Dear customer,

Congratulations on choosing the Noctua NH-L12S. Successor to the award-winning NH-L12, the NH-L12S is a compact low-profile CPU cooler that combines excellent compatibility, surprising efficiency and remarkable flexibility.

Enjoy your NH-L12S!

Yours sincerely,
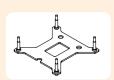
Roland Mossig, Noctua CEO

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

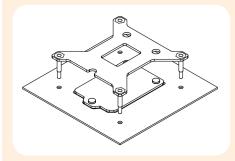2x NM-IMB3 mounting bars

4x NM-IPS1 spacers

4x NM-ITS1 thumb screws

Step 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.

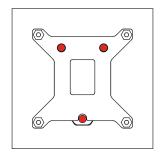Step 2
Attaching the backplate

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

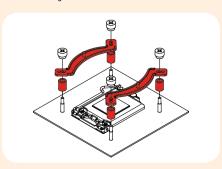Place the backplate on the rear side of the motherboard so that the bolts stick through the mounting holes.

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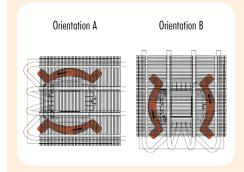

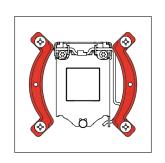

Step 3
Installing the mounting bars

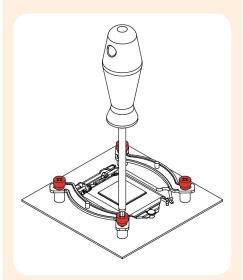First put the plastic spacers onto the bolts of the backplate, then add the mounting bars.

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

Orientation A   Orientation B

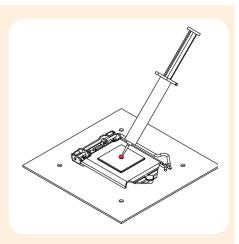Caution: Make sure that the curved sides of the mounting bars are pointing outwards.

Fix the mounting bars using the 4 thumb screws.

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

Step 4
Applying thermal paste

If there are residual traces of thermal paste or thermal pads on your CPU, please clean them off first. Then press a small drop (4-5mm diameter) of NT-H1 onto the centre of the heatspreader.
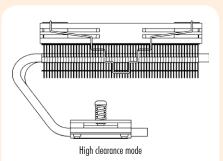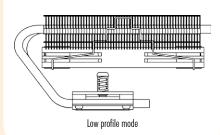
Caution: Applying too much thermal paste will lower heat conductivity and cooling performance!

Step 5
Fan configuration

The NH-L12S ships with the fan installed underneath the fins (low profile mode). Alternatively, you can take off the fan and install it on top of the fins to make more room for tall RAM or other components (high clearance mode). Note that the NH-L12S will provide best performance to noise efficiency in high clearance mode.
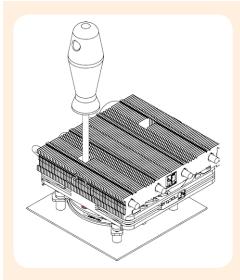

High clearance mode

Low profile mode

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

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

Step 7
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 Adapter (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

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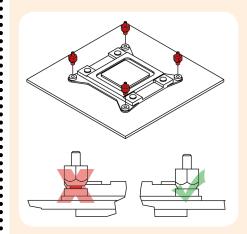
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Required mounting parts:

2x NM-IMB3 mounting bars

4x NM-IBT2 bolts

4x NM-ITS1 thumb screws

Step 1
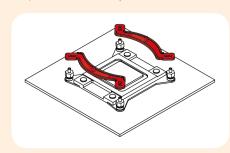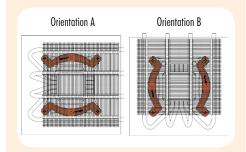## Installing the mounting bars

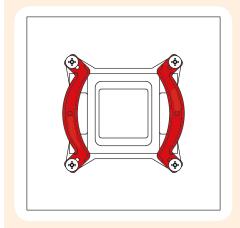First screw the NM-IBT2 bolts into the screw threads of the LGA20xx socket frame.

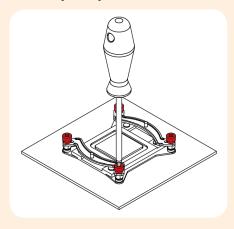Then put the NM-IMB3 mounting-bars onto the bolts.

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

Orientation A

Orientation B

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

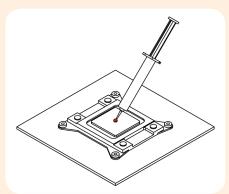Fix the mounting bars using the 4 thumb screws.

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

Step 2
Applying thermal paste

If there are residual traces of thermal paste or thermal pads on your CPU, please clean them off first. Then press a small drop (4-5mm diameter) of NT-H1 onto the centre of the heatspreader.
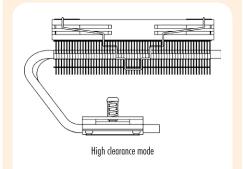
Caution: Applying too much thermal paste will lower the heat conductivity and cooling performance!
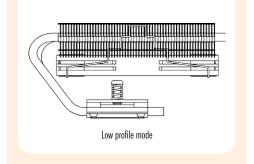
Step 3
Fan configuration

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High clearance mode
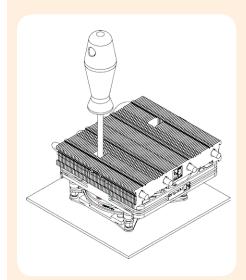
Low profile mode

Step 4
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.

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

Step 5
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 Adapter (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.

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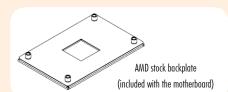
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Required mounting parts:

AMD stock backplate
(included with the motherboard)

2x NM-AMB10 mounting bars

2x NM-AMB11 mounting bars

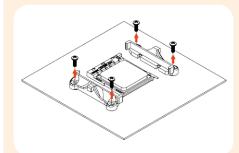4x NM-APS4 plastic spacers for AMD

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

4x NM-ALS1 screws

Step 1
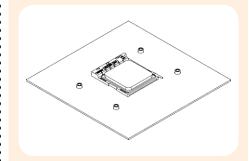
Removing the stock retention module / putting the backplate in place

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.
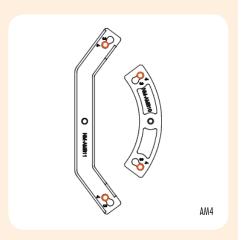

Step 2
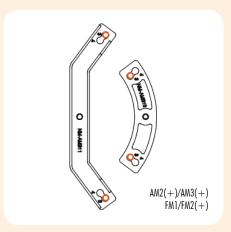
Attaching the mounting bars

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)

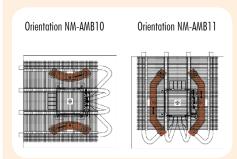AM2(+)/AM3(+) FM1/FM2(+)

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(+).
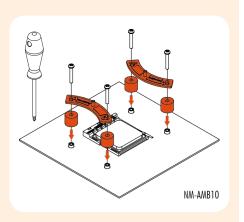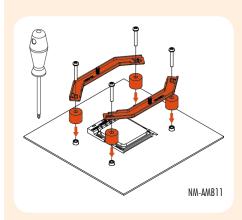

AM4

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.
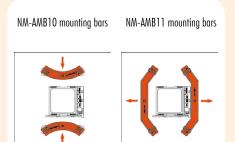
Orientation NM-AMB10   Orientation NM-AMB11

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

NM-AMB10

Scan this code to display multi-lingual manuals on your mobile phone.
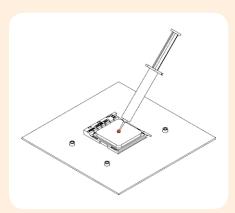

NM-AMB11

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).
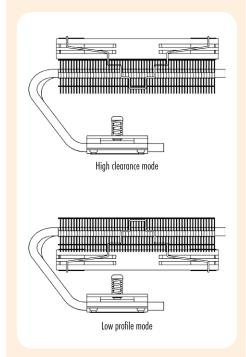
Step 3
Applying thermal paste

If there are residual traces of thermal paste or thermal pads on your CPU, please clean them off first. Then press a small drop (4-5mm diameter) of the supplied NT-H1 thermal compound onto the centre of the heatspreader.

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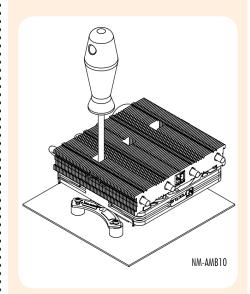
Step 4
Fan configuration

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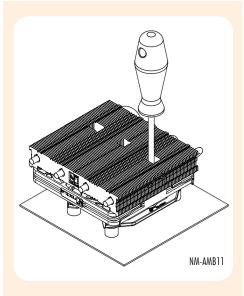

High clearance mode

Low profile mode

Step 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.

NM-AMB10

NM-AMB11

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

Step 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 Adapter (L.N.A.) in order to further reduce the fan's operating noise.

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