FC8α

Before we get into this super exciting user guide, we would just like to share a few words of appreciation .....
In a market dominated by generic designs, marketing fads and RGB lighting, we are on a mission to create products that are purposefully unique, incorporate quality materials, superior finishing, and innovate at every level. These qualities are not easily conveyed in an industry preoccupied with specs, numbers and flashing lights, so your choice shows an appreciation and understanding of what makes our products different, and we sincerely thank you for that.

We genuinely do our best to ensure that every we make is to the highest quality and finish we can achieve. If anything falls short of your expectations or you have any questions that are not covered in this user guide, please do not hesitate to get in touch with us online. We respond to every question or comment and your feedback is a critical part of our ongoing product development and of course our commitment to offer you the best service possible.

From everyone in the team, we hope that you have a great experience with this product :)

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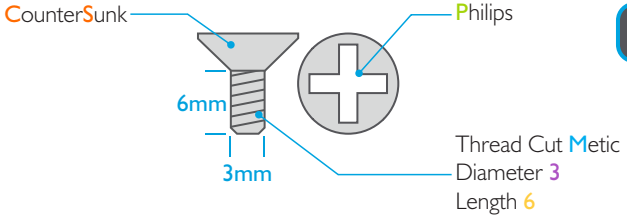
Introduction to Assembling Your Case

It's not rocket science, but our cases can be slightly more challenging to assemble compared with traditional mass production optimized PC cases because of the focus on design and materials used. Passive cooled cases have an added layer of complexity because of the heat pipe assembly and hardware requirements, so please take the time to read the user guide and become familiar with the assembly procedure. Additional information and help is also available on our website in the 'system build guide' or by contacting our support team.

This user guide applies to both the FC8 and FC8 OPTICAL versions of the case as the majority of the build is identical except for the drives and their fitting.

Several different screws will be utilized in the assembly so the user guide indicates which screws should be used and their corresponding fixing location. Screws are defined by head type, e.g. 'Philips countersunk' and by thread and length e.g. 'M3x6', and will be labeled accordingly, e.g. PCS-M3x6. Two screw head types are used throughout the case, HEX 2.5mm which we provide an allen key for and Philips which if you don't have, you really should go out and buy one.

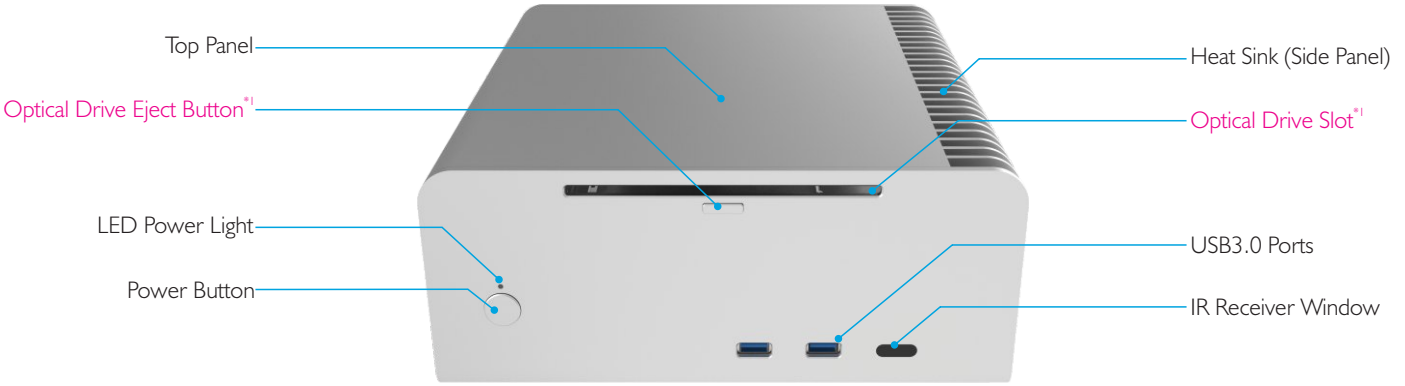


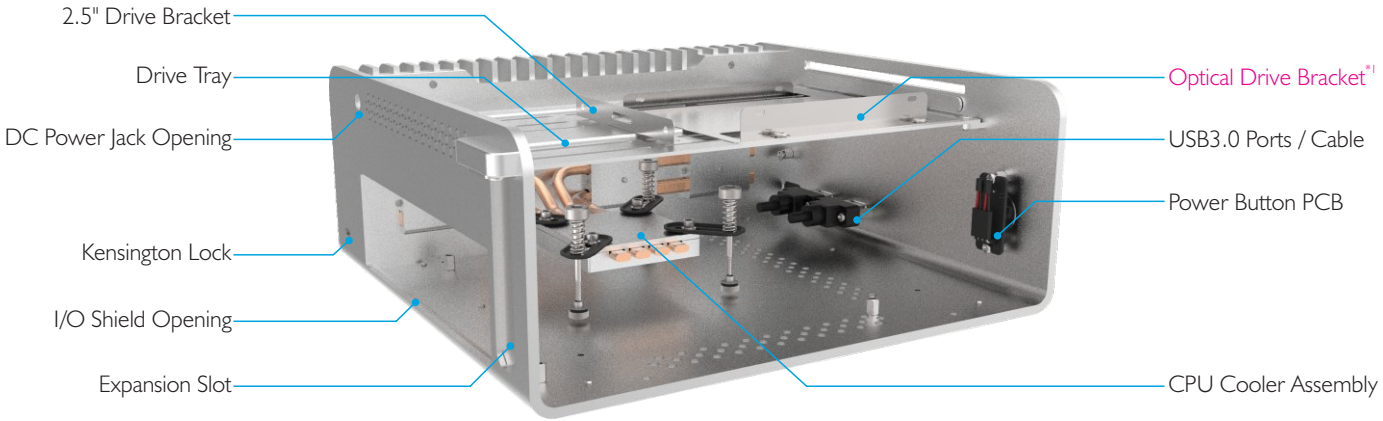
Specification

*1 Optical Version
*2 Not Supplied With Case

Material	Extruded & CNC, Premium Grade Aluminum (6063)
Finish	Silver / Black - Anodized & Sandblasted
Motherboard	Mini-ITX, Requires Compatible CPU Location & Path for Heat Pipes
Storage	Drive Tray, Lower Side - 2 x 3.5" or 3 x 2.5" (Max), Upper Side - 2 x 2.5" or ODD + 1 x 2.5"*1
Optical	1 x 12.7mm Slot Loading Optical Drive, Universal Eject Button*1
CPU Cooling	4 x 6mm Heat Pipe Direct Touch, TDP 65W Recommended, 95W Max
Ports	2 x USB 3.0 (Optional USB2.0 Conversion Cable*2)
Expansion	1 x Low-Profile Single Slot Expansion Card (Max Length 230mm, 80mm Height, 20mm Width)
Dimensions	240 × 250 × 108mm (W×D×H, Including Feet)
Power	NanoPSU (External AC Adapter + Internal DC to DC converter, 5.5mm Jack)*2
IR Solution	IRRC or FLIRC IR Solutions*2
Net Weight	2.6KG (Excluding CPU Cooler Assembly)

Overview

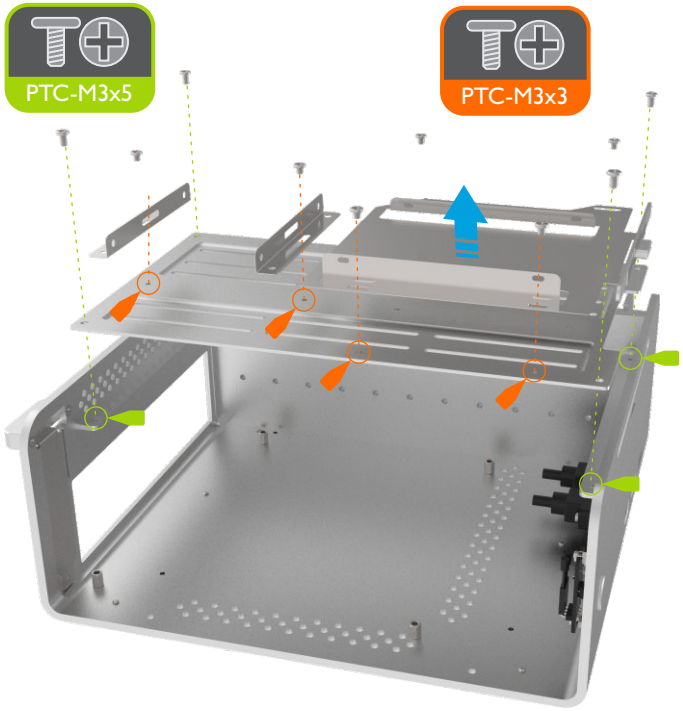




Remove the Top Panel

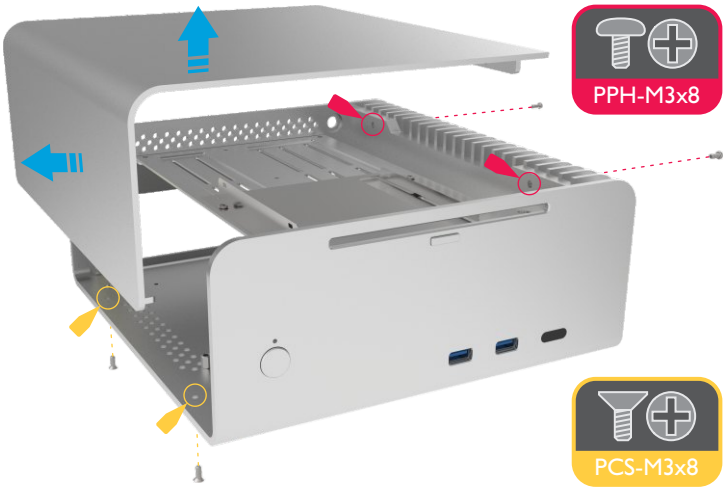
The top panel is held in place by a total of 4 screws, 2 from the bottom left underside of the case, and 2 on the right side of the case that are accessible between the fins of the heat sink.

Remove all 4 screws to release the top panel then separate it from the rest of the case. Be careful not to loose those screws, they are specific to the top panel and must be used when completing the assembly.



Install the I/O Shield

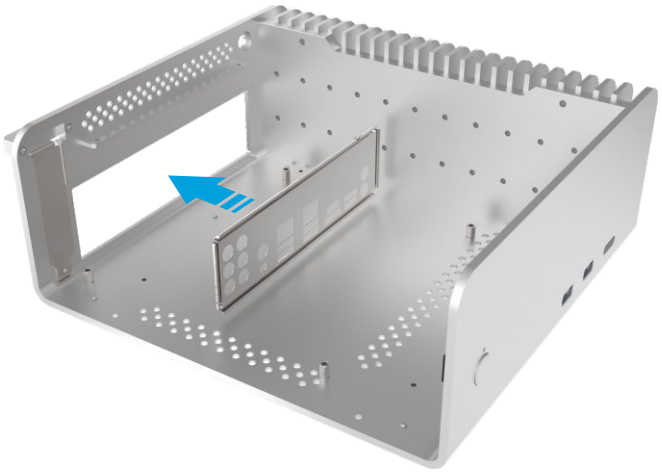
Locate the I/O shield supplied with your motherboard and firmly push it in place. Ensure that it correctly seated otherwise the motherboard will be difficult to install and not align correctly with the stand-offs.

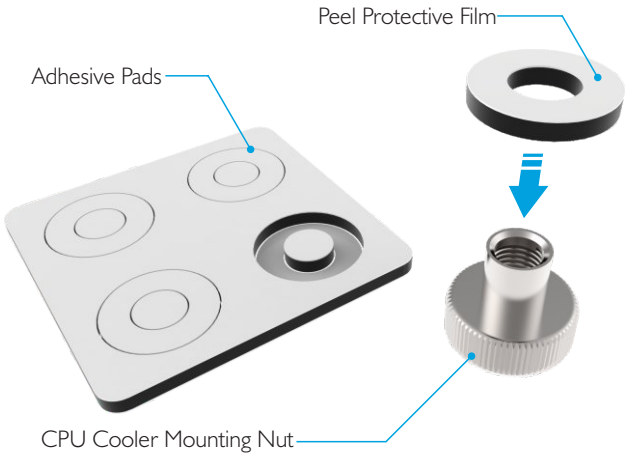


Remove the Drive Tray

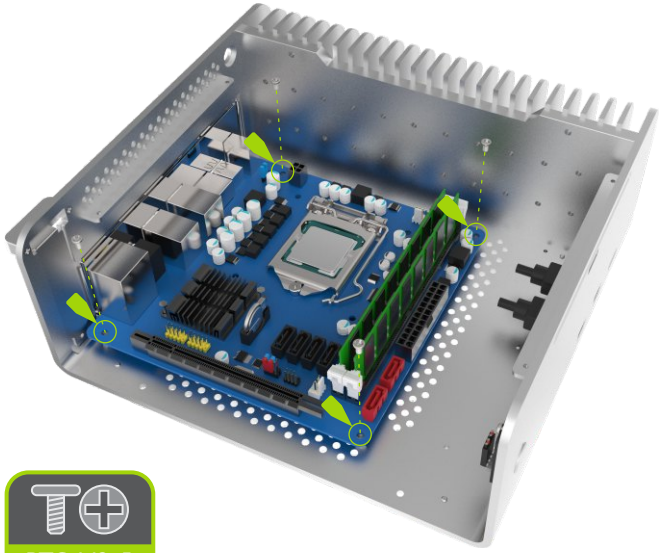
The drive tray is held in place by 4 screws which are all accessible from the top as shown. Once all 4 screws are removed, lift the drive tray out of the case.

The tray will have 2 x SSD brackets pre-fitted which can also be removed. If you have the Optical version of the FC8, the optical drive mounting bracket will be fitted and should also be removed from the tray.



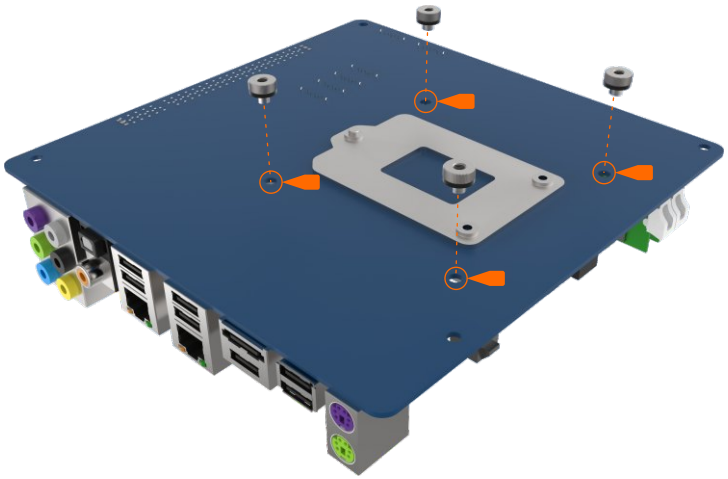


With the motherboard turned upside down, located the CPU cooler mounting holes. The hole position will vary depending on the brand and model of CPU. Peel the protective film from the adhesive pads and stick the nuts to the underside of the motherboard ensuring they correctly align with the holes. The slightly raised rim of the nut should fit through the motherboard and protrude slightly from the top side of the PCB.



Fit the CPU Cooler Mounting Nuts

The CPU cooler assembly will be secured to the motherboard using M3 nuts (4 in total) which must be fitted to the motherboard prior to installing it inside the case. The nuts are held in place by adhesive pads which are supplied with the nuts. Affix the adhesive pads to the CPU nuts in preparation for fixing them to the motherboard. Note that an extra set of adhesive pads are included should you wish to change your motherboard in future.



Install the Motherboard

Carefully lower the motherboard into the case, with the I/O port side leading so that the ports align with the I/O shield cutouts.

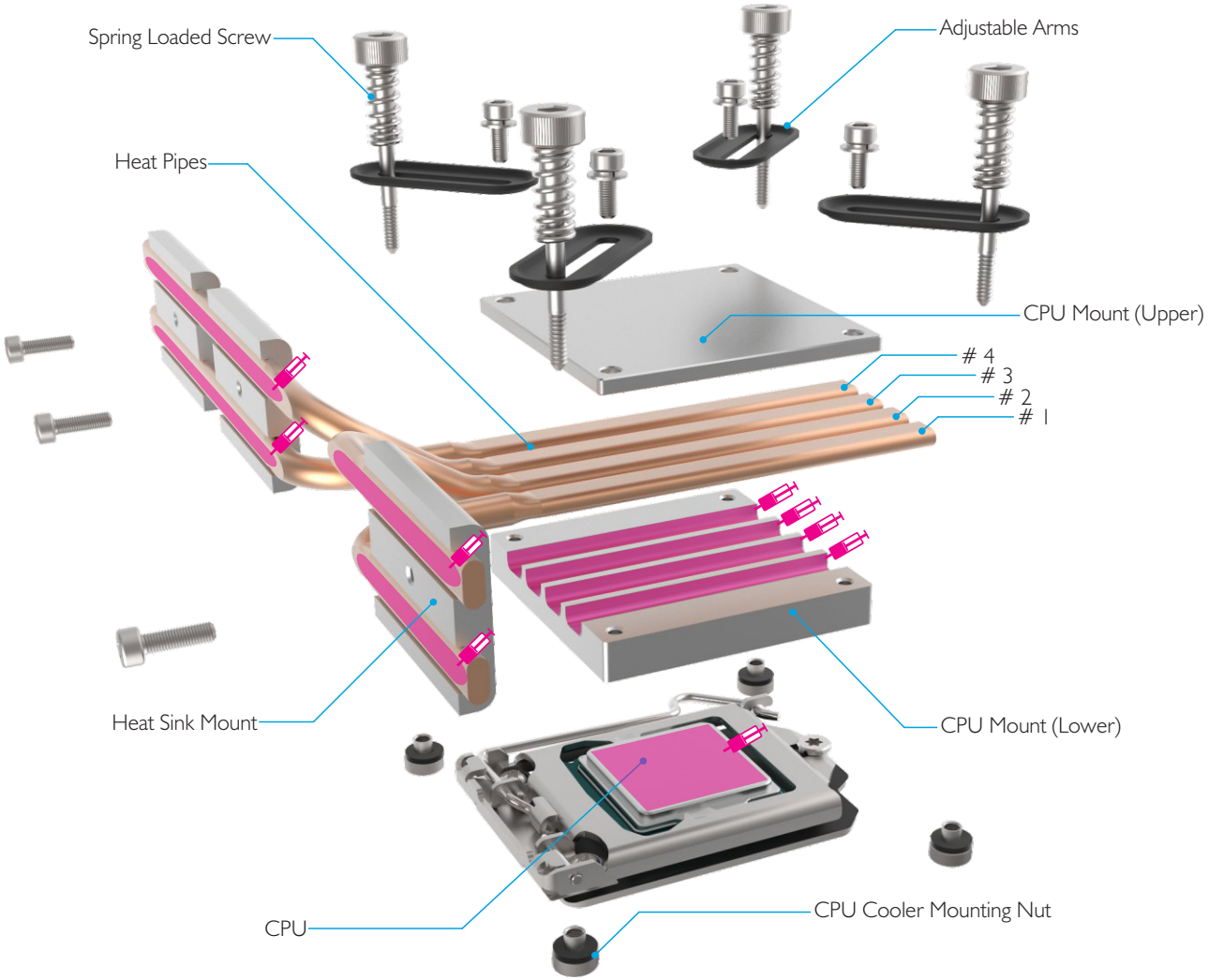
When the motherboard is correctly in position, secure it to the case stand-offs using the screws provided. Ensure that all the holes correctly align before fully tightening the screws.

CPU Cooler Assembly & Installation Overview

The fanless CPU cooler assembly comprises of 3 main parts. **1 - The CPU mount assembly** (upper + lower CPU mount, and arms) that couples the heat pipes to the CPU / motherboard using the spring loaded screws. **2 - The heat sink mounts** that couple the heat pipes to the case side panel (heat sink). **3 - The heat pipes** that transfer the heat from the CPU to heat sink. The heat pipes are supplied in plastic sleeves which are numbered 1 , 2, 3, 4 to assist with identifying them.

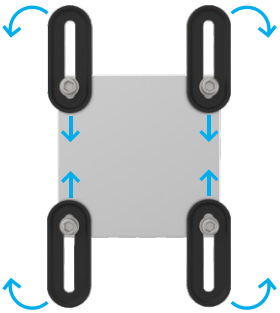
The use of thermal paste is ESSENTIAL to ensure efficient heat transfer and must be applied to ALL the surfaces indicated below.

We recommend first trying the assembly without applying thermal paste as this will allow you to test and adjust the alignment without making a mess. Once you have a good approximation of the positioning, apply thermal paste initially to the lower CPU mount heat pipe grooves, then lock the heat pipes between the upper and lower CPU mounts using the 4 HEX screws. The screws should be slightly loose to allow the arms to rotate and adjust to align with the CPU cooler mounting nuts. With this assembled, you can now remove it from the case and apply thermal paste to the CPU and heat pipe area which will make contact with the heat sink.

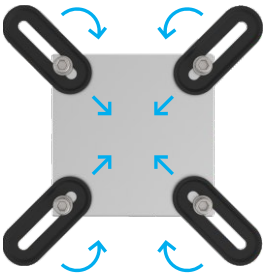


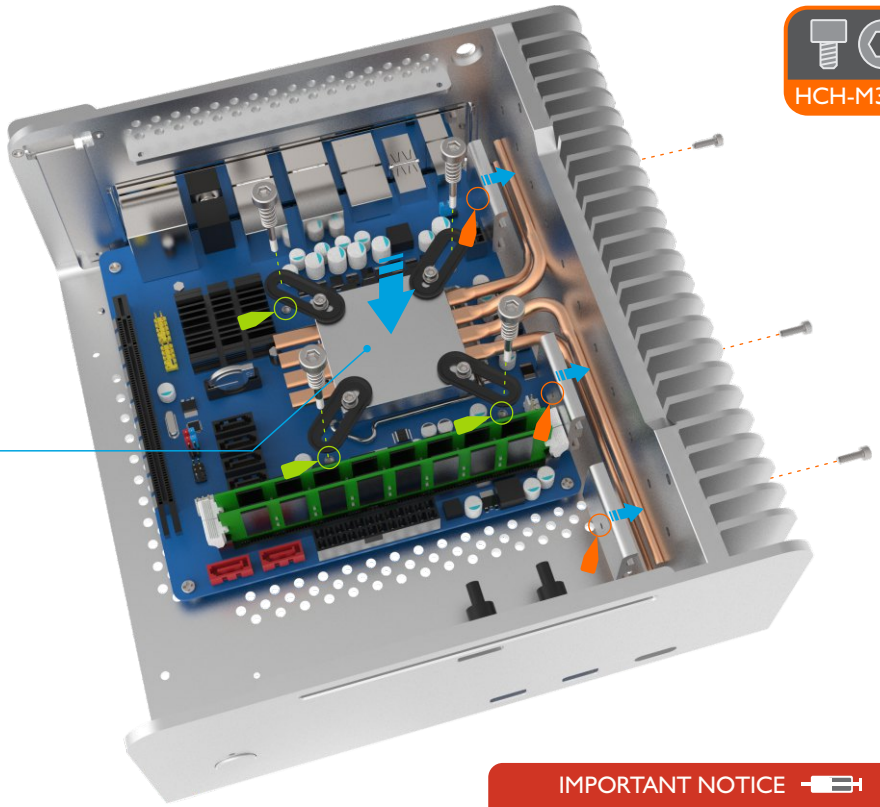
Fit the Cooler Assembly to the Heat Sink & CPU

Carefully lower the CPU mount + heat pipe assembly into the case and place it onto the CPU, ensuring the heat pipes (the area with thermal paste applied) only make contact with the heat sink once the assembly is resting centrally on the CPU. Adjust the CPU mount arms so that they align with the 4 nuts (already fitted to the underside of the motherboard). Fit the 4 spring loaded screws to the motherboard (into the CPU mounting nuts), but do not fully tighten yet.



Adjust the arms for AMD® or Intel® CPU Sockets





IMPORTANT NOTICE

Do not forget to apply thermal paste to all the locations shown in the cooler assembly overview. Failing to do so will result in poor heat transfer, high temperatures and potential damage to the CPU.

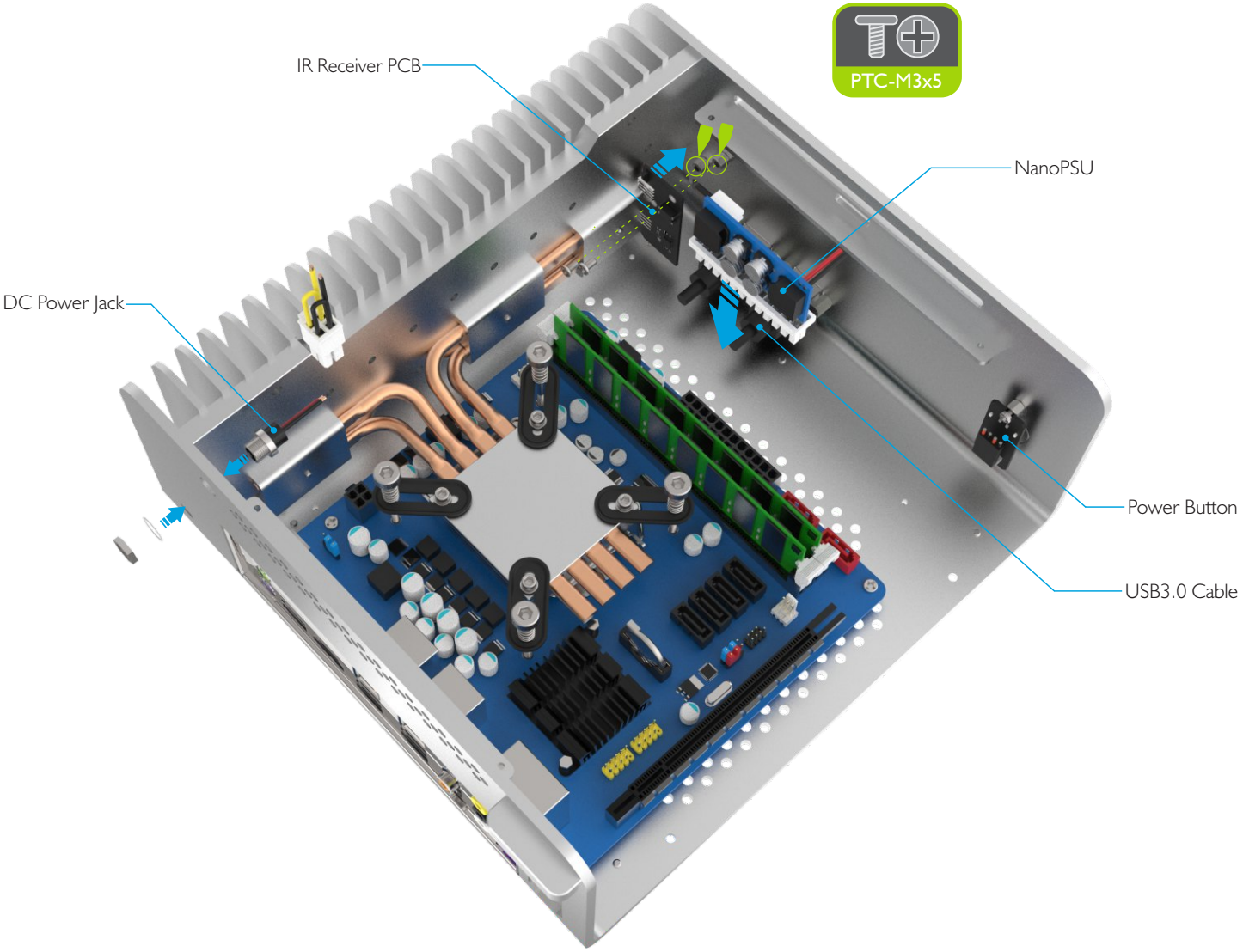
Secure the heat pipes to the heat sink using the 3 heat sink mounts as hex screws that pass from the outside of the case (between the fins). There are a number of holes along the heat sink to allow for different heat pipes and CPU locations, so ensure you select the appropriate location to evenly apply pressure on the heat pipes. Before fully tightening the heat sink mount screws, ensure once again the CPU mount is centrally located over the CPU.

Once you are satisfied with the alignment, fully tighten all the remaining screws. Begin with the CPU mount arms screws then finally the spring loaded screws. The spring loaded screws should not be over tightened, and only require 4-5 turns from the point the spring start to compress.

Install / Connect the PSU, Optional IR, Power Button, USB & Other Cables

With the motherboard and CPU cooler fitted, you can now install the PSU and optional IR receiver as well as connect the power switch, USB and all other internal connections such as the SATA cables in preparation for installing the drive tray assembly. The FC8 is compatible with any Nano style PSU (external AC adapter, internal DC to DC converter) that uses a 5.5mm input power jack. For more details on installing the PSU and optional IR module, refer to their user guides.

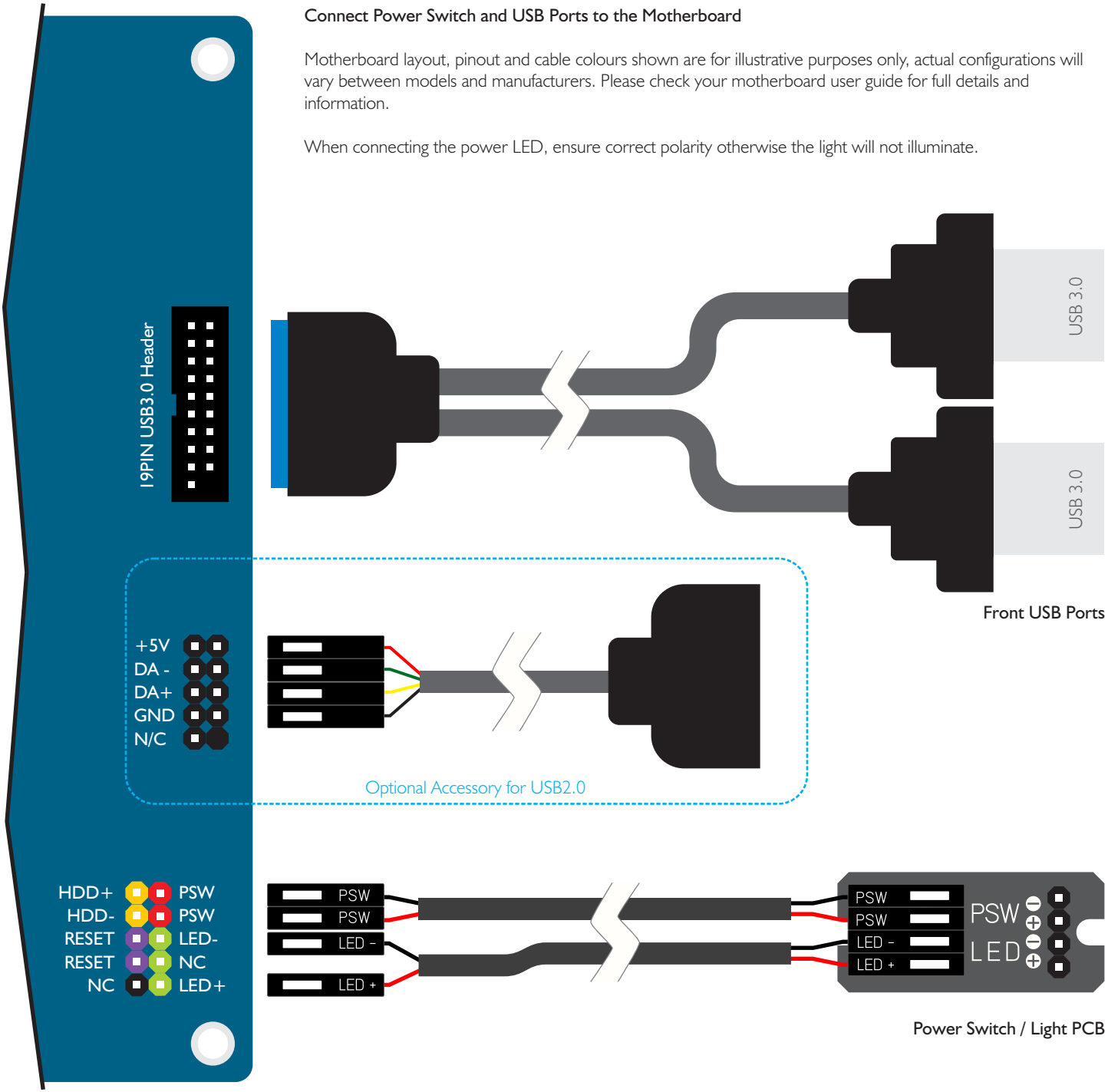
The power button / indicator light connects to the motherboard front I/O header, see diagram on next page for wiring details. The case is fitted with USB3.0 ports which require a 19PIN USB3.0 header on the motherboard. If your motherboard does not have an internal USB3.0 header, it is still possible to connect to the older USB2.0 header with a converter cable (not supplied with the case) but the maximum speed will be limited to USB2.0 specification.



Connect Power Switch and USB Ports to the Motherboard

Motherboard layout, pinout and cable colours shown are for illustrative purposes only, actual configurations will vary between models and manufacturers. Please check your motherboard user guide for full details and information.

When connecting the power LED, ensure correct polarity otherwise the light will not illuminate.

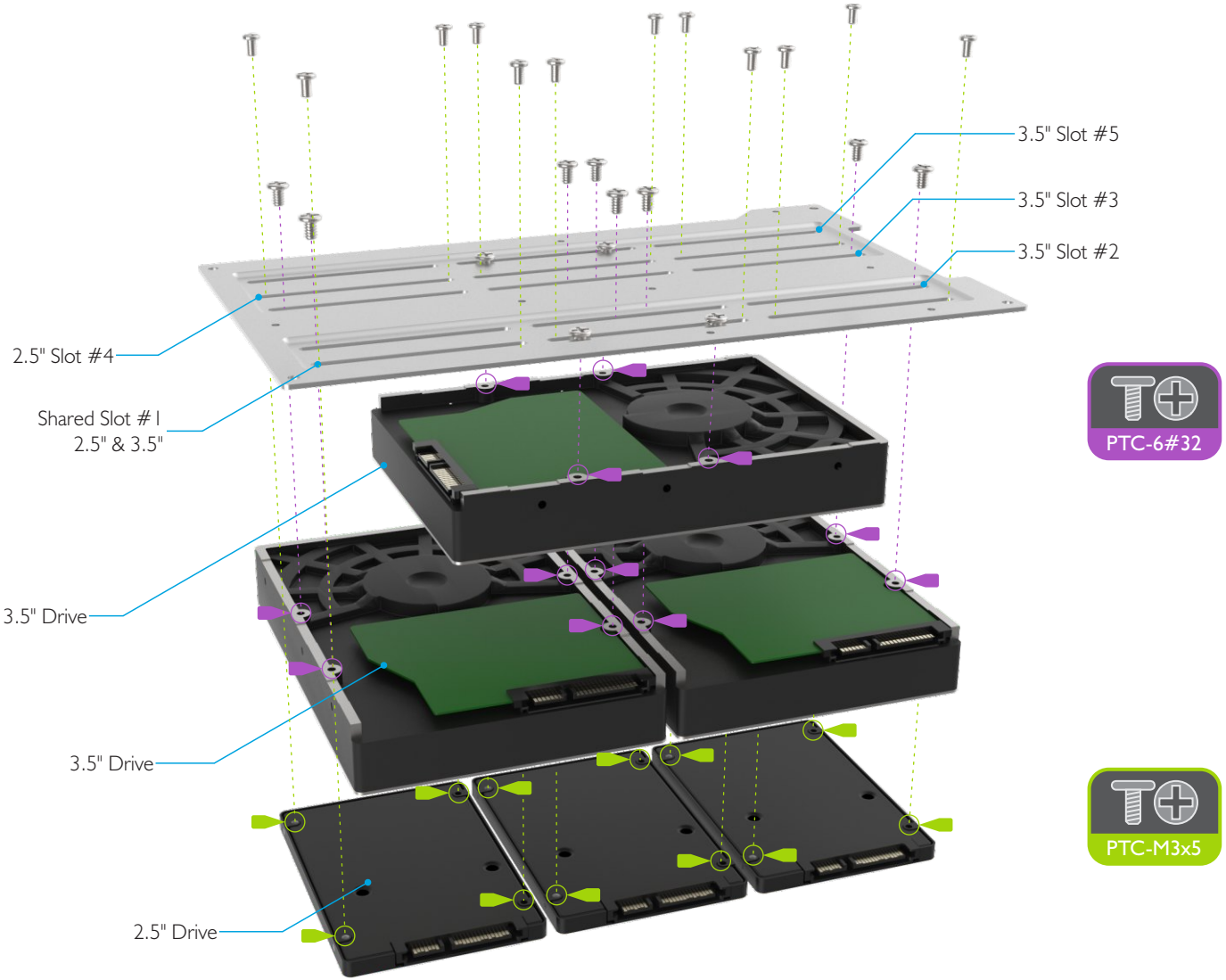


Fit Drives to the Lower Side of the Tray

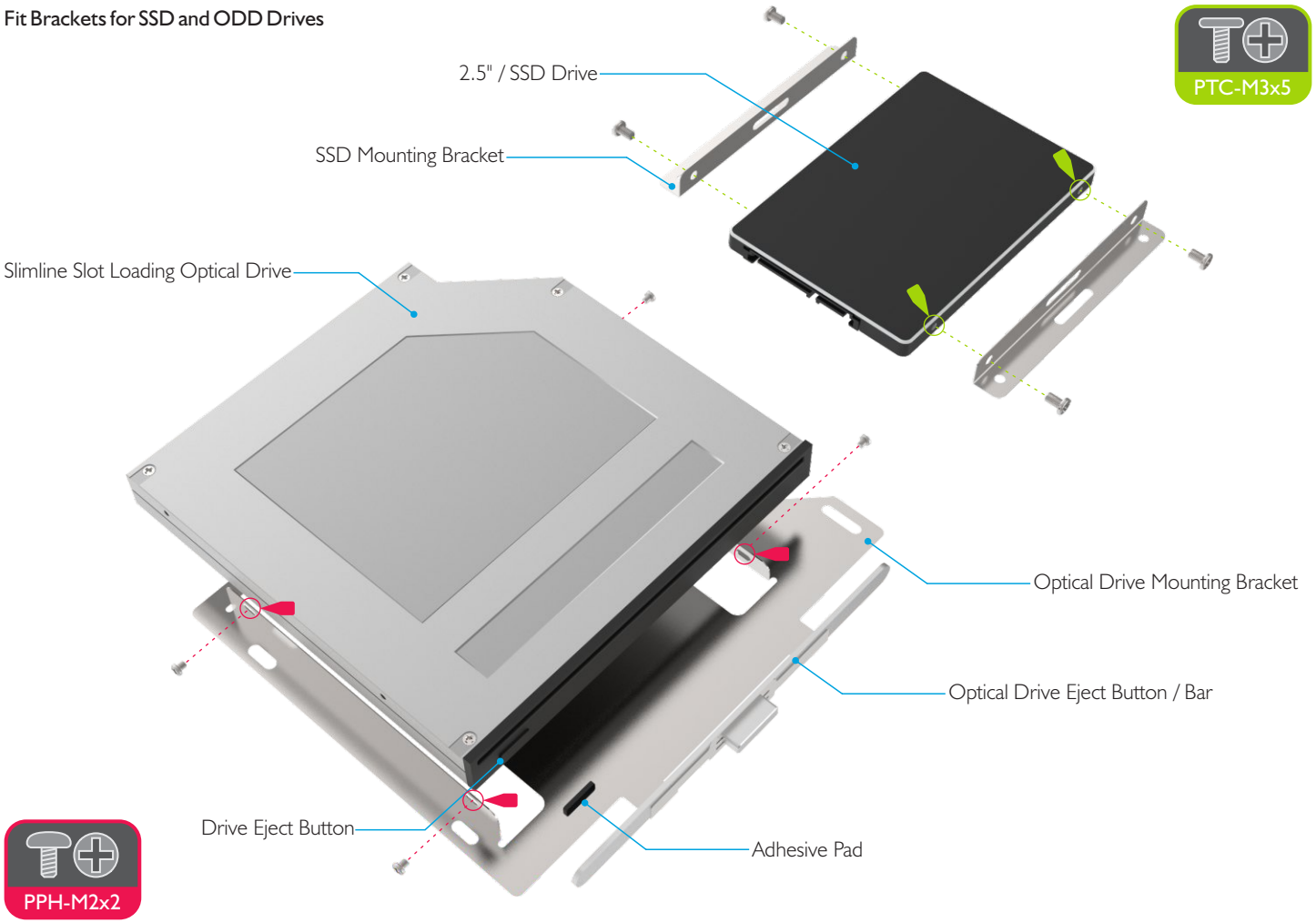
The lower side of the drive tray uses slots instead of dedicated hole positions, which allow drives to be fitted anywhere along the tray and with different orientations. The number of drives that can be fitted will depend on the exact hardware installed in the case. A maximum of 2 x 3.5" and a minimum of 1 x 3.5" drives can be fitted. If you don't plan on using a 3.5" drive, up to 3 x 2.5" drives can be fitted to the bottom side of the tray, or a single 3.5" and 2.5" drive side by side. Where you position the drives on the slots is up to you and what works best to avoid conflicts with other hardware installed.

There are 5 slots that run the length of the tray, slot # 1 is shared by 3.5" and 2.5" drives, slot #4 is exclusively for 2.5" drives, and the other 3 slots are for 3.5" drives, depending on their orientation.

To attach a drive, align the mounting holes on the underside of the drive with the appropriate 2 slots on the tray then secure it using 4 screws. Note that 3.5" and 2.5" drives use different screw threads, so please make sure to use the appropriate type for each drive.



Fit Brackets for SSD and ODD Drives



SSD and ODD drives that fit to the upper side of the tray require brackets to be attached first. If you purchased the OPTICAL version of the FC8, it will include an optical drive mounting bracket, otherwise the kit will include and extra set of 2.5" mounting brackets (2 for each drive).

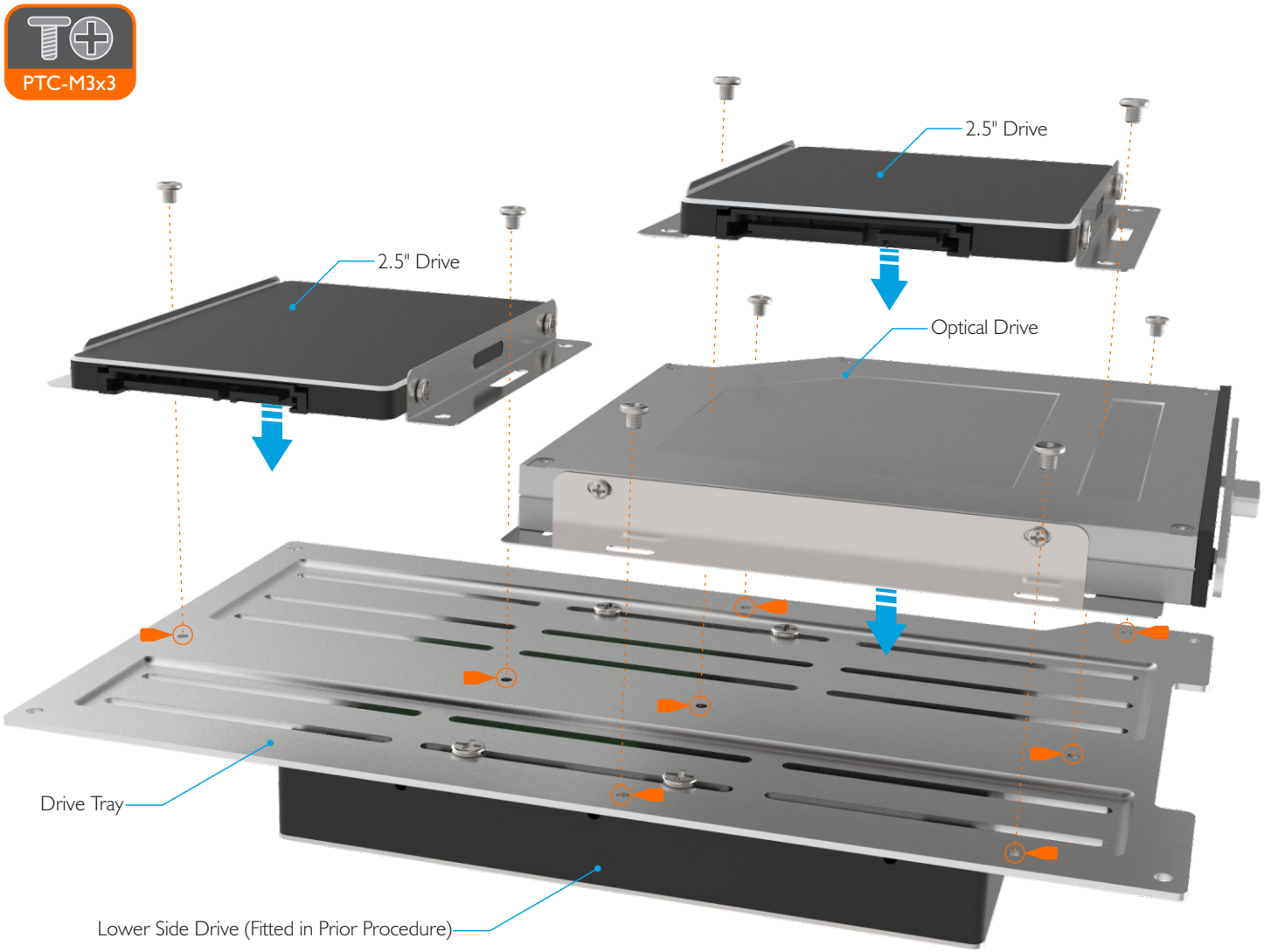
For the 2.5" drive, fit 2 brackets per drive as shown above. The brackets are identical and reversible, so it does not matter which one is used for which side. If you are installing 2 x 2.5" drives to the upper side of the tray, fit the brackets to both drives.

If you are installing an optical drive, secure it to the optical drive bracket using the 4 x 2mm screws supplied. Before fully tightening the screws, position the drive as far forward as possible without the eject button being depressed. If the screws meet any resistance (from internal components of the optical drive), do NOT tighten that screw any further, it could damage the mechanism. Once secured to the bracket, test the eject button can function correctly. Depending on the eject button position and height, a rubber pad might need to be affixed between eject bar and drive eject button. The pads can either be applied directly to the drives eject button, or to the opposite side of the eject button, or both sides, whichever gives the best result.

Fit Drives to the Upper Side of the Drive Tray

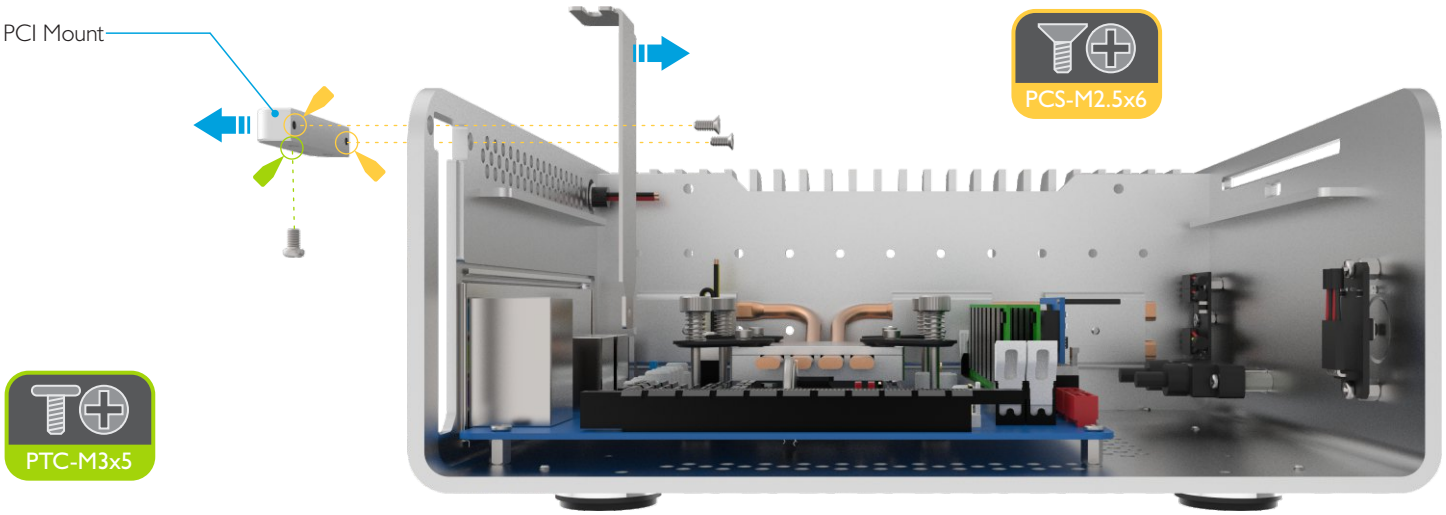
With the drive brackets attached, position the drives over the appropriate holes in the drive tray and secure them in place with the correct screws. it is important not to use the wrong screws as they could damage drive that are installed on the lower side of the tray. The 2.5" drives require 2 screws per drive and has 2 fixed mounting locations (Optical version of FC8 can only use the rear location)

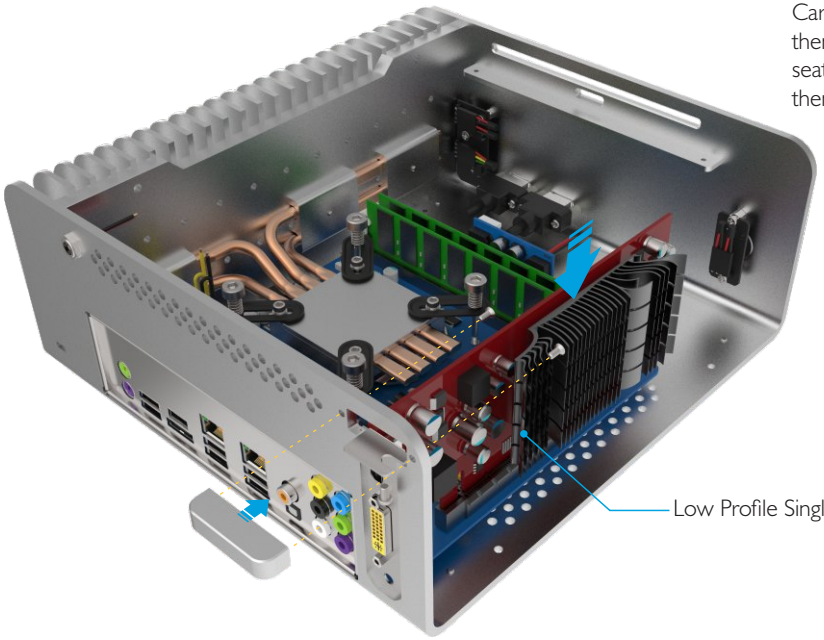
If you have the OPTICAL version of the FC8, secure the optical drive in place with the 4 screws as shown, but DO NOT fully tighten the screws. Only after you have secured the drive tray back into the case should these screws be tightened as you will need to adjust the position of the drive to line up with the front of the case.



Install a PCI Expansion Card (Optional)

To install a low profile expansion card, begin by removing the pre-installed PCI blanking plate and the PCI mount which is secured to the back panel with 2 screws. Removing the PCI mount will give the extra clearance required on the rear panel opening to install the card. Note that this procedure is shown prior to replacing the drive tray as this give more room to work with but it can also be installed after the drive tray has already been fitted.



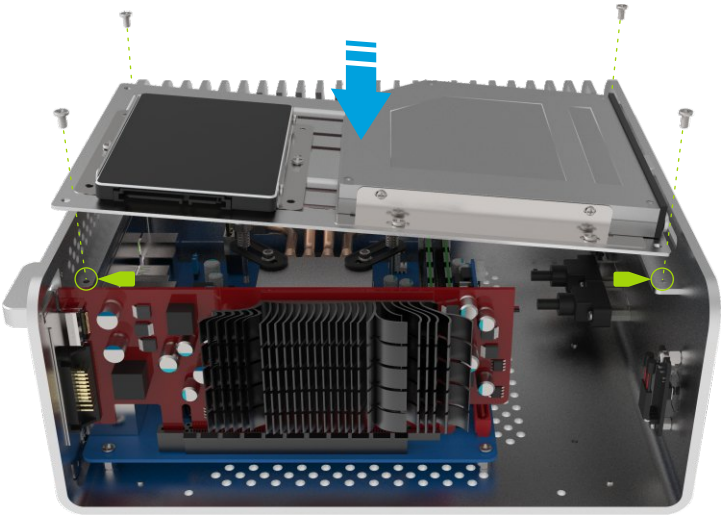


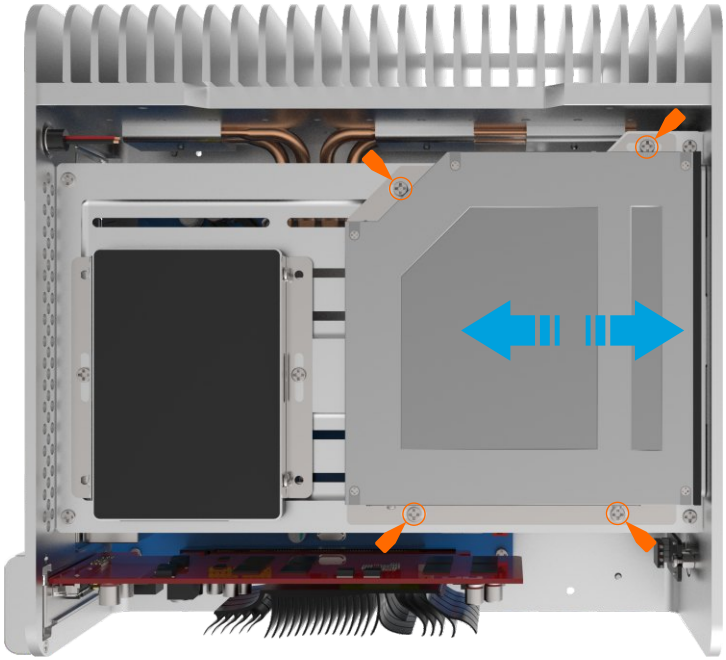
Carefully position the card into the opening on the back panel of the case, then insert it into the motherboard expansion slot. Once the card is fully seated into the motherboard, replace the PCI mount to the back panel then secure the card to the PCI mount with a single screw.

Replace the Drive Tray

With all drives now fitted to the tray, carefully lower it into the case. If you have the OPTICAL version of the FC8, angle the front of the tray to allow the eject button to fit into the opening on the front of the case.

Replace the 4 screws to secure the tray in place, and connect all the drive cables.





Adjust the Optical Drive

Adjust the position of the optical drive eject bar so that its flush with the front inside edge of the case and the eject button protrudes 1-2mm from the front face of the case.

Test that the button operates correctly by listening/feeling for the button 'click' when pressing the eject button.

Once the correct position has been found, tighten the 4 screws to secure the optical drive in place.

Replace the Top Panel

With the hardware components installed, the top panel can now be replaced. Prior to doing this, ensure that all cables are connected and components are securely fitted. Carefully replace the top panel onto the case and secure it in place using 4 screws, 2 from under the case and 2 from the side between the heat sink fins.

IMPORTANT NOTICE

Passively cooled products can get hot to the touch, especially when running at high loads for extended periods. This is a normal part of their operation and they have been tested to run safely under these conditions, but please take their operational temperature into consideration when positioning and handling them.

Connect, Position and Power Up

With the case now fully assembled and closed, all that remains is to connect the power and I/O cables to the appropriate ports.
When positioning your case, please consider an area out of direct sunlight, with adequate natural air flow and a moderate ambient room temperature.