



Item
NH-U12F
 Type
4x Heatpipe-Cooler with Fan
 Language
 **EN**



www.noctua.at
 geräuschoptimierte Premium-Komponenten
 sound-optimised premium components

Noctua aims at establishing a new level of quality and performance "Designed in Austria" through paying attention to the users' needs in a market burdened with all kinds of frills and furbelows and providing sound-optimised premium components, which serve their purpose in a smart, precise and reliable manner.

Competence through cooperation

Noctua arises from a cooperation between the Austrian Rascom Computer-distribution Ges.m.b.H and the Taiwanese Kolink International Corporation and entertains a development partnership with the Austrian Institute of Heat Transmission and Fan Technology (Österreichisches Institut für Wärme-übertragung und Ventilatorentechnik, ÖIWW). These connections form the key to the achievement of our goal: The partnership with the ÖIWW permits the application of scientific measurement instrumentation, methods of calculation and simulation technology in the R&D process. Rascom's long, customer-oriented experience in developing and distributing sound-optimised high-end products ensures a clear focus on the users' needs. The use of Kolink's advanced manufacturing technology and ultra-modern production plants allows us to efficiently implement our technical edge and provide solutions of the highest standard in quality and performance at a fair price.

www.noctua.at | www.rascom.at | www.coolink.com.tw | www.oewv.at



Item
Noctua NH-U12F
 Type
4x Heatpipe-Cooler with Fan
 Dimensions
151.5 x 126.0 x 94.5.0 mm
 Fan Speed / Acoustical Noise
800/1200 RPM, 8/17 dB(A)
 Weight / Material
790g Copper/Aluminium
 Socket Range
AM2, K8 (754, 939, 940), LGA775

Congratulations on your new Noctua NH-U cooler!

You have chosen a sound-optimised premium-quality cooler that offers superior performance at minimum noise levels. In order to achieve the best cooling-results possible, please follow the instructions given in this manual.

Please first check the box contents according to the first chapter of this manual.

The next 3 chapters give you a detailed step-by-step tutorial on how to install the Noctua NH-U on socket LGA775, K8 (754, 939, 940) and AM2.

The last chapter contains information on warranty and support in case you have any further questions.

A multilingual version of this manual is available on our website : <http://www.noctua.at>

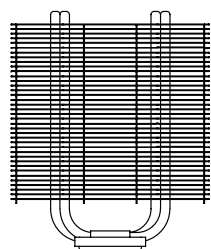
Your Noctua-Team.

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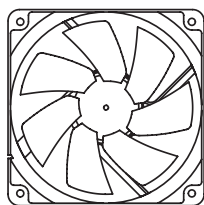
Chapter 1 Box Contents

Please first check the box contents according to the following lists and illustrations.

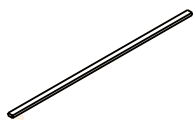
The following items are included in delivery:



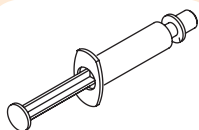
1x Heatsink
NH-U12F



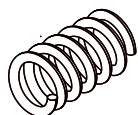
1x Fan
NF-S12-1200



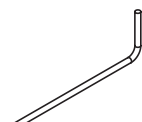
2x Anti-Vibration Strips



1 Tube of high-grade thermal paste



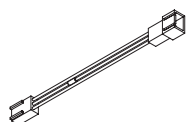
2x Pressure springs



1x Mounting tool

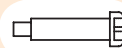


4x Steel-clips for
fan-mounting

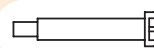


1x Ultra-Low-Noise-Adapter
U.L.N.A.

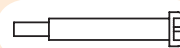
3x 2 Stepped spring screws



LGA 775

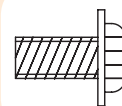


AM2

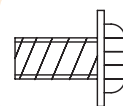


K8

Short screws



8x
short
screws



short screws
with higher
thread pitch
(AM2 only)

Washers



4x red, thin
washers
(LGA, K8)

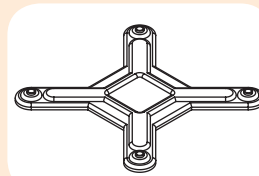


4x white, thin
washers
(AM2)

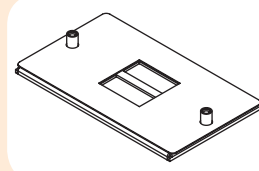


4x red, thick
washers
(AM2)

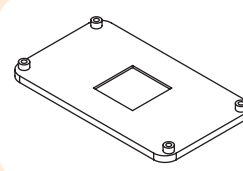
Mainboard Backplates



LGA 775 Backplate

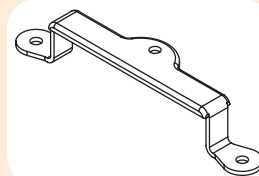


K8 Backplate

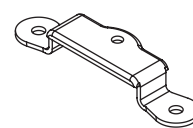


AM2 Backplate

Mounting bars (LGA775 & AM2)

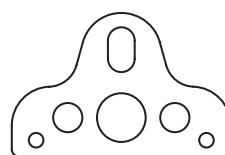


LGA 775

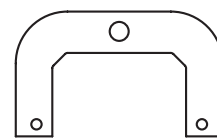


AM2

Fastening Brackets



Standard fastening brackets

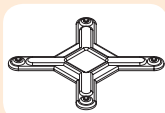


90° fastening brackets
(K8 & AM2 only)

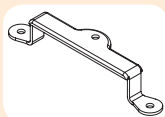
Chapter 2

LGA775 Installation

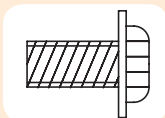
Mounting hardware:



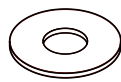
1x LGA-backplate
(black, x-shaped without cut-out)



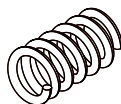
2x Long mounting bars
(fitting the backplane)



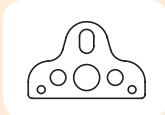
8x Short screws



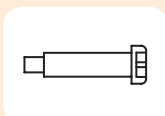
4x Red, thin
washers



2x Pressure springs



2x
Standard fastening brackets



2x
Short, silver-coloured springscrews

Step 1:

Removing the mainboard and retention module

In case you want to use the NH-U on an assembled system, you first have to remove the mainboard from the case as the cooler has to be screwed together with the backplate on the back side of the mainboard.

If your mainboard uses a retention module for CPU cooler installation, you have to remove it first. Should you experience any difficulties, please consult your mainboard's manual. If your previous CPU cooler is attached using a different mounting mechanism, please remove it according to its manual.

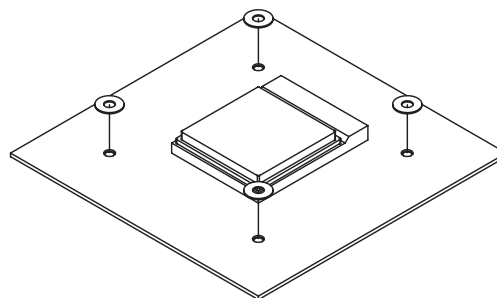
Step 2:

Attaching the backplate on the back side of the mainboard

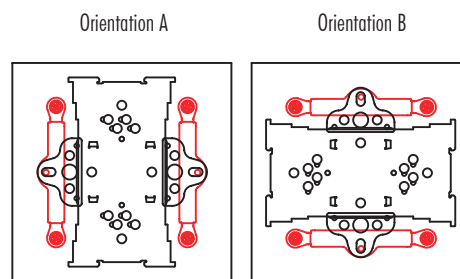
Place the backplate on the back side of the mainboard, aligning the backplate's screw sockets with the mainboard's screwholes.

Caution: The rubber foam square of the LGA backplate has to face the mainboard. Don't remove the white protection film!

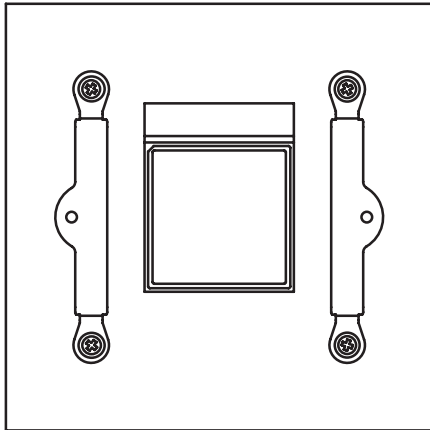
Caution: Don't forget to put 4 washers between the mainboard and the mounting bars to avoid damage to the mainboard.



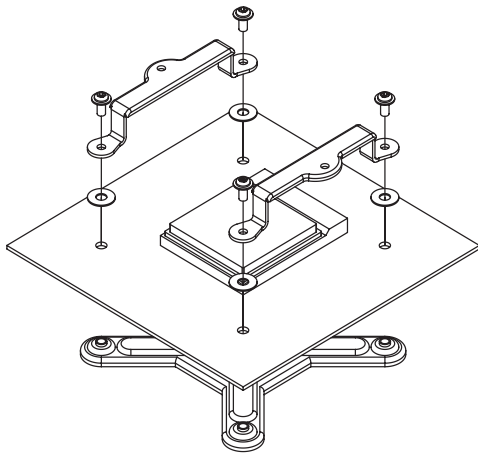
Choose the alignment of the mounting bars according to the desired final orientation of the cooler:



Caution: Make sure that the straight sides of the mounting bars face the socket and the bulgings are pointing outwards.



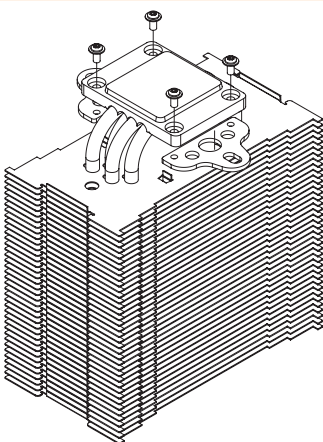
Now screw the mounting bars to the backplate using small screws and washers.



Step 3:

Attaching the fastening brackets to the heatsink

Tightly screw the fastening brackets to the copper base of the heatsink using 4 short screws.



Step 4:

Applying thermal paste

If there are traces of thermal paste or thermal pads on your CPU, please clean them off first. Spread a thin coating of the supplied thermal paste on the CPU.

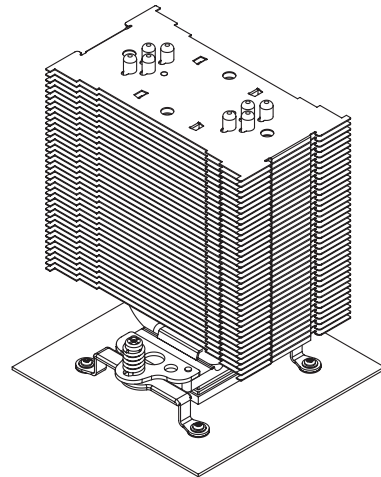
Caution: Applying too much thermal paste will lower the heat conductivity and cooling performance!

Step 5:

Attaching the heatsink to the CPU

Caution: Peel off the protection film at the bottom side of the heatsink first!

Place the heatsink on the CPU, so that the mounting holes of the fastening brackets screwed to the base of the cooler align with those of the mounting bars. Now screw the fastening brackets to the mounting bars employing the pressure springs and the respective screws

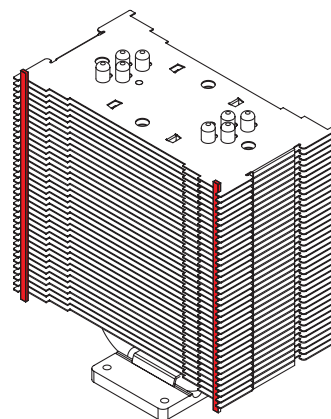


Caution: Tighten the screws until they stop.

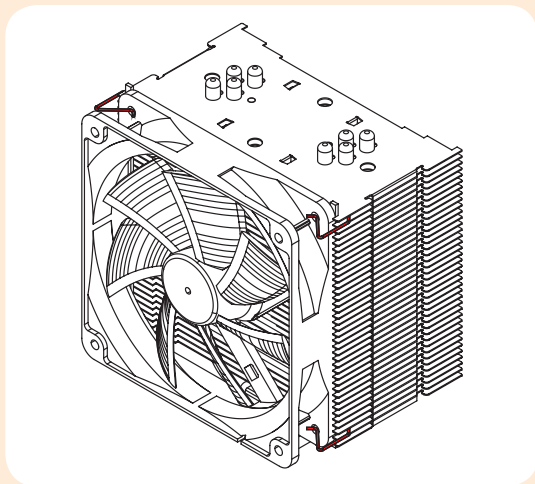
Step 6:

Attaching the fan

First stick the 2 anti-vibration strips onto the cooling fins in order to dampen minor vibrations emitted by the fan.



Then attach the fan to the heatsink using 2 steel clips, placing it so that it blows onto the heatsink (You can optionally use the second pair of clips to install a second fan).

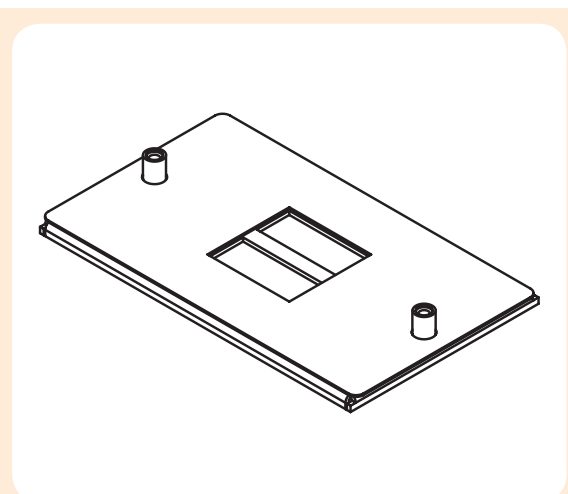


Depending on the orientation of the cooler, the fan should either blow towards the rear side of the case or the power supply in accordance with the airflow within the case.

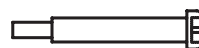
Connect the fan to the mainboard, power supply or fan controller. Depending on your CPU and the temperature inside the case, you may interconnect the supplied Ultra-Low-Noise Adapter (U.L.N.A.) in order to further reduce the fan's operating noise.

Caution: When using the U.L.N.A., check the temperature of your CPU using appropriate software (e.g. the respective applications of your mainboard 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 U.L.N.A.

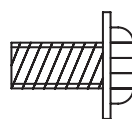
Mounting hardware:



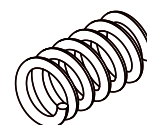
1x K8-backplate (silver-coloured, rectangular with 2 rectangular cut-outs in the center)



2x Long, black springscrews



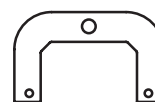
4x Short Screws



2x Pressure springs



2x Standard fastening brackets



2x 90°-Fastening brackets

Step 1:

Removing the mainboard and retention module

In case you want to use the NH-U on an assembled system, you first have to remove the mainboard from the case as the cooler has to be screwed together with the backplate on the back side of the mainboard.

If your mainboard uses a retention module for CPU cooler installation, you have to remove it first. Should you experience any difficulties, please consult your mainboard's manual. If your previous CPU cooler is attached using a different mounting mechanism, please remove it according to its manual.

Step 2:

Attaching the backplate on the back side of the mainboard

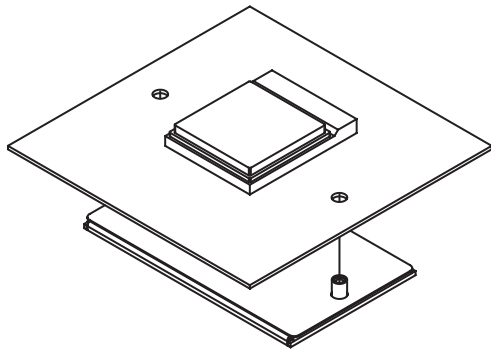
Place the K8 backplate on the back side of the mainboard, so that the backplate's screw sockets stick out through the mainboard's screwholes.

Chapter 3

K8 (Socket 754, 939, 940) Installation



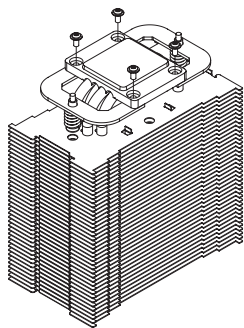
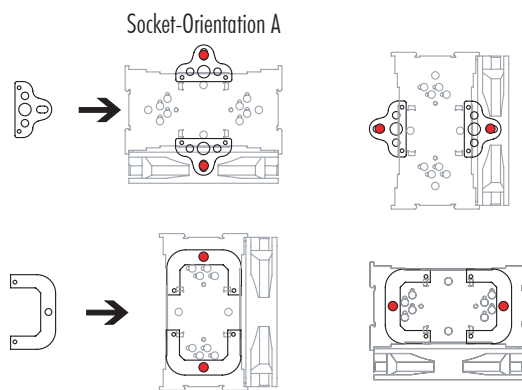
Caution: As the fastening brackets are screwed directly to the backplate on K8 mainboards, no mounting bars are required.



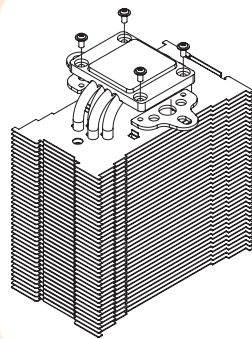
Step 3:

Attaching the fastening brackets to the heatsink

Choose the fastening brackets according to the desired orientation of the cooler.



When using the 90° fastening brackets, first stick the spring screws and springs into the fastening brackets. Then screw them to the copper base of the heatsink tightly using 4 short screws.



When using the standard fastening brackets, tightly screw them to the copper base of the heatsink using 4 short screws.

Step 4:

Applying thermal paste

If there are traces of thermal paste or thermal pads on your CPU, please clean them off first. Spread a thin coating of the supplied thermal paste on the CPU.

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

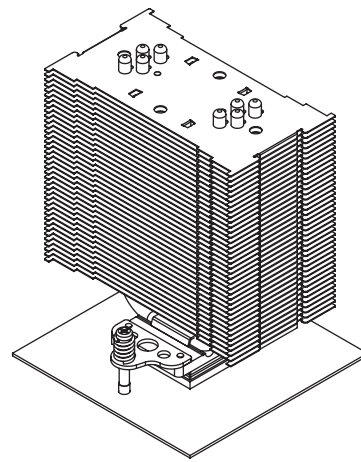
Step 5:

Attaching the heatsink to the CPU

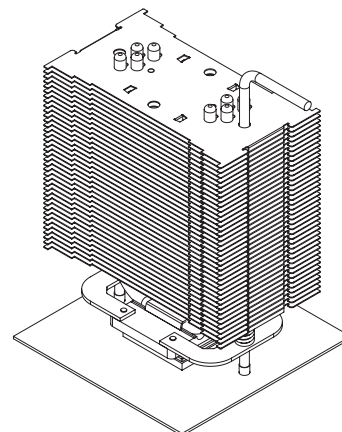
Caution: Peel off the protection film at the bottom side of the heatsink first!

Place the heatsink on the CPU, so that the mounting holes of the fastening brackets screwed to the base of the cooler align with those of the mainboard and the backplate.

Now screw the fastening brackets to the backplate employing the pressure springs and the respective screws.



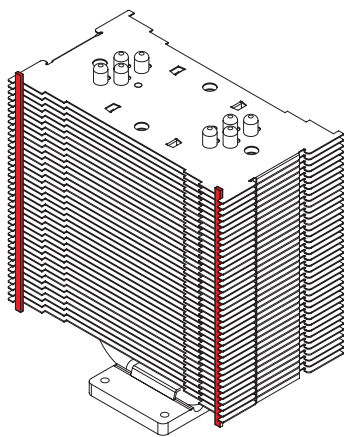
When employing the 90° fastening brackets, please use the supplied mounting-tool to tighten the springscrews.



Caution: Tighten the screws until they stop.

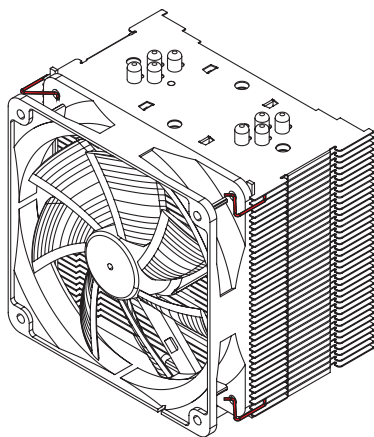
Step 6:

Attaching the fan



First stick the 2 anti-vibration strips onto the cooling fins in order to dampen minor vibrations emitted by the fan.

Then attach the fan to the heatsink using 2 steel clips, placing it so that it blows onto the heatsink (You can optionally use the second pair of clips to install a second fan).



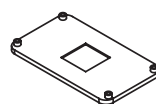
Depending on the orientation of the cooler, the fan should either blow towards the rear side of the case or the power supply in accordance with the airflow within the case.

Connect the fan to the mainboard, power supply or fan controller. Depending on your CPU and the temperature inside the case, you may interconnect the supplied Ultra-Low-Noise Adapter (U.L.N.A.) in order to further reduce the fan's operating noise.

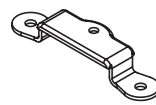
Caution: When using the U.L.N.A., check the temperature of your CPU using appropriate software (e.g. the respective applications of your mainboard manufacturer), in order to evade automatic throttling of the CPU due to the increased temperature. If the cooling performance is insufficient, please increase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

Chapter 4 AM2 Installation

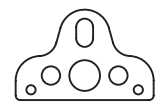
Mounting hardware:



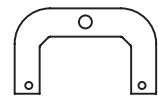
1x AM2 backplate



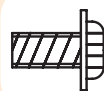
2x Short mounting bars (fitting the backplane)



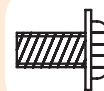
2x Standard fastening brackets



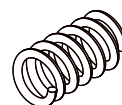
2x 90° - fastening brackets



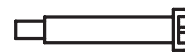
4x Short screws



4x Short screws with higher thread pitch (from the AM2 bag)



2x Pressure springs



2x Mid-sized, silver springscrews



4x White, thin washers (from the AM2 bag)



4x Red, thick washers (from the AM2 bag)

Step 1:

Removing the mainboard and retention module

In case you want to use the NH-U on an assembled system, you first have to remove the mainboard from the case as the cooler has to be screwed together with the backplate on the back side of the mainboard.

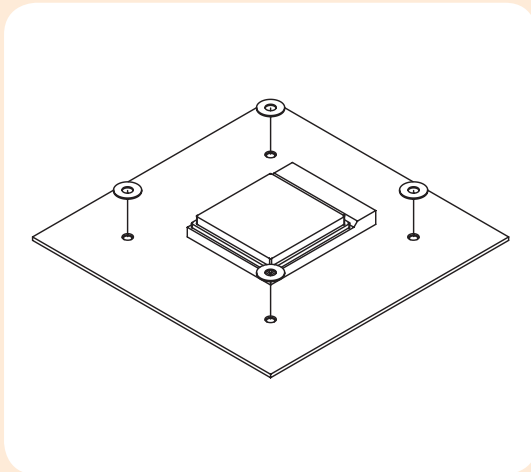
If your mainboard uses a retention module for CPU cooler installation, you have to remove it first. Should you experience any difficulties, please consult your mainboard's manual. If your previous CPU cooler is attached using a different mounting mechanism, please remove it according to its manual.

Step 2:

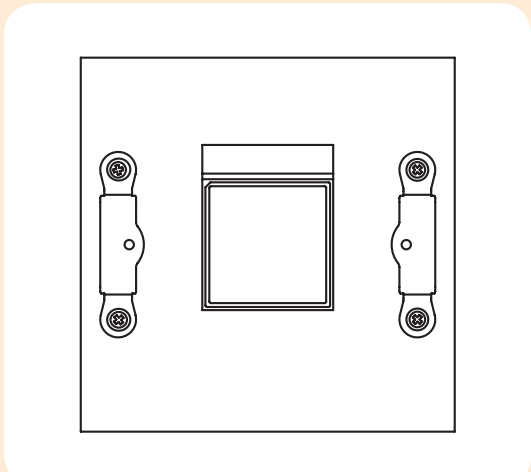
Attaching the backplate on the back side of the mainboard

Place the backplate on the back side of the mainboard, aligning the backplate's screw sockets with the mainboard's screwholes.

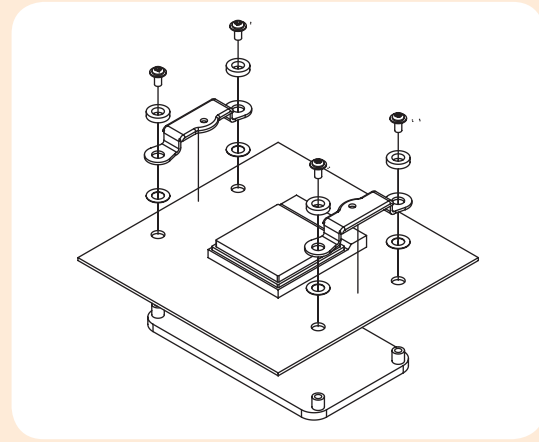
Caution: Don't forget to put 4 washers between the mainboard and the mounting bars to avoid damage to the mainboard.



Caution: Make sure that the bulgings of the mounting bars are pointing towards the socket.



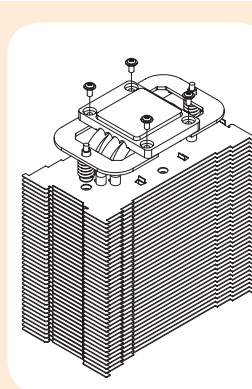
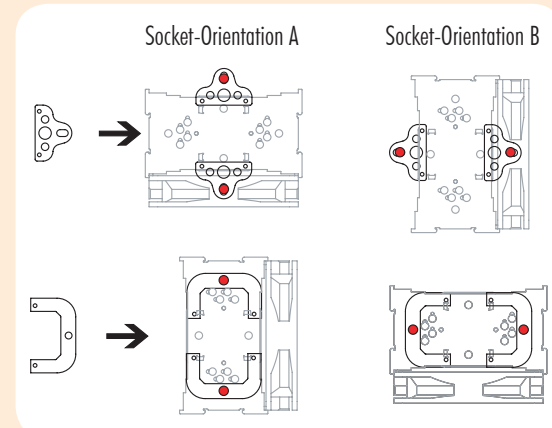
Put the 4 white, thin washers under the mounting bars and the 4 red, thick washers onto the mounting bars. Now screw the mounting bars to the backplate using the small screws with higher thread-pitch (from the AM2 bag).



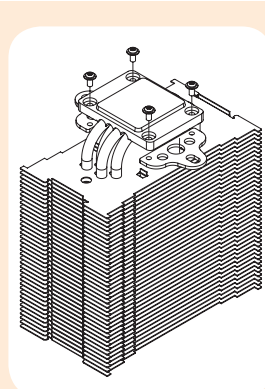
Step 3:

Attaching the fastening brackets to the heatsink

Choose the fastening brackets according to the desired orientation of the cooler.



When using the 90° fastening brackets, first stick the spring screws and springs into the fastening brackets. Then screw them to the copper base of the heatsink tightly using 4 short screws.



When using the standard fastening brackets, tightly screw them to the copper base of the heatsink using 4 short screws (*not* those with higher thread pitch from the AM2 bag!).

Step 4:

Applying thermal paste

If there are traces of thermal paste or thermal pads on your CPU, please clean them off first. Spread a thin coating of the supplied thermal paste on the CPU.

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

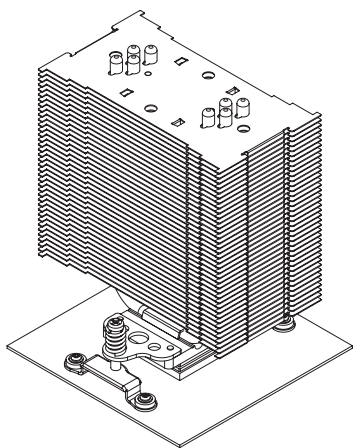
Step 5:

Attaching the heatsink to the CPU

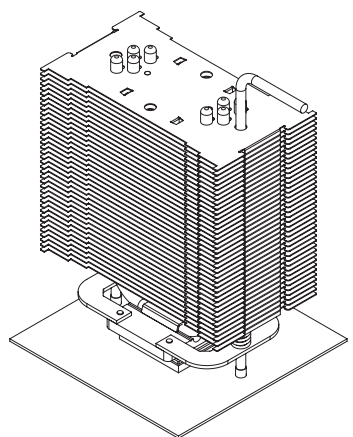
Caution: Peel off the protection film at the bottom side of the heatsink first!

Place the heatsink on the CPU, so that the mounting holes of the fastening brackets screwed to the base of the cooler align with those of the mounting bars.

Now screw the fastening brackets to the mounting bars employing the pressure springs and the respective screws.



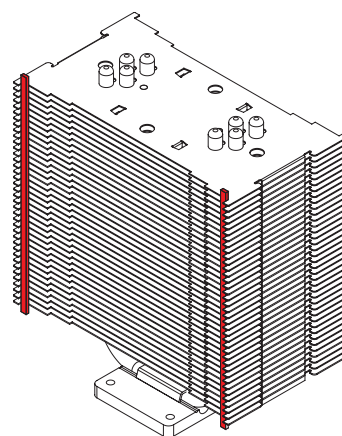
When employing the 90° fastening brackets, please use the supplied mounting-tool to tighten the springscrews.



Caution: Tighten the screws until they stop.

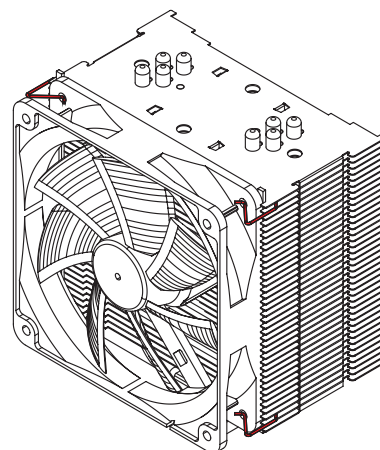
Step 6:

Attaching the fan



First stick the 2 anti-vibration strips onto the cooling fins in order to dampen minor vibrations emitted by the fan.

Then attach the fan to the heatsink using 2 steel clips, placing it so that it blows onto the heatsink (You can optionally use the second pair of clips to install a second fan).



Depending on the orientation of the cooler, the fan should either blow towards the rear side of the case or the power supply in accordance with the airflow within the case.

Connect the fan to the mainboard, power supply or fan controller. Depending on your CPU and the temperature inside the case, you may interconnect the supplied Ultra-Low-Noise Adapter (U.L.N.A.) in order to further reduce the fan's operating noise.

Caution: When using the U.L.N.A., check the temperature of your CPU using appropriate software (e.g. the respective applications of your mainboard 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 U.L.N.A.

Chapter 5 **Warranty & Support**

Warranty

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 dependability and convenience by offering a warranty period of up to 60 months and direct, fast and straightforward RMA service.

In addition to the implied warranty, your Noctua NH-U cooler has a 3 years manufacturer's guarantee as well as an option to extend warranty up to 5 years at no additional cost by joining the Noctua Extended Warranty Program. To participate, free registration is required at www.noctua.at.

In case of warranty, you can either request RMA at your retailer or use our Direct RMA Service. For further information, please consult www.noctua.at.

Support

For all enquiries concerning your Noctua NH-U cooler, both your retailer and the international Noctua support team at support@noctua.at are at your service.

Please also note the FAQ section on our homepage www.noctua.at, where we elaborate on questions that frequently arise in connection with our products.