

micro-Duck: files to print

All 27 files for the XGO-Duck from the Luwu Dynamics repository, 35 pieces. Optional lines are the roller skates. Sizes are measured in the saved orientation.

Legs and feet

File	Qty	Size (mm)	Mat.	Notes
☐ 2x_shank.stl	x2	58 x 7 x 20	PLA	The lower leg.
☐ 2x_thigh_support.stl	x2	58 x 43.5 x 1.4	PLA	A flat plate, 1.4 mm thick.
☐ thigh_left_shell.stl	x1	61.2 x 25 x 47.5	PLA	Left only. Not a mirror copy.
☐ thigh_right_shell.stl	x1	61.2 x 25 x 47.5	PLA	Right only. Not a mirror copy.
☐ left_foot.stl	x1	54 x 26.4 x 39.7	PLA	Holds a bearing (assembly guide, page 11). Good test part.
☐ right_foot.stl	x1	54 x 26.4 x 39.7	PLA	Same page: the right foot uses other screws than the left.
☐ 2x_ankle_axis.STL	x2	10 x 3 x 10	PLA	Small. Quick to print.
☐ 2x_foot_bottom_tpu.stl	x2	54 x 7.2 x 40	TPU	The soft sole. Check its direction when you fit it (guide, page 15).

Hips

File	Qty	Size (mm)	Mat.	Notes
☐ 2x_hip_rol_output.stl	x2	34 x 32 x 19	PLA	
☐ 2x_hip_rol_shell.stl	x2	1.4 x 40 x 23	PLA	A thin plate, 1.4 mm.
☐ 2x_hip_yaw2rol.STL	x2	26.2 x 26 x 23	PLA	The inventory says 1 copy, the file name says 2. The guide has no part names, so I settle it by comparing the printed parts with its photos.
☐ hip_yaw_support.STL	x1	57 x 1 x 38	PLA	A thin plate, 1 mm.

Body

File	Qty	Size (mm)	Mat.	Notes
☐ body.stl	x1	59 x 9 x 78.5	PLA	
☐ body_left_shell.stl	x1	32 x 70.9 x 41.7	PLA	Left only.
☐ body_right_shell.stl	x1	33 x 70.9 x 41.7	PLA	Right only.
☐ battery.stl	x1	53.8 x 28 x 71.5	PLA	The battery bracket. The guide (page 23) screws the circuit board onto it with four M3 x 16 screws.

Head, neck and mouth

File	Qty	Size (mm)	Mat.	Notes
☐ head.stl	x1	88.3 x 118.9 x 16	PLA	
☐ head_shell.stl	x1	88 x 124.1 x 48.1	PLA	The biggest part, and the heaviest mesh.
☐ head_pitch.stl	x1	35 x 28.2 x 18	PLA	
☐ head_yaw.STL	x1	35.9 x 22.5 x 34	PLA	
☐ head_servo_support.stl	x1	68.5 x 60.5 x 18.8	PLA	
☐ 2x_neck.stl	x2	20 x 2 x 10	PLA	Very small, 2 mm thick.
☐ eye.stl	x1	17.4 x 7.5 x 17.4	PLA	The inventory says 1. A duck has two eyes, and the guide shows no eyes at all, so the count stays open.
☐ eye_shell.stl	x1	30 x 11.6 x 29.8	PLA	Same open question as the eye.
☐ jaw.stl	x1	88 x 67.7 x 30.1	PLA	Moves with the mouth servo.
☐ mouth_up_tpu.stl	x1	84.3 x 27.2 x 2.4	TPU	Upper mouth, soft. Probably one of the two soft pads taped into the beak (guide, page 21).
☐ mouth_bottom_tpu.stl	x1	80.6 x 29.1 x 7	TPU	Lower mouth, soft. Taped in with double-sided tape. The "bottom" spelling is the real file name.

Optional: roller skates

File	Qty	Size (mm)	Mat.	Notes
☐ 2x_tire_support.STL	x2	77 x 21.5 x 37	?	
☐ 4x_tire.STL	x4	8 x 30 x 30	?	The repository doesn't say which material.
☐ 4x_tire_axis.STL	x4	9.9 x 11 x 9.9	?	

File names only. The STL files are in the repository: github.com/LuwuDynamics/xgoduck_hardware (folder structure). No licence file exists yet, so the files are not published here.

Settings and checks

The repository gives 4 walls, 13% gyroid and the orientation. Everything marked mine is a starting point, not tested.

Setting	Start with	Source
Walls	4	Repository
Infill	13%, gyroid	Repository
Orientation	As in the reference picture, no auto-arrange	Repository
Scale	100%, millimetres	Mine
Layer height	0.2 mm	Mine
Rigid parts	PLA	Mine
Soft parts	TPU (soles and mouth)	File names
Supports	None to begin with, check the preview	Mine
Brim	Off, unless a part lifts	Mine

Left and right

left_ and right_ files are separate parts, not mirror copies. Do not mirror them. 2x_ means print the file twice. Check in the assembly guide (page 8) whether the two copies must differ.

Print these first

Test	Good result
☐ left_foot with a 10 x 15 x 3 mm bearing	Bearing presses in snugly, part does not crack
☐ One bracket for a servo, with a Feetech 1910	Servo fits, screw holes line up
☐ One TPU sole on the foot	Fits and sits flat

Print order

Group	Remark
☐ 1. Test parts	
☐ 2. Legs and feet	Shanks, thigh supports, shells, second foot
☐ 3. Hips	After checking the copies of 2x_hip_yaw2rol
☐ 4. Body	With both shells
☐ 5. Head and neck	Head shell last, it is the biggest
☐ 6. Soft parts	Second sole and mouth parts

Printing log

Fill this in as you print. Upper limit if everything were solid: about 310 g PLA and 50 g TPU. Real use is lower.

Item	Value
Printer	
Nozzle	
PLA and brand	
TPU, brand and hardness	
Layer height	
Supports used	
Total print time	

Group	Filament (g)	Print time	Notes
Test parts			
Legs and feet			
Hips			
Body			
Head, neck and mouth			
Soft parts			
Total			