RIOTORO®

Your Installation Guide For The

CR480 MID TOWER CASE

Congratulations you are on your way to build the perfect gaming machine

RIOTORO®

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Welcome to RIOTORO

Thank you for purchasing the RIOTORO CR480 Computer Case.

The CR480 was engineered to provide a solution that offers plenty of expansion space, and lots of features at a very competitive price. A well thought product for those that wish a versatile solution, featuring an incredible amount of heat dissipation performance for its price range, it also supports 120mm radiators, a tool free design, USB 3.0 and multiple SSD/HDD bays.

Note: This manual is a guide for RIOTORO's computer cases. For instructions on installing the motherboard and other components, please refer to their documentation.

1

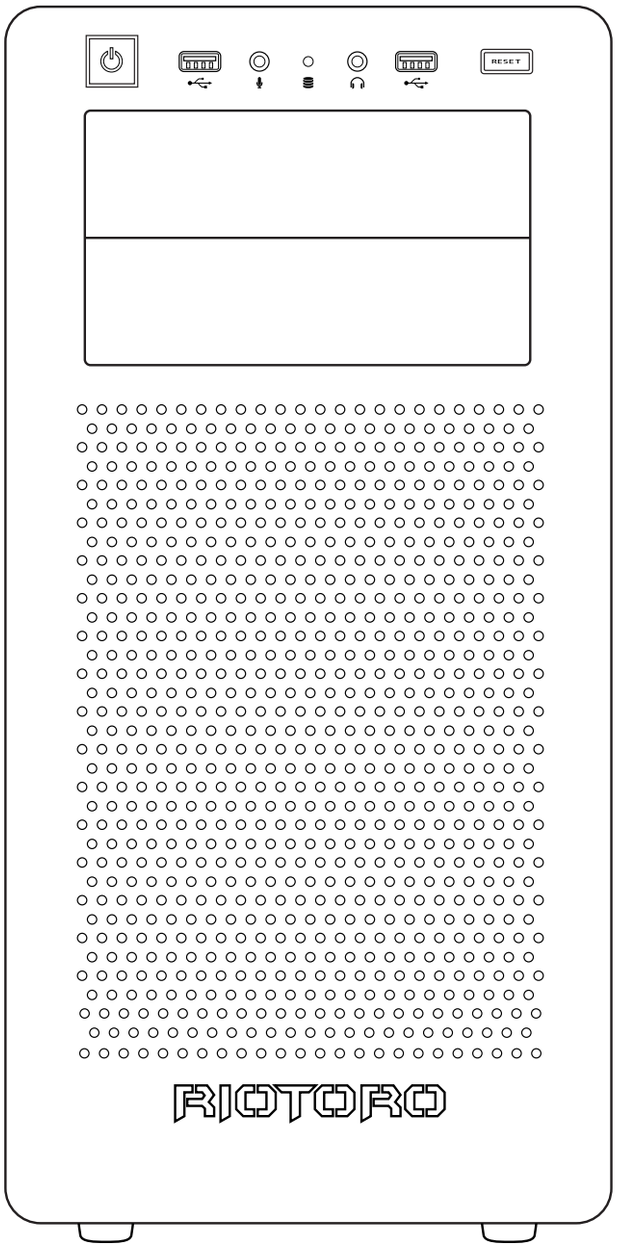
Before You Begin

www.riotoro.com/cases

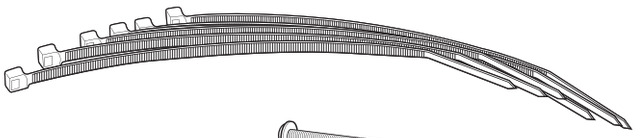
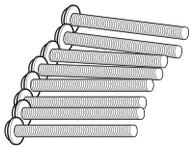
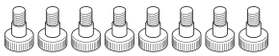
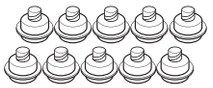
CR480 MID TOWER

What's in the Box

CR480 Case



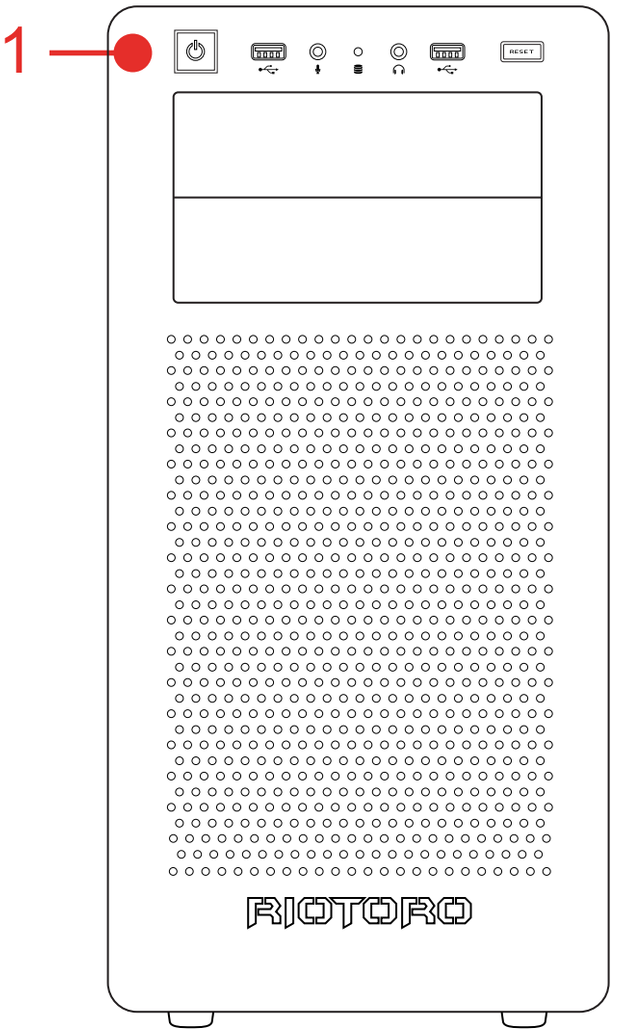
Included Hardware

- 6x nylon ties 
- 8x long screws 
- 8x screws for fans 
- 2x spare thumbscrews for optional cooling radiators
- 16x small Phillips head screws
- 10x small accessories screws 

CR480 MID TOWER

Product Details

1) Front Panel:
   - USB 3.0 ports
   - Microphone jack
   - Headphone jacks
   - Power switch
   - Reset switch
   - Hard Disk Drive LED

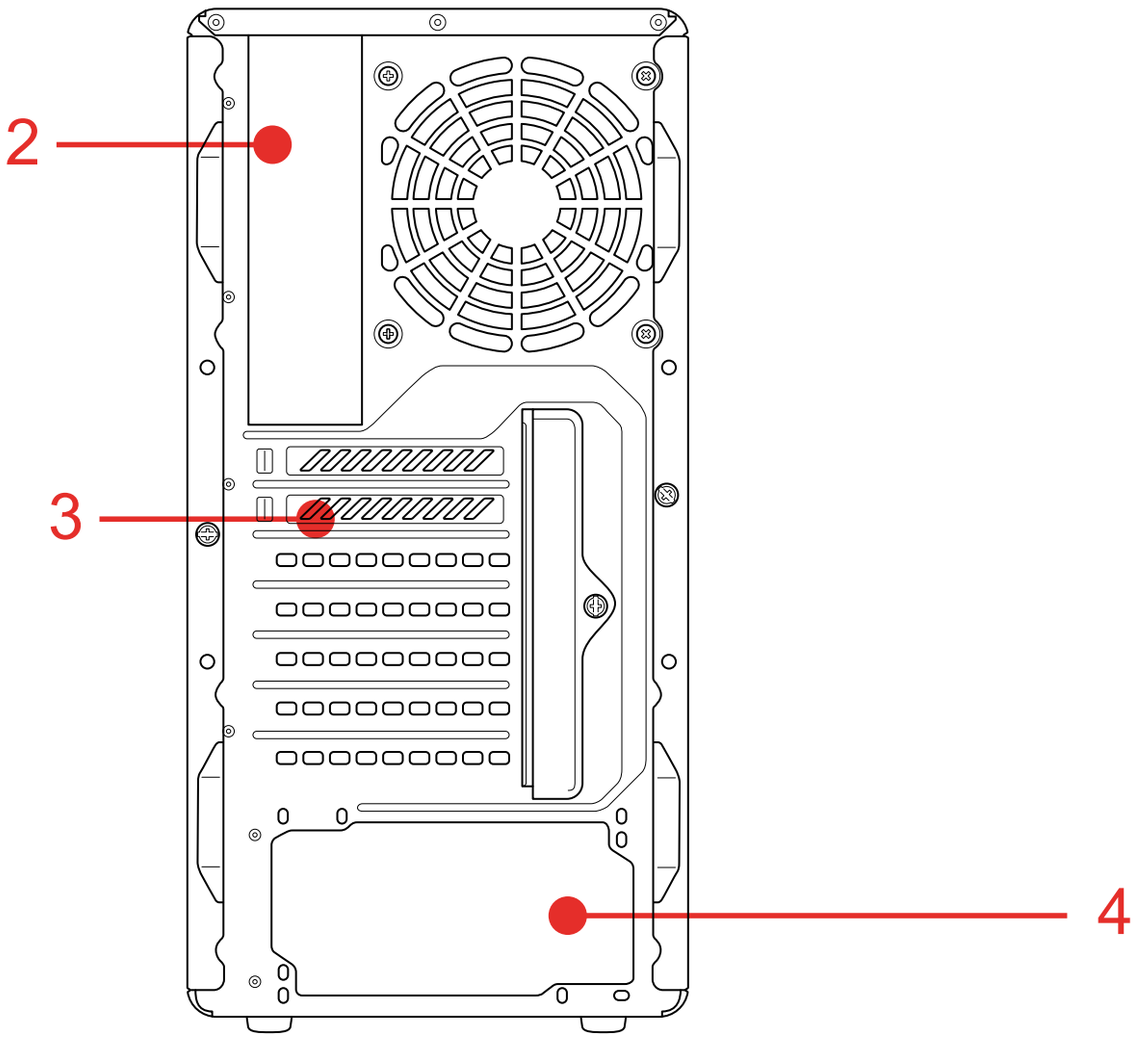


Product Details

2) I/O shield cutout

3) PCI-E expansion slots

4) Power supply bay



Before You Begin

Please take the following precautions:

- Handle all PC components and cards with care.
- Hold cards and processors by their edges to avoid damaging components.
- To avoid damaging components by electrostatic discharge, periodically ground yourself by touching an unpainted metal surface or by using a wrist grounding strap.
- Before connecting cables, make sure the connectors are correctly aligned.
- Consult the documentation of your motherboard and other components for specific installation instructions and troubleshooting.

When routing cables

Route and bundle PSU and case cables to reduce clutter for a cleaner look and to improve airflow. The case is designed with cable pass-through cutouts throughout and space to conceal cables under the right side panel (as seen from the front). Use the provided nylon zip ties to hold the cables in place.

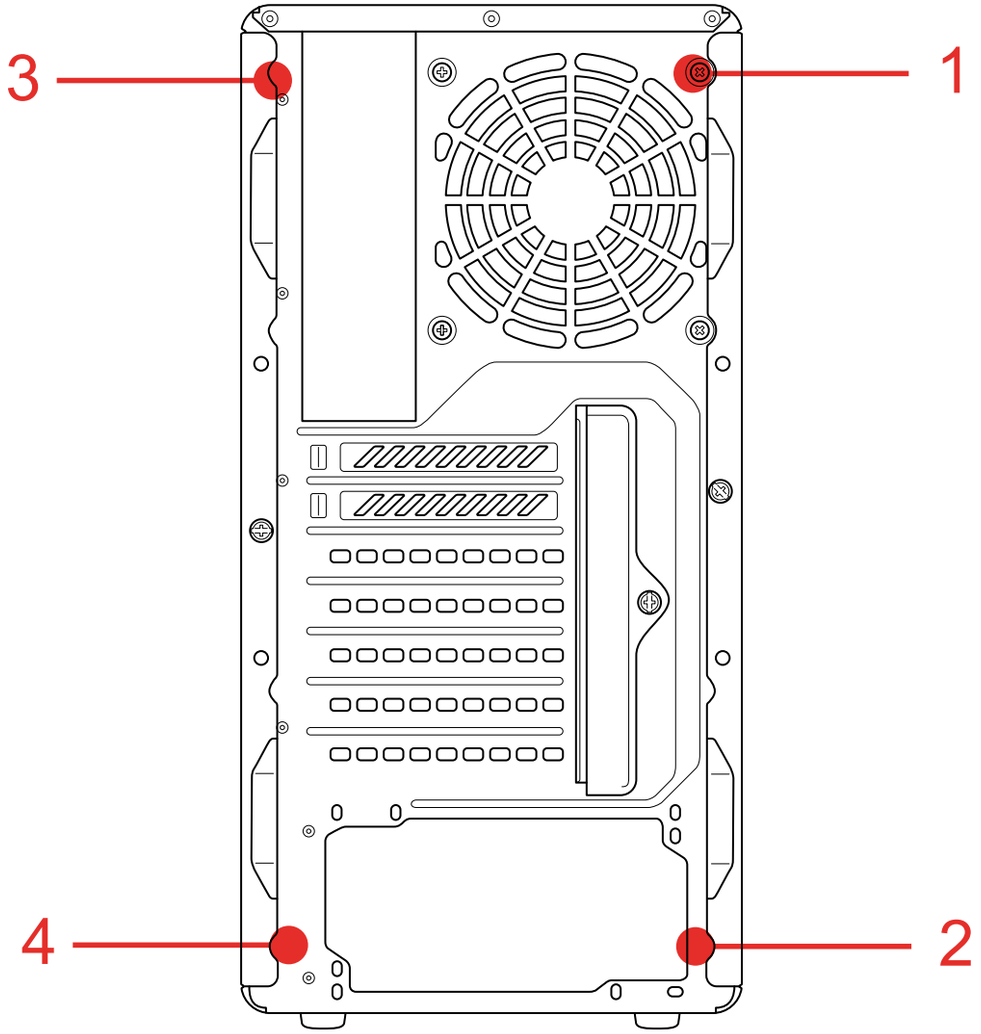
2

Ready, Setup, Go

www.riotoro.com/cases

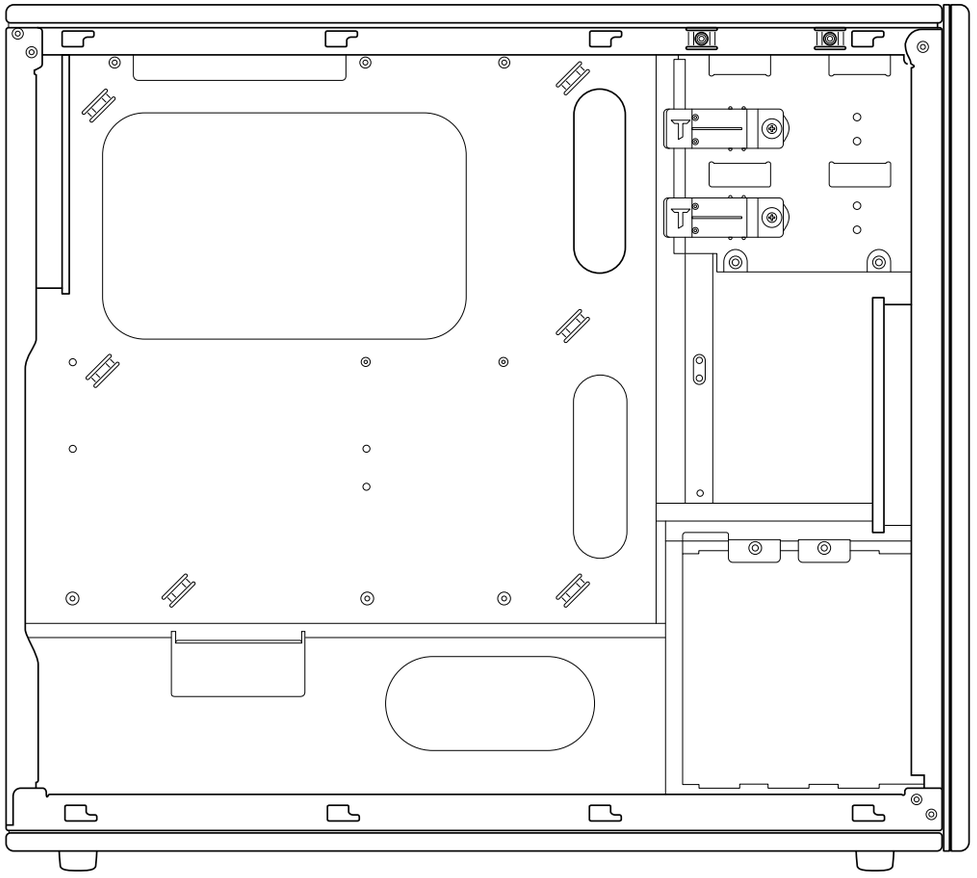
Remove the Case Side Panels

Put the case upright on a stable, flat surface with rear facing you. Remove the thumbscrews from both side panels and store them in a safe place. Remove each panel by sliding the panel toward the rear.



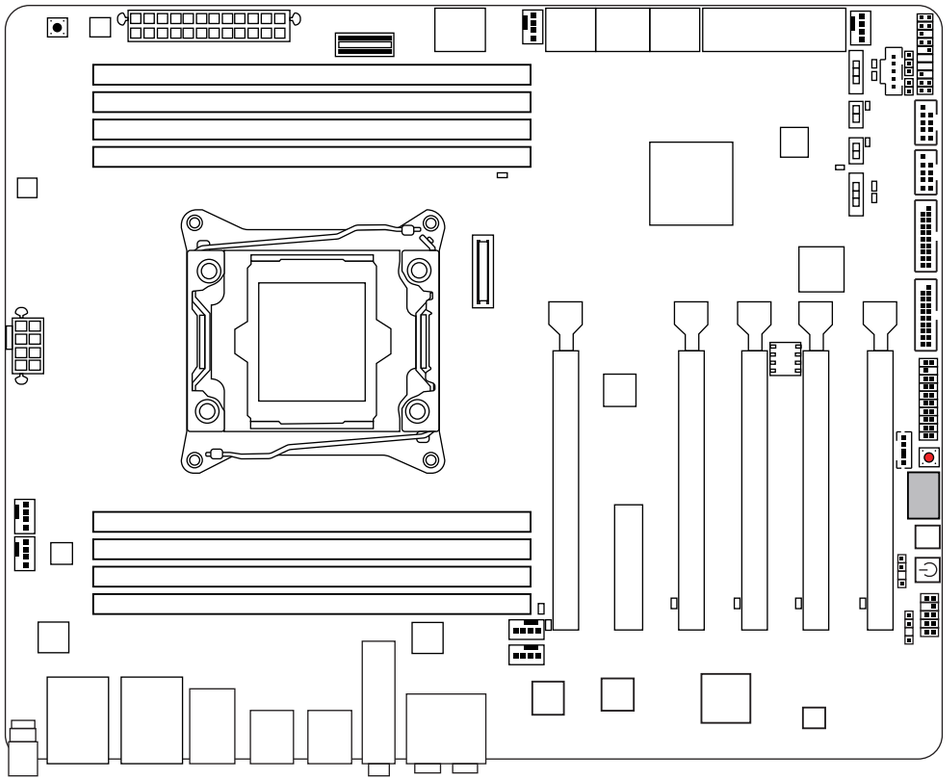
Install the Motherboard

The CR480 is compatible with motherboards up to E-ATX, including ATX, Micro ATX, and Mini-ITX.



Install the Motherboard

Install the CPU, CPU cooler and memory on the motherboard.

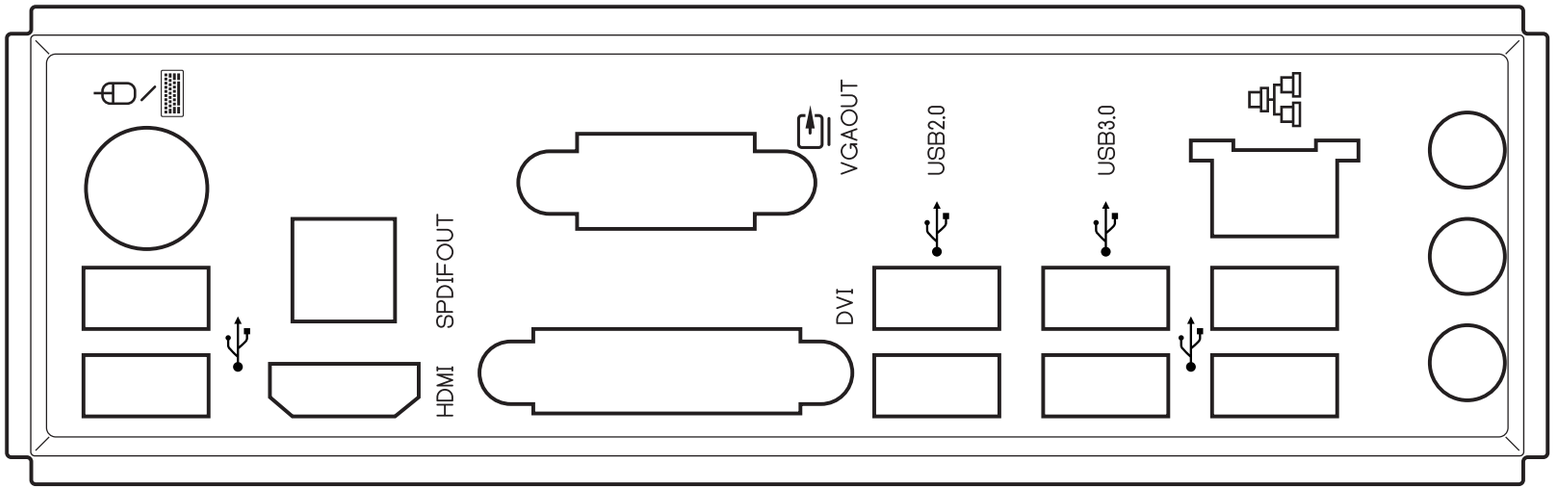


Refer to your CPU and motherboard documentation how to mount the CPU and its cooler on your motherboard. If you are using a liquid CPU cooler you may find it easier to install it after the motherboard is installed in the case.

Install the Motherboard

Install the I/O shield

Your motherboard should have come with a standard I/O shield that exposes the rear motherboard connectors out of the back of the case. From inside, snap the I/O shield into the cutout in the rear of the case.

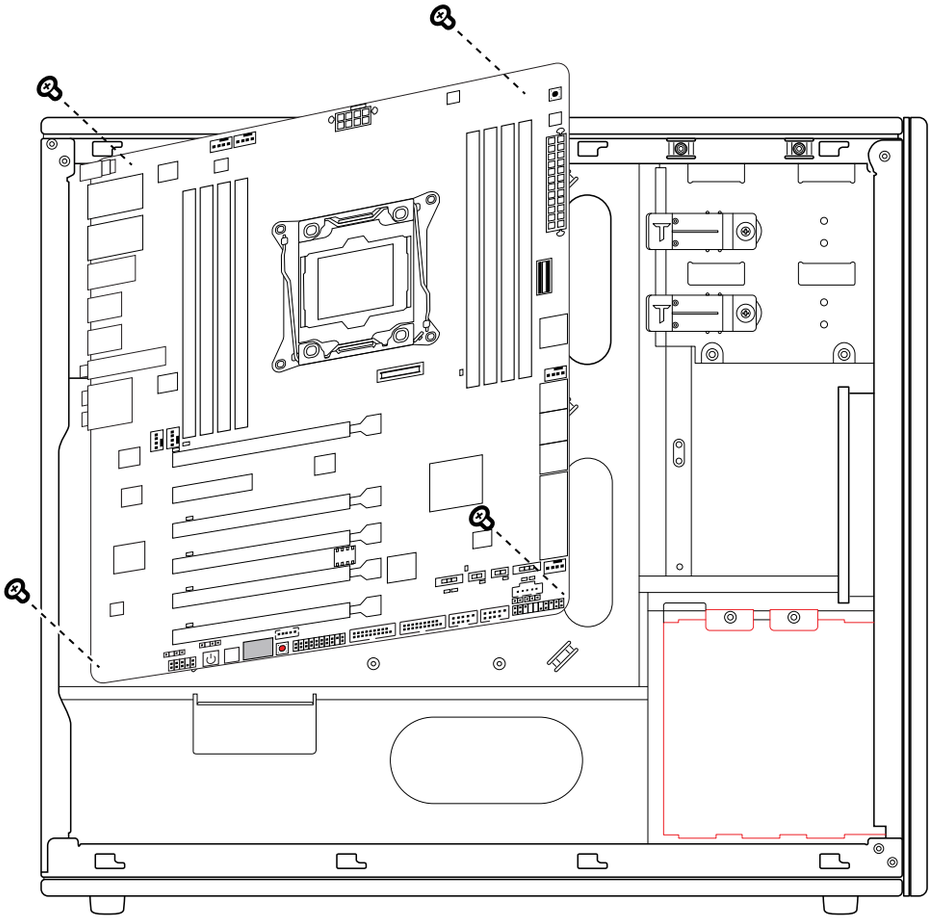


Example I/O panel

Install the Motherboard

Attach the motherboard to the case.

The CR480 comes with most pre-installed standoff, it also adds a couple extra if you need to add them, Slide the motherboard into the I/O shield and then align the motherboards screw holes with the case standoff. Attach the motherboard to the standoffs with the provided motherboard screws.



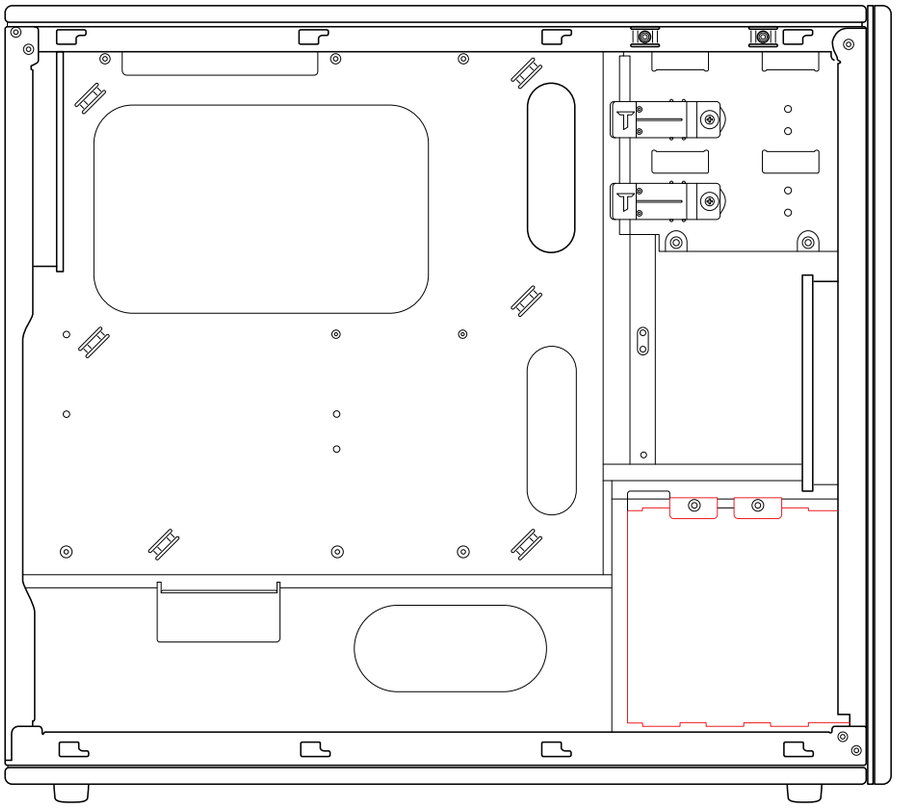
Install HDD & SSD

The CR480 has one 3.5” drive bays and two 2.5” drive bays. These bays are located in the compartment under the motherboard.

The Cr480 comes with three 3.5” bays for HDD, the bays and retention mechanism are tool less.

Instructions:

- Pull each of the brackets to remove the plastic bracket out of the bay, once out, place the HDD into the plastic bracket and slide it back to its original position until it is secure.



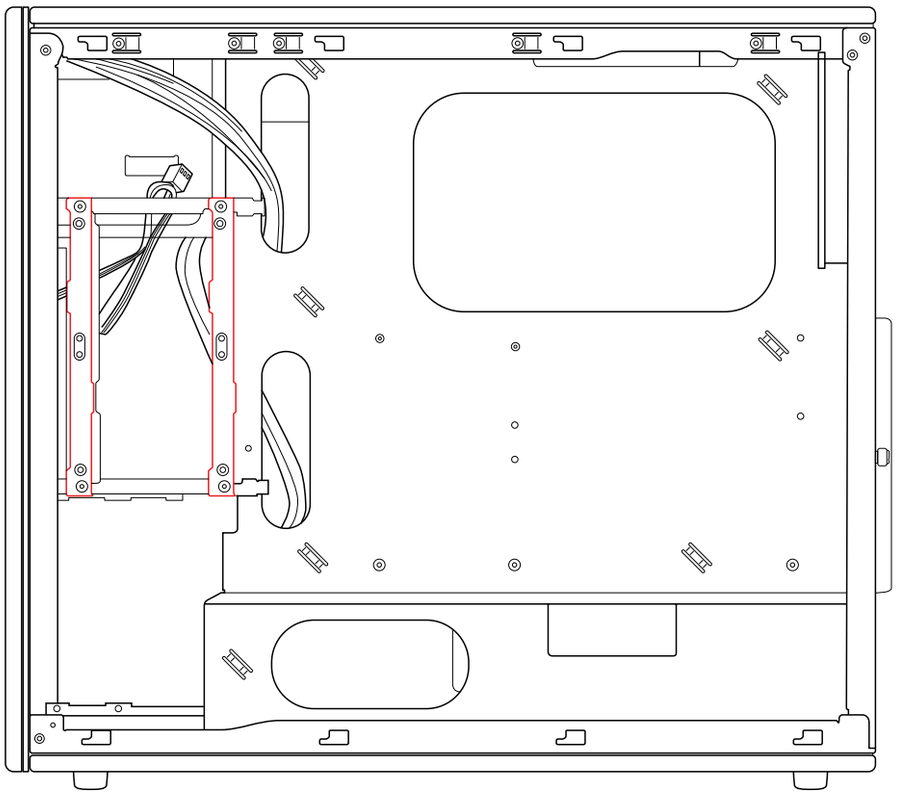
Installing Drives into the 2.5” Mounts

The CR480 case has two mounts for 2.5” drives such as SSD’s.

Instructions:

- Place the 2.5” drive and align the drive to a position where it can be secured.

- From the other side of the case, screw the drives in place with the provided Philips screws.



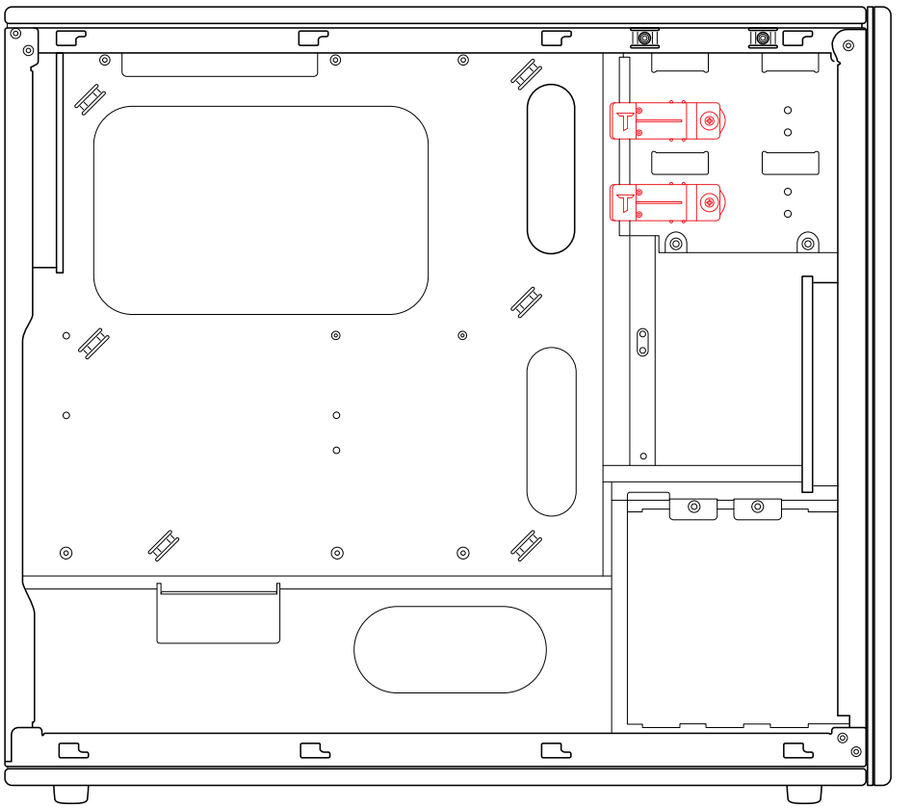
Installing Drives into the 5.25” Mounts

The CR480 supports a total of 2 Optical Drive bays.

Instructions:

- Remove the plastic cover from the front Bezel. By gently pushing the cover out.

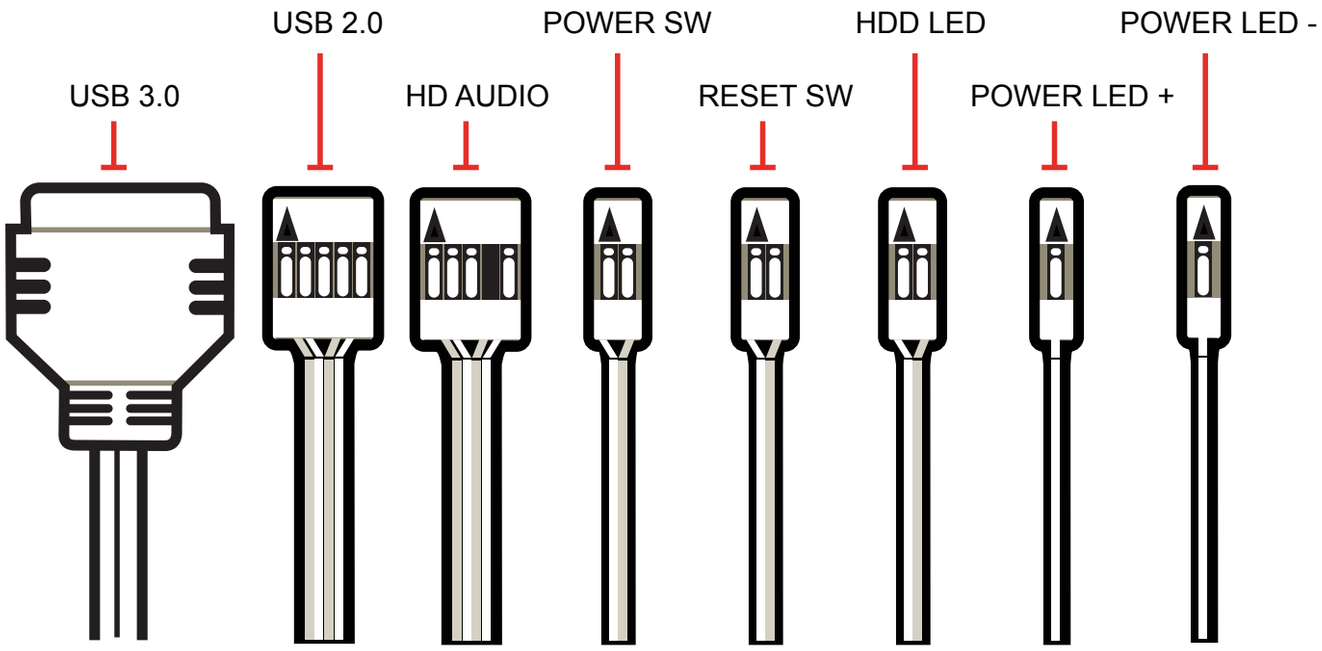
- Once the cover is removed slide the unit into the bay, until the drive is totally secured By the plastic retention mechanism.



Attching Cables

Connect the Front Panel Switches and LEDs

The CR480 front panel switches, LEDs, and USB ports have wire leads that need to be attached to header pins the motherboard. Refer to your motherboard manual to locate the proper motherboard header pins and attach the cable connectors listed below.



Tips:

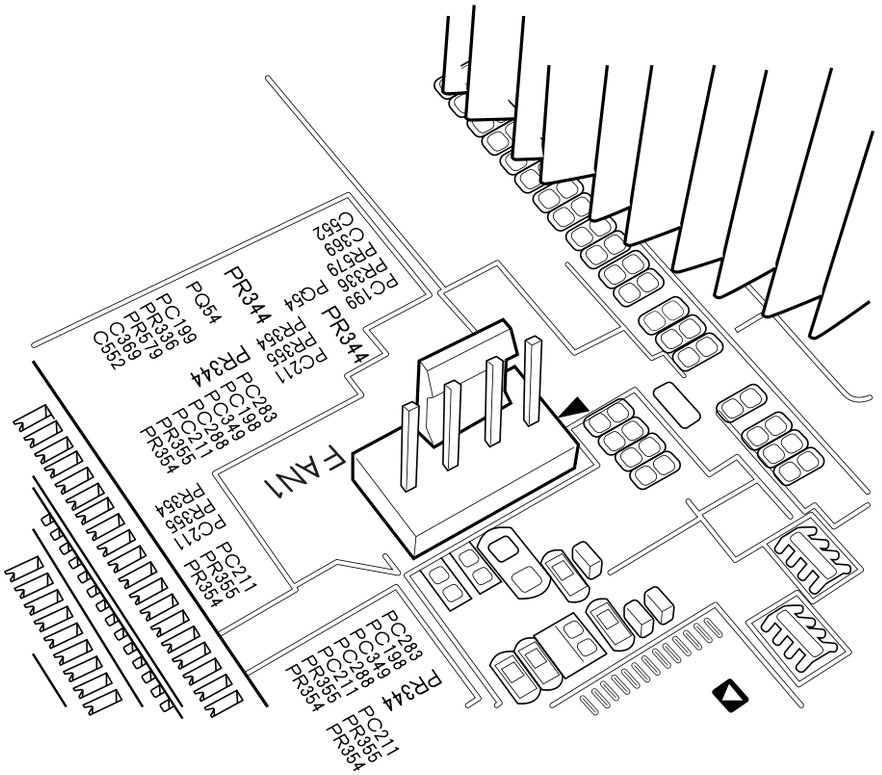
- The LED leads are marked positive (+) or negative (–) and must be connected to the corresponding pins on the motherboard. The orientation of the switch connectors does not matter.
- Use your motherboard manual to correctly identify the front I/O connectors.

Attaching the Case Fan Cables

The CR480 comes with two 120mm fan —a front intake LED fan and a rear exhaust fan. Connect the 3-pin connector of each fan to a 3 pin fan header on your motherboard. Refer to your motherboard manual for more information.

Tips:

- CR480 includes mounts for two more 120mm fans on TOP.



Note: connecting a NON RGB-RIOTORO FAN will potentially set the RGB lightning out of sync, connect any non RGB fan or third party fan to the motherboard fan headers if needed.

Fan Mounting Points, and Water Cooling Support

The CR480 includes mounts for 120 fans. That can be added to increase cooling capacity and/or for aesthetics reasons.

Front:	1x 120mm intake LED fan (included)
Back:	1x 120mm exhaust (1x120mm fan included)
Top:	2x 120mm fan mounts on top
Bottom:	1x120mm Fan mount

Some of the fan mounts on the CR480 can also be used to mount Water cooling radiators, the following are supported:

Front:	Radiator supported: 120mm
Top:	Radiator supported: 120mm

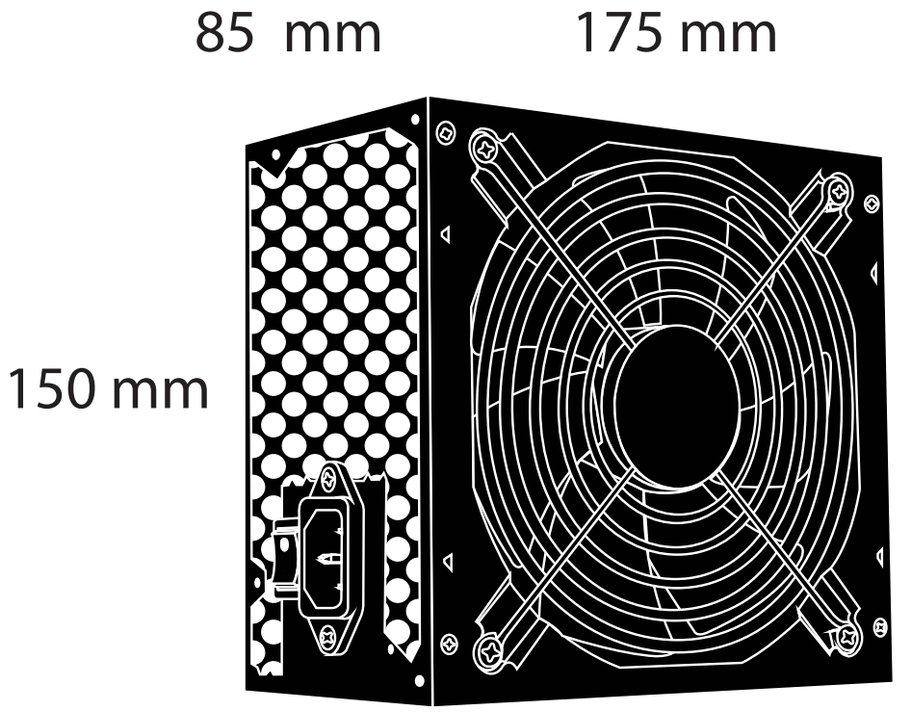
Tips:

- Screws and rubber grommets are provided in the accessory box to allow you to add optional fans and radiators.
- RIOTORO recommends Bifrost 120ti as a perfect water cooling companion for the CR480.

Install the Power Supply

The power supply unit (PSU) drive bay is located on the bottom of the case in a separate compartment.

- Remove the thumb screws located on the opposite side were the motherboard area is located, Slide the PSU in the case PSU bay with the fan facing the case bottom. Push the power supply to the rear
- Align the PSU and case mounting holes and attach the power supply to the case with the provided PSU thumbscrews.
- Connect the relevant PSU cables to your motherboard and drives.



Troubleshooting Your New CR480

The Front panel LED for Power and HDD activity does not lit.
The polarity of the LED cables matter, and they are not connected as they should (inverted polarity), connect the positive cable marked as “+” to the right mother-board “+” pin header, do the same for the negative, (refer to your MB manual to identify the right pin headers.)

How to clean the Dust filters.
The CR480 comes with dust filters, and are meant to help keep the computer components clean, blocking the dust from the outside, they are located across several points that could potentially be used as intake areas. (Fresh air intake)

- Magnetic filters: simply detach those filters, and use compressed canned air.
- Slide in filters: usually located on the bottom of the case, this needs to be gently pulled out, and use canned air to clean, once done just push it back to its position.
- Front bezel Foam filter: to access this, just pull the bezel from the bottom. Once detached, Use canned air to clean it and then reinstall it

3

Specifications

CR480 MID TOWER

Specifications

Motherboard Support	- ATX, Micro ATX, Mini-ITX
Drive Bays	- 3x 3.5” - 3x 2.5” - 2x 5.25”
Front Panel I/O	- 2x USB 3.0 ports - 1x Headphone - 1x Microphone - Power button - Reset button
Expansion Slots	- 7
Fans	- Front: 1x 120mm intake fan (included) - Back: 1x120mm exhaust fan. (included) Additional fan mounting points. - Bottom: 1x 120mm - Top: 2x120mm

CR480 MID TOWER

Specifications

Fan/Radiator Mount Points	- Top: 1x120mm Radiator - Front: 1x120mm Radiator
PSU Support	- Standard ATX up to 220mm Long
Max. GPU Length	- 320mm - 164.8mm
Materials	- Steel, plastic
Dimensions	- 18.3x8.3x17.6in / 457.0x279.0x540.0mm
Weight	- 14.8lbs/6.8kg

Recommended Parts

POWER SUPPLY UNIT

ENIGMA 850W: Unleash your gaming computer potential with the high efficiency and power of ENIGMA power supplies. The large built-in fan prevents it from overheating during heavy use, and the sturdy construction makes it easy to mount.

ONYX 650W & ONYX 750W: Are designed to hit the sweet spot for practical real-world performance, reliability, and price. To protect you and your PC, ONYX PSUs include full over-voltage, under-voltage, over-current, over-power, and short-circuit protections.

CR480 MID TOWER

Recommended Parts

WATER COOLING

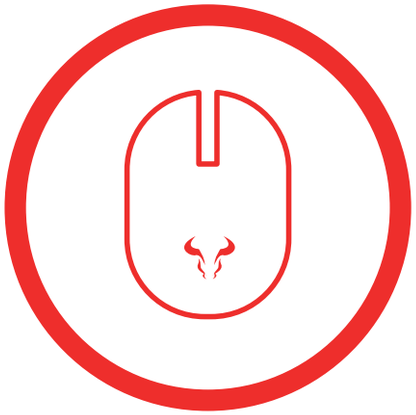
RGB FAN

The BiFrost 120ti new generation water-cooling solution: The BiFrost 120ti a new generation water cooling solution for both AMD and Intel platforms. Using a 45mm extra thick radiator, the BiFrost 120ti uses more liquid, improving its cooling performance.

Cross X LED Fan (Red, White, Blue): Delivers unparalleled Cooling Performance with it's Precision-Molded Fan Blade Design and a Fan Speed of 1500 RPM and exceeds expectations with a very comfortable 26.5dB decibel noise rating.

CR480 MID TOWER

Recommended Peripherals



GAMING MICE

GAMING KEYBOARD

The URUZ Z5: It delivers precise tracking complimented by professional Design. The URUZ Z5 offers on-the-fly DPI adjustments up to 4,000 DPI, Multicolor RGB Customizable Back-lighting up to 16.8 million different colors.

The Ghostwriter PRISM: features cutting edge stealth design with German made Cherry MX switches. With many different options to choose from, the Ghostwriter PRISM keyboards have been designed to enhance your gaming style.

The Ghostwriter Classic: is a brand new keyboard featuring unique stealth design and low-profile, quiet membrane keys blend understated style with comfort and quiet efficiency.

4

Everything Else

Important Safety Information

In order to achieve maximum safety while using your CR480 MID TOWER, we suggest that you adopt the following guidelines:

- Should you have trouble operating the device properly and troubleshooting does not work, unplug the device and contact the RIOTORO hotline or go to www.riotoro.com for support. Do not attempt to service or fix the device yourself at any time.
- Do not take apart the device (doing so will void your warranty) and do not attempt to operate it under abnormal current loads.
- Keep the device away from liquid, humidity or moisture. Operate the device only within the specific temperature range of 0°C (32°F) to 40°C (104°F). Should the temperature exceed this range, unplug and switch off the device and let the temperature stabilize to an optimal level.

Operational Safety: Research has shown that long periods of repetitive motion, improper positioning of your computer peripherals, incorrect body position, and poor habits may be associated with physical discomfort and injury to nerves, tendons, and muscles. Below are some guidelines to avoid injury and ensure optimum comfort while using your CR480 MID TOWER.

- Position: your keyboard, mouse and monitor need to be placed directly in front of you. Place your elbows next to your side, not too far away and your mouse within easy reach.
- Height: Adjust the your chair and table so that the keyboard and mouse are at or below elbow height.
- Support: Keep your feet well supported, posture straight and your shoulders relaxed.
- Operation: relax your wrist and keep it straight. If you do the same tasks with your hands repeatedly, try not to bend, extend or twist your hands for long periods. Do not rest your wrists on hard surfaces for long periods. Use a wrist rest to support your wrist while gaming.
- Customization: personalize your keyboard to suit your style of gaming in order to minimize repetitive or awkward motions while gaming.
- Activity: Ensure that you et up, step away from your desk and do exercises to stretch your arms, shoulders, neck and legs; do not sit in the same position all day.
- Safety: If you should experience any physical discomfort while using your Keyboard, such as pain, numbness, or tingling in your hands, wrists, elbows, shoulders, neck or back, please consult a qualified medical doctor immediately.

General Maintenance

If you need to clean your gaming computer by doing more than wiping it down with a clean cloth, follow these instructions:

- Complete power down of your machine, display and peripherals.
- Disconnect all the power cables from the electrical outlet power strip.
- Disconnect all peripherals from the machine.
- Clean the machine with a soft, lint-free paper or cloth damped with mild soap and water.

Note: Do not spray liquid directly onto the case, liquid could drip inside it and cause electrical shock.

CR480 MID TOWER

LIMITED PRODUCT WARRANTY ("Limited Warranty")

Limited Warranty. RIOTORO warrants the Product to be free from defects in materials and workmanship when used normally in accordance with the official documentation for the applicable Warranty Period from the date of retail purchase.

Exclusions and Limitations. This Limited Warranty does not cover:

- Software, including (without limitation) software added to the RIOTORO-branded hardware products or third-party software;
- Non-RIOTORO branded products and accessories, even if packaged and sold with the Product;
- Problems with and/or damage to the Product caused by using accessories, parts, or components not made by RIOTORO;
- Damage caused by service (including upgrades and expansions) performed by anyone who is not officially acting as an employee, representative or sub-contractor of RIOTORO;
- Claims arising from any unacceptable use or care of the Product;
- Claims arising from external causes, including (without limitation), accidents, acts of God, liquid contact, fire or earthquake;
- Products with a serial number or date stamp that has been altered, obliterated or removed;
- Cosmetic damage, minor cosmetic abnormalities (including minor pixel abnormalities) and normal wear and tear, including (without limitation) scratches, dents and chips.

For the latest and current terms of the Limited Product Warranty, please visit www.riotoro.com/warranty.

RIOTORO®

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