



CR280

MINI TOWER CASE

Welcome to RIOTORO

Thank you for purchasing the CR280!

The CR280 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 120.0 mm radiators, a tool free design, USB 3.0 and multiple SSD/HDD bays.

Note: This manual is a guide for the CR280 MINI TOWER case. For instructions on installing the motherboard and other components, please refer to their documentation.



CONTENTS

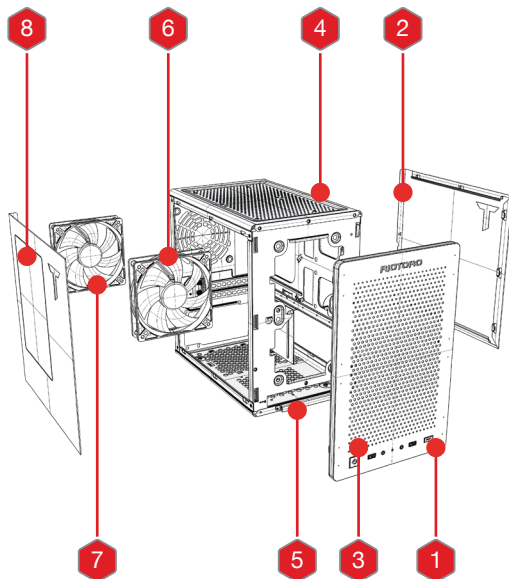
1	Before You Begin	
	- Exploded view	4
	- What is in the box	5
	- Precautions	6
	- Requirements	7
2	Ready, Setup, Go	
	- Specifications	9
	- Remove the side panels	10
	- Install the motherboard	11
	- Connect the Front Panel Switches and LEDs	12
	- SSD / HDD Installation	13
	- Power Supply Installation	14
	- Fan Installation - Front, Top, Rear	15
	- Attaching the Case Fan Cables	16
	- Water Cooling Installation - 120.0 mm or 240.0 mm options	17
	- Air Cooling Installation	18
	- GPU Installation	19
3	EVERYTHING ELSE	
	- General Maintenance	21
	- Important Safety Information	22
	- Limited product warranty ("Limited Warranty")	23
	- Troubleshooting your new CR280	24
	- Recommended parts	25

1

Before You Begin

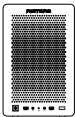






www.riotoro.com/cases

EXPLODED VIEW



1. I/O panel
2. Side panel
3. Front panel
4. Structure
5. LED
6. 120.0 mm fan
7. 120.0 mm fan
8. Side panel with window

WHAT'S IN THE BOX

ITEM	IMAGE	DESCRIPTION	USE	QTY
1		CR280 Mini Tower Case	Build your gaming machine	1
2		Nylon ties	Cable management	6
3		Long screws	Water cooling installation	4
4		Fan screws	Fan installation	8
5		Thumb screws	GPU installation	2
6		Phillip screws	Motherboard installation	8
7		SSD Screws	Secure SSD Drives	2

PRECAUTIONS

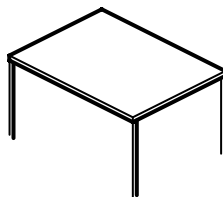
Please take the following precautions:

- 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.

REQUIREMENTS

In order to configure the CR280 you will need:

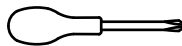
1. A flat working area (e.g. desk or table) with sufficient space



2. A magnetic Phillips screw driver



----- This means you need to have the Phillips screw driver available in order to complete this assembly.



Note: Handle all components with care, should you need any assistance go to www.riotoro.com/support

2

Ready, Setup, Go

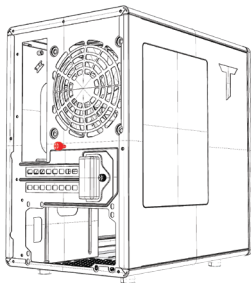
www.riotoro.com/cases

SPECIFICATIONS

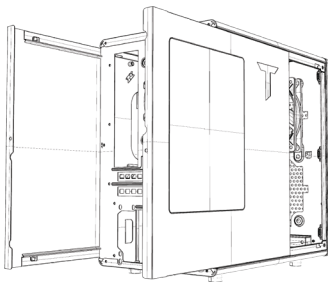
GENERAL	<ul style="list-style-type: none"> - Type: - Color: - Case Material: - With Power Supply: - Motherboard Compatibility: - Side Panel Window: 	MINI TOWER Black Steel, ABS Plastic No Mini-ITX Yes
EXPANSION	<ul style="list-style-type: none"> - External 5.25" Drive Bays: - External 3.5" Drive Bays: - Internal 3.5" Drive Bays: - Internal 2.5" Drive Bays: - Expansion Slots: 	0 0 1 2 2
EXTERNAL PORTS	<ul style="list-style-type: none"> - Top Panel: 	2x USB 3.0 1x Headphone 1x Microphone
COOLING SYSTEM	<ul style="list-style-type: none"> - Included Fans: - Fan Mounts: - Water Cooling Mounts: 	Front: 1x 120.0 mm intake fan Rear: 1x 120.0 mm exhaust fan Front: 2x 120.0 mm Rear: 1x 120.0 mm Top: 2x 120.0 mm Front: 1x 120.0 or 1x 240.0 mm Rear: 1x 120.0 mm
MAX DIMENSIONS	<ul style="list-style-type: none"> - Max GPU Length: - Max CPU Cooler Height: - Max PSU Length: 	290.0 mm 168.0 mm 180.0 mm

REMOVE THE SIDE PANELS

Put the case upright on a stable, flat surface with rear facing you.

1

Remove the thumbscrews from both side panels and store them in a safe place. Be careful when removing the tempered glass.

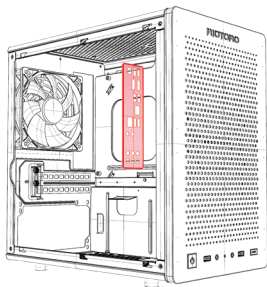
2

Remove the side panel by sliding them towards you.

INSTALL THE MOTHERBOARD

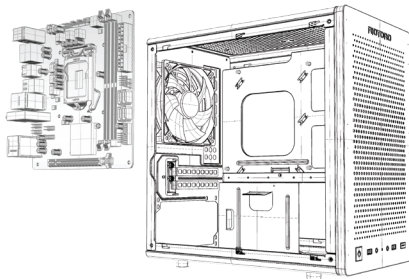
CR280 comes with enough mounting standoffs for a full ATX or smaller form factor.

1



From inside, snap the I/O shield into the cutout in the rear of the case.

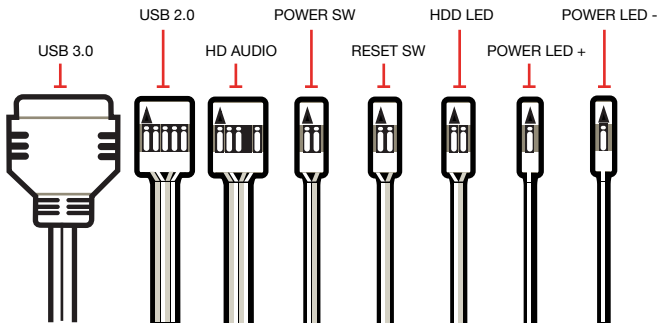
2



Align the motherboards screw holes with the case standoff, attach the motherboard using the provided screws.

CONNECT THE FRONT PANEL SWITCHES AND LEDS

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

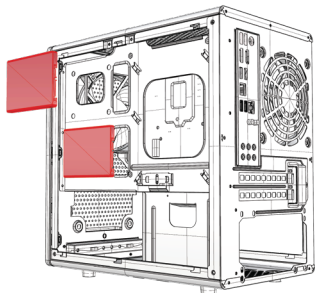


Tips: - LED leads are marked positive (+) or negative (-) and must be connected to the corresponding pins on the motherboard. The orientation of the RESET SW and POWER SW connectors does not matter
- Use your motherboard manual to correctly identify the front I/O connectors.

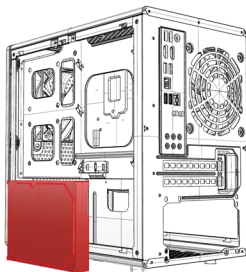
SSD / HDD INSTALLATION

CR280 is equipped to fit one 3.5" HDD and up to two 2.5" SSDs.

1



2



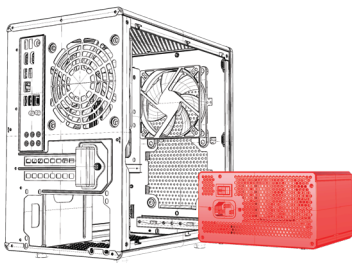
- Place the 2.5" drive on middle panel and screw them in place from the other side using the provided set of screws

- Align drives with corresponding screw holes and secure them in place.

POWER SUPPLY INSTALLATION

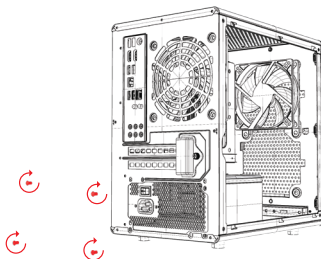
CR280 is designed for quick PSU installation, simply put in place and tighten screws to the back panel.

1



Slide the PSU into position

2

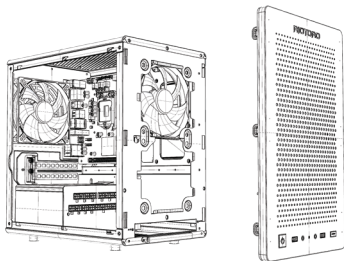


Tighten screws

FAN INSTALLATION – FRONT, TOP, REAR

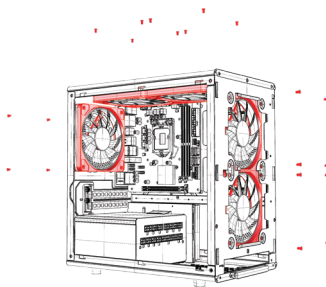
CR280 is designed to provide superb cooling with the two included 120.0 mm fans. Optionally, you can upgrade to RGB fans.

1



Remove the front panel

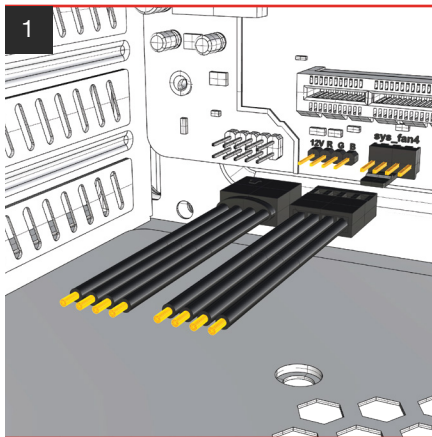
2



Attach the 120.0 mm fans on the front or top of the case. Also a 120.0 mm exhaust on the bottom.

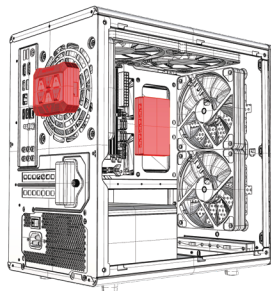
ATTACHING THE CASE FAN CABLES

Connect the fans directly to the motherboard using the appropriate fan header. Alternatively, connect the fans to an RGB hub and controller (make sure they are connected to the PSU).



To connect fans directly to the motherboard always make sure you use the correct header; 12V fan to 12V header / 5V fan to 5V header.

2



Position the fan hub to allow facilitate good cable management and allows you easy access to the controller.

Note: The fans included are NON-RGB fans, **DO NOT** connect to the RGB header. To avoid issues follow the instructions provided by the fan, controller and motherboard manufacturer. Connecting a NON-RGB RIOTORO FAN will potentially set the RGB lighting out of sync, connect any non RGB fan or third party fan to the motherboard fan headers if needed.

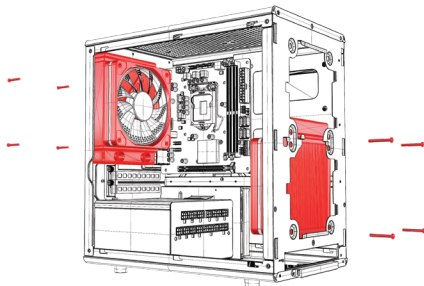
WATER COOLING INSTALLATION - 120.0 MM OR 240.0 MM OPTIONS

CR280 is designed to provide superb cooling with two options, use a 120.0 mm or a 240.0 mm radiator in the front or 120.0 mm at the back.

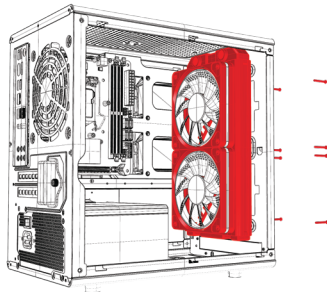
1



2



Remove the front panel, attach the 120.0 mm radiator to the front or back.



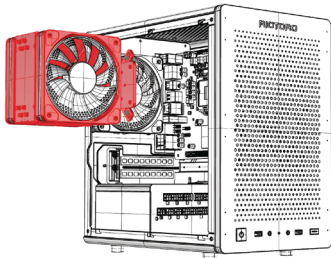
Remove the front panel, attach the 240.0 mm radiator to the front.

Note: To avoid issues follow the instructions provided by the water cooling solution manufacturer.

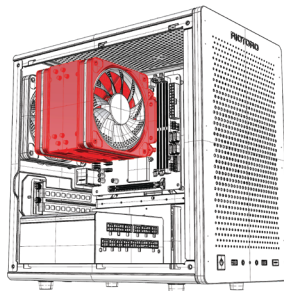
AIR COOLING INSTALLATION

CR280 is designed to provide superb cooling with the installation of air cooling solutions up to 168.0 mm in height.

1



2



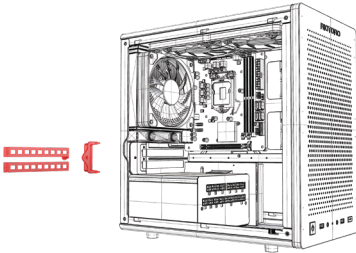
Attach the brackets and air cooler to the motherboard

Make sure all screws are tight and fans are connected to the correct motherboard headers.

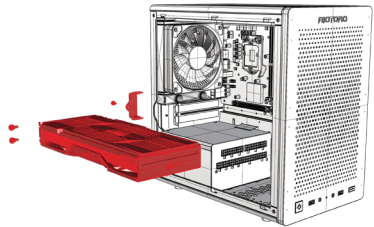
Note: To avoid issues follow the instructions provided by the air cooling solution manufacturer.

GPU INSTALLATION

The CR280 allows for the installation of a single GPU.

1

Remove the thumb screws for the PCIe expansion covers.

2

Attach each GPU to the motherboard, place and tighten the thumbs screws and PCIe cover.

3

Everything Else

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.

IMPORTANT SAFETY INFORMATION

In order to achieve maximum safety while using your CR280 MINI 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 hot-line 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 CR280 MINI 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 get 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.

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.

TROUBLESHOOTING YOUR NEW CR280

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 motherboard “+” 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 CR280 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 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

What size of motherboard does the CR280 support?

The CR280 supports the mini ITX standard

Does this case support USB 3.0?

The CR280 supports USB 3.0 (2x)

How many hard drives can be installed in the CR280?

The CR280 supports natively 1x 3.5” bays, 2x 2.5” bays.

Does the CR280 supports optical Drives?

No, the CR280 was not designed to hold Optical disk drives, as that technology is turning obsolete.

RECOMMENDED PARTS**POWER SUPPLY UNIT**

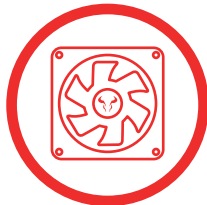
BUILDER EDITION 500W & 600W: The Builder Edition combines 80 PLUS White certified energy efficiency with flat cables for reduced energy consumption, quiet operation, and easy installation.

ONYX 650W & 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.

ENIGMA^{G2} 650W, 750W & 850W: The ENIGMAG2 PSU overpowers and under-prices the competition with 80 Plus Gold 90% efficiency, fully modular cabling, class-leading voltage regulation, and truly silent operation.

RECOMMENDED PARTS

WATER COOLING



RGB FAN

BIFROST 120ti & 240: is a new generation water cooling solution for both AMD and Intel platforms. Using a 45.0 mm extra thick radiator, the BIFROST 120ti uses more liquid, improving its cooling performance.

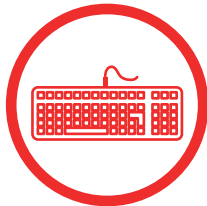
QUIET STROM: Quiet Storm RGB 120.0 mm fans will transform your case into a whisper-quiet, super-cooled RGB PC. The fans are illuminated by ten individually addressable RGB LEDs for dazzling multi-color effects, and are compatible with ASUS, Gigabyte, and MSI motherboards with 5-volt RGB connectors.

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 26.5 dB decibel noise rating.

RECOMMENDED PARTS



GAMING MICE



GAMING KEYBOARD

AUROX: the Aurox Prism RGB gaming mouse combines an ergonomic exterior with an ultra-precise 10000 DPI optical sensor, 8 programmable buttons, aluminum scroll wheel, and customizable RGB lighting.

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.



© 2019 RIOTORO Inc. All rights reserved. RIOTORO, the RIOTORO logo, and CR280 are trademarks of RIOTORO Inc., Registered in the U.S. and other countries. All other trademarks are the property of their respective owners. Product may vary slightly from those pictured.

Technical Support and Customer Service
US & Canada
1-888- 270-7090
support@riotoro.com
cs@riotoro.com

sales@riotoro.com

© Copyright 2019 RIOTORO. All rights reserved.
All trademarks are the property of their respective owners.
Reproduction in whole or part without written permission is prohibited.

www.riotoro.com