



Modular Snap Together Raspberry Pi 2B/3B/3B+/4 Case w/ OLED & Fan Options



Sneaks

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Summary

This fully customizable Raspberry Pi 2B/3B/3BP/4 case snaps together without the need for any hardware.



N/A



12 pcs



0.20 mm



0.40 mm



PLA



N/A



Prusa
MK3/S/S+

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Tags: [case](#) [raspberry](#) [pi](#) [rasberrypi](#) [rasberrypicase](#) [3b](#)
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[3bplus](#) [pi2b](#) [rasberrypie](#)

Compatibility: This case design is compatible with Raspberry Pi's 2B/3B/3B+/4. It may be compatible with other models, however, these were the ones I was personally able to test it on.

Two Top Depths: (01/06/2022) The top half is now available in two different depths. There is a 3mm depth difference between DEEP and STANDARD. The DEEP option was added for more clearance when using the OLED and Fan Module and also to increase clearance for Heat Sink users. When picking your files to print, make sure to pay attention to match “STD” or “DEEP” in their filenames. ie If you are printing a DEEP top with Side Rails, make sure to select DEEP rails. Bottoms fit both top sizes, only the side mounting rails are affected by different tops.

No Hardware: This design does not use any hardware and all parts are “Snap-Fit.” There are small tabs that flex a tiny bit to allow a lip to snap into a groove.

Mounting: There are 3 variations of the cases: No Mounting Options, VESA 75 Mount, and a Side Rail Case. The Side Rail case is designed so that users can easily make their own mounting option for the case. Included in the files is “__ss_rail_1_02.STEP” which can be used to design your own mount for the Side Rail Design.

Modules: Included in the files is “module_1_01_blank.STEP” which can be used to make your own custom modules.

Printing / Support: I have Uploaded GCODE (All Sets) for Prusa MK3S and MINI. These files do not require any support. In Prusa Slicer .20mm Layer Thickness on QUALITY prints out a very nice case.

Tips:

- This is a “Snap-Fit” design and it uses small FRAGILE tabs to lock together; be gentle.
- If you need to open the case back up after snapping together, remove the SD card, stick a mid-sized flat head screwdriver between top/bottom at SD slot, and twist gently. Slowly work your way around to open back up.
- If you need to remove a module, there is a release slot on the back of the case (Small rectangle). Stick a small flat head screwdriver in and gently pry up. This will raise the module high enough to access the recessed slot you can get a thumbnail or screwdriver in to pull off the module.
- Did I mention BE GENTLE? Seriously, I've broken a lot of these by pulling too hard or being impatient. A few seconds of patience will save you 4 hours waiting for another printed part.

File Structure: I have separated the different versions into STL sets. The file names reference the model and mounting style. The modules are available in both a set and individually.

Naming Convention: There are a lot of parts! I did my best to identify each part's features in the filenames. Here is a breakdown:

- STD: Standard Height / Depth
- DEEP: 3mm Higher / Deeper than Standard
- 3BP: Compatible with Raspberry Pi 2B/3B/3B+
- RP4 / 4: Compatible with Raspberry Pi 4
- SS / SIDE / RAIL: Side Mounting Rail Mounting
- VESA: 75x75 Vesa Mounting
- NO MOUNT: Case Doesn't Offer Mounting
- TOP: Top Portion of Case
- BOTTOM: Bottom Portion of Case
- SET: Contains Parts for Full Case.
- MK3S: For Prusa MK3S Printer
- MINI: For Prusa MINI

Fan Module: The fan module uses a 40x40x10mm fan. I have tried tons of manufacturers fans and they all snap in the module perfectly. The trick is to gently insert the fan straight on (not crooked). Getting it back out is a bit trickier, in fact, I typically break the tabs trying to get the fan back out. This is the limitation of making a Snap-In module with a 3D printer that uses layers. It is recommended to use the DEEP top for fan and OLED modules.

OLED: I have a document on how I got the OLED wired and what software was installed. The file is a very rough outline; if anyone wants it it is available [here](#). It is a work in progress and I will keep updating. It is recommended to use the DEEP top for fan and OLED modules.

Rails: I have uploaded rails for several mounting options including a Prusa MK3S rail, Mini Rail, and a Left/Right Wall Mount rail. The Prusa MK3S rail uses the two open M3 screw holes directly above the control box. There are also two rails for the Prusa Mini. One Rail is designed to mount your Raspi on the 3030 behind the controller, and one is designed to mount your Raspi on the 3030 in the Rear Left corner. Both of these rails can be used to mount your Raspi in many other places too! I have also included M3 Roll Nuts in the design The Mount behind the Mini Controller Requires 2x M3x12mm flathead screws and 2x M3 nuts. The Mini Rear Left Mount Requires 2x M3x18mm flathead screws and 2x M3 nuts.

Rail Update: (01/06/2022) There are now two widths of rails STANDARD and DEEP. A new top size was added, and the DEEP rail is needed when using this new top. Additionally, all rails lock into place now. When putting the Pi on the rails, if you give a little extra force at the end it should pop into a locked position.

** Disclaimer: This design requires a perfect printer setup. The amount of material on the tabs is so small, that the slightest layer adhesion issue and the tab will break. I have printed and tested hundreds of these on my Prusa MK3S/Mini Printer's and the design is solid. If you are having issues with the tabs breaking, please look at your print settings.

Model files

 **3MF_MK3S** 6 files

**nomount_2_3b_3bp_set_mk3s_std.3mf**
☐ Raspi 2/3B/3B+ / No Mount / 3MF MK3S / STANDARD

**nomount_4_set_mk3s_std.3mf**
☐ Raspi 4 / No Mount / 3MF MK3S / STANDARD

**sidemount_2_3b_3bp_set_mk3s_std.3mf**
☐ Raspi 2/3B/3B+ / Side Mount / 3MF MK3S / STANDARD

**sidemount_4_set_mk3s_std.3mf**
☐ Raspi 4 / Side Mount / 3MF MK3S / STANDARD

**vesamount_2_3b_3bp_set_mk3s_std.3mf**
☐ Raspi 2/3B/3B+ / VESAS / 3MF MK3S / STANDARD

**vesamount_4_set_mk3s_std.3mf**
☐ Raspi 4 / VESA / 3MF MK3S / STANDARD



RASPI_4_STL_SETS

3 files



nomount_4_set_std.stl

☐ Basic Case for Raspi 2/3B/3BP (No Mounting Options) / STANDARD



vesamount_4_set_std.stl

☐ Vesa Mount Set for Raspi 4 / STANDARD



sidemount_4_set_std.stl

☐ Side Mount Set for Raspi 4 / STANDARD



RASPI_2_3B_3BP_STL_SETS

3 files



nomount_2_3b_3bp_set_std.stl

☐ Basic Case for Raspi 2/3B/3BP (No Mounting Options) / STANDARD



vesamount_2_3b_3bp_set_std.stl

☐ Vesa Mount Set for Raspi 2/3B/3BP / STANDARD



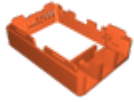
sidemount_2_3b_3bp_set_std.stl

☐ Side Mount Set for Raspi 2/3B/3BP / STANDARD



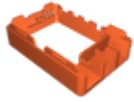
TOP_STLS_STANDARD

4 files



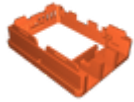
__raspi_top_1_05-rp3bp_std.stl

☐ Raspi 2/3B/3B+ / No Mount or VESA / Top - STANDARD



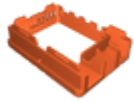
__raspi_top_1_05-rp4_std.stl

☐ Raspi 4 / No Mount or VESA / Top - STANDARD



__raspi_top_1_05-ss_3bp_std.stl

☐ Raspi 2/3B/3B+ / Side Mount / Top - STANDARD



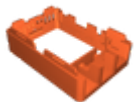
__raspi_top_1_05-ss_4_std.stl

☐ Raspi 4 / Side Mount / Top - STANDARD



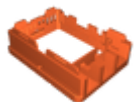
TOP_STLS_DEEP

4 files



__raspi_top_1_06a-3bp_deep.stl

☐ Raspi 2/3B/3B+ / No Mount or VESA / Top - DEEP



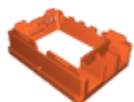
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☐ Raspi 2/3B/3B+ / Side Mount / Top - DEEP



__raspi_top_1_06a-rp4_deep.stl

☐ Raspi 4 / No Mount or VESA / Top - DEEP



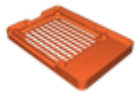
__raspi_top_1_06a-ss_4_deep.stl

☐ Raspi 4 / Side Mount / Top - DEEP



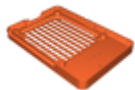
BOTTOM_STLS_INDIVIDUAL

6 files



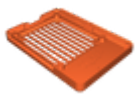
__raspi_bottom__1_05-rp3bp.stl

☐ Raspi 2/3B/3B+ / No Mount / Bottom



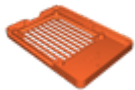
__raspi_bottom__1_05-rp4.stl

☐ Raspi 4 / No Mount / Bottom



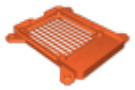
__raspi_bottom__1_05-ss_3bp.stl

☐ Raspi 2/3B/3B+ / Side Mount / Bottom



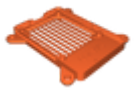
__raspi_bottom__1_05-ss_4.stl

☐ Raspi 4 / Side Mount / Bottom



__raspi_bottom__1_05-rp3bp-v75.stl

☐ Raspi 2/3B/3B+ / VESA / Bottom



__raspi_bottom__1_05-rp4-v75.stl

☐ Raspi 4 / VESA / Bottom



MODULES_STL

12 files



module_set.stl

☐ Set of all Current Snap In Modules



__raspi_module_1_01-vented_top.stl

☐ Simple Vented Module



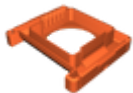
__raspi_module_1_01-snap-in-fan.stl

☐ Snap In Fan Module



__raspi_module_1_01-sif_oled.stl

☐ Snap In Fan Module with 128x32 OLED



__raspi_module_1_01-sif_term.stl

☐ Snap In Fan with Terminal Slot

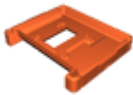


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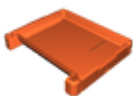
__raspi_module_1_01-blank.stl

☐ Blank Module



__raspi_module_1_01-oled.stl

☐ Terminal Slot with 128x64 OLED



__raspi_module_1_01-2xslot_term.stl

☐ Terminal Slot with 2 Cable Slots



__raspi_module_1_01-oled_only.stl

☐ 128x64 OLED Slot



raspi_module_1_04-sif_camera_slot.stl

☐ Snap In Fan wit Cable Slot for Camera



module_1_01_blank.step

☐ STEP Module for Designing Your Own Module



DEEP_RAILS_STL

6 files



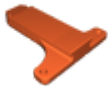
__ss_rail_1_04-mini_rl_deep.stl

☐ Rear Left Mounting Rail for Mini for DEEP top



__ss_rail_1_04-wall_deep_l.stl

☐ Left Wall Mounting Rail for DEEP Top



__ss_rail_1_04-mk3s_deep.stl

☐ MK3S Mounting Rail for DEEP top



__ss_rail_1_04-wall_deep_r.stl

☐ Right Wall Mounting Rail for DEEP Top



__ss_rail_1_04-mini_deep.stl

☐ Rear Control Mounting Rail for Mini for DEEP top



__ss_rail_1_04_deep.step

☐ Reference File for DEEP Rail



STANDARD_RAILS_STL

7 files



__ss_rail_1_04-mk3s_std.stl

☐ MK3S Mounting Rail for STANDARD top



__ss_rail_1_04-mini_std.stl

☐ Rear Control Mounting Rail for Mini for STANDARD top



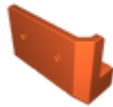
__ss_rail_1_04-mini_rl_std.stl

☐ Rear Left Mounting Rail for Mini for STANDARD top



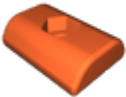
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☐ Right Wall Mounting Rail for STANDARD Top



__ss_rail_1_04-wall_std_l.stl

☐ Left Wall Mounting Rail for STANDARD Top



3030_roll_nut.stl

☐ M3 Roll Nut for 3030 Extrusion



__ss_rail_1_04_std.step

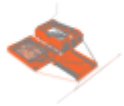
☐ Reference File for STANDARD Rail

Print files



MINI GCODE

6 files



nomount_2_3b_3bp_set_02mm_pla_mini_4h59m_std.gcode

PLA 0.40 mm 0.20 mm 4.98 hrs 50 g Prusa MINI / MINI+

☐ Raspberry Pi 2/3B/3BP / No Mount / MINI / STANDARD



nomount_4_set_02mm_pla_mini_5h6m_std.gcode

PLA 0.40 mm 0.20 mm 5.10 hrs 51 g Prusa MINI / MINI+

☐ Raspberry Pi 4 / No Mount / MINI / STANDARD



vesamount_2_3b_3bp_set_02mm_pla_mini_5h13m_std.gcode

🌀 PLA 📏 0.40 mm 📏 0.20 mm ⌚ 5.21 hrs ⚖️ 52 g 📄 Prusa MINI / MINI+
📁 Raspberry Pi 2/3B/3BP / VESA Mount / MINI / STANDARD



vesamount_4_set_02mm_pla_mini_5h20m_std.gcode

🌀 PLA 📏 0.40 mm 📏 0.20 mm ⌚ 5.33 hrs ⚖️ 53 g 📄 Prusa MINI / MINI+
📁 Raspberry Pi 4 / VESA Mount / MINI / STANDARD



sidemount_2_3b_3bp_set_02mm_pla_mini_8h42m_std.gcode

🌀 PLA 📏 0.40 mm 📏 0.20 mm ⌚ 8.71 hrs ⚖️ 85 g 📄 Prusa MINI / MINI+
📁 Raspberry Pi 2/3B/3BP / Side Rail Mount / MINI / STANDARD



sidemount_4_set_02mm_pla_mini_8h52m_std.gcode

🌀 PLA 📏 0.40 mm 📏 0.20 mm ⌚ 8.87 hrs ⚖️ 86 g 📄 Prusa MINI / MINI+
📁 Raspberry Pi 4 / Side Rail Mount / MINI / STANDARD



MK3S GCODE

6 files



nomount_2_3b_3bp_set_02mm_pla_mk3s_5h8m_std.gcode

🌀 PLA 📏 0.40 mm 📏 0.20 mm ⌚ 5.14 hrs ⚖️ 50 g 📄 Prusa MK3/S/S+
📁 Raspberry Pi 2/3B/3BP / No Mount / MK3S / STANDARD



nomount_4_set_02mm_pla_mk3s_5h18m_std.gcode

🌀 PLA 📏 0.40 mm 📏 0.20 mm ⌚ 5.31 hrs ⚖️ 51 g 📄 Prusa MK3/S/S+
📁 Raspberry Pi 4 / No Mount / MK3S / STANDARD



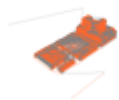
vesamount_2_3b_3bp_set_02mm_pla_mk3s_5h26m_std.gcode

🌀 PLA 📏 0.40 mm 📏 0.20 mm ⌚ 5.44 hrs ⚖️ 52 g 📄 Prusa MK3/S/S+
📁 Raspberry Pi 2/3B/3BP / VESA Mount / MK3S / STANDARD



vesamount_4_set_02mm_pla_mk3s_5h31m_std.gcode

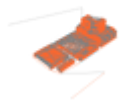
🌀 PLA 📏 0.40 mm 📏 0.20 mm ⌚ 5.52 hrs ⚖️ 53 g 📄 Prusa MK3/S/S+
📁 Raspberry Pi 4 / VESA Mount / MK3S / STANDARD



sidemount_2_3b_3bp_set_02mm_pla_mk3s_9h4m_std.gcode

🌀 PLA 📏 0.40 mm 📏 0.20 mm ⌚ 9.06 hrs ⚖️ 85 g 🖨️ Prusa MK3/S/S+

📁 Raspberry Pi 2/3B/3BP / Side Rail Mount / MK3S / STANDARD



sidemount_4_set_02mm_pla_mk3s_9h9m_std.gcode

🌀 PLA 📏 0.40 mm 📏 0.20 mm ⌚ 9.15 hrs ⚖️ 86 g 🖨️ Prusa MK3/S/S+

📁 Raspberry Pi 4 / Side Rail Mount / MK3S / STANDARD

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