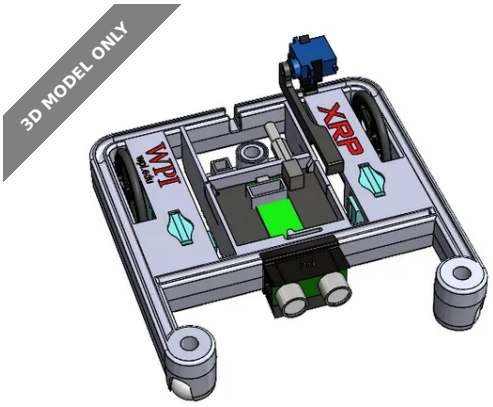


XRP Robot, part of the Experiential Consortia

Experiential

VIEW IN BROWSER

updated 18. 10. 2024 | published 18. 10. 2024

Summary

These are the 3d-printable components of the XRP robot. See https://www.sparkfun.com/products/22230 for more info.

Learning > Engineering

Tags: robot stem robotics curriculum

These are the latest printable files for the XRP robot, they may be read into any slicer and prepared for printing. Solidworks CAD files are available by request only at this time.

For printing we recommend .2mm layer height, 5% fill, two outer layers, three top and bottom layers. Grid fill pattern is preferred, no brim (unless you need it). Take note of the breakaway details, this governs the orientation of parts on the bed.

The files have all been tested on a Bambu Labs P1P printer, but they can be printed on other machines as well.

The XRP kit ships with 7 printed plastic parts:

(1) Single Part Frame: the main chassis for the robot. all the other part attach to this chassis. (includes breakaway support material that can be

removed after the print). This should be printed upside-down, with the logo side against the bed.

(1) Reflectance Sensor Bracket : a clip to attach the reflectance sensor to the frame. (includes support material that can be removed after the print)

(1) Peripheral - Ultrasonic Clip : a clip to attach the ultrasonic distance sensor to the frame (includes support material that can be removed after the print)

(1) Lifter Hook : a little lifter arm that attaches to the servo

(1) Lifter Clip : the clip that attaches the servo to the frame

(1) Battery Cover : a cover for retaining the batteries that snaps into the bottom of the chassis. Note: The Battery cover has shown to be a possible point of failure; the little spring clip can snap off if handled roughly. We suggest this particular part be printed in PET-G, and with increased infill (50% or more), to give it greater break resistance.

(2) Wheel: the wheel that attaches to the motors. You'll need two for your robot!

I have added two new models, both in alpha form (not heavily tested):

- Modified chassis with many holes for various purposes, plus provisions for the new battery pack retainer. Also now with V1.5 stronger “fingers” for the ball wheels, less prone to breakage
- The newly redesigned battery pack retainer for use with the above frame.

These two new files are a pair, meant to work together, not to be confused with parts from the original design.

Also see:

https://www.printables.com/model/627111-holder-for-controllerbit

https://www.printables.com/model/627118-bracket-for-microbit-breakout-board-for-use-on-xrp

Model files

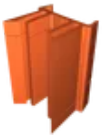
lifter-hook-bigger-slot.3mf

lifter-clip.3mf

single-part-frame-v13.3mf

☐ The current (old) chassis.

reflectance-sensor-bracket.3mf



peripheral-ultrasonic-clip.3mf

alpha-battery-pack-retainer-3.3mf

☐ Use with the V1.5.x chassis

battery-cover-3.3mf

☐ Use with the older chassis.

wheel-fixed-bore.3mf

☐ Corrects looseness that exists with the current motors.

single-part-frame-v151.3mf

☐ Includes all the updates as of 10-18-2024.

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