



! LGA115x & LGA1200


Dear customer,

Congratulations on choosing the Noctua NH-L12 Ghost S1 edition.

Our classic NH-L12 has proven to be the best air cooling solution for Louqe's award-winning Ghost S1 enclosure. With its single 92mm fan, the new Ghost S1 edition is tailored for use in this case and has been updated with the latest SecuFirm2™ mounting hardware for all current mainstream sockets. Topped off with our further improved NT-H2 thermal compound and a full 6-year manufacturer's warranty, the NH-L12 Ghost S1 edition is the ideal choice for premium grade quiet builds in the Louqe Ghost S1 chassis.

Enjoy your NH-L12 Ghost S1 edition!

Yours sincerely,



Roland Mossig, Noctua CEO

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

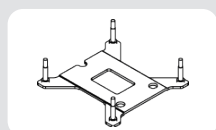
Prior to installing the cooler, please consult the compatibility list on our website (www.noctua.at/compatibility) and verify that the cooler is fully compatible with your motherboard. Please also make sure that your PC case offers sufficient clearance for the cooler and that there are no compatibility 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.

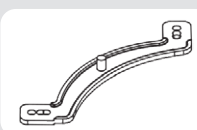
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Required mounting parts:



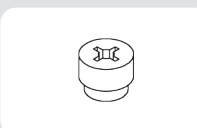
1x NM-IBP2 backplate



2x NM-IMB3 mounting bars



4x NM-IPS1 plastic spacers

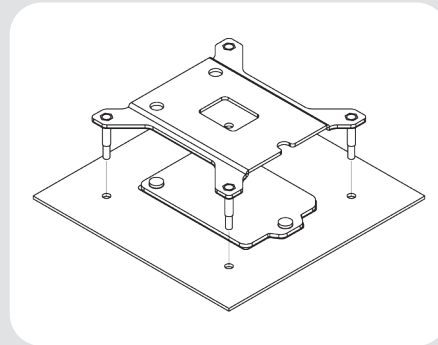


4x NM-ITS1 thumbscrews

1 Removing the motherboard

In case you want to use the cooler on an assembled system and your case doesn't have a cut-out at the rear side of the motherboard tray, you first have to remove the motherboard from the case in order to be able to install the supplied backplate.

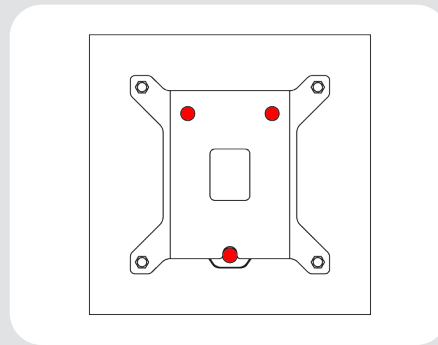
2 Attaching the backplate



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

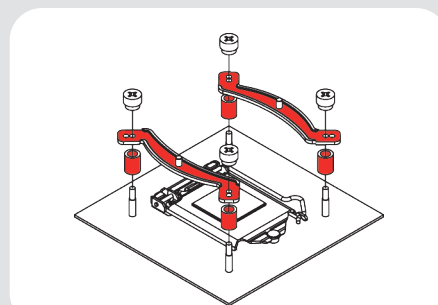
Place the backplate on the rear side of the motherboard so that the bolts stick through the mounting holes.

Caution: Please make sure that the three cut-outs in the supplied backplate align with the screws of the motherboard's stock backplate.

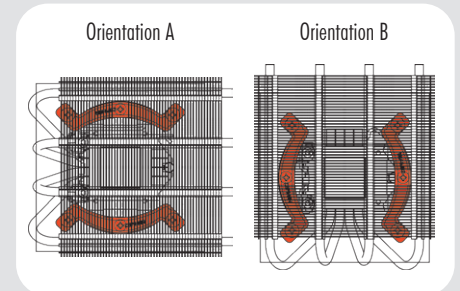


3 Installing the mounting bars

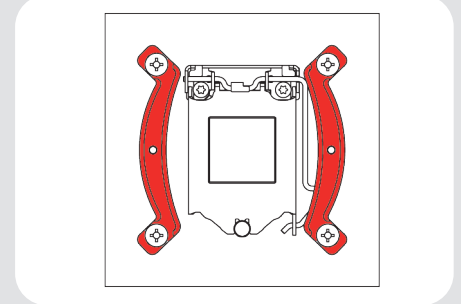
First put the plastic spacers onto the bolts of the backplate, then add the mounting bars.



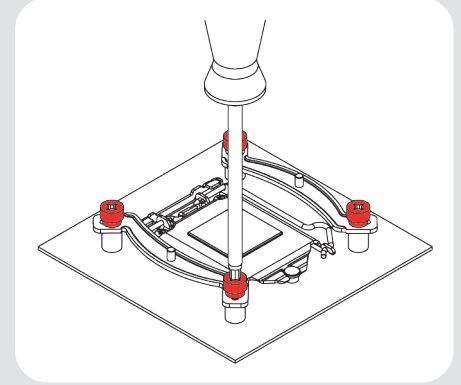
Caution: Choose the alignment of the mounting bars according to the desired final orientation of the cooler:



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



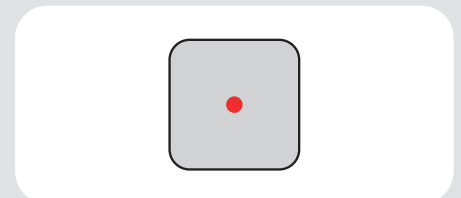
Fix the mounting bars using the 4 thumbscrews.



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

4 Applying the thermal paste

If there are residual traces of thermal paste or thermal pads on your CPU, please clean them off first. Then press a drop (3-4mm diameter) of NT-H2 onto the centre of the heatspreader.



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

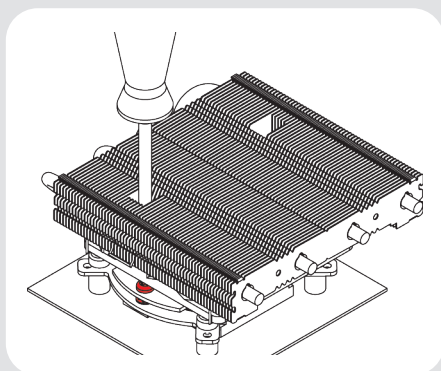


5 Fastening the heatsink to the CPU

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 screw driver. There is thus no need to take off the fan for installation.

Perform 2-3 turns on each screw, then repeat until both are fully tightened.



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

6 Fan setup

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-RC7 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..

! 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-L12 Ghost S1 edition, please don't hesitate to contact our support team (support@noctua.at).

Please also consult the FAQ section on our website:
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! LGA20xx

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

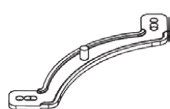
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Double check that the heatsink and fan clips do not make contact with the VGA card or other PCIe cards. Noctua cannot be held responsible for any damage or losses caused by compatibility issues.

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Required mounting parts:



2x NM-IMB3 mounting bars



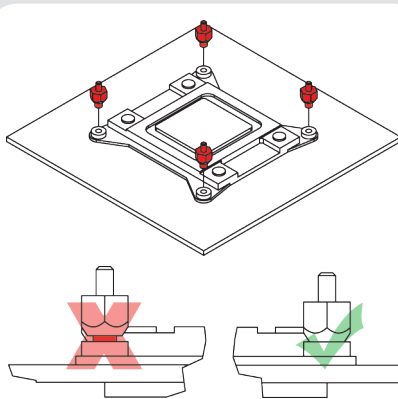
4x NM-IBT2 bolts



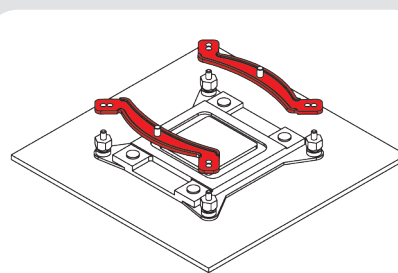
4x NM-ITS1 thumbscrews

1 Installing the mounting bars

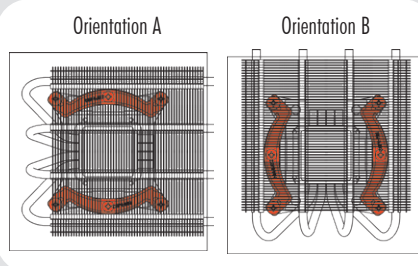
First screw the NM-IBT2 bolts into the screw threads of the LGA20xx socket frame.



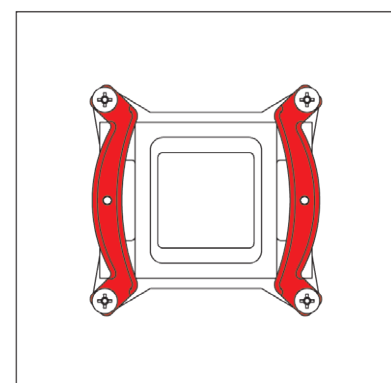
Then put the NM-IMB3 mounting bars onto the bolts.



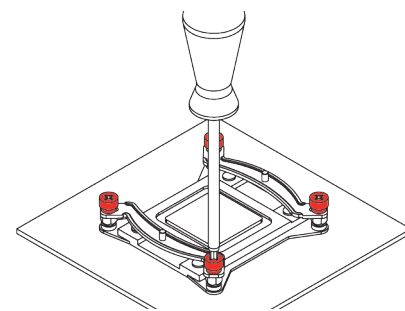
Caution: Choose the alignment of the mounting bars according to the desired final orientation of the cooler:



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



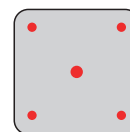
Fix the mounting bars using the 4 thumbscrews.



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

2 Applying the thermal paste

If there are residual traces of thermal paste or thermal pads on your CPU, please clean them off first. Then press 4 small dots (~2mm diameter) near the corners plus 1 dot (~3-4mm diameter) of NT-H2 onto the centre of the heatspreader.



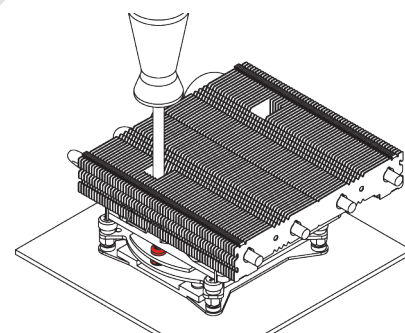
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3 Fastening the heatsink to the CPU

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

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Perform 2-3 turns on each screw, then repeat until both are fully tightened.



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4 Fan setup

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

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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..

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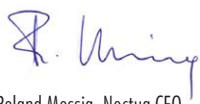


! AMD

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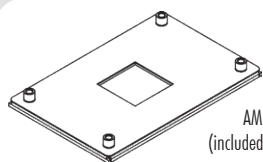
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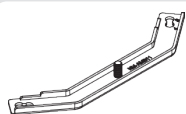
Required mounting parts:



AMD stock backplate
(included with the motherboard)



2x NM-AMB10 mounting bars



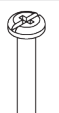
2x NM-AMB11 mounting bars



4x NM-APS4
plastic spacers for
AM4



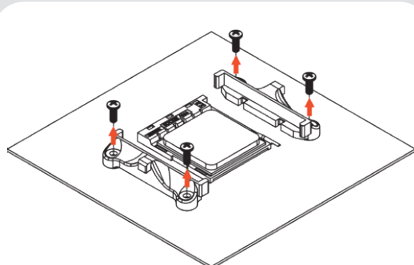
4x NM-APS5
plastic spacers for
AM2(+)/AM3(+)
FM1/FM2(+)



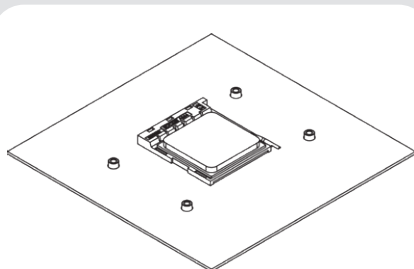
4x NM-ALS1
long screws

1 Removing the stock retention module - Putting the backplate in place

If your motherboard comes with a pre-installed CPU cooler retention module, please first remove it 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 come with a pre-installed CPU cooler retention module, the AMD stock backplate should be included with the motherboard accessories. Please put the backplate on the rear side of the motherboard so that the screw threads of the backplate stick through the mounting holes of the motherboard as shown below. If your motherboard does not include a stock backplate, please contact Noctua customer support at support@noctua.at.



2 Attaching the mounting bars

Please first choose the correct set of plastic spacers and the correct set of holes on the mounting bars depending on whether you are using a socket AM4 or a socket AM2(+)/AM3(+)/FM1/FM2(+)-motherboard:

AM4



NM-APS4 (grey)

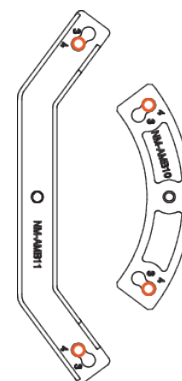
AM2(+)/AM3(+)
FM1/FM2(+)



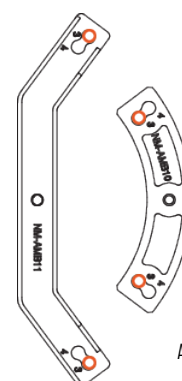
NM-APS5 (white)

Use the grey NM-APS4 spacers for AM4 and the white NM-APS5 spacers for AM2(+)/AM3(+)/FM1/FM2(+).

Use the set of holes marked with "4" for AM4 and the set of holes marked with "3" for AM2(+)/AM3(+)/FM1/FM2(+).



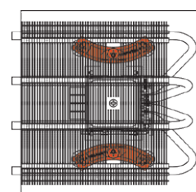
AM4



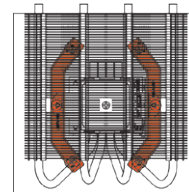
AM2(+)/AM3(+)
FM1/FM2(+)

Choose either the short NM-AMB10 or the long NM-AMB11 mounting bars according to the desired final orientation of the cooler.

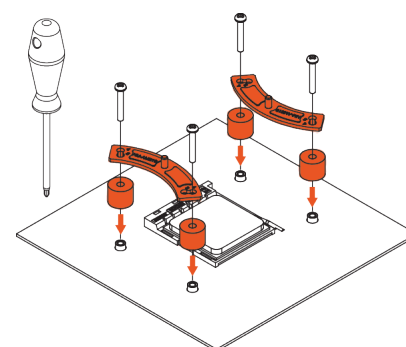
Orientation NM-AMB10



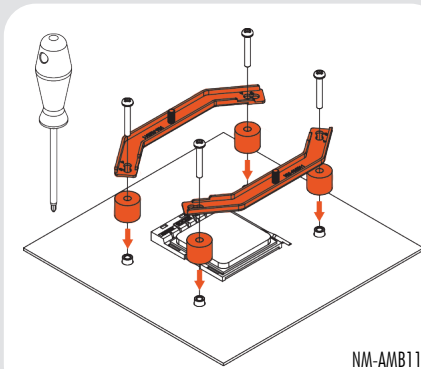
Orientation NM-AMB11



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



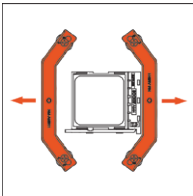
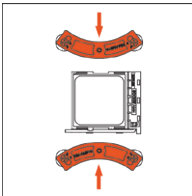
NM-AMB10



For the short NM-AMB10 mounting bars, make sure that the curved sides are pointing inwards. For the long NM-AMB11 mounting bars, make sure that the curved sides are pointing outwards.

NM-AMB10 mounting bars

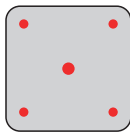
NM-AMB11 mounting bars



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

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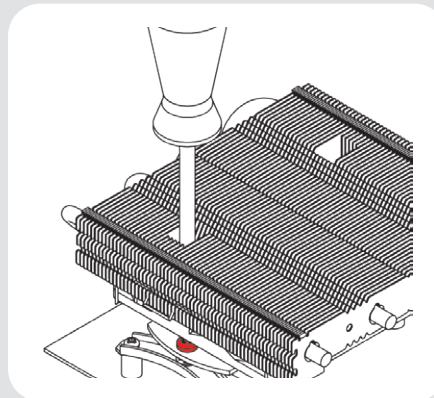
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