

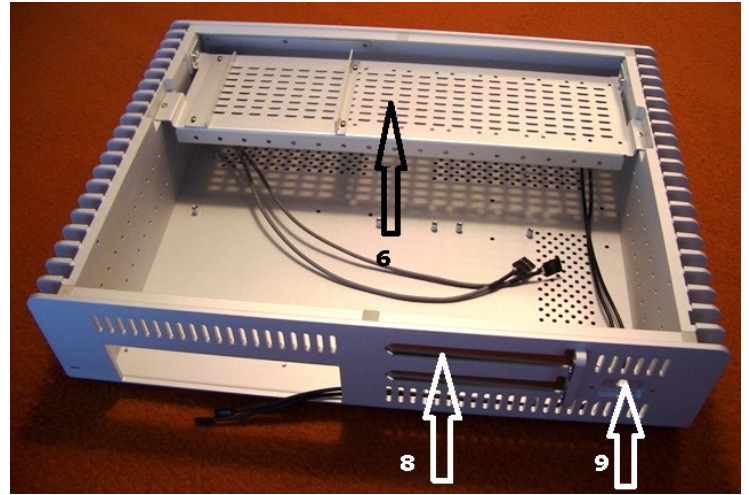
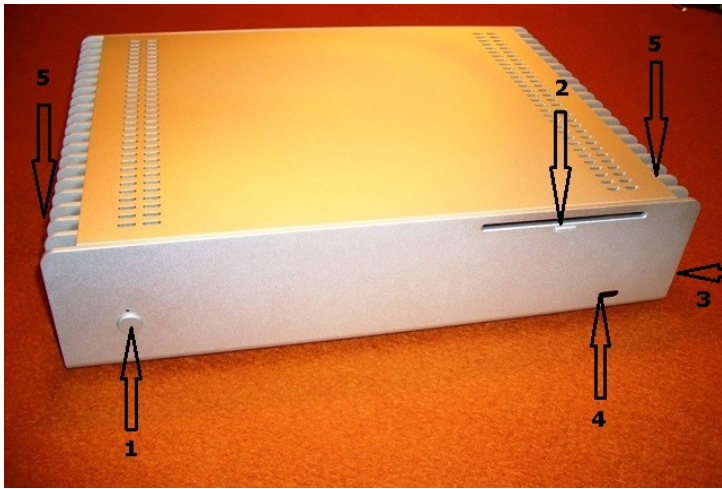
FLS-7 and FLS-8 User Guide



Thank you for purchasing our product.

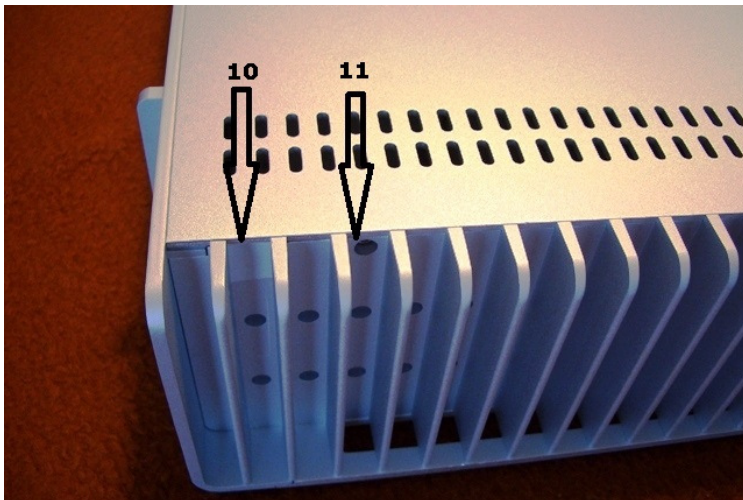
If you have any questions that are not covered in this manual, please contact us by phone or e-mail at Sales@PerfectHomeTheater.com.

Overview



- 1 Power Button & LED
- 2 ODD Eject Button
- 3 USB Ports 2.0 & 3.0 on the side (optional cable required. Sold separately)
- 4 IR Receiver Window
- 5 Heat Sinks
- 6 HDD/ODD tray
- 7 Power Button PCB
- 8 Two full size slots
- 9 Plate for PSU IN

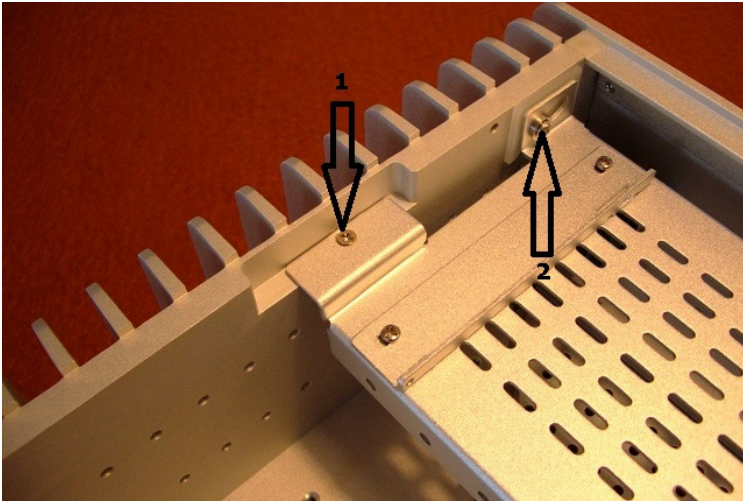
Removing top panel.



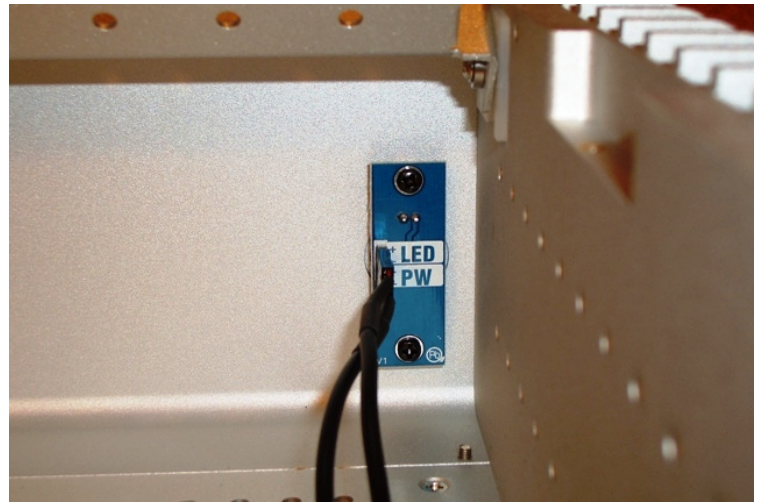
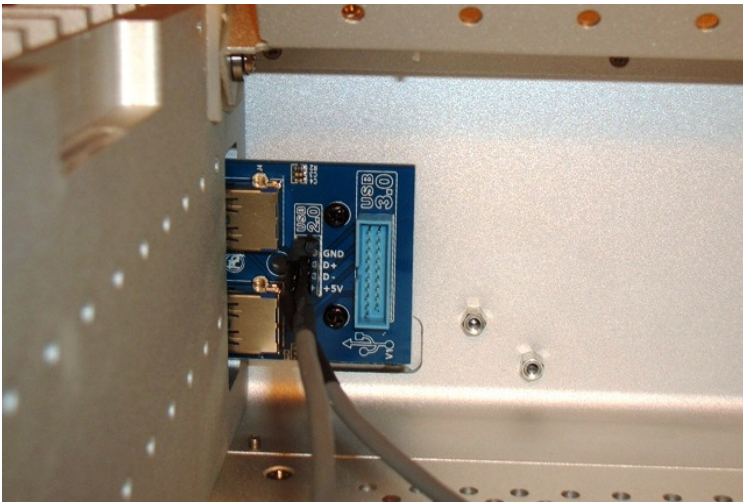
Remove four screws (11) and put fingers between two fins (10) and rise top panel. Now you can easily remove it.

Installing HDDs and ODD.

ODD/HDD bracket is hold in place by four screws. Please remove two screws (1) and untighten the other two (2).



Now you can rise the tray and have access to USB PCB and PSU PCB.

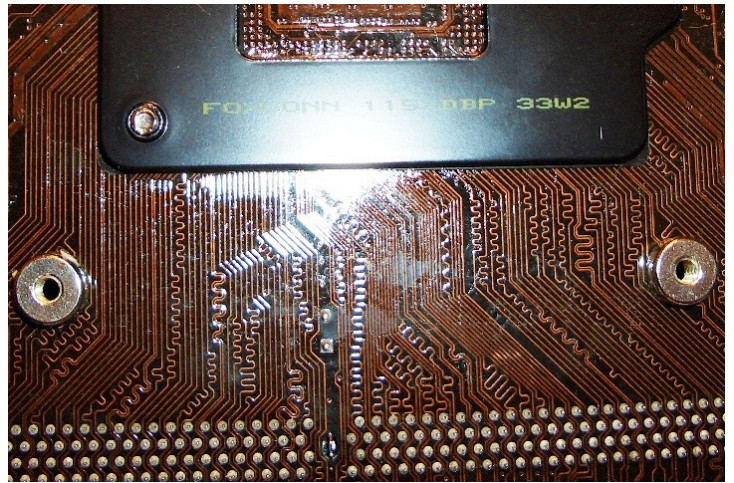
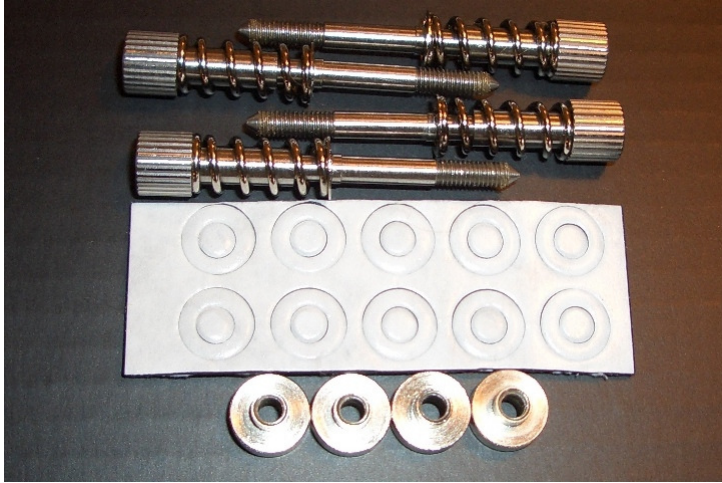


You can install up to three 2.5" drives on the top of the tray and two 3.5" HDs under. First install ODD (FLS-8) and 2.5" HDs on the top (one SSD shown), than 3.5" HDs (one HDD shown).



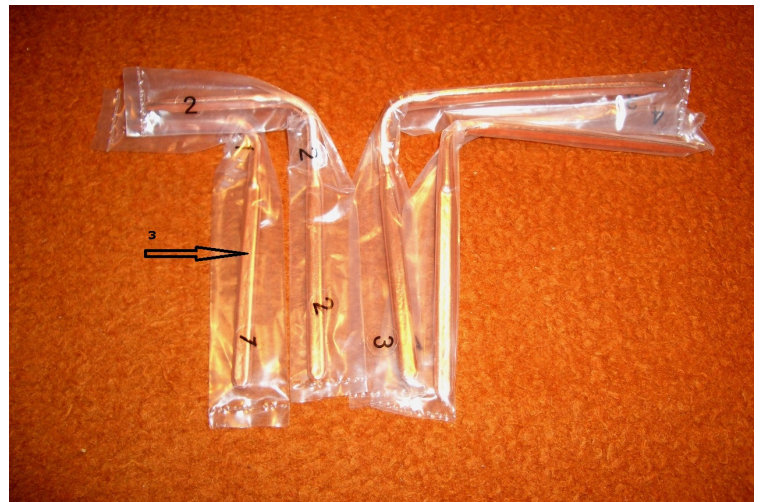
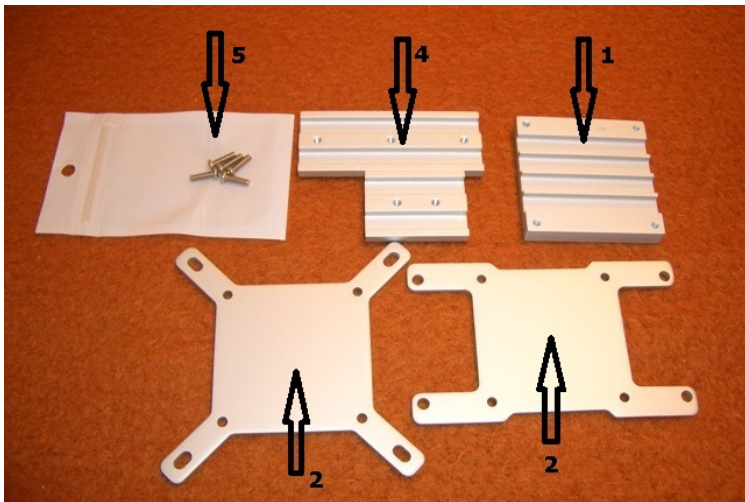
Motherboard installation

There are four long screws with springs and fasteners (you have to assembly them first) and four CPU cooler mounting nuts with sticking rings. Before installing motherboard into chassis please stick four CPU cooler mounting nuts on the bottom of Motherboard.



Next install CPU and memory on the Mobo, install backplate and motherboard inside of chassis.

Cooling system



These are the following parts of cooling system:

1. Lower CPU plate
2. Upper CPU plate (Intel or AMD)
3. Standard or short Heat Pipes (**Attention: heat pipes are numbered.**)
4. Heatsink blocks with thread.
5. Five screws for thermal blocks
6. Thermal paste. (Supplied)

Mini ITX motherboard.

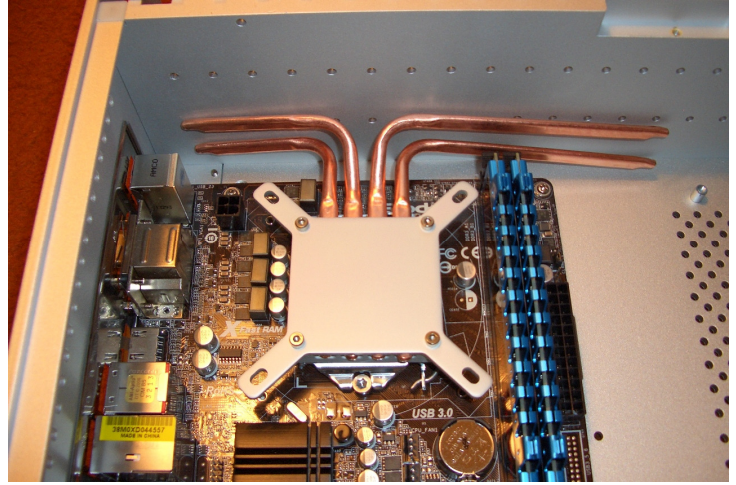
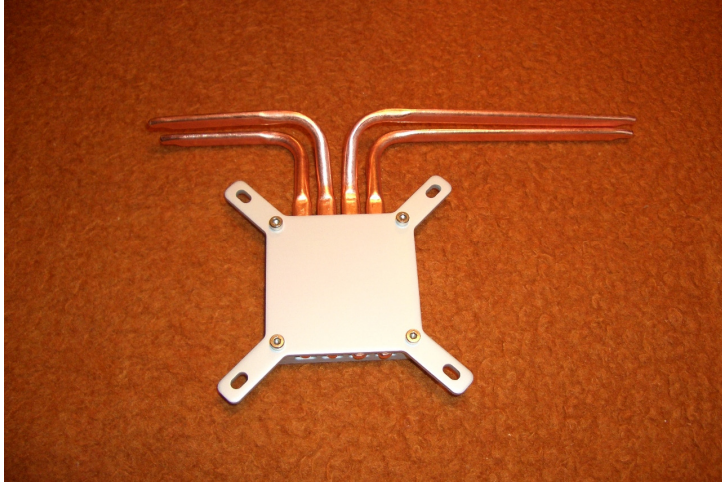
Most recent ITX motherboards have CPU socket close to right side of motherboard like ASRock motherboard used in this manual. Such motherboards require short cooling pipes; HP4-97, sold separately. Standard pipes are too long for this motherboard. They will extend ~17mm. There is no problem with this particular motherboard, but other models may have tall object on line of pipes and conflict with them. If your current motherboard require short pipes, please add them to your order. Please keep your standard pipes for future motherboards.

There are three options in this chassis:

1. Use short pipes for FLM chassis (HP4-97) as I did here.
2. Use short pipes for FLM chassis (HP4-110) and mount them to upper side of heatsink.
3. Use thermal riser – HPR4 and standard pipes.

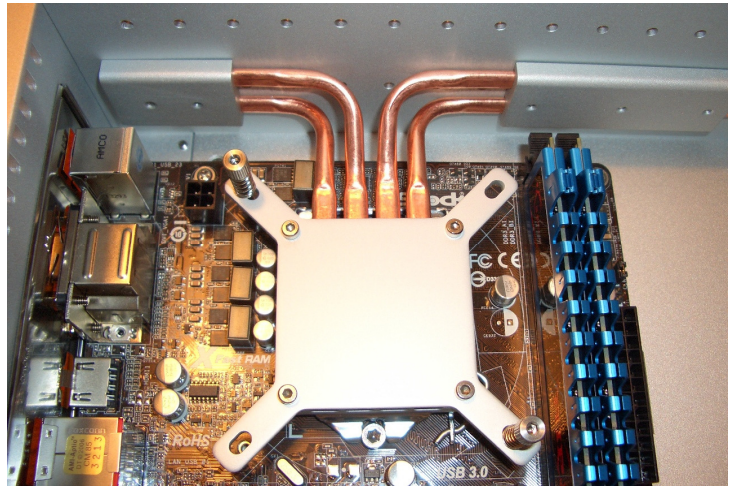
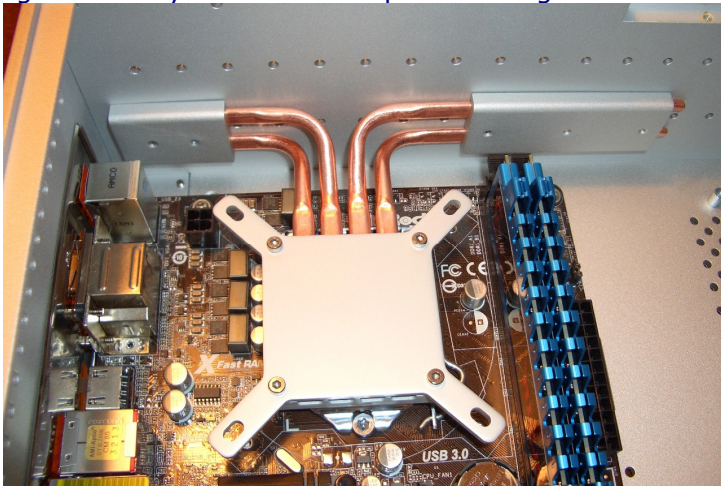
DO NOT TIGHTEN ANY SCREWS UNTIL INSTALLATION IS FINISHED.

First assembly cooling system without paste, to find out the best position for pipes but do not tighten screws yet. Next put it on CPU align with CPU and move pipes toward or away from radiator if necessary.

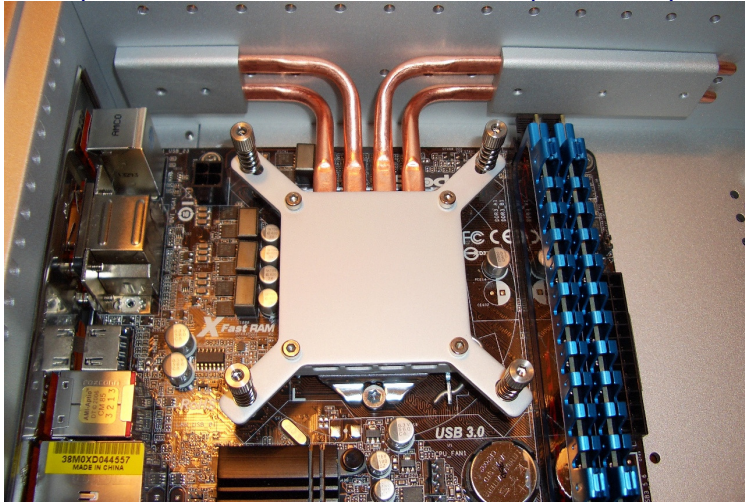


After setting position of pipes between plates, remove upper plate, apply small amount of thermal paste in grooves on lower plate, set pipes, apply small amount of thermal paste on top of pipes and put upper plate back. Now, even you have to move pipes a little you will have clean assembly.

In next step apply small amount of thermal paste on CPU and put whole assembly on CPU. Install heatsink blocks (4) on radiator. **Screws mounting heatsink blocks are from outside IN!** Align assembly over CPU and put two long screws first like shown here.



Then put another two screws and set up assembly over CPU perfectly.



Now you can tighten screws. First, five screws in heatsink blocks. Pipes still can move toward heatsink. Next, use supplied wrench and tighten screws keeping both plates together. Do not over tighten screws!



At last, hand tighten long screws and you just finished installation of cooling system for your CPU.

You can use short pipes for FLM chassis (HP4-110) and mount them to upper side of heatsink – if you have them already or if you prefer this way.
For Thin-Mini-ITX Motherboards you have to use long pipes – HP4-147-b. Please mount long pipes to upper side of heatsink like HP4-100 on this picture.

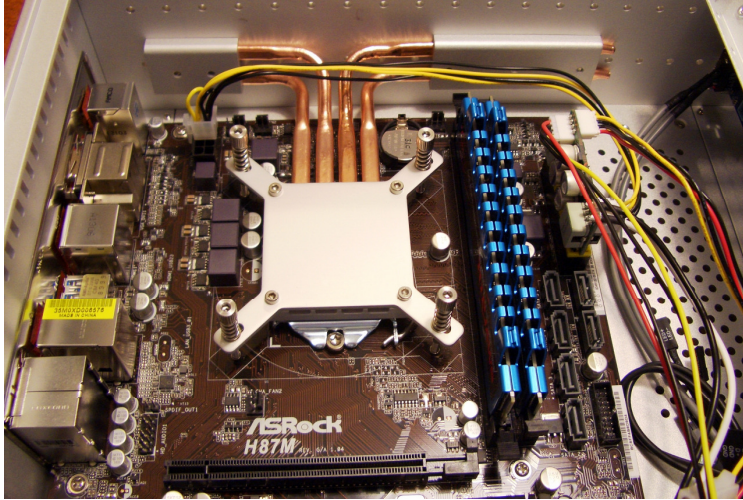


µATX motherboard.

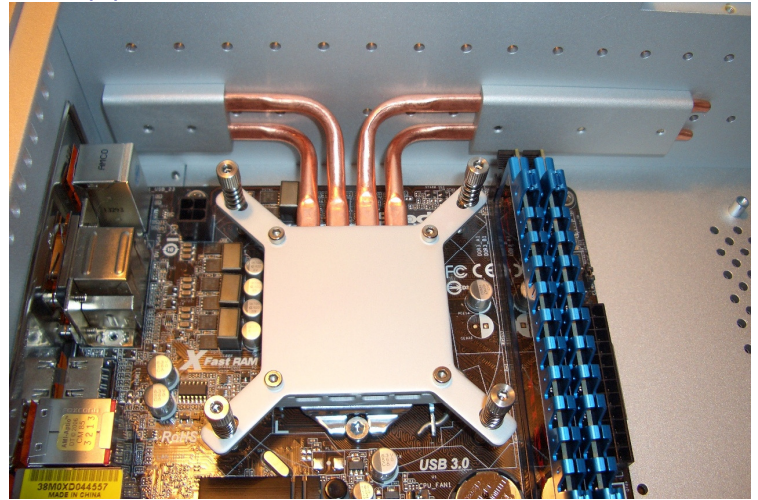
Majority of µATX motherboards are compatible with standard pipes supplied with chassis.

Please follow procedure for mini ITX motherboard. The only difference is length of pipes.

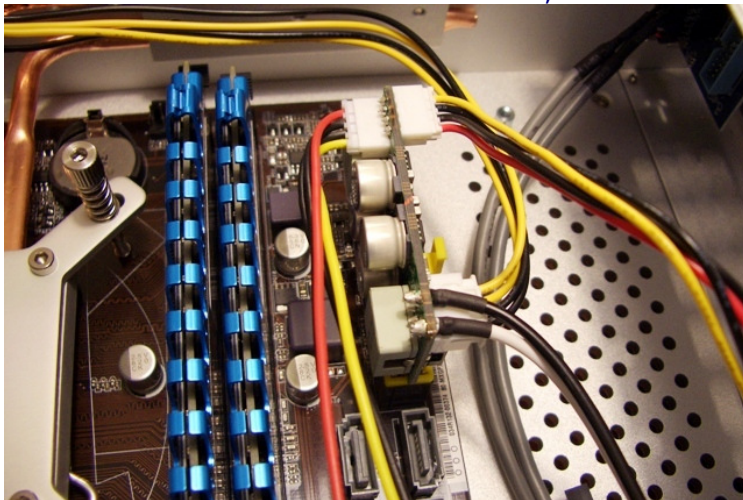
Standard pipes



Short pipes



Now it's time to connect PSU and cables, install bracket with drives attached and test your PC.





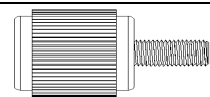
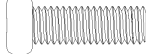
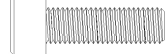





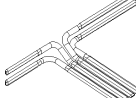


I installed 160W (200W peak) PSU, more adequate for FLS chassis. I also added optional SATA/PATA power cable.

Is everything OK? Install top cover and enjoy it.



FLS-7 and FLS-8 accessory list

Picture (Not in scale)	Description/Type	Quantity	Application
	M2x3	4	Slim ODD drive (FLS-8 only)
	M3x4	2	IR
	M3x4	9	Motherboard
	M3x5	12	2.5" HDD
	6-32x6	8	3.5" HDD
	M3x10	5	Heat sink blocks
	M3x10	4	Heat sink plates
	CPU retention screws	4	Heat sink mounting screws
	Mounting nuts	4	Heat sink mounting nuts
	Nuts shock pad	1	Nuts shock pad
	Rubber pads	5	Hard drives pads
	Rubber pads	1	ODD
	Heatsink pipes	4	Heatsink system