thermaltake

thermaltake

No.14
January 2025

Liquid Cooling News

Contents

Coolant

01 Cool with Coolant

Liquid cooling is usually better than other types of cooling when it comes to extracting heat from the computer components and keeping components within the permissible operating temperatures.

Coolant is essential for liquid cooling.
Go to the next page and see how to do a coolant color mix & match.

When Meets

**Thermaltake
TT Premium Concentrate Kit**

**Thermaltake
P1000 Pastel Coolant**

**Thermaltake
T1000 Transparent Coolant**

**Thermaltake
T1000 Pure Clear
Transparent Coolant**

Be a Coolant Artist

» Fill the reservoir with Thermaltake P1000 Pastel White Coolant, then pour in the TT Premium Concentrate.

» The More TT Premium Concentrate you add, the stronger the color appears.

» Thermaltake recommends using a mixture of 50ml TT Premium Concentrate and 95 ml Thermaltake P1000 Pastel White Coolant.

《 Mix With P1000 Pastel White Coolant 》

《 Mix With T1000 Transparent Coolant 》

Thermaltake P1000 Pastel Coolant Series

Formulated to Impress

Liquid Surface Tension Optimizer

Helps minimizes the risk of an airlock; with the Liquid Surface Tension Optimizer, P1000 only takes about 5 to 10 seconds when starting the system for the first time after filling the loop.

Anti-Corrosive Solution

Protects copper, brass, nickel, and aluminum.
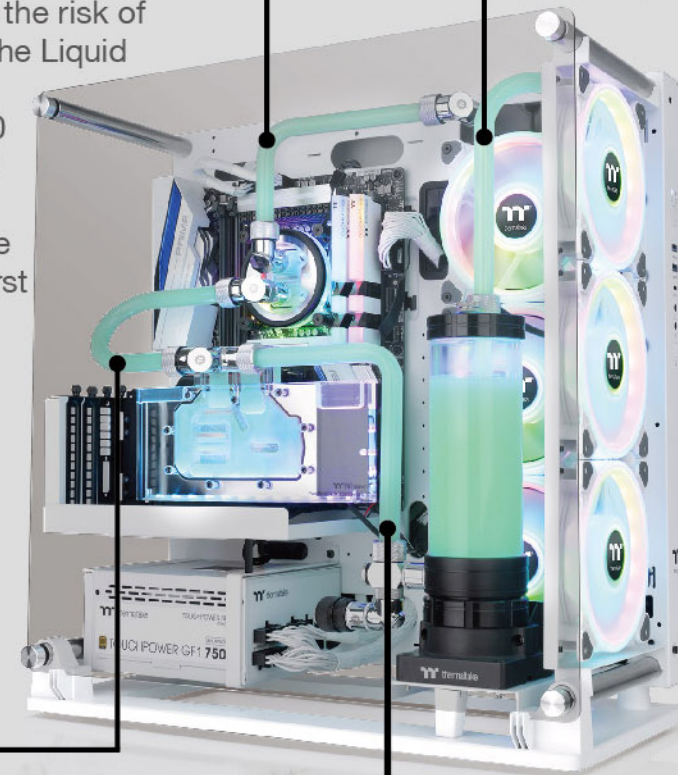
Antifreeze

Ensures coolant to run effectively under extreme weather.

Low Viscosity Enabler

Low viscosity allows the P1000 Pastel Coolant to travel through the loop faster, thus dispatching the heat more effectively.

02 How LCS Works

Understanding
Liquid Cooling System in Minutes !

Step 1

Fill the reservoir with coolant no more than 80% full.

Step 2

The pump will circulate the coolant, and from the pump carry the coolant through your heat source(s), i.e., CPU/GPU.

Step 3

When the coolant reaches the heat source, the water block will dissipate the congested heat from the source into the coolant via the water block's micro fin-structure.

Step 4

The coolant continues to travel to the radiator with all the dissipated heat. The radiator spreads the coolant out into the flat tubes creating a larger surface for heat extraction.

Step 5

The radiator fans will actively cool down the coolant by sending cool air through the radiator fins and dissipating the heat into the air.

Step 6

Then, after most of the heat is extracted from the coolant, the coolant will flow back into the reservoir and restart the cycle.

Customize Your RGB LCS System
03 Sync All with TT RGB PLUS Ecosystem

Let's get start and see how to customize an RGB LCS System with the right components and how to light up your build with the TT RGB PLUS Ecosystem.
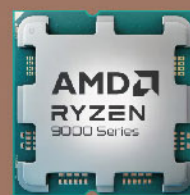
1. Choose a CPU

Generally, there are two types of CPU: single-threaded and multi-threaded.

Single-threaded CPUs are for tasks like browsing websites and word processing. Multi-threaded CPUs are better suited for gaming, photo editing, video encoding, and rendering.

Intel® Core™ Ultra

AMD® Ryzen™ 9000 Series

2. Choose a Motherboard

The most common motherboard sizes come in Mini-ITX, Micro -ATX, ATX, and E-ATX. The motherboard you select should be compatible with your CPU, memory, and most of your other components.

ATX Motherboard Size Comparison

- FlexATX
- MicroATX/EmbeddedATX
- Mini ATX
- Standand ATX
- Extended ATX (EATX)
- Workstation ATX (WATX)
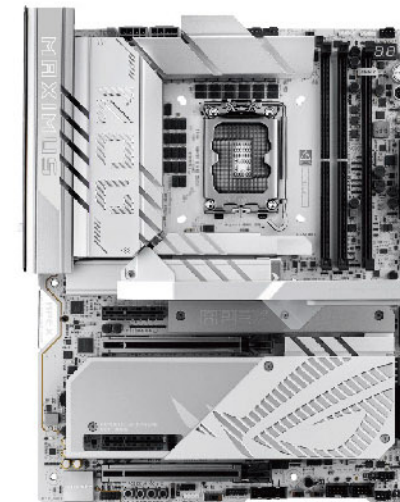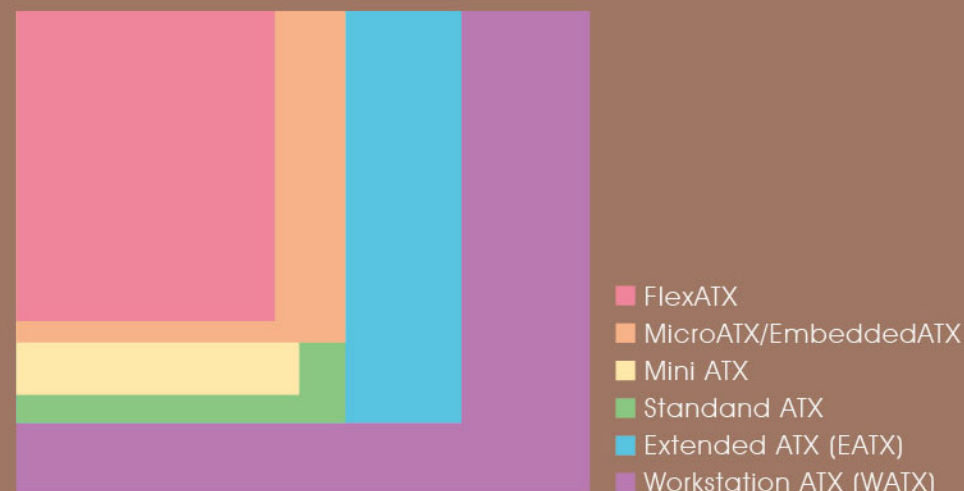
ROG MAXIMUS Z890 APEX

ROG CROSSHAIR X870E HERO

3. Choose a Graphic Card

There are two main types of graphic cards: gaming-oriented cards and workstation-oriented cards.

Gaming cards aim to deliver the best frame rates with the most realistic detail settings and the highest resolutions. Meanwhile, workstation cards are made for maximum stability and precision and are specifically optimized for 3D rendering.

ASUS ROG-STRIX-RTX4090

4. Choose a Chassis

You would need a chassis to fit the components your picked, the following the chart on the right shows which chassis would better fit which motherboard. A chassis with a transparent side panel is best recommended to show off the water-cooling system.

Chassis	Motherboard
Full Tower	E-ATX
Mid-Tower	ATX
Cube Case/Micro Case/Mini Case	Micro ATX / Mini ITX

Core P3 TG Pro Snow

Open Frame Chassis

CTE C750 Air

Full Tower Chassis

DistroCase™ 350P

DistroCase™

CTE E550 TG

Mid Tower Chassis

The Tower 300

Micro Chassis

5. Select One or More TT RGB PLUS Synchronizable Products

TT has a wide range of selections for RGB liquid cooling components that can be synchronized via TT RGB Plus Ecosystem. We have chosen some of our latest featured components for you to consider when coloring up your builds.

• TT software only supports English.

Pacific TF3 Liquid Cooling System Dashboard

Pacific TF3 Liquid Cooling System Dashboard has 3 analog dashboards that allow you to check your system's real-time Coolant Temperature, Coolant Pressure, and even Chassis' Ambient Temperature. It can be installed anywhere inside the chassis because of its 120 mm fan shape design.

Pacific SW1 Plus CPU Water Block

Pacific SW1 Plus CPU Water Block features solid industrial-style aluminum alloy design, anti-corrosive nickel plating copper base and central inlet design. Users can monitor coolant temperature and control 12 LEDs through the TT RGB Plus 2.0. It is for sure SW1 will let you see the quality and beauty of CPU Water Block.

Pacific MX2 Ultra CPU Waterblock

Pacific MX2 Ultra has a 2.1 Inch LCS Display that presents real-time information and even plays JPG and GIF files with 480*480 resolution, bringing great visual aesthetics and highly customizable functions to your water block.
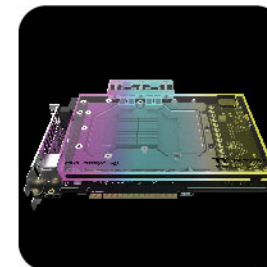
Pacific V-RTX 4090

Pacific V-RTX 4090 waterblock can fully support Asus ROG STRIX RTX 4090 GPU. The waterblock supports TT RGB Software that can control 1.68M RGB colors.

Pacific SR360 Radiator

Pacific SR360 Radiator is an industrial-designed slim radiator with detachable side panels for maximum modification capability. With 28mm think fins and 12 flat tubes will provide strong cooling performance.

Pacific DP100-D5 Plus Distro-Plate with Pump Kit

Pacific DP100-D5 Plus is a distribution plate with a pre-installed D5 pump; the distro is universal and can be installed to most 360mm radiator fan mounting points.

CT120/140 EX ARGB Sync PC Cooling Fan

CT120/140 EX ARGB Sync incorporates the new MagForce 2.0 for a better, quicker magnetic connection among fans. This fan maintains the 2000/1800 RPM fan speed, providing superior cooling performance.

SWAFAN EX12/EX14 RGB PC Cooling Fan

SWAFAN EX features a new magnetic force design for quick connection among fans with its 12V cable and at the same time keeping the swappable fan blade design.

TOUGHFAN EX12/14 ARGB Sync High Static Pressure PC Cooling Fan

TOUGHFAN EX ARGB Syncs brings the innovative MagForce 2.0 quick magnetic connection into the TOUGHFAN Series. This fan features a new luminous fan frame design with 24 addressable LEDs, elevating the aesthetics of PC setups.

Pacific PR32-D5 Plus Reservoir/ Pump Combo

This combo kit includes a high performance pre-installed D5 pump with a special rotatable upper reservoir lid to fit different tube angles. Two mounting brackets included to mount either to a case or radiator.

TS120/140 EX RGB PC Cooling Fan

TS EX RGB is a high-performance fan with the MagForce 2.0 design. The temperature sensor at the back of the fan frame provides an extra method to monitor the cooling system's condition.

If you don't know where to start, TT has an easy solution for you!

Pacific CLM360 Ultra Hard Tube Liquid Cooling Kit

Pacific MX2 Ultra CPU Waterblock

Riing Duo 12 RGB Radiator Fan x 3

Pacific CLM360 Radiator

Pacific PR32-D5 Plus Pump & Reservoir Combo

T1000 Transparent Coolant - Pure Clear

C-Pro Compression Fitting – Black x 8

90 Degree Adapter - Black x 2

PETG Hard Tubes x 8

6. Select Your LCS Components

Coolant

Thermaltake P1000 Pastel Coolant Series comes in various colors.
Or mix Thermaltake T1000 Transparent Coolant with TT Premium Concentrate Coolant Series to formulate unique colors for your builds.

CPU/GPU Water blocks

Water blocks are usually installed on your CPU or GPU to achieve maximum heat extraction. Its performance is determined by the design of the base plate material and micro-channel.

Pump & Reservoir

Choose a reservoir that fits the chassis you choose; the bigger the reservoir and the pump is, the less likely it will run dry and wear down.

Tubing

You can choose either soft tubes or hard tubes for your build. Soft tubes are easier for beginners since bending hard tubes requires operating tools like a bending kit and heat gun. However, hard tubes provide better visual effects when creating a build. The tubes of your choice should match the outside diameter (OD) of the fittings.

Radiators

Thermaltake provides a variety of copper radiators with high-density copper fins or double micro-fin designs. Radiators help dissipate heat through the flat tubes and allow the fans to extract heat; choose your radiators according to the fan size and your chassis.

Fittings

Fittings come in all shapes, sizes, and angles; they help connect components and the tubes. The most popular sizes is 16 mm OD. The outside diameter should fit the tubing of your choice.

7. Select A Power Supply

The power supply powers up all the components in your computer. Although some chassis has a pre-installed power supply, you would have to double-check if the power supply is sufficient to power up all the components you picked out.
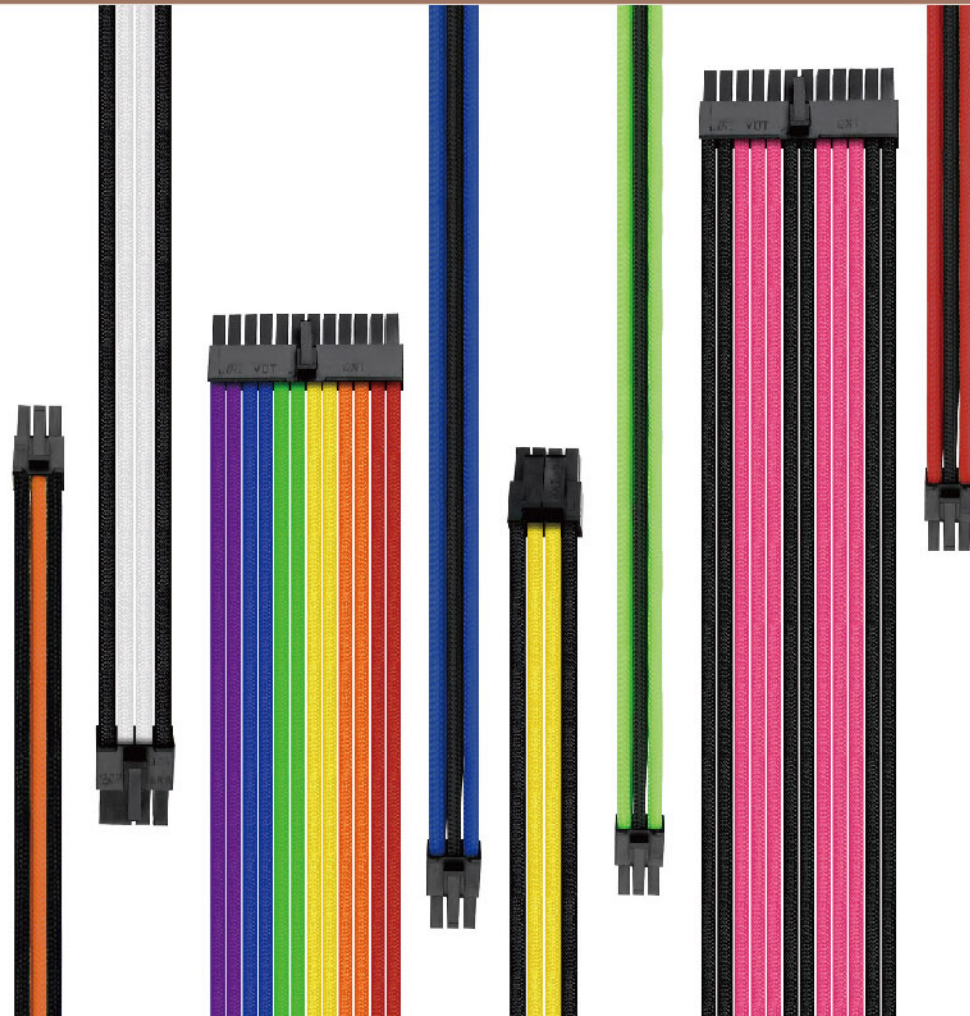
8. Select Sleeve Cables

Pick out TtMod Sleeve Cables to enhance the look of your build. These power supply cables come in different color combinations that allow users to match up their design.

For more features, please visit:
https://www.thermaltake.com/ttmod-sleeve-cable-cable-extension-yellow-and-black.html

9. Install TT RGB PLUS Software and App

Controller configuration

For starters, you would need to assign a number for each controller. All products come with a digital lighting controller is designed with a DIP switch in the back. Follow the steps on the user's manual located in all packages; then, you will be able to set a number for your controllers. You can connect up to 16 controllers to the TT RGB PLUS software.

The 4th gen. controller enhance RGB system's connection stability so you can manage your RGB without any concern.

TT RGB PLUS SOFTWARE

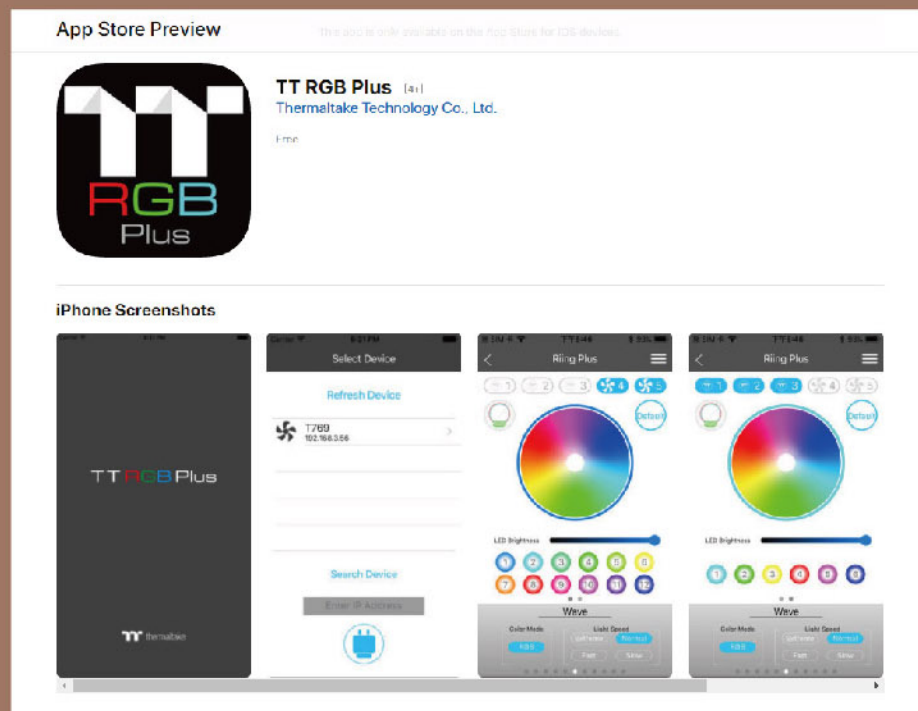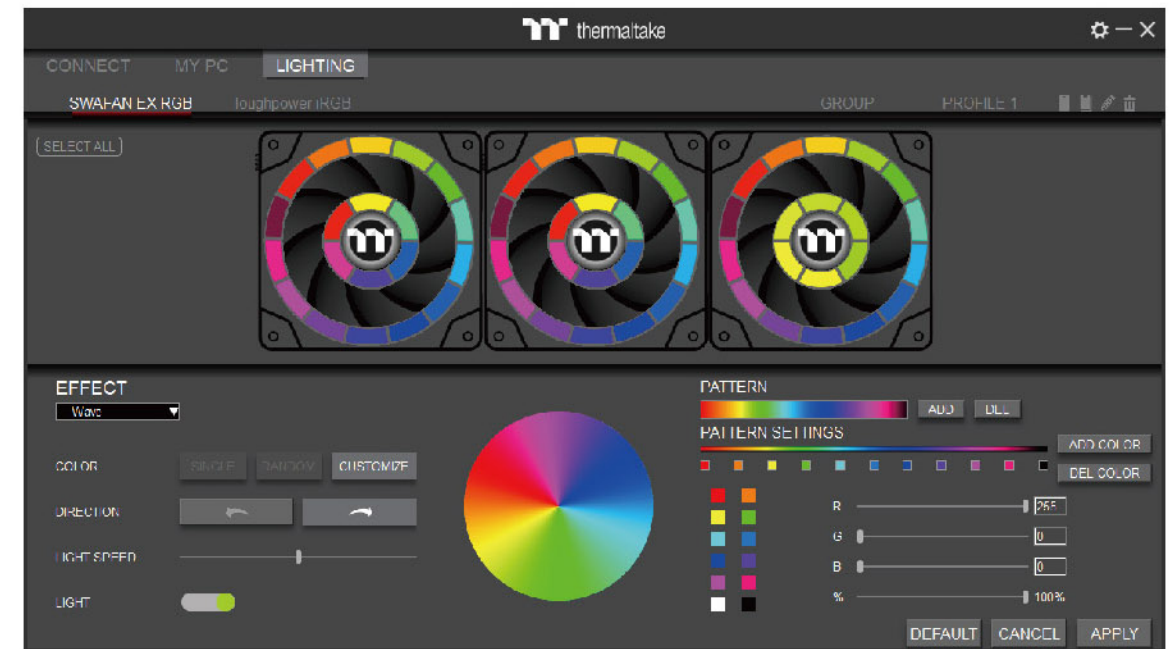## How to download the TT RGB PLUS software

Download the software from
http://ttrgbplus.thermaltake.com/

Alternatively, you can search "Riing Quad" on Thermaltake's product page and download the software from there.

TT RGB PLUS Software profile settings

You can control the lighting effects of the devices that are connected to the controller with 23 preset lighting modes, and also allows you to customize every single LEDs through TT RGB Plus 2.0 software.

With TT RGB Plus 2.0, you could save up to 20 temporary profiles and apply the settings to the controller afterwards. It allows you to adjust the lighting effects and fan speed under different kinds of scenarios.

How to download TT RGB PLUS app

The app is available on the App Store and Google Play. Type in "TT RGB PLUS" on the search column, then install the TT RGB PLUS app on your phone and get connected to the TT RGB PLUS software.

Your phone must be connected to Wi-Fi for the app and TT AI Voice Control to work. While using the app, you will find the settings menu on the side of the screen where the number of each profile and the number of each controller is displayed.

TT RGB Plus 2.0 is now available for download, and all Ultra products must use TT RGB Plus 2.0 to set effects.

Set Up Your Spectacular Lighting

NeonMaker is the new advanced editing software for RGB lighting customization. NeonMaker provides various stunning pre-set lighting effects; this allows users to edit their lighting effects on every single led. Users can customize lighting profiles and adjust the timeline and lighting directions, which grants access to further customizable lighting options.

The NeonMakerr software now supports the Riing Trio fans, Floe DX AIO liquid coolers, and TOUGHRAM RGB memory series. Not only will you be able to personalize your lighting effects freely by utilizing the NeonMaker software, but you can also synchronize with the TT RGB Plus software to maximize the control of your RGB effects.

NEON MAKER

04 Cool Your System with Thermaltake LCS Components

Pacific A2 Ultra Memory Water Block

The Pacific A2 Ultra memory water block is equipped with a 3.9" LCD display for monitoring real-time temperature and your PC performance, meanwhile allowing you to add flair to your liquid cooling system.

Pacific MX2 Ultra CPU Waterblock

Pacific MX2 Ultra has outstanding performance and great visual anesthetics. By incorporating a central inlet design which not only allows coolant to contact the CPU heat source directly but to have a more effective water flow, and the 2.1 Inch LCS Display can presents real-time information and even plays JPG and GIF files with 480*480 resolution, bringing highly customizable functions to your water block.

Pacific Copper Radiator Series

Pacific SR Radiator Series

Pacific C Radiator Series

Pacific CL Radiator Series

Pacific CLD360 Radiator

Thermaltake has four different series' or radiators for users to choose from; they come in various thicknesses, sizes, and fin designs. Here's a chart to help you pick out the right radiator for you:
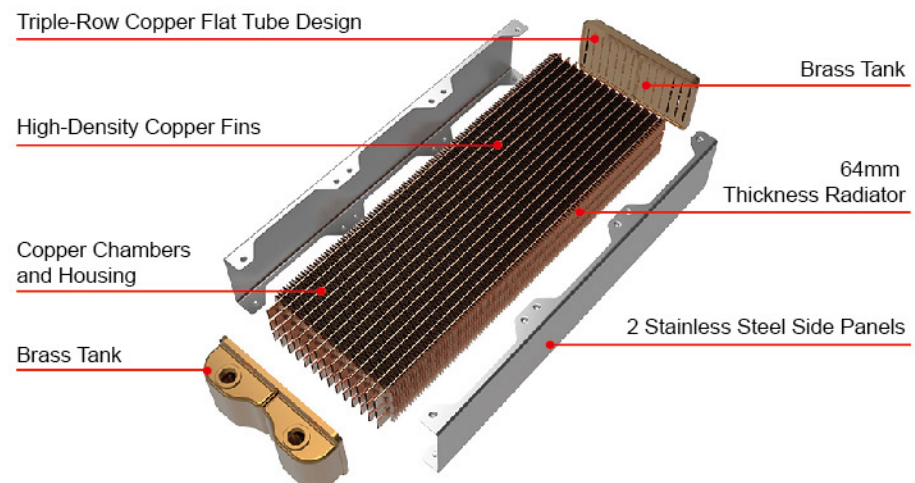
Series	Thickness/Size	240	280	360	420	480
SR	27mm	✓	✓	✓	✓	
C	27mm	✓		✓		
CL	64mm			✓	✓	✓
CLD(Double Fin)	40mm			✓		

Pacific SR, C, CL Series Radiator are all designed with high-density copper fins, ensuring excellent heat dissipation performance.

The Pacific CLD Series Radiator, on the other hand, utilizes a highly efficient double-fin design. The CLD series is manufactured with a "reflow soldering manufacturing process," which provides exceptional cooling performance.

For more information, please visit:
https://www.thermaltake.com/products/custom-liquid-cooling.html?cat=172

High-Quality Copper Radiator Design

Triple-Row Copper Flat Tube Design

High-Density Copper Fins

Copper Chambers and Housing

Brass Tank

Brass Tank

64mm Thickness Radiator

2 Stainless Steel Side Panels

Pacific PCTG Hard Tube Series

Designed for higher temperature tolerance, the Pacific PCTG Hard Tube 16mm OD 12mm ID series is made of high-quality PCTG, providing reliable and durable rigid tubing for custom liquid cooling configurations. Choose the 500mm 4-Pack or 1000mm 4-Pack to complete your water-cooled system.
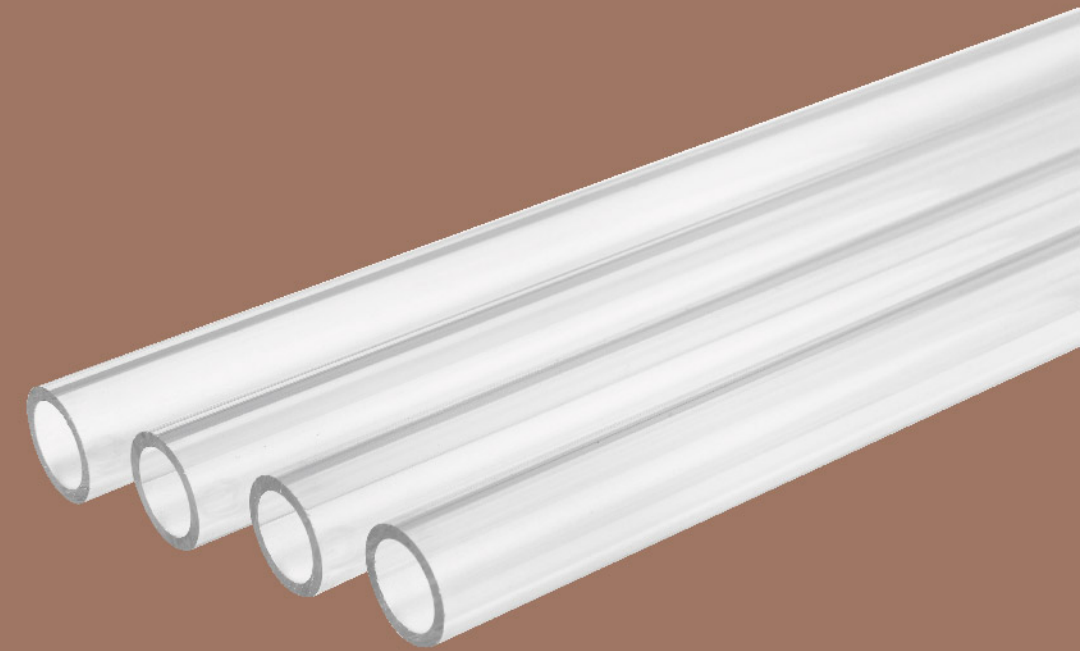
Pacific Hard Tube Bending Kit

The Pacific Hard Tube Bending Kit is designed for ID 12mm x OD 16mm tubes, including mandrels, a reamer, a cutter, and a cord for easy loop planning. It ensures stylish bends in various angles, clean and precise cuts, and kink-free tubing, making liquid cooling customization much easier!

05 Meet The TT RGB PLUS Ecosystem

TT RGB PLUS Ecosystem allows TT RGB PLUS products to work with Thermaltake's patented TT RGB PLUS Software.


TT RGB PLUS ECOSYSTEM

What is the TT RGB PLUS Ecosystem?

TT RGB PLUS Ecosystem is an intelligent lighting system for PCs that combines the most advanced addressable LED lighting with Thermaltake's patented TT RGB PLUS Software and Amazon Alexa Voice Service. The patented TT RGB PLUS software allows users to change the light modes, colors, speeds, brightness, fan speeds via TT AI Voice Control and Amazon Alexa Voice Service.

For more information, please visit: http://ttrgbplus.thermaltake.com

TT RGB Plus 2.0 is now available for download, and all Ultra products must use TT RGB Plus 2.0 to set effects.
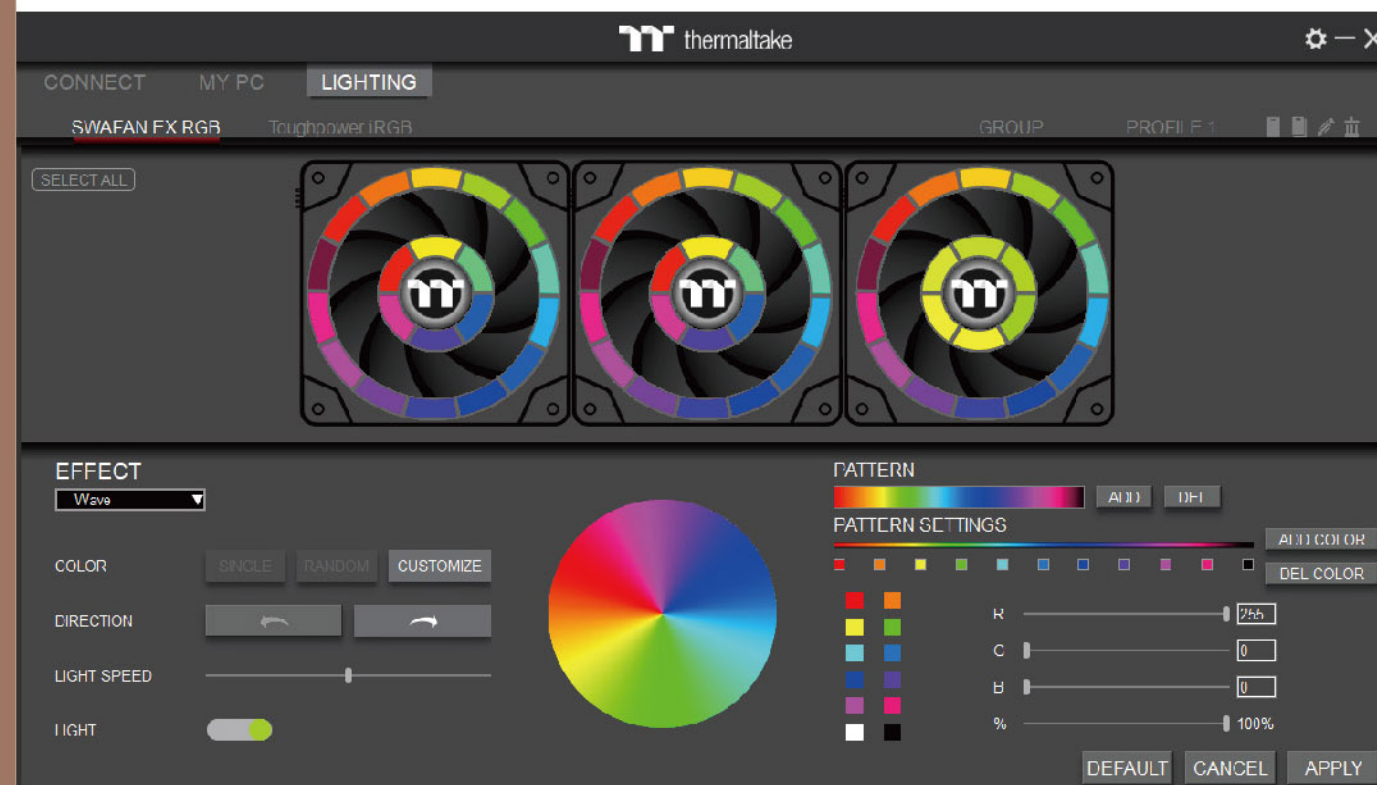
Fun with the TT RGB PLUS Software

Thermaltake's patented software for synchronizing TT RGB PLUS products allows you to customize addressable LEDs for fantastic lighting effects, monitor PC fan performance, or adjust the fan speeds from your PC.

Taiwan Patent: 105216989

US Patent Applied

China Patent Applied