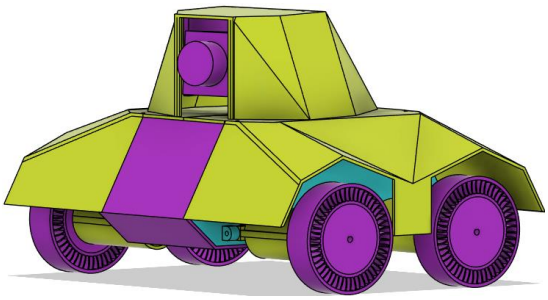
Physical assembly



Print in PLA

- 1x Cybershell left
- 1x Cybershell right
- 1x Cybershell pin
- 2x hingeplate
- 1x main body
- 4x motor holder
- 1x swivel
- 1x enclosure
- 1x turner
- 4x wheel internal

All 80 percent infill except for wheel internal that on 15 percent infill

Print in TPU 95A

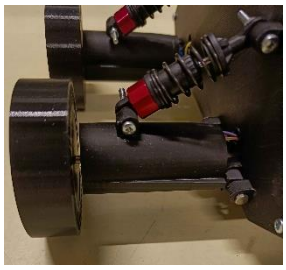
- 4x nonpneumatic wheel
- 4x motor holder insert

80 percent infill

Other parts needed

- 1x Raspberry pi + ai kit with all the code on it
- 2x joy-IT SBC-MotoDriver2
- 1x 5000mAh 11.1-volt LiPo
- 1x SG90 Servo
- Reely Micro-servo Digitale servo Materiaal (aandrijving): Kunststof Stekkersysteem: JR
- 1x Reely 1:10 Hydraulische schokdempers Zwart-blauw Met veren Zwart 1 stuk(s)
- 1x **Arducam 5MP OV5647DS PTZ Camera for Raspberry Pi 4/3B+/3**
- 1x usb a to c cable
- 1x plug for LiPo
- Cables
- Nuts bolts and

Locomotion

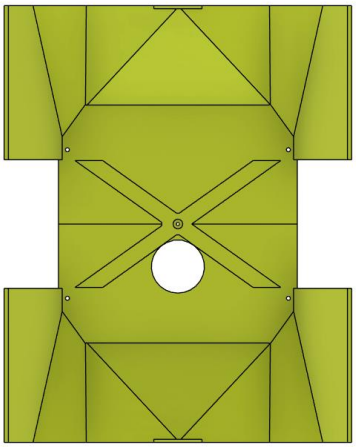


1. Fit a wheel internal on each motor with a hammer and then take it out. This is to make the connection fit
2. Then solder a wire to each motor
3. Insert the motor holder insert into the motor holder make sure all holes line up.
4. Insert the motor and bolt it down tight. Use these m3 bolts:

5. Guide the wires though the hole of the Hingeplate.
6. Bolt the shock dampers to the motor holder with m3 bolts and m3 locking nuts.
7. Then bolt it all to the hingeplate.
8. Then fit the nonpneumatic wheels over the wheel internal.
9. Place the wheels on the motors.
10. Screw the hingeplates to the main body.

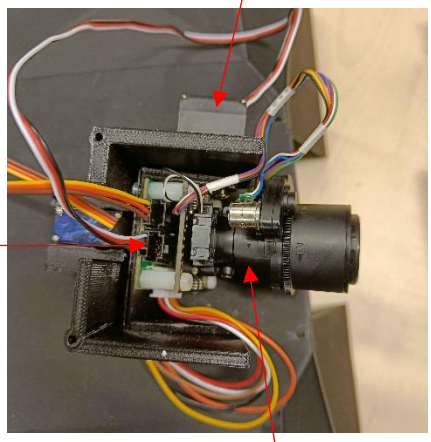
Pan tilt

1. glue the Cybefrshell together with superglue like this:



2. take the turner and insert a bearing might need a vice to put it in
3. take the turner and mount the hingeplate to it with m3 locking nut and m3 bolt

4. place the reely servo and screw it into the hingeplate with the included screw from the sevo.
5. Screw in the sevo to the to the swivel



6. Take the camera parts and make sure they line up like the picture. Use only 4 of the included bolts to connect the this to the white offsets. Connect the rest with these  bolts again directly to the hingeplate.
7. Take the blue servo and cut off the screw in flap closest to the white turning thing.
8. Screw in the servo.
9. Put the assembly into the pin of the Cybershell make sure the blue servo is inserted into the hole of the pin might need to drill out the hole a bit.
10. Screw blue servo to the Cybershell pin.
11. Screw the enclosure to the Turner
12. Plug the servos into the plugs on the camera module

electronics

1. Solder the LiPo plug in that it splits to the two motor controllers.
2. Add a ground from the LiPo to the raspberry pi.
3. Connect the motors to the motor controllers. Back wheels to the same and front wheels to the same
4. Connect the motor controllers to the raspberry pi. (there will come a update with all connections mapped out.

Final assembly

1. Plug in the motor controllers and the raspberry pi
2. Place the power bank in the main body. Then the LiPo on top.
3. Connect the camera through ribbon cable and pint to the raspberry pi through the hole.
4. Fit everything into the main body.
5. Screw on the Cybershell to the Hingeplates
6. Done.