NOCTUA NH-U12S SE-AM4 INSTALLATION MANUAL

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! AMD (AM4 & AM5)

Dear customer,

Congratulations on choosing the Noctua NH-U12S SE-AM4.

Continuing the legacy of our classic NH-U-series, which has received more than 500 awards and recommendations from international hardware websites and magazines, the NH-U12S has become a benchmark for slim, highly compatible 120mm single tower coolers. The SE-AM4 version is a dedicated special edition for AMD's AM4/AM5 platform, featuring the latest SecuFirm2™ mounting system for AM4/AM5.

Enjoy your NH-U12S SE-AM4!

Yours sincerely,

Roland Mossig, Noctua CEO

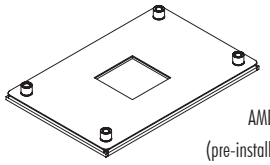
This manual will guide you through the installation process of the SecuFirm2™ mounting system step by step.

Prior to installing the cooler, please consult the compatibility list on our website (www.noctua.at/compatibility) and verify that the cooler is fully compatible with your motherboard. Please also make sure that your PC case offers sufficient clearance for the cooler and that there are no compatibility issues with any other components (e.g. tall RAM modules). Double check that the heatsink and fan clips do not make contact with the VGA card or other PCIe cards. Noctua cannot be held responsible for any damage or losses caused by compatibility issues.

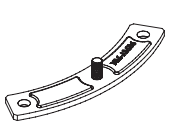
Should you encounter any difficulties, please check the FAQs on our website (www.noctua.at/faqs) and don't hesitate to contact our support team at support@noctua.at.

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

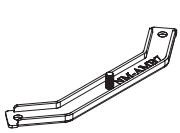
Required mounting parts:



AMD stock backplate
(pre-installed on the motherboard)



2x NM-AMB6
mounting bars



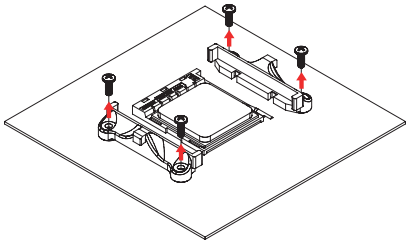
2x NM-AMB7
mounting bars

4x NM-APS4
grey plastic spacers

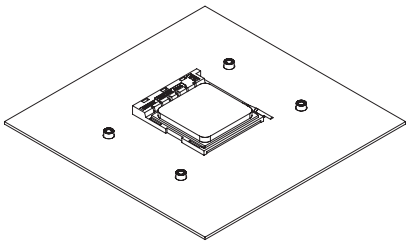
4x NM-ALS1
long screws

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

First remove the motherboard's stock CPU cooler retention module by unscrewing it from the backplate. The SecuFirm2™ mounting system will install directly to the stock backplate, so please keep it in place.



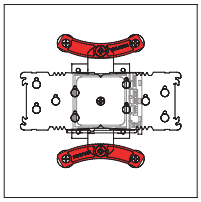
If your motherboard does not include a stock backplate, please contact Noctua customer support at support@noctua.at.



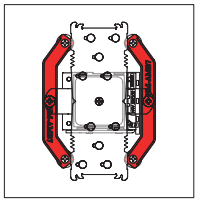
2 Attaching the mounting bars

Choose either the short NM-AMB6 or the long NM-AMB7 mounting bars according to the desired final orientation of the cooler.

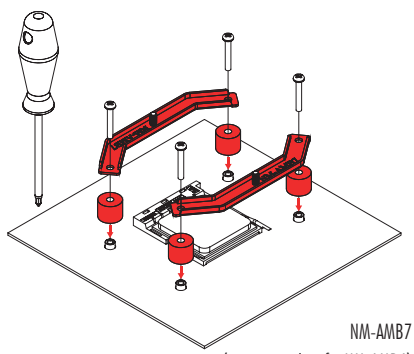
Orientation NM-AMB6



Orientation NM-AMB7

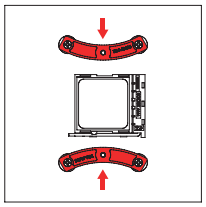


First put the NM-APS4 plastic spacers onto the screw threads of the backplate, then fix the mounting bars using the four long screws.

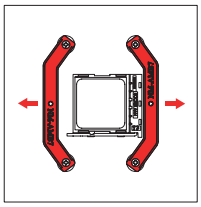


NM-AMB7
(same procedure for NM-AMB6)

For the short NM-AMB6 mounting bars, make sure that the curved sides are pointing inwards. For the long NM-AMB7 mounting bars, make sure that the curved sides are pointing outwards.



NM-AMB6 mounting bars



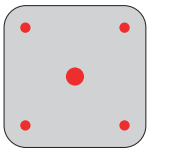
NM-AMB7 mounting bars

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

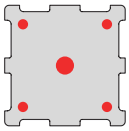
3 Applying the thermal paste

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

Apply 5 small dots; 4 small dots with ~2mm diameter near the corners plus 1 dot with 3-4mm diameter in the centre:



AM4

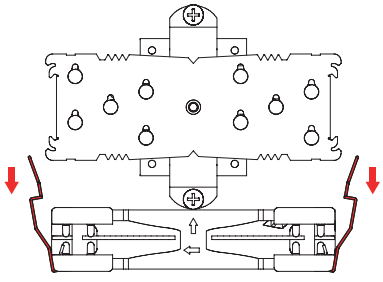


AM5

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

4 Fastening the heatsink to the CPU

Caution: Please first take off the fan as well as 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.

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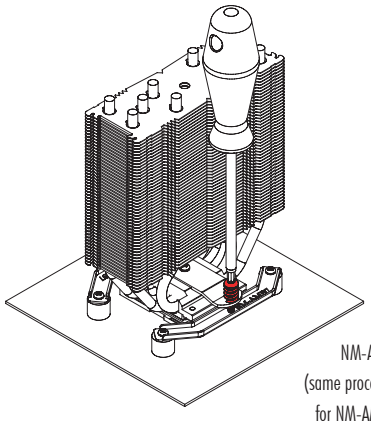


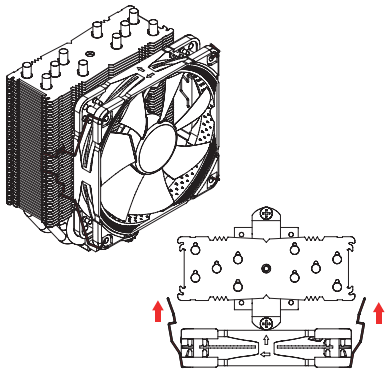
NM-AMB7
(same procedure
for NM-AMB6)

Caution: Tighten the screws until they stop, but don't use excessive force (max. torque 0.6 Nm).

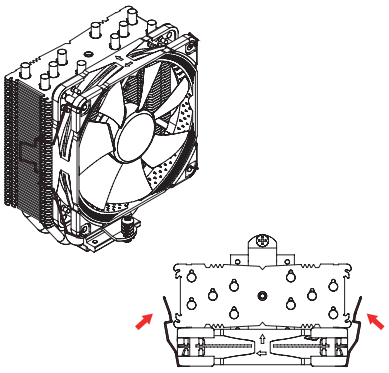
5 Fan setup

Reattach the fan to the heatsink using the supplied fan clips:

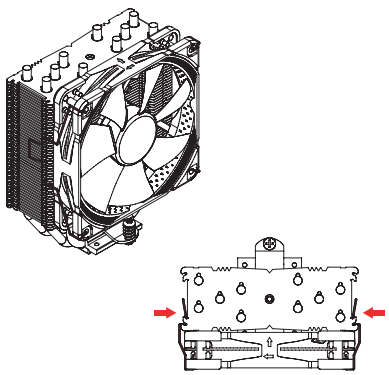
1.



2.



3.



Connect the fan to the motherboard 's CPU fan header.

Depending on your CPU and the temperature inside the case, you may interconnect the supplied NA-RC6 Low-Noise Adaptor (L.N.A.) in order to further reduce the fan's operating noise.

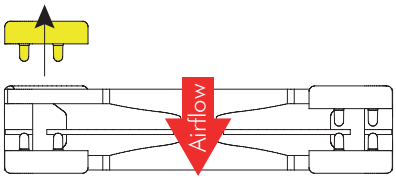
Caution: When using the L.N.A., check the temperature of your CPU using appropriate software (e.g. the respective applications of your motherboard manufacturer), in order to evade automatic throttling of the CPU due to the increased temperature. If the cooling performance is insufficient, please increase case ventilation or remove the L.N.A.

Adding a second fan

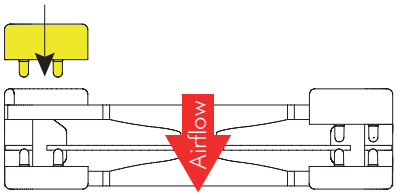
The NH-U12S SE-AM4 includes an extra set of fan clips and an extra set of thicker anti-vibration pads for installing a second NF-F12 fan in push/pull mode in order to further improve cooling performance.

Please use the thicker anti-vibration pads on the rear NF-F12 fan for improved acoustics if space allows. The y-cable supplied with the retail NF-F12 fan can be used to control the speed of both fans via the same motherboard fan header.

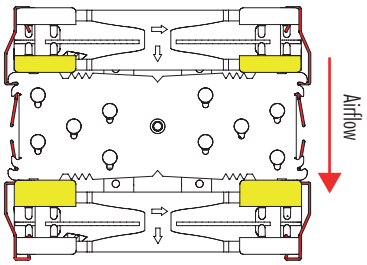
1. Remove standard pads on rear fan



2. Install thick pads on rear fan

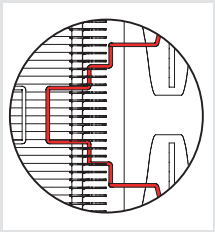


Front fan (standard pads)

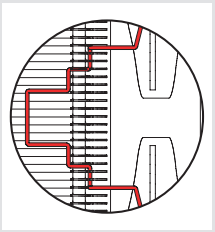


Rear fan (thick pads)

Clip position for thick pads:



Clip position for standard pads:



While Noctua recommends using an NF-F12 fan for best results in dual fan mode, the extra set of fan clips can also be used to install most other fans. In this case, please put the supplied self-adhesive anti-vibration strips onto the heatsink to avoid vibrations being transmitted to the cooler.

! 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 fan off the heatsink in order to reduce the weight below 700g. Noctua cannot be held responsible for any damage that may arise due to excessive stress during transport if you keep the fan 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-U12S SE-AM4, please don't hesitate to contact our support team (support@noctua.at).

Please also consult the FAQ section on our website: www.noctua.at/faqs