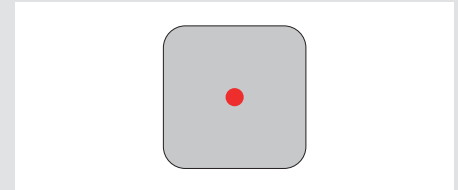
Caution: Gently tighten the screws until they stop, but do not use excessive force (max. torque 0.6 Nm).

5 Applying the thermal paste

If there are residual traces of thermal paste or thermal pads on your CPU, please clean them off first. Then apply the supplied NT-H2 thermal paste onto the CPU as shown in the following images.

For LGA1851/LGA1700, apply 5 small dots; 4 dots with ~2mm diameter near the corners plus 1 dot with 3-4mm diameter in the centre:

For LGA1200/LGA115x (LGA1150, LGA1151, LGA1155, LGA1156) apply a single 4-5mm dot in the centre:

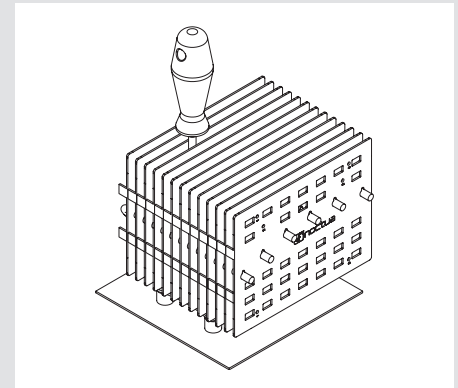


Caution: Applying too much thermal paste will lower heat conductivity and cooling performance!

6 Fastening the heatsink to the CPU

Caution: Please first take off the protection cover at the bottom side of the heatsink.

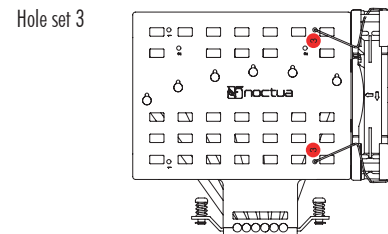
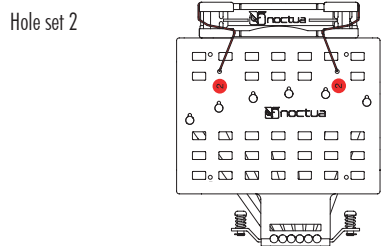
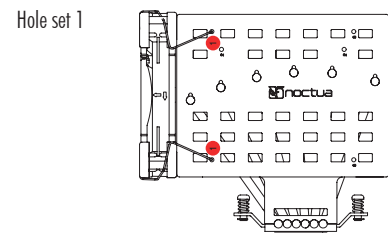
Then put the heatsink onto the CPU and screw it to the screw threads of the mounting bars. Note that you can reach through the blades of the fan using the supplied screwdriver. Perform 2-3 turns on each screw, then repeat until both are fully tightened.



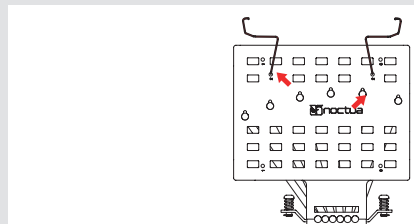
Caution: Gently tighten the screws until they stop, but do not use excessive force (max. torque 0.6 Nm).

7 Fan setup

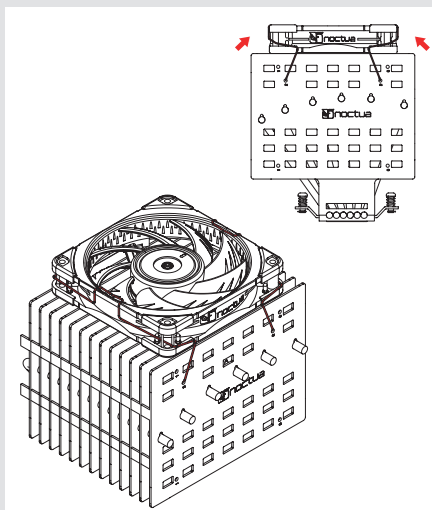
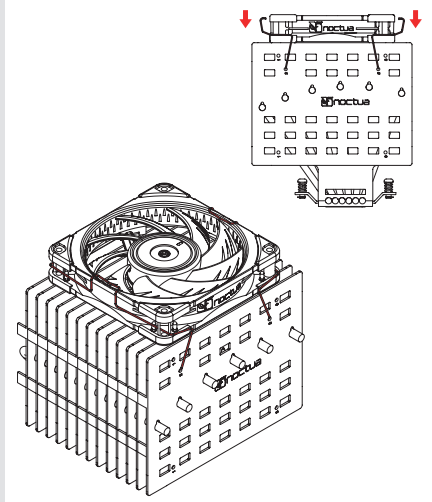
While the NH-P1 has been designed for passive operation, its cooling performance can be significantly improved by adding a near-silent low-speed fan such as the NF-A12x25 LS-PWM. In order to install the fan using the supplied fan mounting clips, please first decide on which side of the cooler you would like to install the fan and identify the correct hole set (1/2/3):



Then insert the tips of the fan clips into the correct hole set.



Place the fan on the heatsink and pull the clips over the fan to hold it in place.



Connect the fan to one of the fan headers of your motherboard.

! Transporting your system

As it is not possible to reliably calculate or control the forces that act upon a system during transport (e.g. in shipping), we generally recommend, for safety reasons, taking the cooler off. Noctua cannot be held responsible for any damage that may arise due to excessive stress during transport if you keep the heatsink installed.

! Warranty, support and FAQs

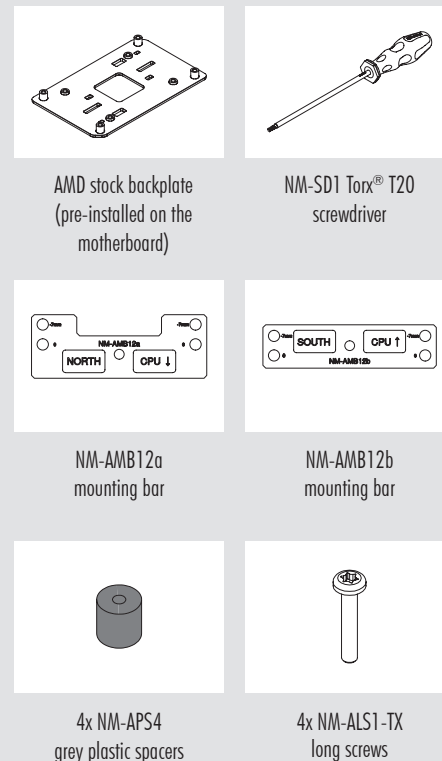
Even with high-grade products and strict quality control, the possibility of defects cannot be eliminated entirely. Therefore, we aim at providing the highest possible level of reliability and convenience by offering a warranty period of 6 years and direct, fast and straightforward RMA service.

Should you encounter any problems with your NH-P1, please don't hesitate to contact our support team (support@noctua.at).

Please also consult the FAQ section on our website: [faq.noctua.at](https://www.noctua.at/faq)

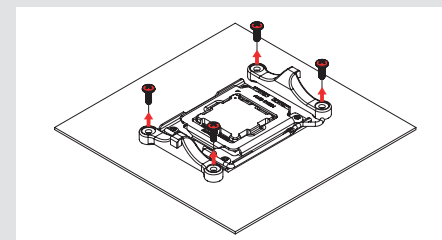
AMD AM5 & AM4

Required mounting parts:

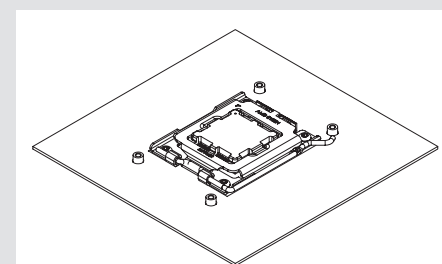


1 Removing the stock retention module — putting the backplate in place

The SecuFirm2+™ mounting system will install directly to the motherboard's stock backplate, so please first remove the motherboard's stock CPU cooler retention module by unscrewing it from the backplate (if it has not already been removed for previous installations).

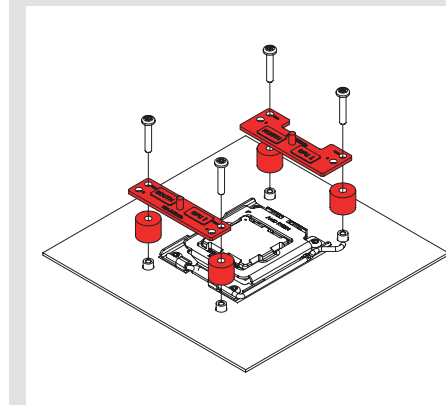


On AM4, the stock backplate will become loose when unscrewing the retention module, so hold it in place for the next step. If you have lost your stock AM4 backplate, please contact us at support@noctua.at. On AM5, the stock backplate is screw-fixed to the socket, so should simply remain in place.



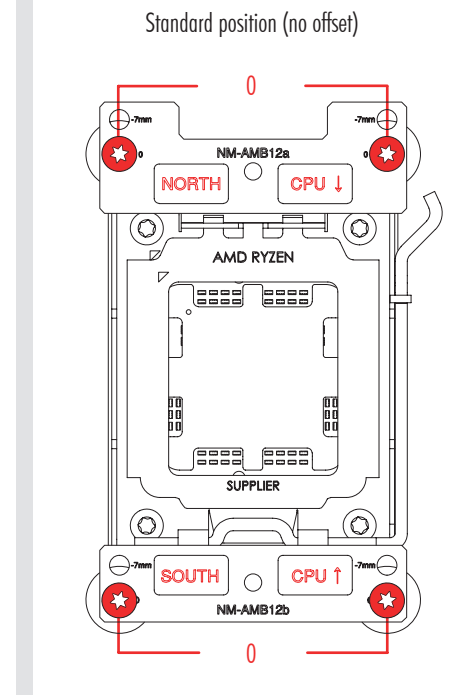
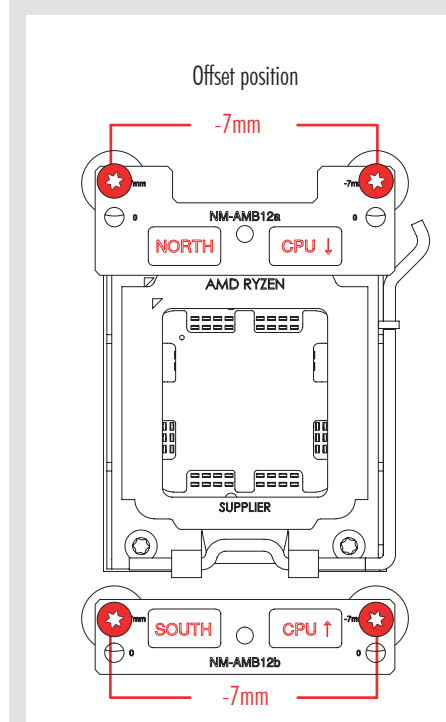
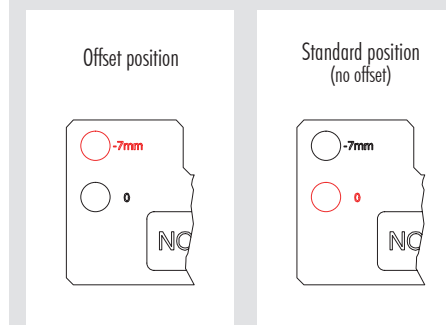
2 Installing the mounting bars

First put the plastic spacers onto the screw threads of the backplate. Then fix the NM-AMB12 mounting bars using the four NM-ALS1-TX long screws.



On AM5 and Ryzen 5000/3000 series AM4 CPUs, choose the -7mm offset hole position to ensure optimal contact quality and performance.

On other AM4 CPUs, or if there are any compatibility issues in the offset position (e.g. clearance with motherboard heatsinks), please choose the standard position (0).



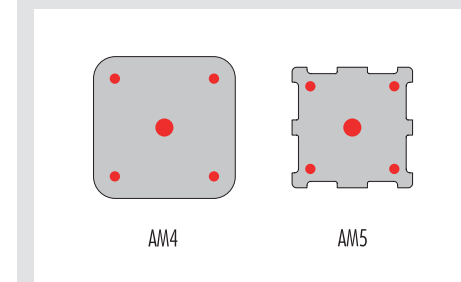
Caution: Make sure that the "CPU →" markings point towards the CPU and that the NM-AMB12a bar with the "NORTH" marking is installed on the north (top) side of the socket and the NM-AMB12b bar with the "SOUTH" marking is installed on the south (bottom) side of the socket, as shown above.

Gently tighten the screws until they stop, but do not use excessive force (max. torque 0.6 Nm).

3 Applying the thermal paste

If there are residual traces of thermal paste or thermal pads on your CPU, please clean them off first.

Then, apply 5 dots of the supplied NT-H2 thermal paste; 4 small dots with ~2mm diameter near the corners plus 1 dot with 3-4mm diameter in the centre:



Caution: Applying too much thermal paste will lower heat conductivity and cooling performance!

4 Fastening the heatsink to the CPU

Please refer to step 6 of the Intel installation manual.

5 Fan setup

Please refer to step 7 of the Intel installation manual.

! Transporting your system

As it is not possible to reliably calculate or control the forces that act upon a system during transport (e.g. in shipping), we generally recommend, for safety reasons, taking the cooler off. Noctua cannot be held responsible for any damage that may arise due to excessive stress during transport if you keep the heatsink installed.

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