MonsterLabo
The Beast

# USER MANUAL

Version 1.2
2021 July, 12th

Before you start using The Beast, please follow these basic guidelines:

- Protect the table with a towel or any other protective fabric before placing your Beast on it.
- Do not wear rings, bracelets or watch that could scratch the case during the unboxing and the assembly.
- Test the components you plan to assemble into your Beast before starting their assembly.
- Never lift your Beast by the side panels.
- Keep the shipping boxes.
- And - of course - read carefully the user manual before beginning with the assembly process.

Thank you for choosing The Beast.
Enjoy the silence!

MLTeam

# The right side

GPU side

# Table of content

# The unboxing

The unboxing | The box of accessories | The fans | The power supply | The storage (1/2) | The motherboard | The graphic card | With spreader / Without spreader | The storage (2/2) | The cable management | The fanless optimization | The dust


1. Place horizontally the box on the floor.

2. Open the box by the bottom and remove the protective foam.

# The unboxing



3. Carefully slide off the inner box to the outside. To avoid any shoc and damage to the side panels, you can place a towel or any protective fabric.

4. Keep the inner box horizontally.

# The unboxing



5. Open the box by the bottom.

6. Fold the bottom flaps outwards and carefully move the box vertically.

# The unboxing



⚠ Never lift the case by the side panels, only by the bottom parts (the feet).

7. Slide the box from the top. Remove the protective foams. Remove the protective packaging by hand, not with a cutter, to avoid scratches.

# The unboxing



Picture to come


8. Protect the table where you will assemble your components (the feet might scratch the surface – protective pads are available into the box of accessories).
9. Open the case by pulling on the side panels (tempered glasses or aluminum side panels). Be careful, the sides panel are not symmetrical.
10. Take off the box of accessories placed into your case.

# The box of accessories




If you bought a « The Beast & Accessories » package, this is the content of the box of accessories. For those who ordered a « Only The Beast », your box of accessories only contains the little bags of screws for each component and accessory. The box of accessories might be different depending on the cooler for your graphic card and the additional accessories you bought in addition to your Beast.

# The box of accessories



Kit of taped heatsinks for memories and/or VRMs


Bracket for your graphic card (many brackets are available).

VRMs machined heatsink (Large, Small or both), if compatible with your graphic card (thermal interfaces included)

Kit « GPU NSP »
- 4 spacers
- 5 black screws
- 4 plastic washers
- 4 metallic washers
- 4 grey screws
- 5 spacers
- 5 springs
- 5 thumbnuts

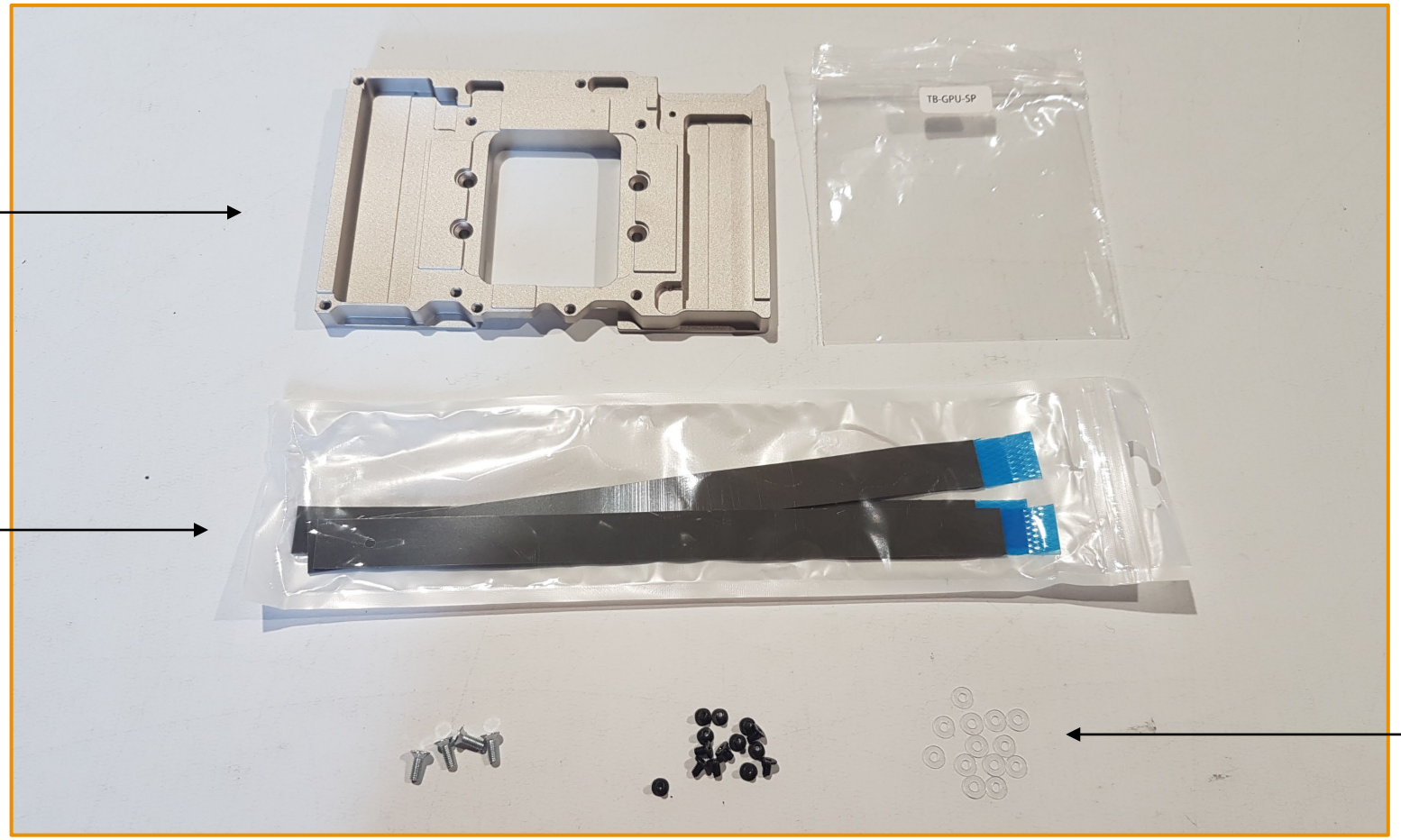
**Kit for the graphic card – No spreader**

# The box of accessories



Spreader (many references are available)

Thermal interfaces

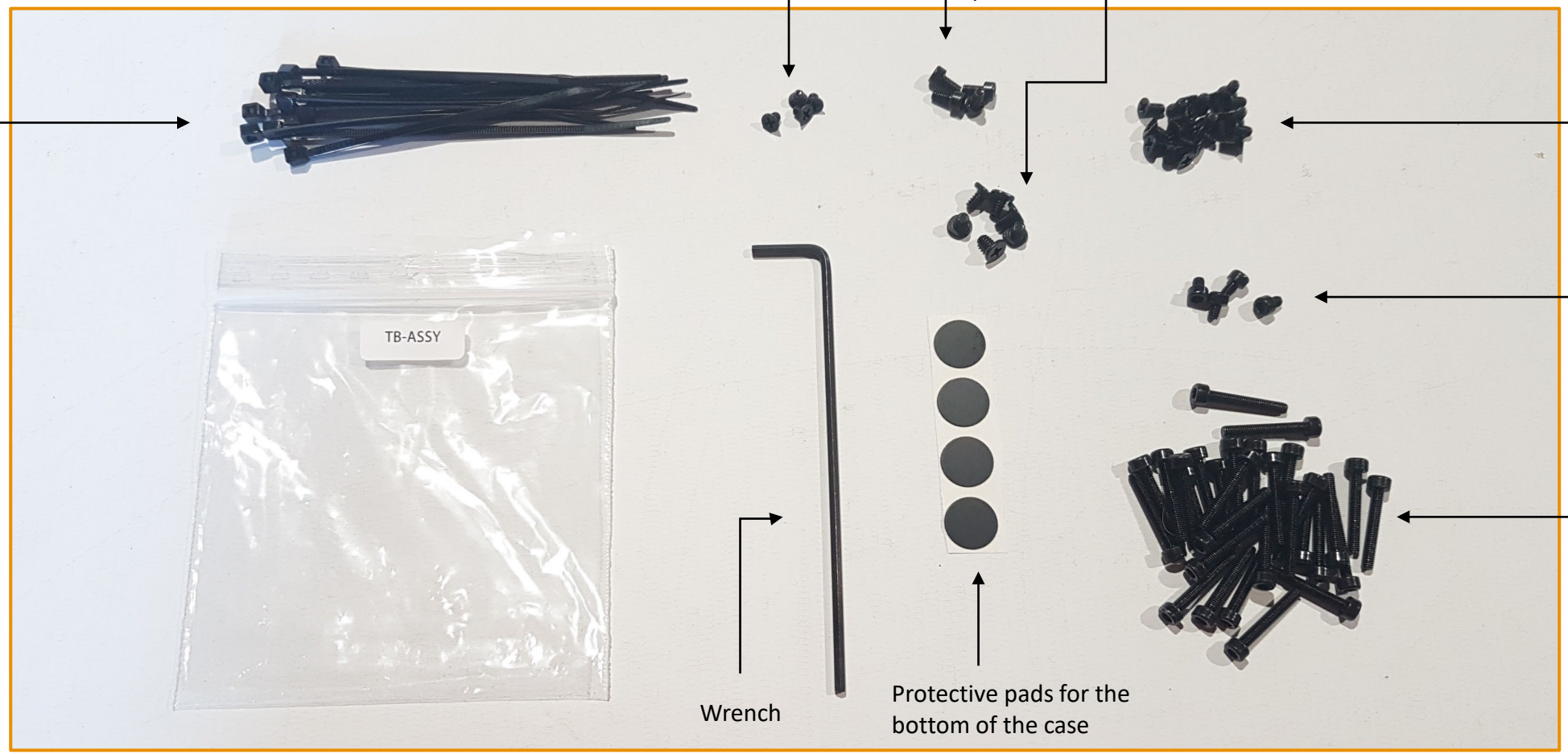



Kit « GPU SP »:
- 4 grey screws
- >10 black screws
- >10 plastic washers

**Kit for the graphic card - Spreader**

# The box of accessories






**Kit for the assembly & spare parts**

# The box of accessories

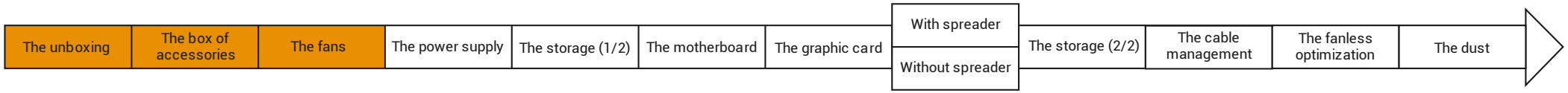


Bracket for the CPU (AMD and Intel). Both of them share the same assembly.


Kit « CPU »:
- 5 thumbnuts
- 5 springs
- 5 thumb screws
- 5 screws
- 4 metallic washers
- 4 plastic washers

**Kit for the CPU**

# The fans




If you plan to use fans, they are the first components that should be mounted. If you don't plan to use fans, simply go to the section « The power supply ». If you're not very sure about what to do, read our section « The fanless optimization ».

# The fans



The top fans

Picture to come

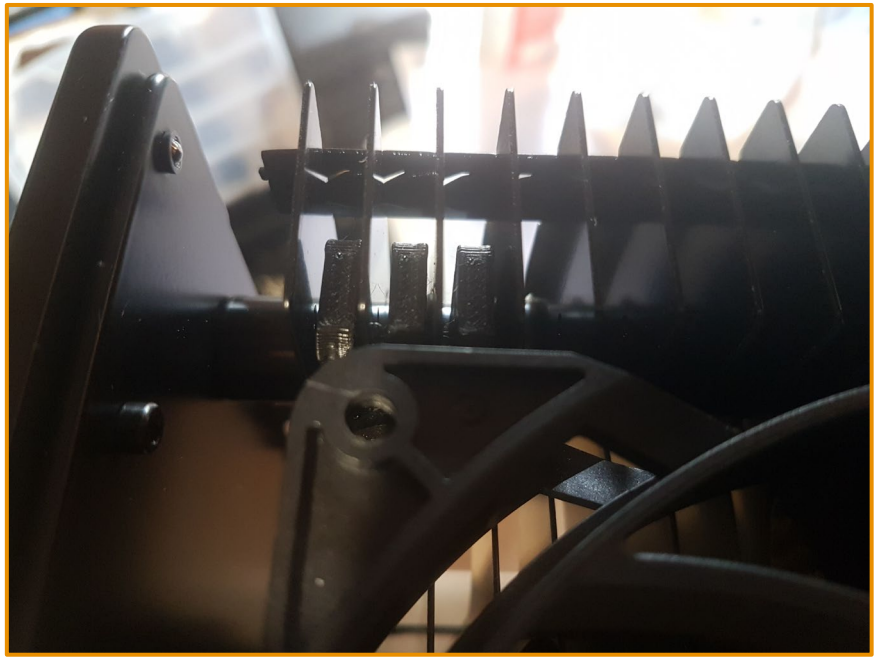

1. Remove the aesthetic top panel and remove the mesh.

2. Screw the 4x fans adapters 3D printed from the bag « FAN » onto the fans. You only need to use 2x adaptater per fan.

# The fans



The top fans

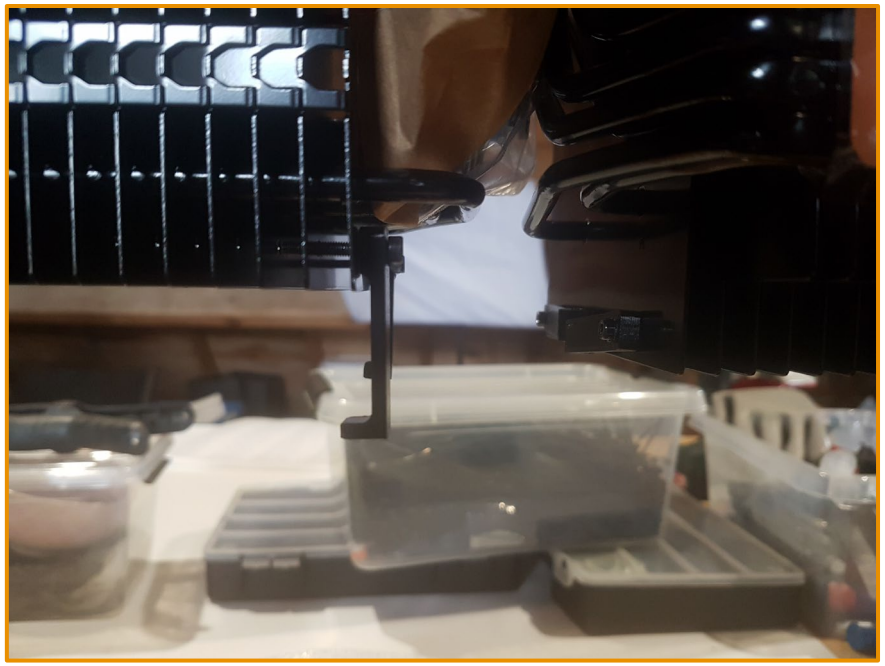



3. Place the fans on the top of the case. The adapters should be placed between the fins of the heatsinks. Keep in mind the cables should be placed on the side dedicated to the motherboard.
4. Close the top of the case with the mesh and the aesthetic panel.

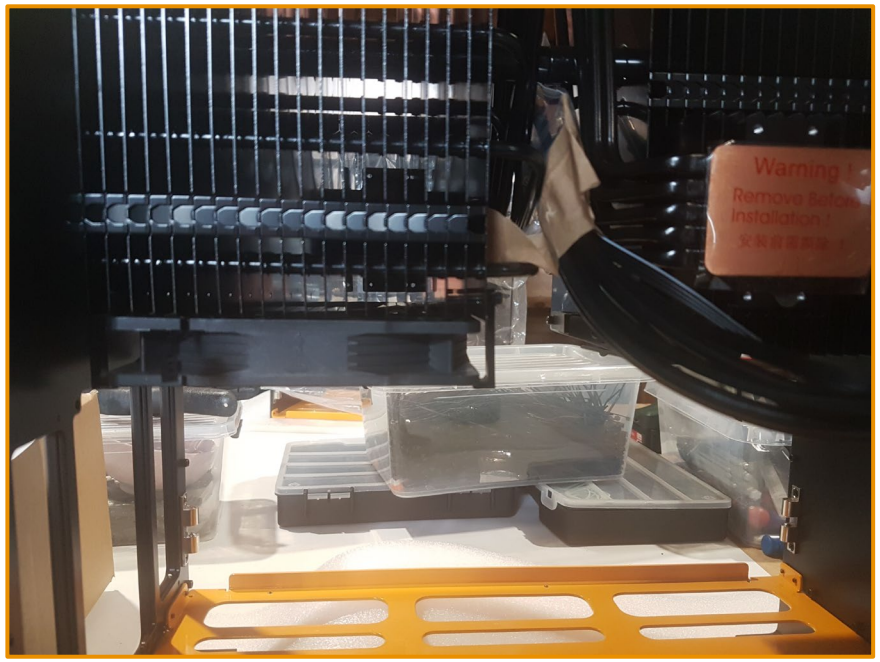
# The fans



The bottom fans



1. Lower the 4 adapters for the fans on the two heatsinks of The Beast and place them horizontally.




2. Put the 140mm fans into the slots (for 120mm, ask the team for longer adapters). Keep in mind the cables should be placed on the side dedicated to the motherboard.

# The power supply

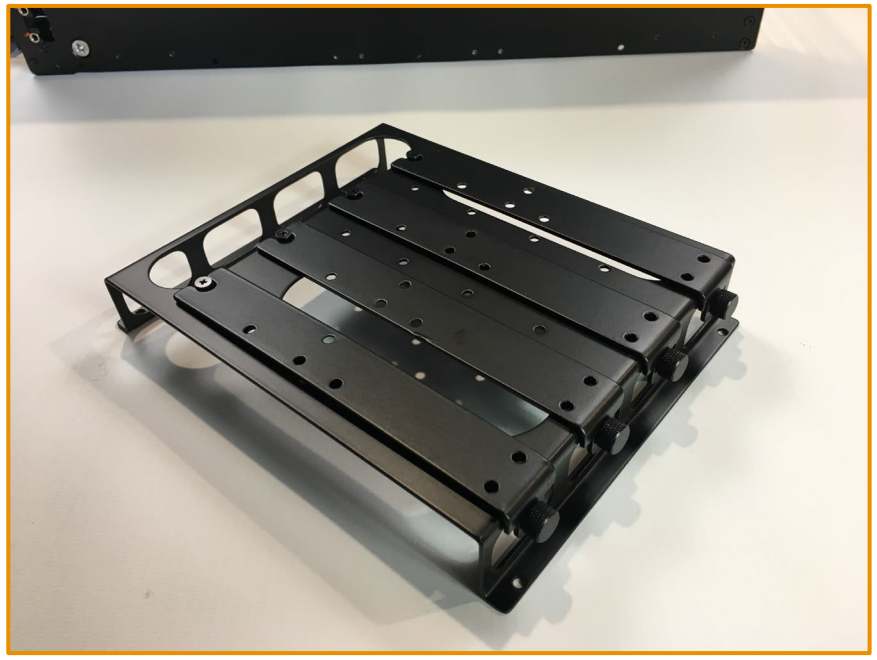



1. Place your power supply into the case in its dedicated slot.

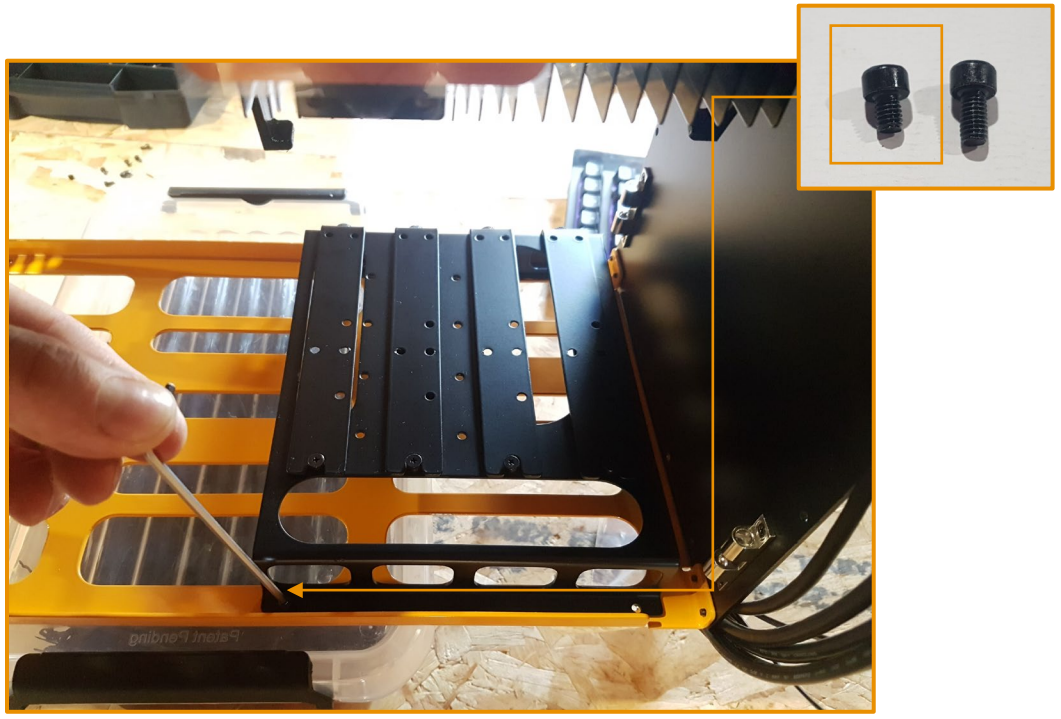
2. Screw the power supply with the dedicated screws from the bag « ASSY ». Do not wire it yet.

# The storage (1/2)





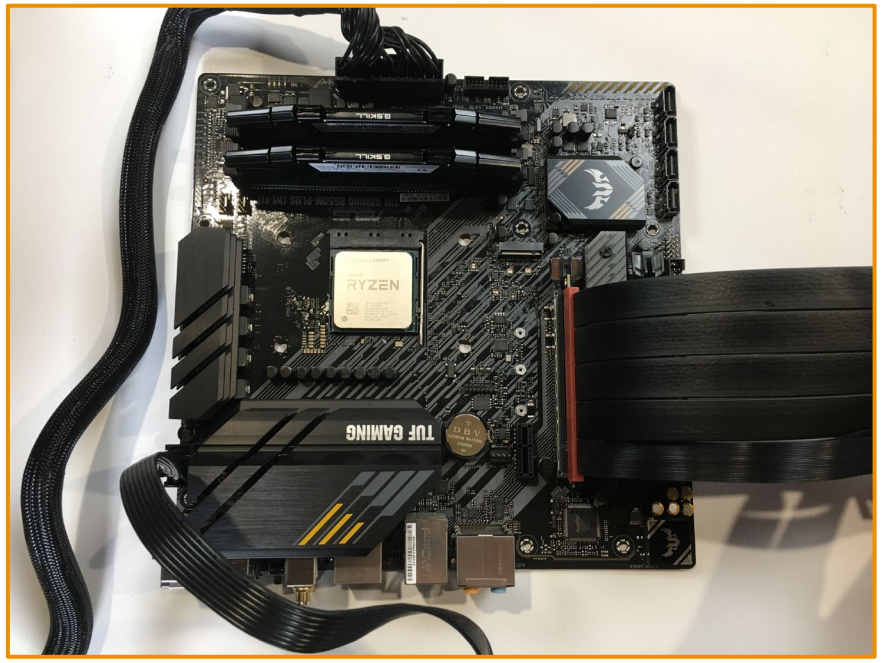
1. Take the SSD/HDD support available in the box of accessories.



2. Screw the support with the screws (x4) available in the bag « ASSY ».

# The motherboard





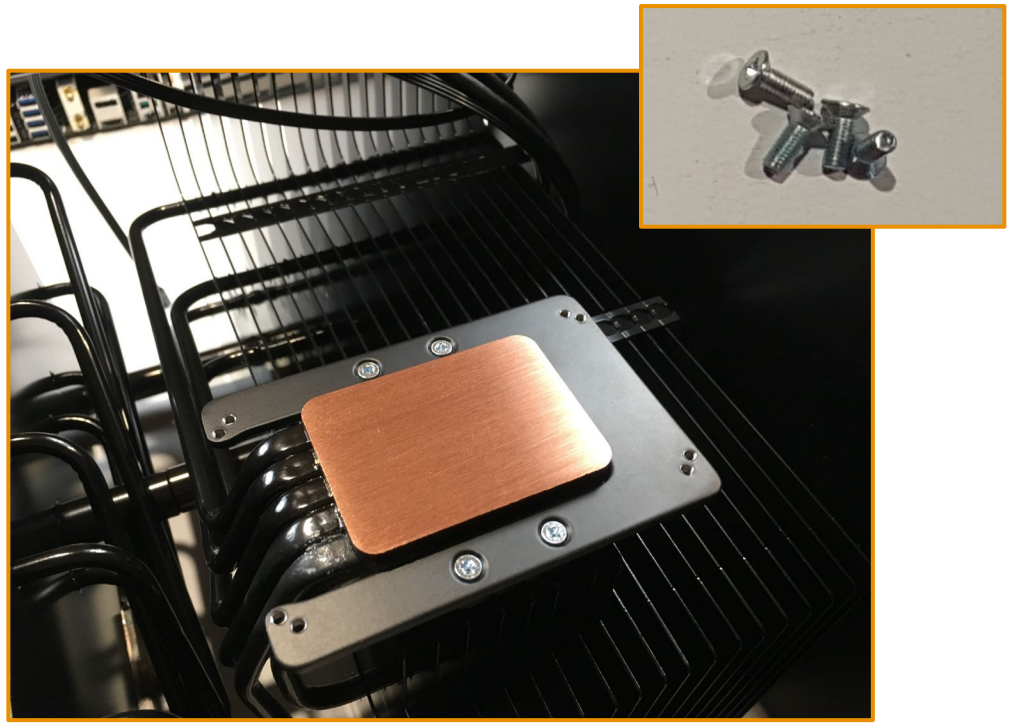

Picture to come

1. Prepare your motherboard. Place the processor and the memories on your motherboard.
2. Prewire all the cables for the power, SATA, M2, fans, front panel extension, etc. Refer to the user manual provided with your motheboard to find the right locations.
3. Use the NVMe cooler if you have a M2 drive. Simply remove the protective film and place the cooler on the M2.

# The motherboard



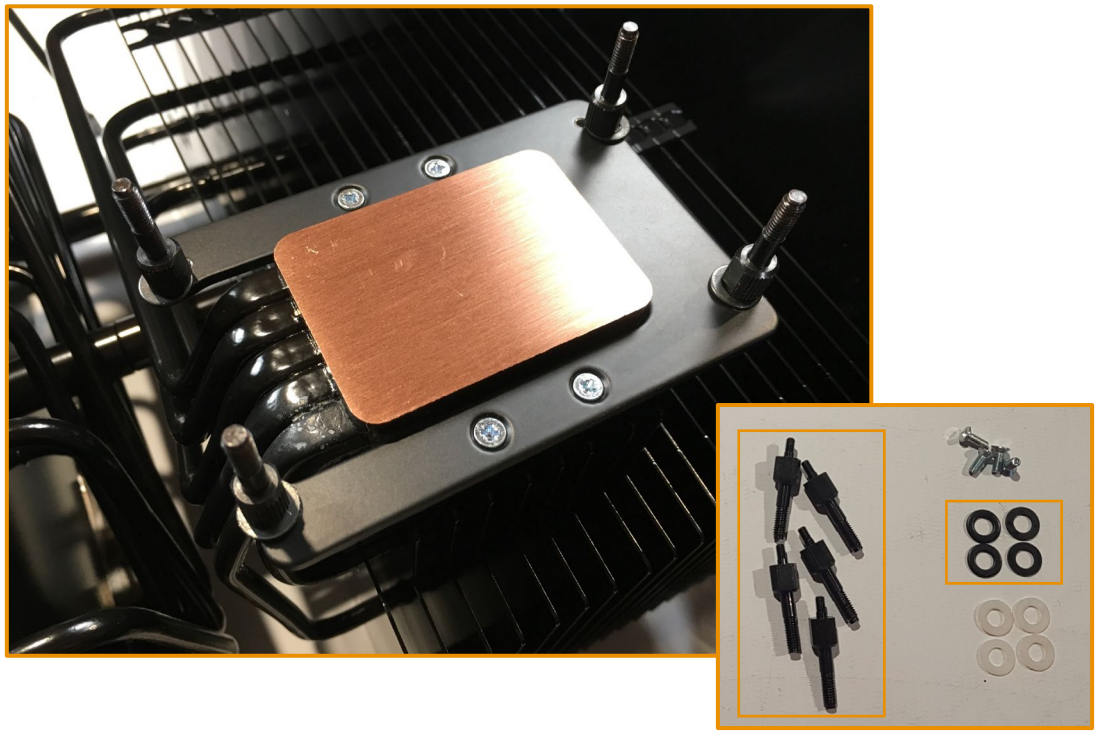
4. Place the case horizontally on the desk/table, remove the protective film on the CPU cooler and mount the bracket (Intel or AMD) onto the cooler.



5. Mount the screws available in the bag « CPU ». The assembly is the same for AMD and Intel processors (except for TR4 – pictures to come).

# The motherboard





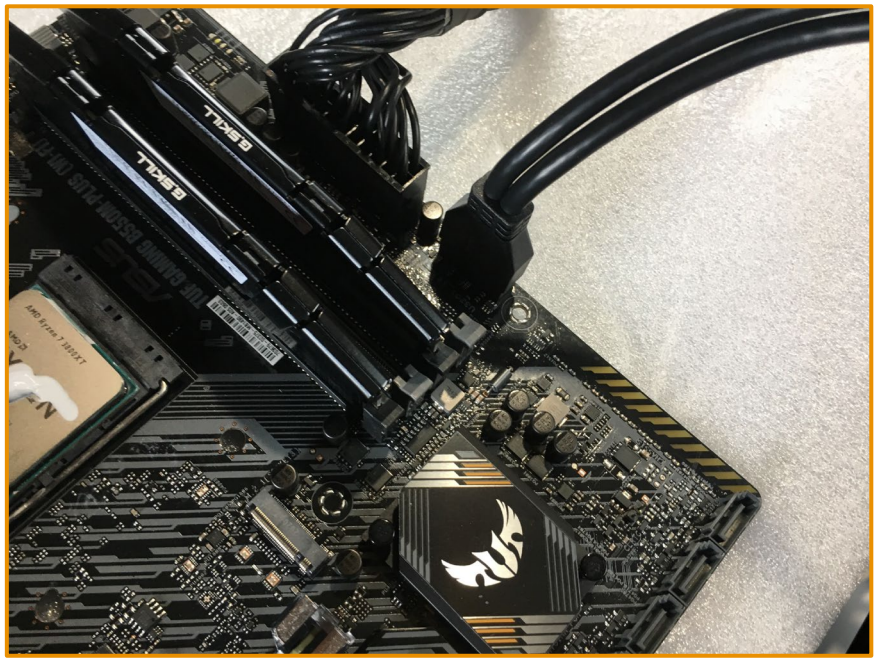
6. Use the screws available in the bag « CPU » for your bracket. Place the spacers first, the screws then. Make sure the washers can't move anymore. Use a clamp if needed.

Picture to come

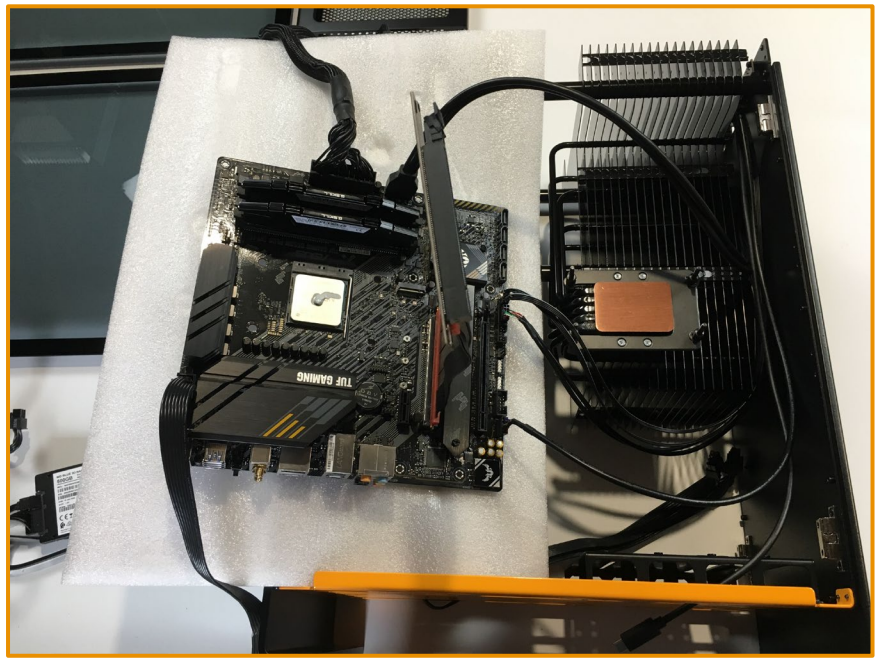
7. Since your case is placed horizontally, you can also put the protective pads provided in the bag « ASSY » on the feet of the case, in order to prevent your desk from scratching.

# The motherboard





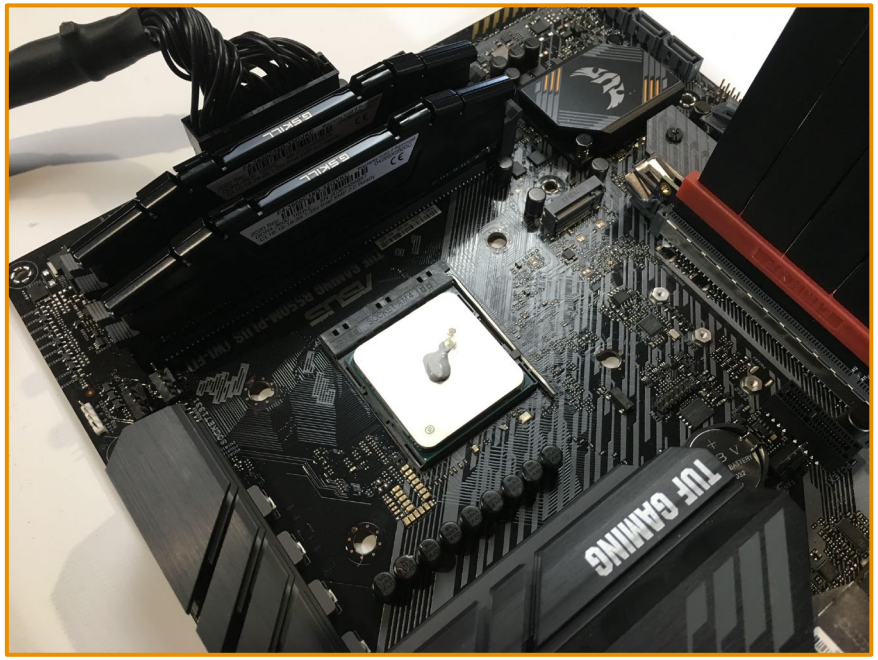
8. Connect the cables of the front panel on the motherboard. Refer to the user manual provided with your motheboard to find the right locations.



9. Connect the riser on the motherboard.

# The motherboard



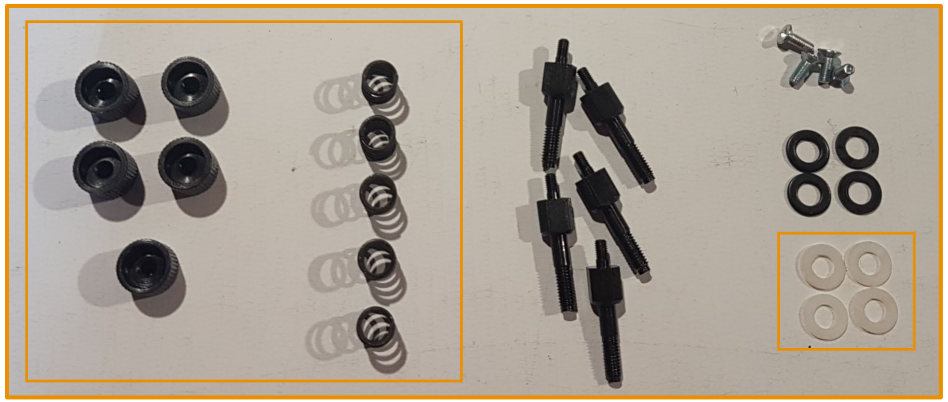


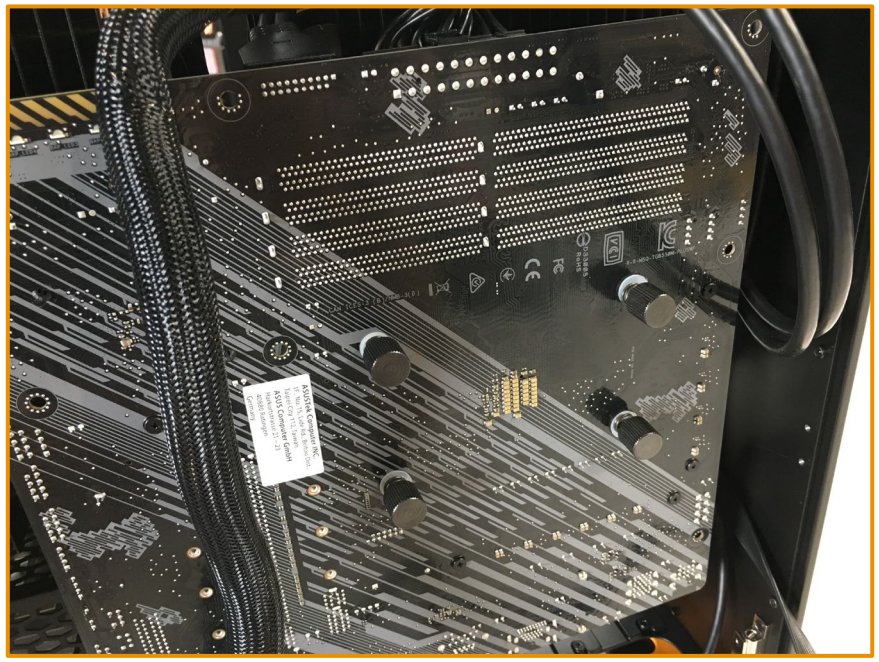

10. Put some thermal grease on the processor.

11. Place the motherboard on the cooler.

# The motherboard

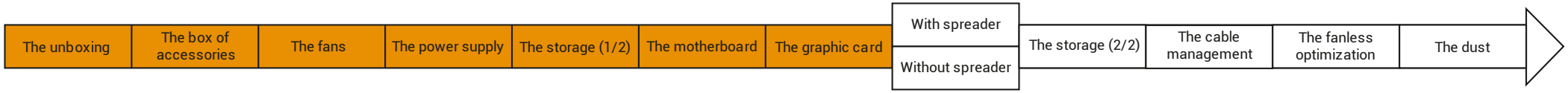


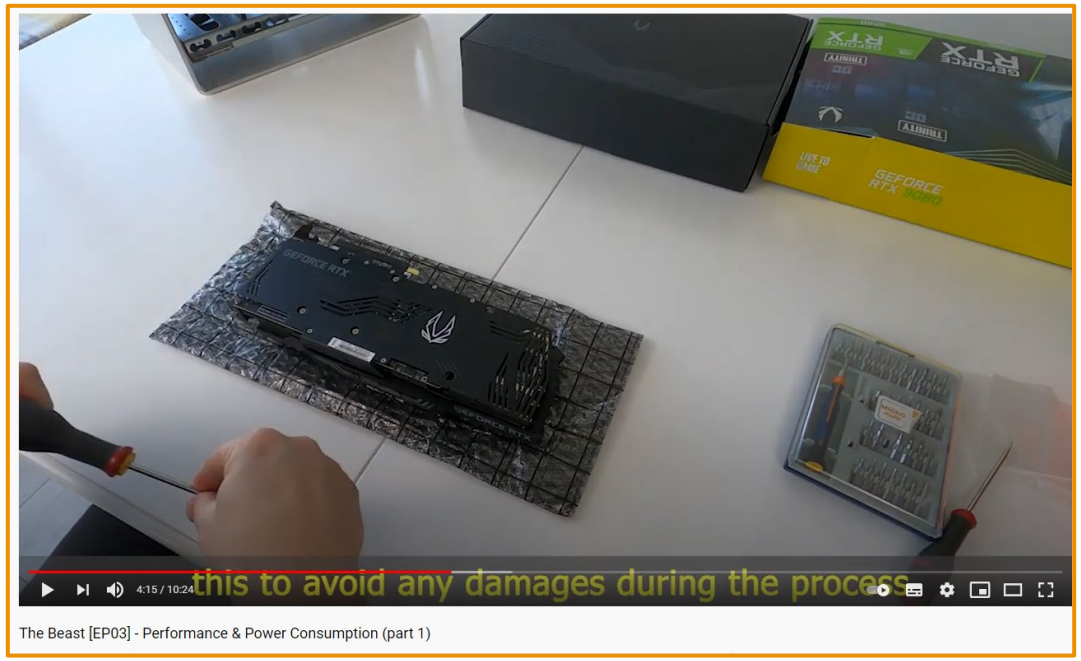




12. Screw tight the motherboard with the screws available in the bag « CPU ». Place first the spacers, then the springs and finally the thumbnuts.

# The graphic card



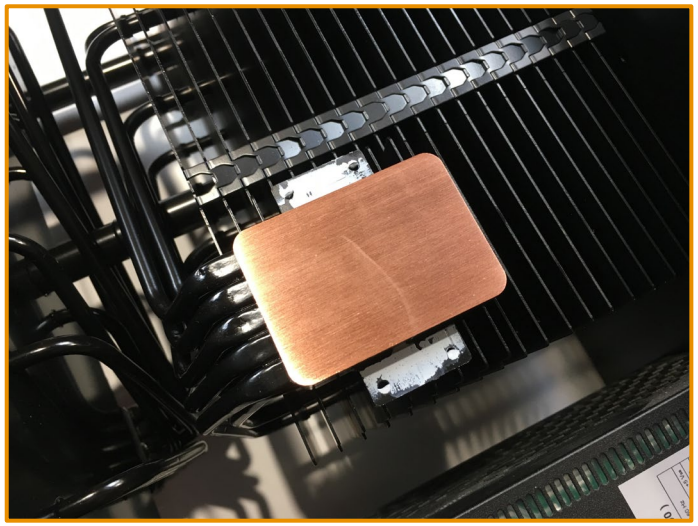

1. Prepare your graphic card by removing the cooler and, if necessary, the backplate. The backplate should not be in contact with the top of the case, not with the heatsink. Please refer to our video « The Beast EP03 » at 4.00'' for a detailed view of the process.
2. Connect the PWM adapter if you plan to use fans (refer to the user manual of your graphic card to find the right location).
3. Clean up the chip with isopropyl alcohol.

# The graphic card

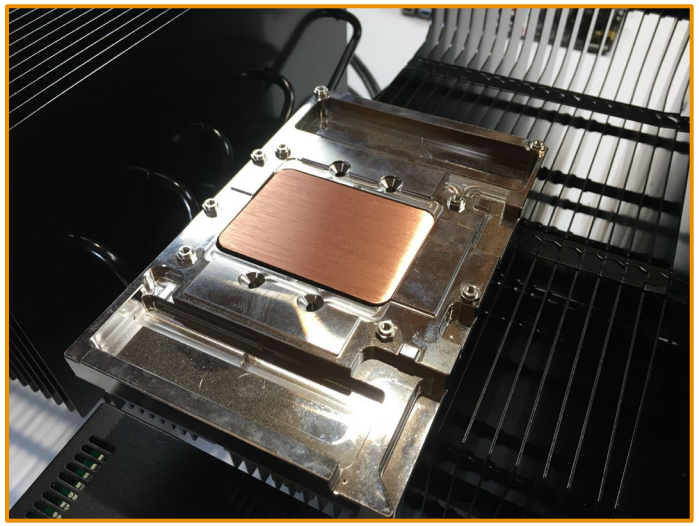


With spreader


4. If you have a spreader, remove the adhesive film on the cooler block. You can place the case horizontally for easier assembly.



5. Put some thermal grease on the two bracket plates (you can use a brush to spread the grease).

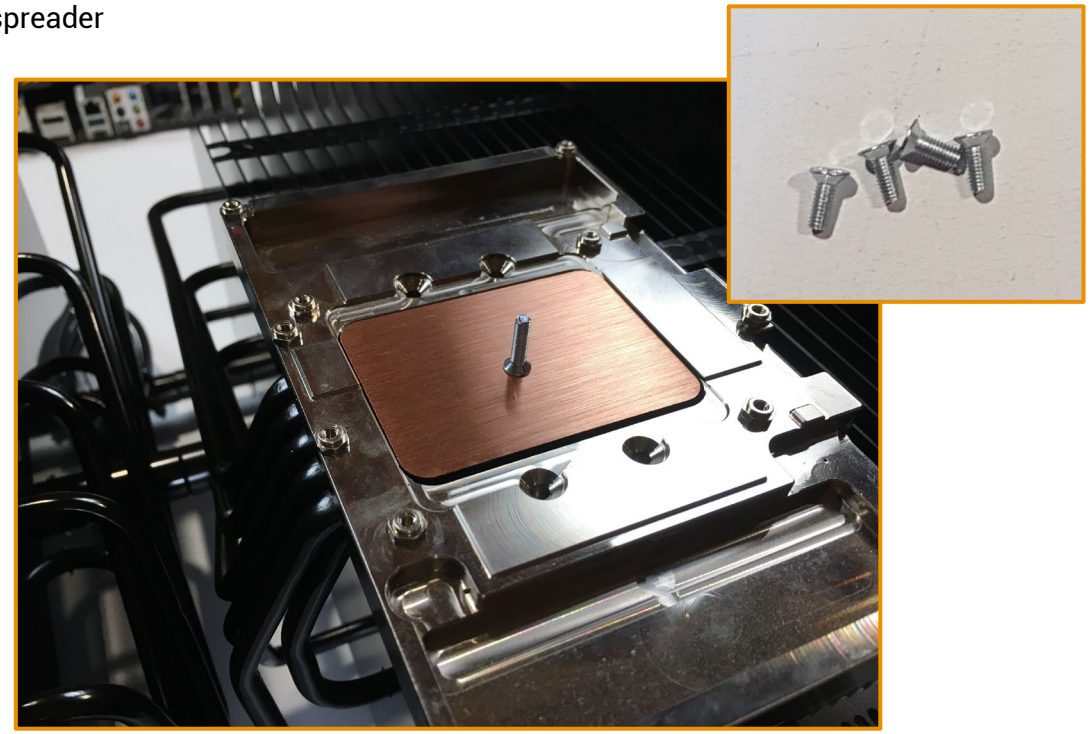


6. Place the spreader onto the cooler block.

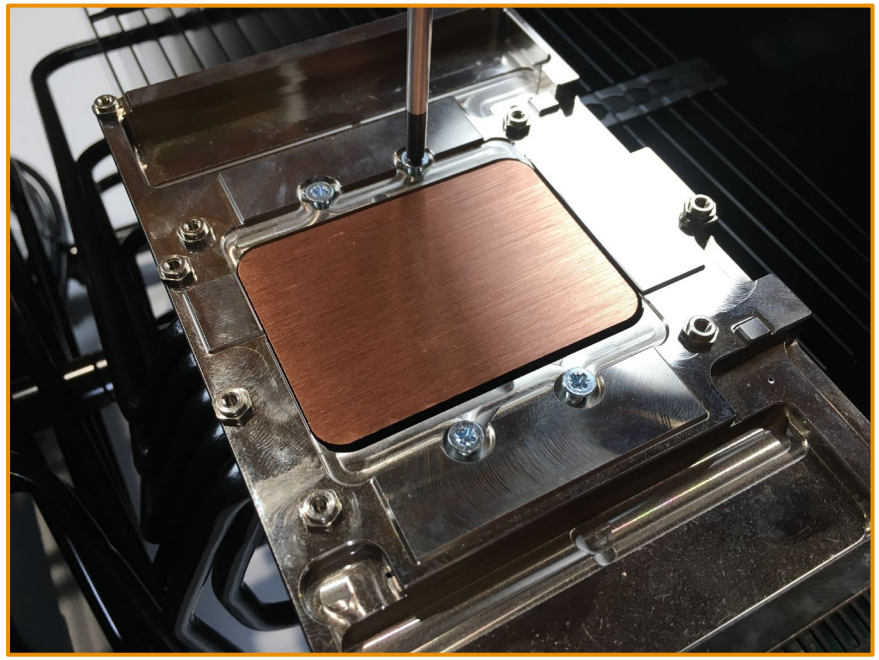
# The graphic card



With spreader





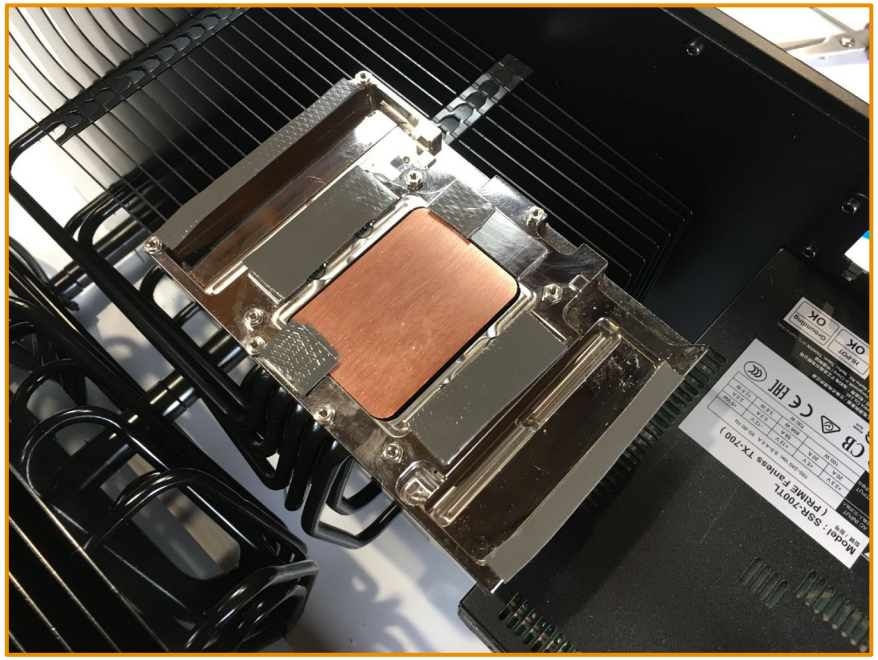


7. Screw the spreader on the cooler block with the screws available in the bag « GPU SP ».

# The graphic card



With spreader



Spreader 001 – RTX 2080 Ti – User Manual
Spreader 002 – RTX 2070/2080/2080 Ti – User Manual
Spreader 003 – RTX 3080/3080 Ti/3090 TUF – User Manual
Spreader 004 – RTX 3080/3080 Ti/3090 XC3 – User Manual
Spreader 006 – RTX 3080/3080 Ti/3090 Trinity – User Manual
Spreader 007 – RTX 3080/3080 Ti/3090 Strix – User Manual
Spreader 008 – RX 6800/6900 – User Manual
Spreader 009 – RTX 3080 FE – User Manual

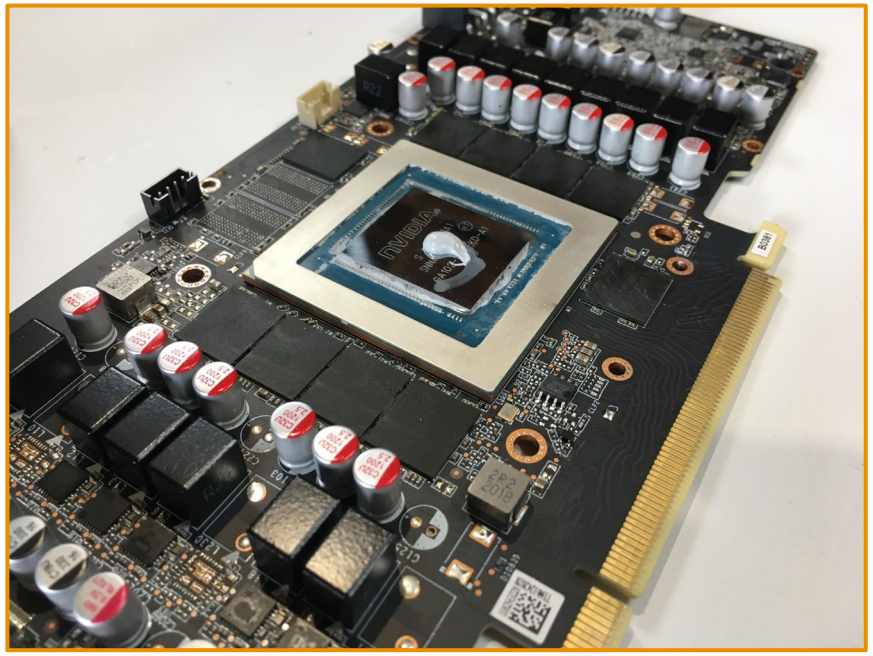
8. Put the termal interfaces provided with your spreader (please refer to the user manuals provided by EKWB).
The interfaces provided are 3W/m.K.

Tips to improve your performance
You can go with 5W/m.K. (Bergquist GP5000S35 for example) or even with 12W/m.K. (GELID SOLUTIONS GP-Extreme TP-GP01-B) for extreme applications.

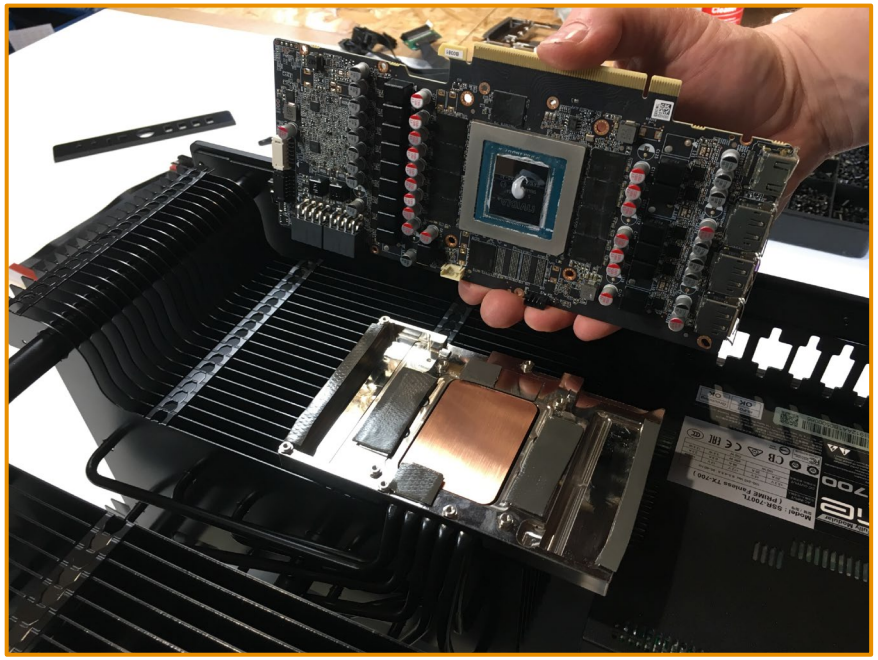
# The graphic card



With spreader



9. Put some thermal grease on the chip of the card.

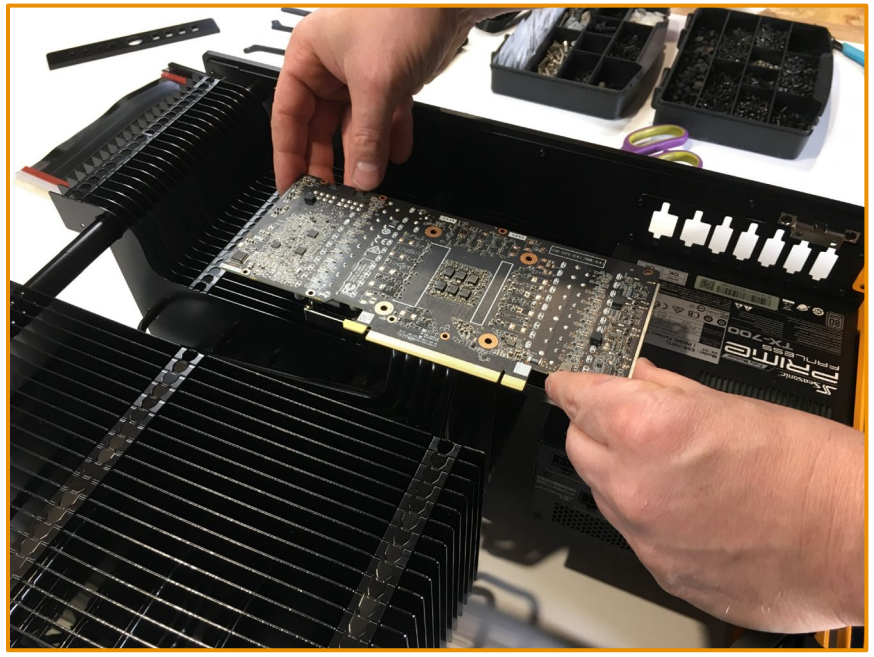


10. Place the graphic card onto the cooler block and spreader.

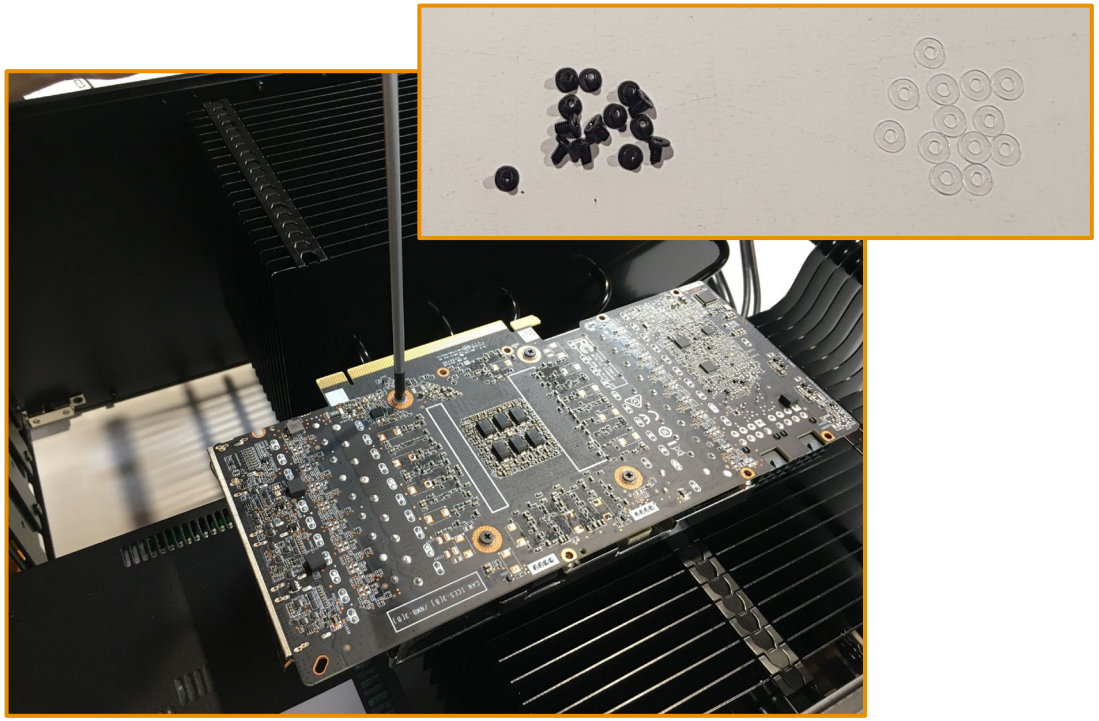
# The graphic card



With spreader



11. Make sure the contact between the spreader and the graphic card is good.

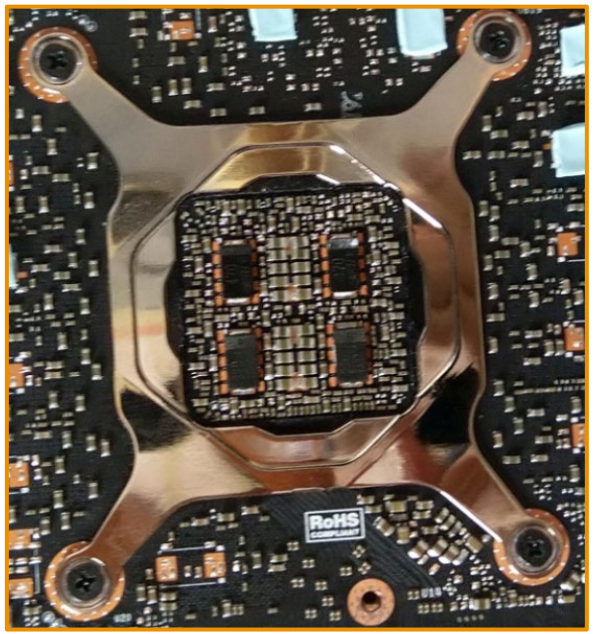


12. Screw the graphic card with the screws available in the bag « GPU SP ». Place the spacers first, then the screws.

# The graphic card



With spreader



ADDITIONAL NOTE

If possible, place the GPU spring plate on the back of your PCB. This will spread the force between the processor and the cooler.

The GPU spring might be compatible with the backplate (cf p.34). We are currently checking the compatibilitie:

Spreader 001 – RTX 2080 Ti – Compatibility spring plate + backplate TBC

Spreader 002 – RTX 2070/2080/2080 Ti – Compatibility spring plate + backplate TBC

Spreader 003 – RTX 3080/3080 Ti/3090 TUF – Compatibility spring plate + backplate TBC

Spreader 004 – RTX 3080/3080 Ti/3090 XC3 – Compatibility spring plate + backplate TBC

Spreader 006 – RTX 3080/3080 Ti/3090 Trinity – Compatibility spring plate + backplate TBC

Spreader 007 – RTX 3080/3080 Ti/3090 Strix – Compatibility spring plate + backplate TBC

Spreader 008 – RX 6800/6900 – Compatibility spring plate + backplate TBC

Spreader 009 – RTX 3080 FE – Compatible

# The graphic card



With spreader


ADDITIONAL NOTE

It is recommended to use a backplate combined with the spreader provided with your Beast.
The two plates will help to keep the GPU memory temperature low.
We recommend to choose EKWB's backplates that are great for their simplicity of mounting.

Spreader 001 – RTX 2080 Ti – Compatibility TBC – User Manual

Spreader 002 – RTX 2070/2080/2080 Ti – Compatibility TBC – User Manual

Spreader 003 – RTX 3080/3080 Ti/3090 TUF – Compatibility TBC – User Manual

Spreader 004 – RTX 3080/3080 Ti/3090 XC3 – Compatibility TBC – User Manual

Spreader 006 – RTX 3080/3080 Ti/3090 Trinity – Compatible – User Manual

Spreader 007 – RTX 3080/3080 Ti/3090 Strix – Compatible (an additional hole needs to be done, ask the team for some help!) – User Manual

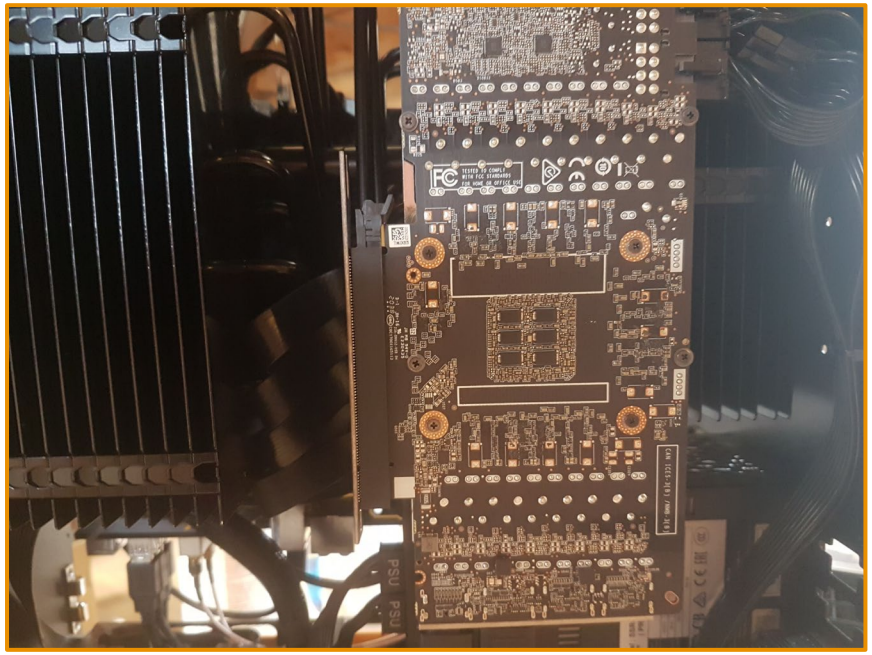
Spreader 008 – RX 6800/6900 – Compatibility TBC – User Manual

Spreader 009 – RTX 3080 FE – Compatible – User Manual

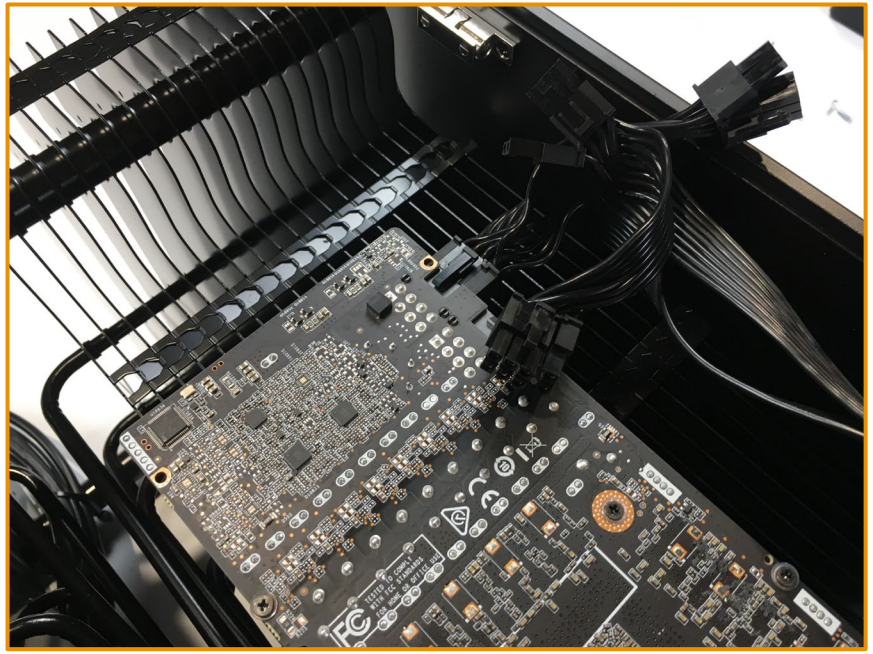
# The graphic card



With spreader



13. Connect the riser on the graphic card.



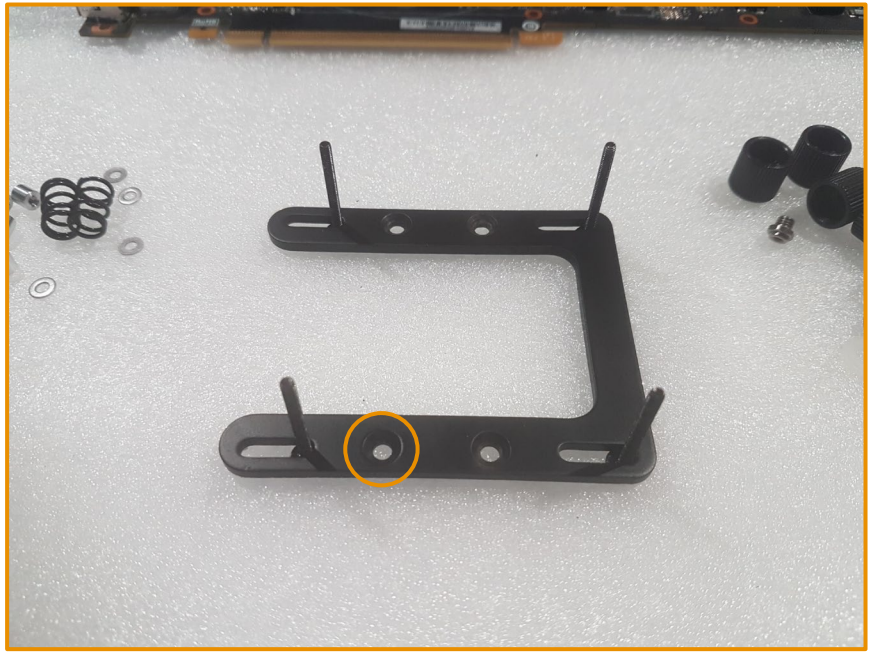
14. Plug the power cables on the graphic card.

# The graphic card



Without spreader


4. If you do not have a spreader, remove the adhesive film on the GPU cooler block. You can place the case horizontally for easier assembly.

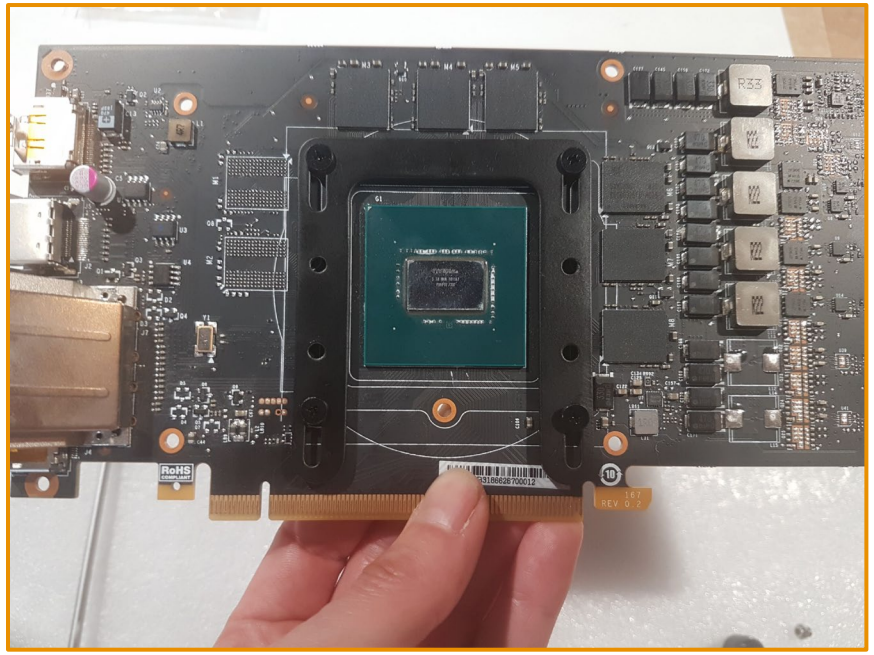


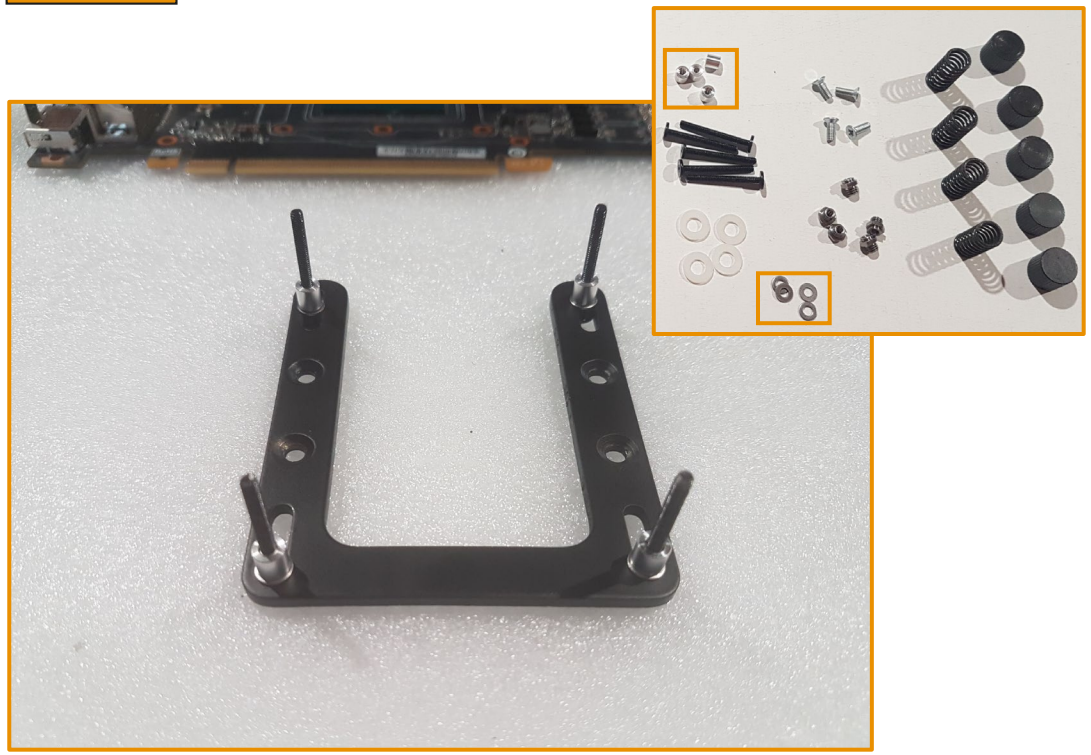
5. Mount the 4 screws provided in the bag « GPU NSP ». Be careful to place the bracket on the correct side. See the shape of the holes.

# The graphic card



Without spreader





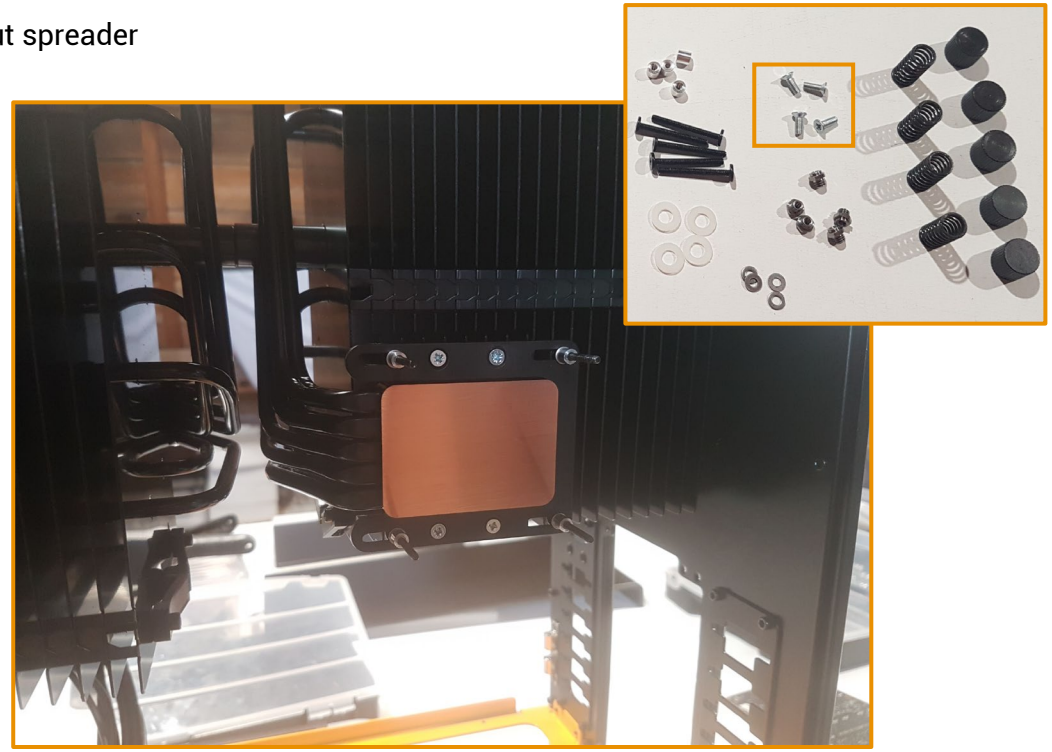
6. Check the position of the screws by placing your bracket onto your graphic card. It will be helpful before placing the other parts. You can mark their position with a pen if needed. Be sure to leave enough space for the riser, as well as for the taped heatsinks on the memories.

7. Assemble the metallic washers and the spacers. Mount tight – if necessary, you can use a wrench to grimp them. It should not move at all.

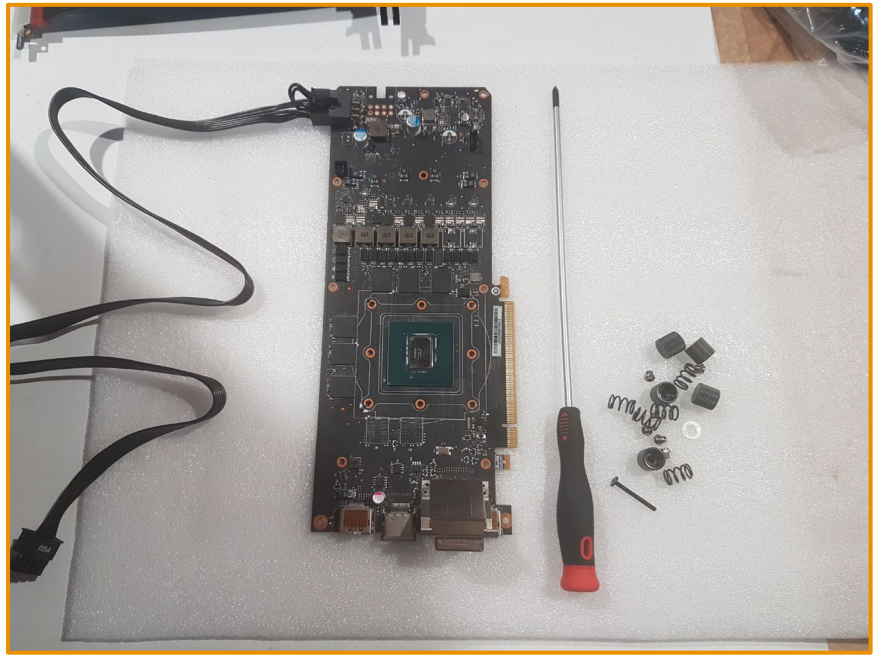
# The graphic card



Without spreader



8. Screw the bracket onto the cooler block with the dedicated screws available in the bag « GPU NSP ».



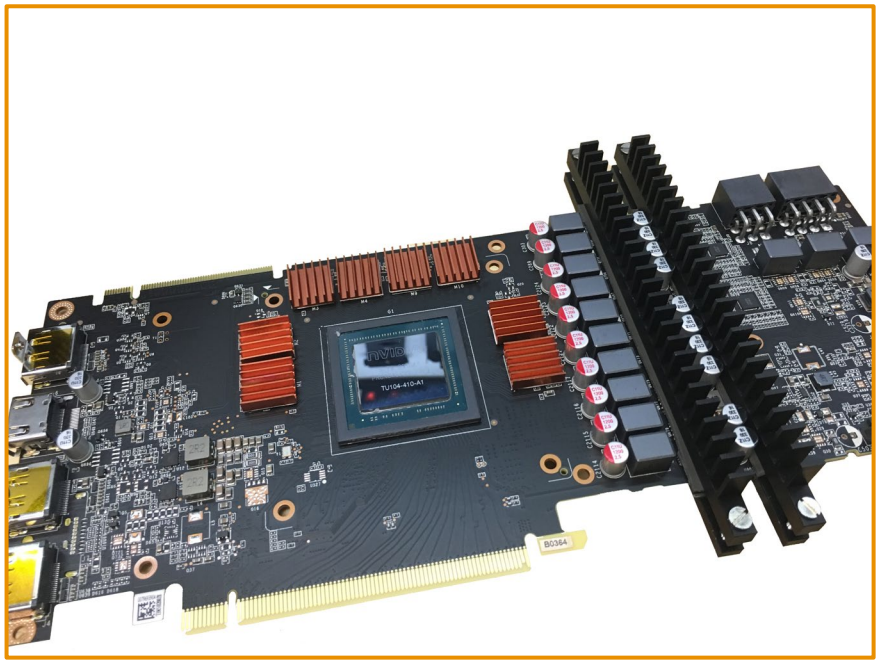
9. Prewire the graphic card.

# The graphic card



Without spreader

10. Assemble the thermal tapes and the VRM machined heatsinks (1 or 2 depending on your graphic card) on the card. Use the screws provided with the VRMs machined heatsinks. Different spacers are available and can be used to adjust the height depending on your PCB.

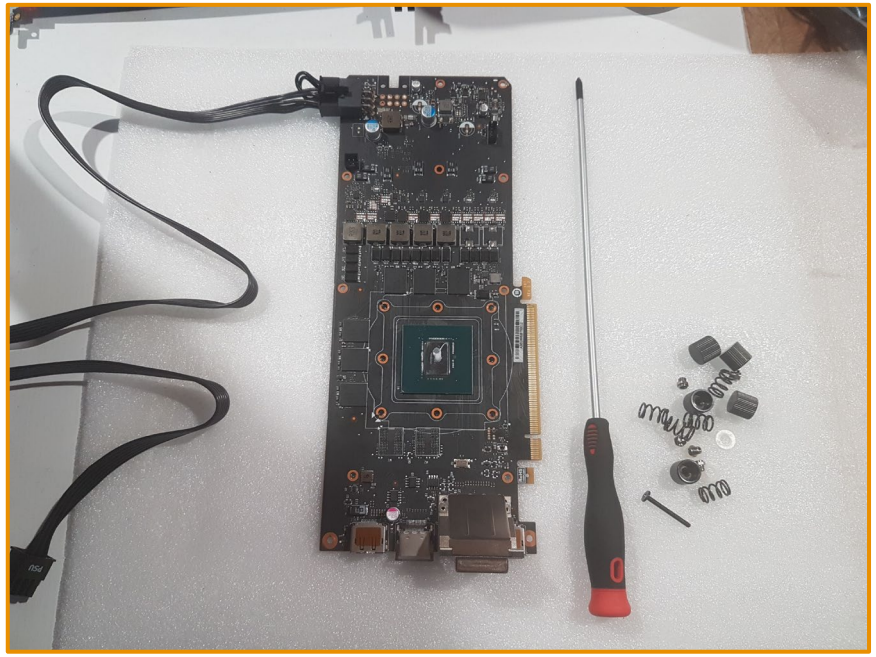


11. Place the taped heatsinks on the memories by removing the protective adhesive on the thermal interfaces.

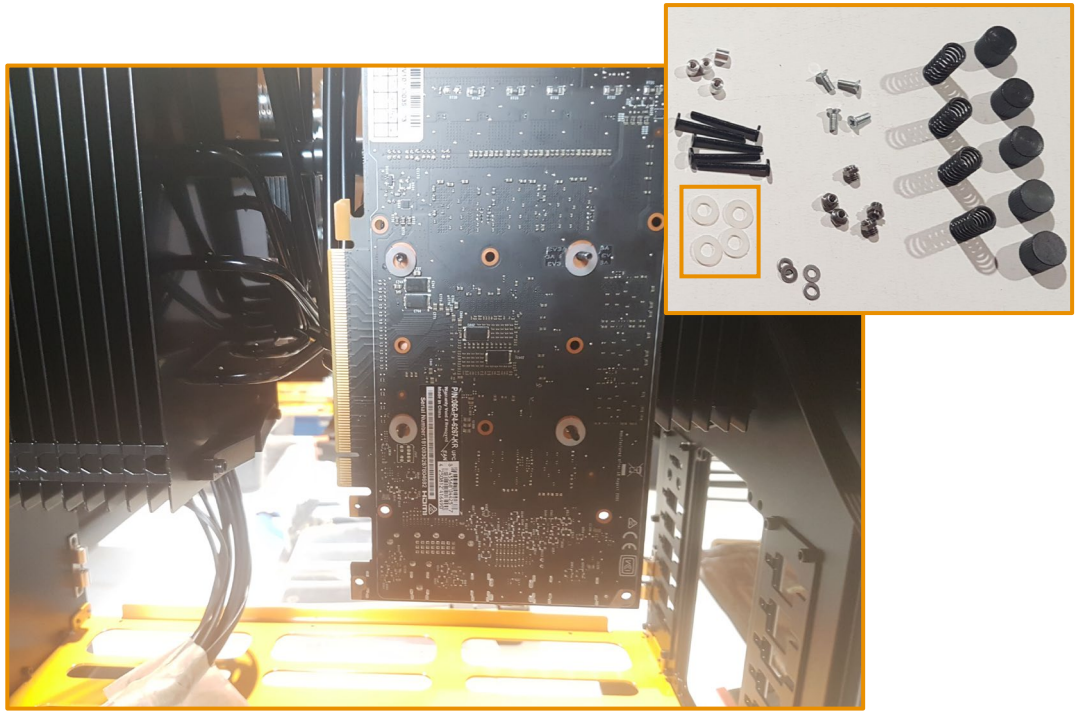
# The graphic card



Without spreader



12. Put some thermal grease on the chip.

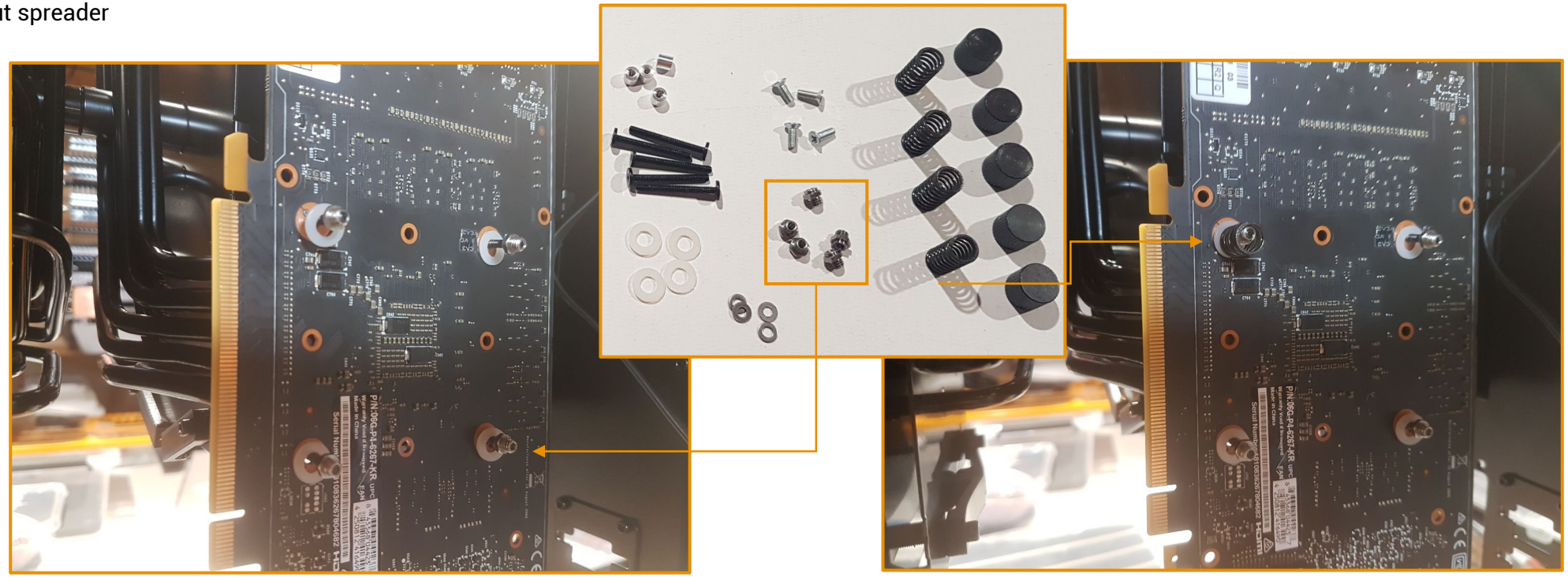


13. Mount the graphic card onto the cooler and place the plastic spacers.

# The graphic card



Without spreader



14. Mount the thread adapters. Stop screwing when you can see the long screws.

15. Place the springs.

# The graphic card



Without spreader

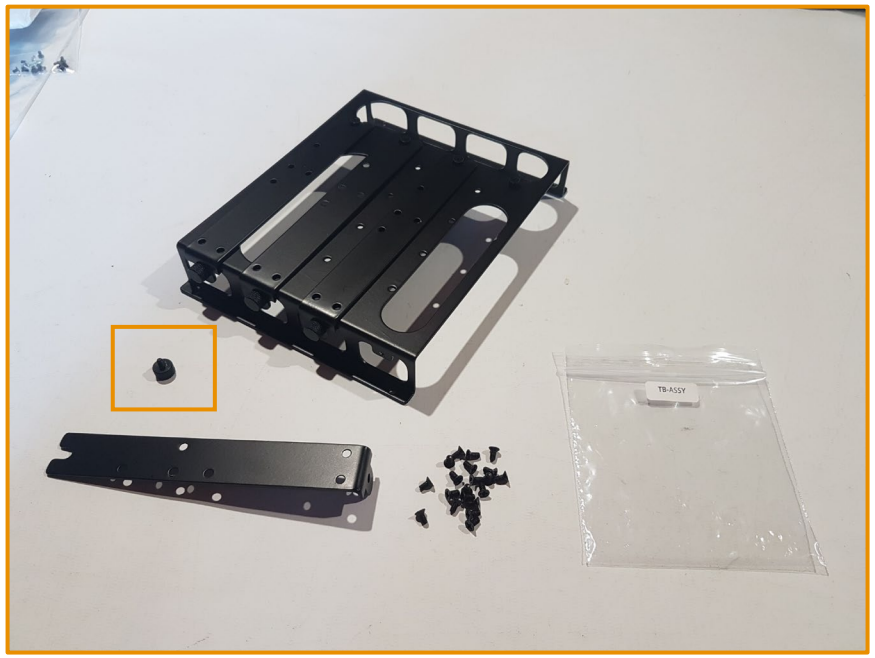
16. Mount the nuts tight up. Screw until you can't screw anymore. We recommend to tighten up all of them at the very end, once they are all placed.

17. Connect the riser.

# The storage (2/2)



The support should be already assembled into the case – see « The storage (½) ».




1. Remove the screw on the support for SSD/HDD (each part can handle 2x SSDs or 1x HDD).

2. Place your storage on the support and screw it with the screws provided in the bag « ASSY ». Place your storage like in the example here. Prewire your storage.

# The storage (2/2)

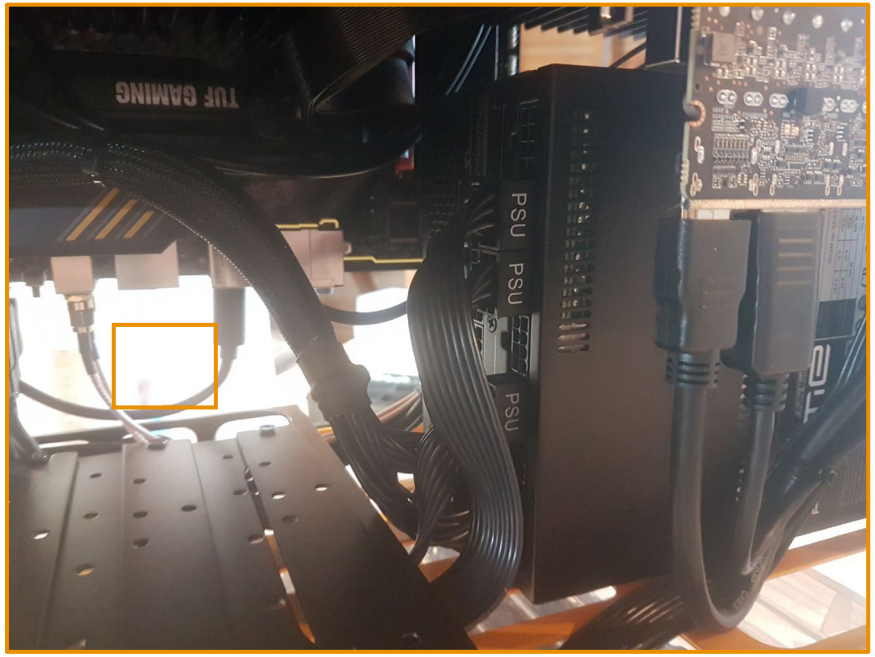


The support should be already assembled into the case – see « The storage (½) ».


3. Screw the storage and its dedicated part onto the main support.

# The cable management

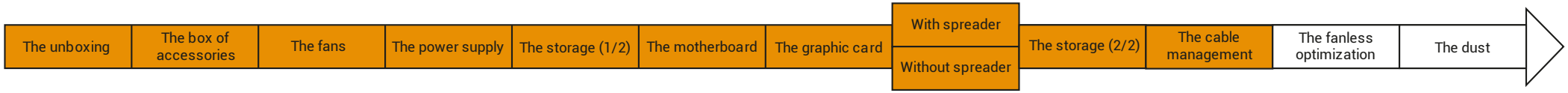
The unboxing | The box of accessories | The fans | The power supply | The storage (1/2) | The motherboard | The graphic card | With spreader / Without spreader | The storage (2/2) | The cable management | The fanless optimization | The dust

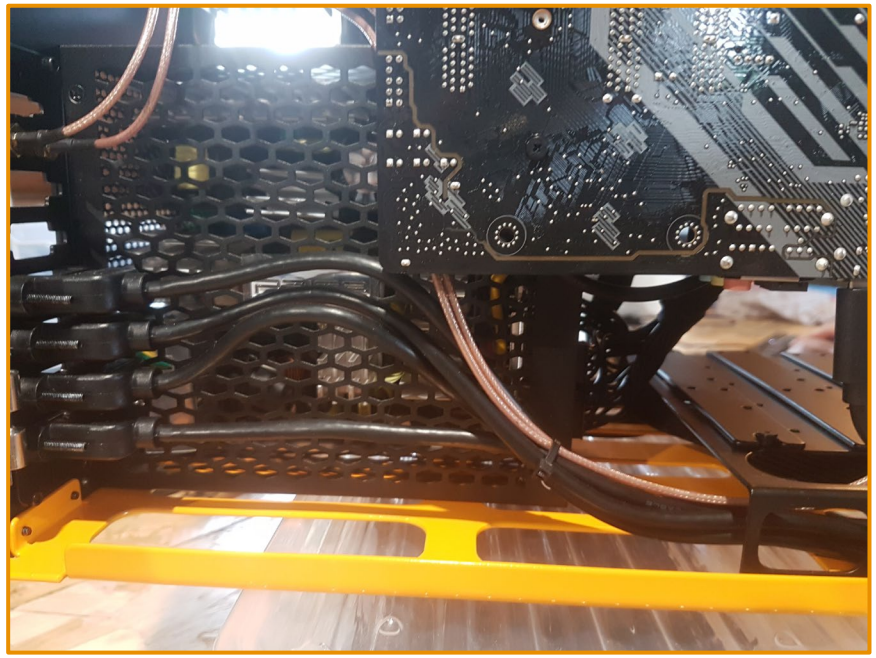



1. Connect all the cables to the power supply. Carefully check that all of them are correctly plugged.

2. Connect all the extended cables to the front panels. Use the screws provided in the bag « ASSY ».

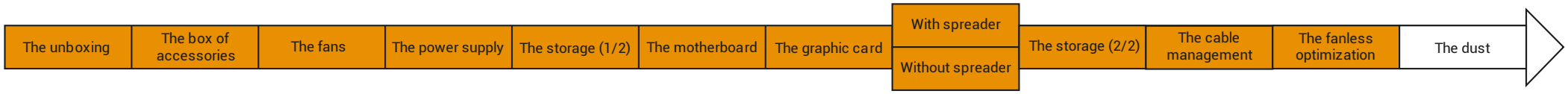
# The cable management



3. Make sure everything is well mounted and connected. Do some cable management to improve the airflow into the case. Use the cable clamps provided in the bag « ASSY ».
4. Connect the PC to power and switch it on. The LEDs on the front of the case will let you know if the PC is running.
5. Everything is working well? You can close the PC with the side panels. Congratulations, you made it!

# The fanless optimization




The Beast has been designed to run fully passively. The slots for the fans (x4) are available mostly to prevent overheat during the heat waves in Summer, for example. Of course, they can be used to increase the power of the processor and the graphic card. But The Beast remains a fanless case and we recommend to not install fans to completely enjoy the experience.

Maximum TDP (passive configuration)
CPU = 150W
GPU = 240W

●

Maximum TDP (active configuration)
CPU = 200W
GPU = 300W

A passive configuration requires an optimization of the voltage and the power of the components.

The first reason is that reducing the voltage of the processor and/or the graphic card (and so the power supply) will avoid having coil whine. Indeed, having a fanless PC is great, until you hear this annoying noise from your components. Whatever the components, the coil whine is more common with low and mid-range (mostly with the GPUs but also with the power supplies and the motherboards). This is due to the price optimization regarding the dedicated components for the voltage regulation. By optimizing the power consumption of CPU, GPU and so PSU, the coil whine simply disappears (frequency is not detectible anymore). With a same card, you could have coil whine at full charge, but nothing at a lower power.

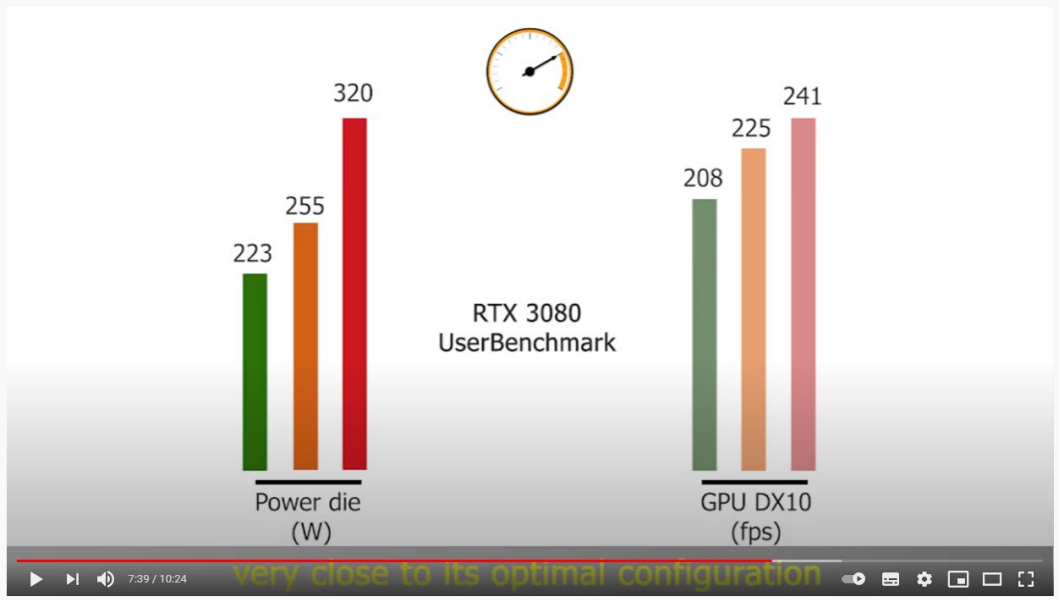
The second reason – obviously - is to respect the TDP of the coolers. This will prevent throttling but also reduce the temperature of your system.

# The fanless optimization

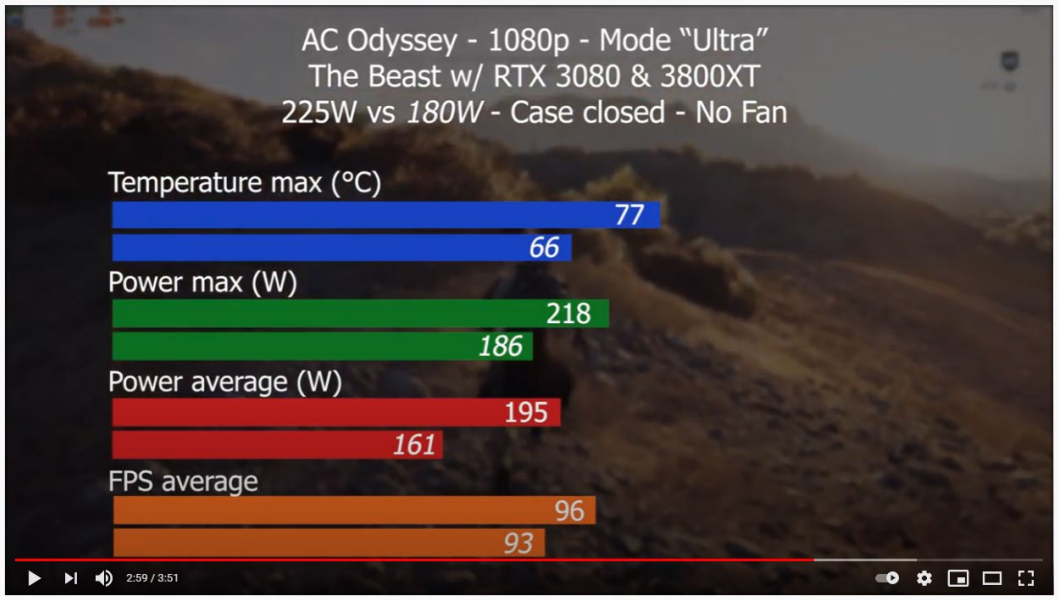


Reducing the power and the voltage will only slightly affect the performances of your configuration. In most of the applications, you won't even notice the difference (between 5-10% loss, depending on your card and the parameters). Several tests are available in the videos below as well as in an article you can find following this link. Many other videos can be found online.

More power doesn't mean more performances and a RTX 3070 at 220W will better perform than a RTX 3060 Ti at full load.

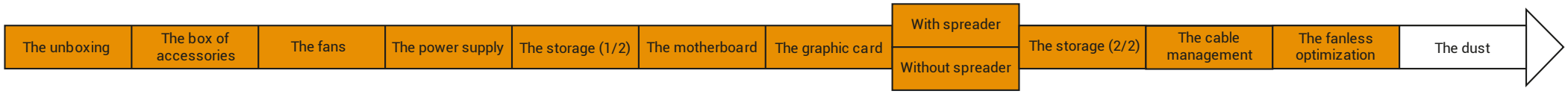



The Beast [EP03] - Performance & Power Consumption (part 1)

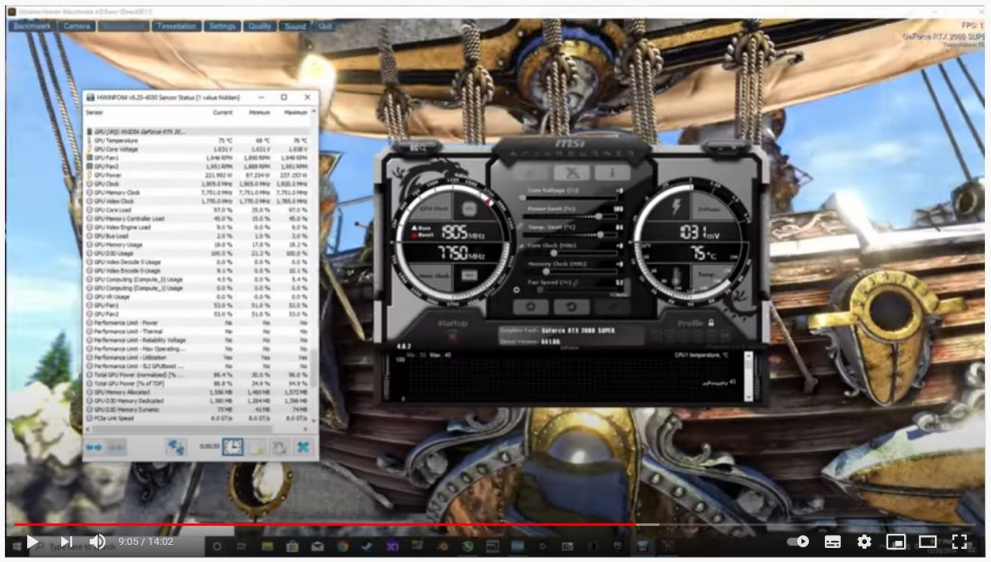



The Beast [EP04] - Tests in-game (Performance & Power consumption part 2)

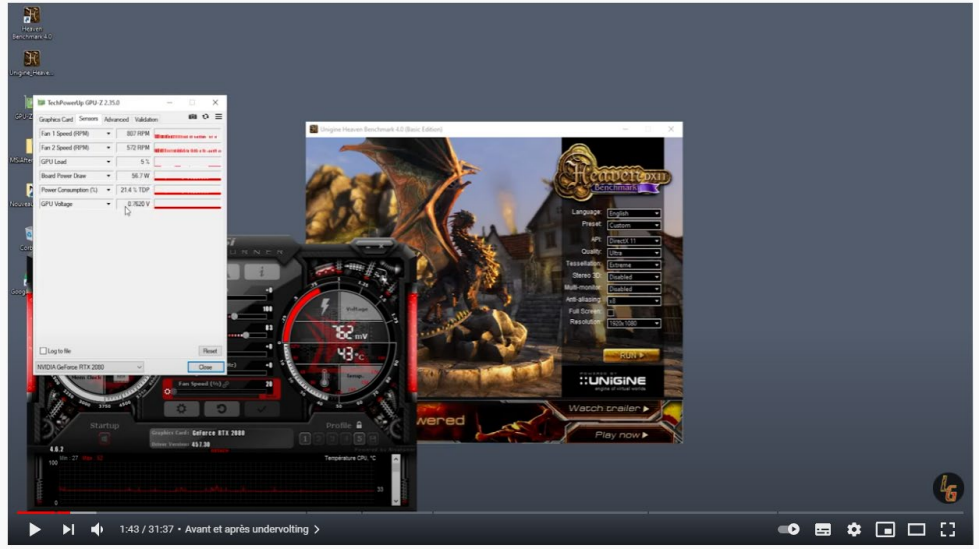
# The fanless optimization




How to optimize your setup? Many tutorials are available online and you will only need to download MSI AfterBurner for free. We selected two tutorials below (EN and FR) and the team remains available to help you in this process. Contact us by email at info@monsterlabo.com or join us on our Discord channel.

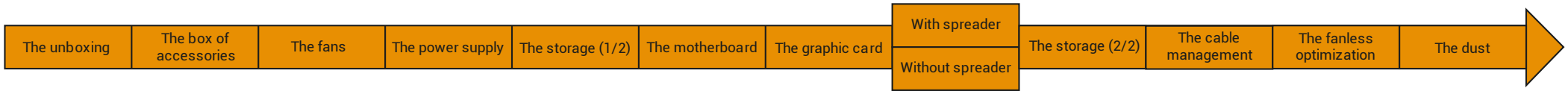


The Ultimate GPU Undervolting Guide - Navi, Turing, Vega + More



#Undervoltgpu #LudimaxGaming #MSIafterburner
TUTO : Undervolt GPU (GTX, RTX) avec MSI Afterburner

# The dust




Many of you wonder why The Beast has no dust filter. The reason is actually simple.

The dust can't go into your Beast from the bottom because it needs to be sucked at 2.5m/s (minimum) while the natural airflow into the case is at 1m/s. This natural airflow will also avoid dust that could come from the top of the case - the dust can't be scattered.

Of course, if the case is not used for several months, dust will get into the case.
The use of fans, as with any other case, will allow dust to gather into your case, because of the blades that can suck dust in from the floor/desk.

If you need to add a dust filter, since The Beast is made of steel, you can easily place one at the top of your case mounted with magnets.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