

CatCare

**Leave the care to technology and the
love to you!**

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The Idea



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The Result



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The Idea



Feeder



Litterbox

Auto Feeder

- 1. Remote Food and Water Dispensing.**
- 2. Meal Scheduling.**
- 3. Automatic Water Refill.**
- 4. Container Status Tracking.**
- 5. Optimized Portion Control.**



Smart cleaner Litterbox

1. Entry and Exit Tracking.

2. Maintaining Clean, Waste-Free Sand.

3. Multiple Usage Options:

a. manual.

b. remote.

c. scheduled.

d. automatic cleaning



MOTIVATIONS

1

Simplifying Daily Care

2

Convenience During Absence.

3

Automated Solutions for Undesirable Tasks.



challenges

1

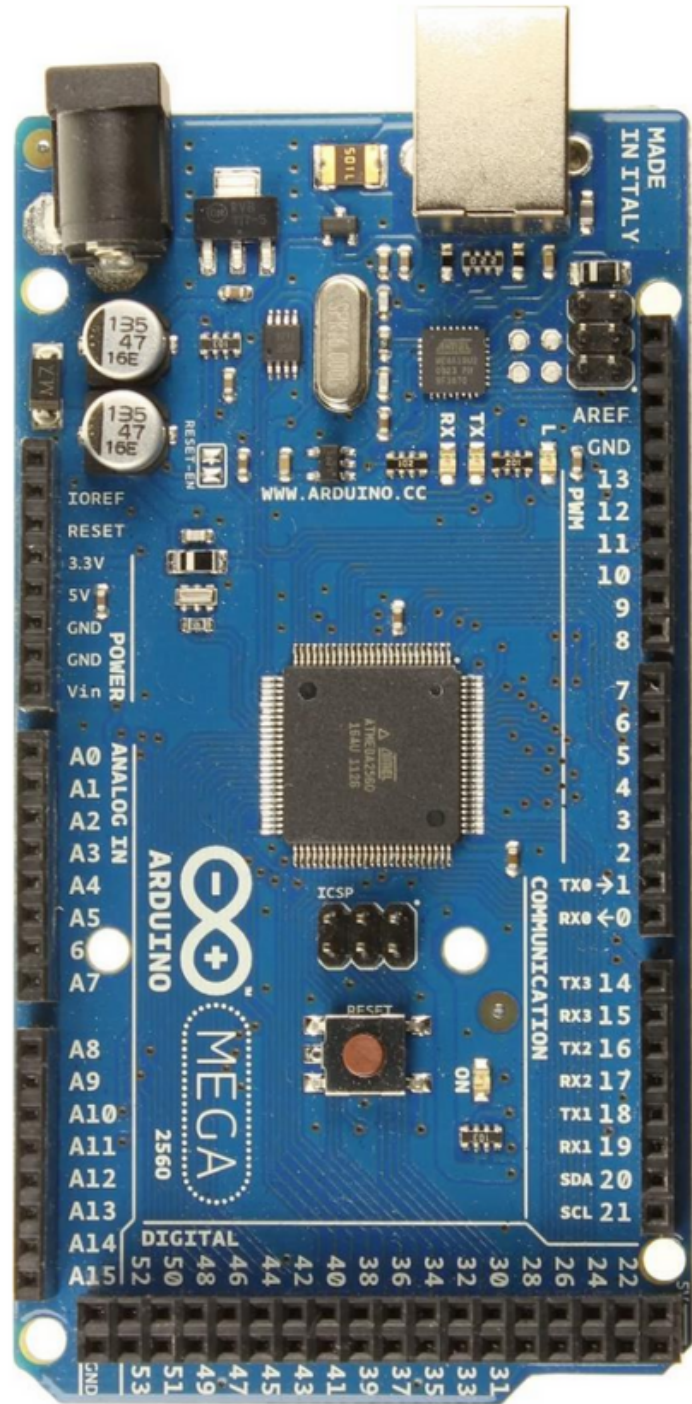
Large Design Size.

2

Cost Constraints.



Components



Arduino Mega 2560



Computer power supply

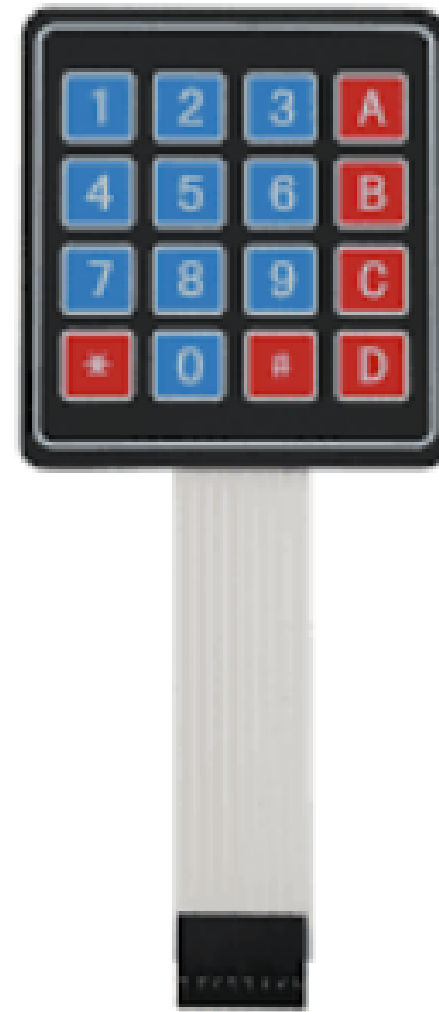


ESP8266EX

Components



LCD 20*4 and I2C



Keypad



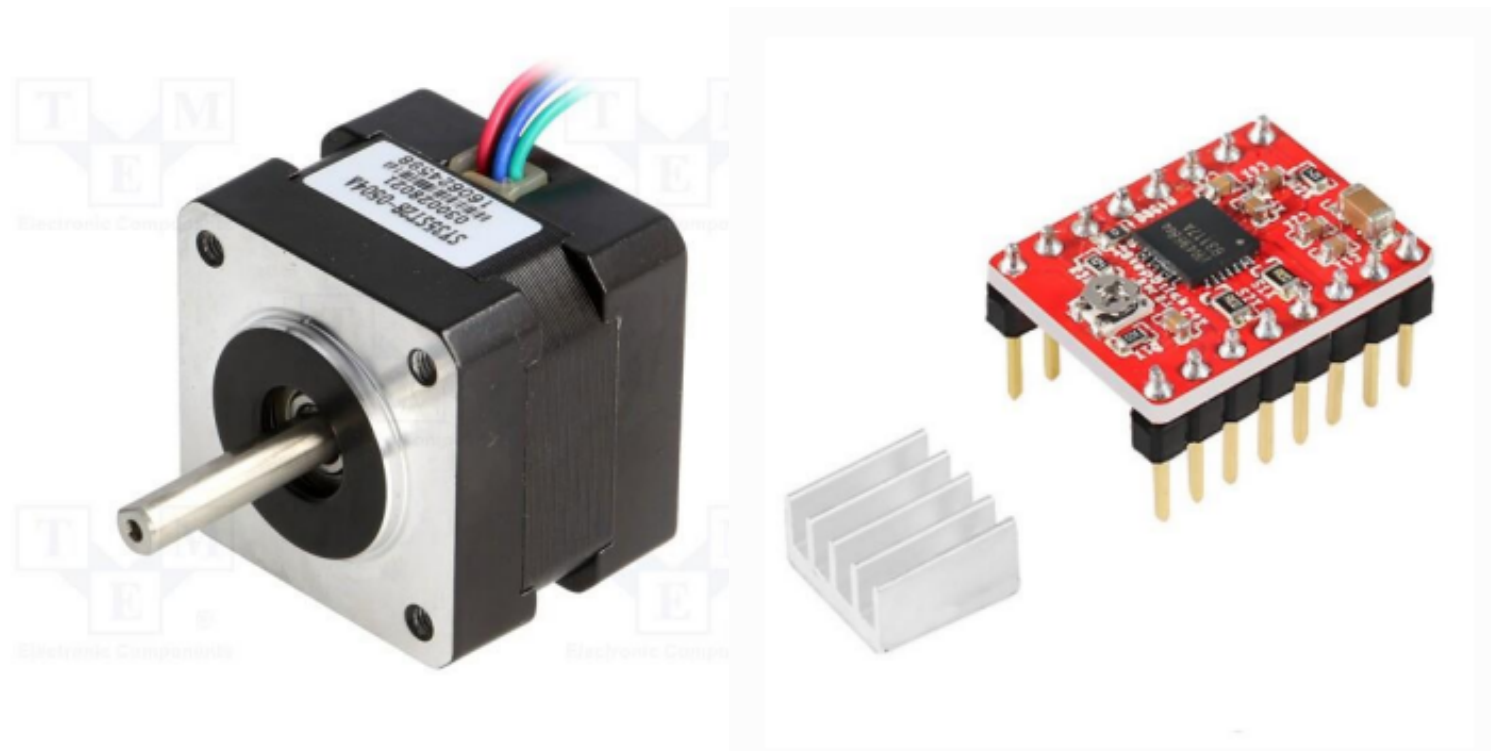
RTC



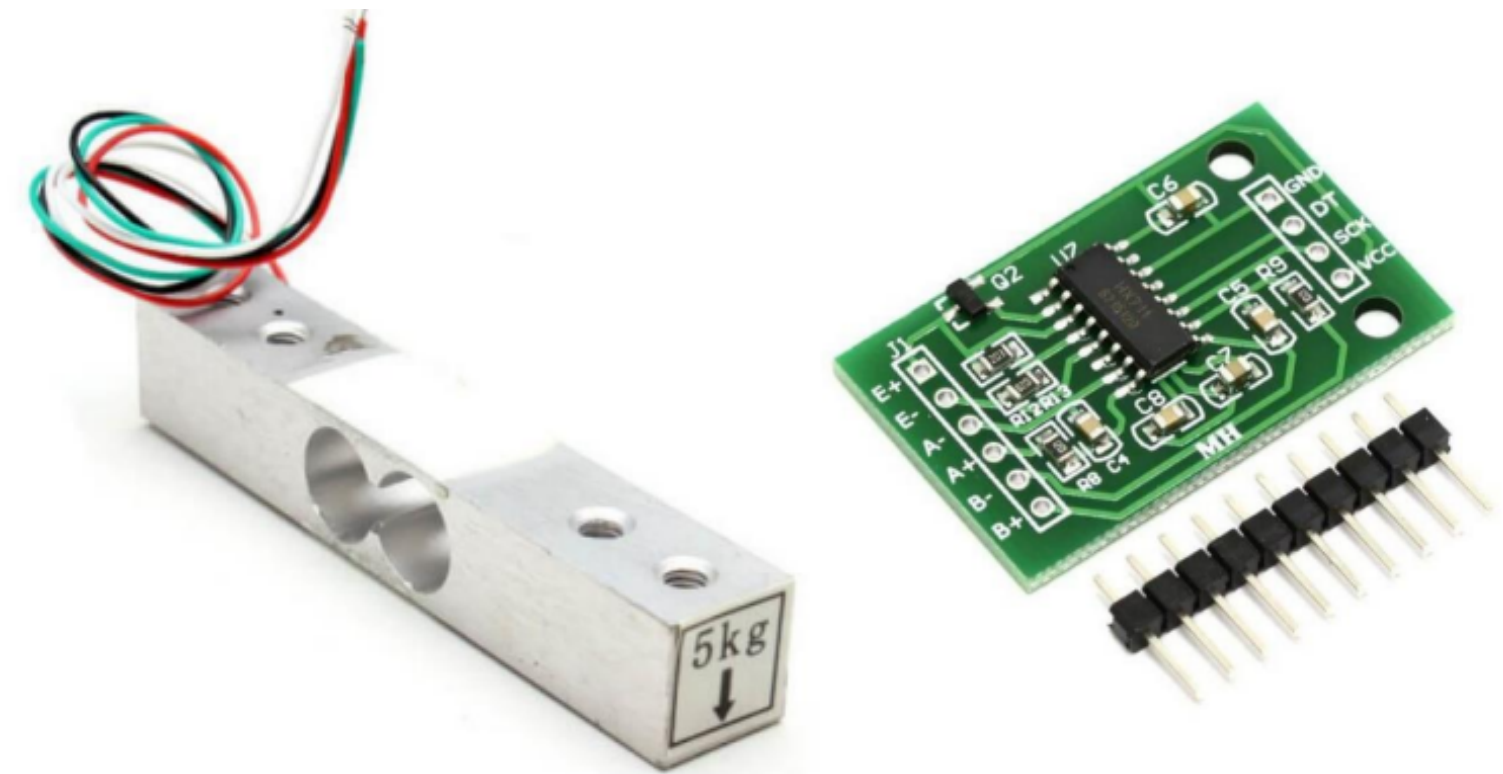
Wires

Components

Feeder



Stepper motor and A4988 Driver



Load Cell and HX711

Components

Feeder



Water pump



Valve



Relays



Ultrasonic sensors

Components

Litterbox



RFID



IR Sensors



**Stepper motor Nema23
with Drive**

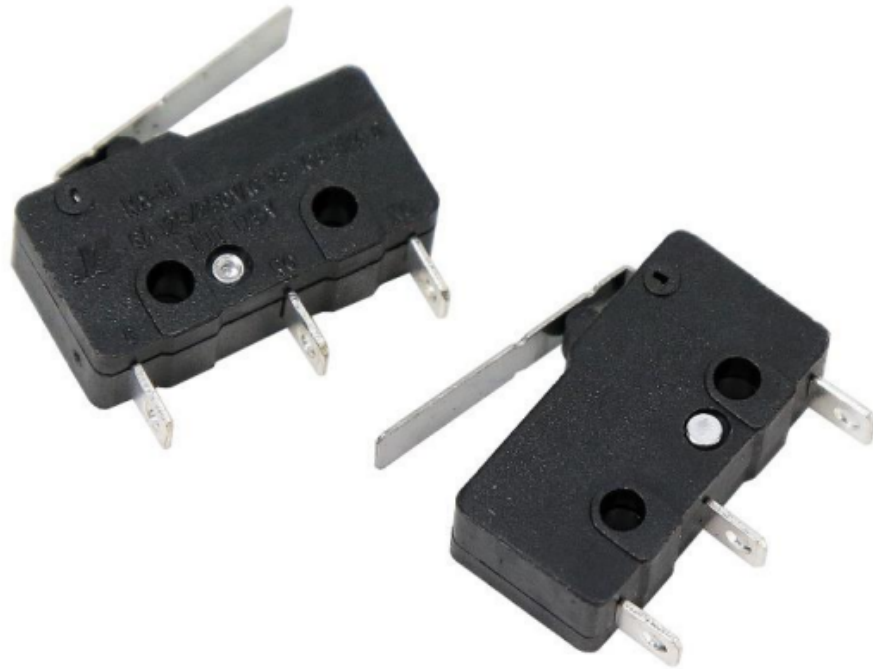


Peak Current	Current Selection Table		
	SW1	SW2	SW3
1.05A	1	1	1
1.45A	0	1	1
1.85A	1	0	1
2.25A	0	0	1
2.65A	1	1	0
3.05A	0	1	0
3.45A	1	0	0
3.85A	0	0	0

Resolution	SW4	SW5	SW6	SW7	SW8
200	0	0	0	0	0
400	0	0	0	1	0
800	0	0	1	0	0
1600	0	1	0	0	0
3200	1	0	0	0	0
6400	0	1	1	0	0
12800	1	0	1	0	0
25600	1	1	0	0	0
51200	0	1	1	0	0
102400	1	1	1	0	0
204800	0	0	1	1	0
409600	1	0	0	1	0
819200	0	1	0	0	1
1638400	1	0	0	0	1
3276800	0	1	0	0	1
6553600	1	1	0	0	1
13107200	0	0	1	1	1
26214400	1	0	1	1	1
52428800	0	1	1	1	1
104857600	1	1	1	1	1

Components

Litterbox



Limit Switches



Push button



LED

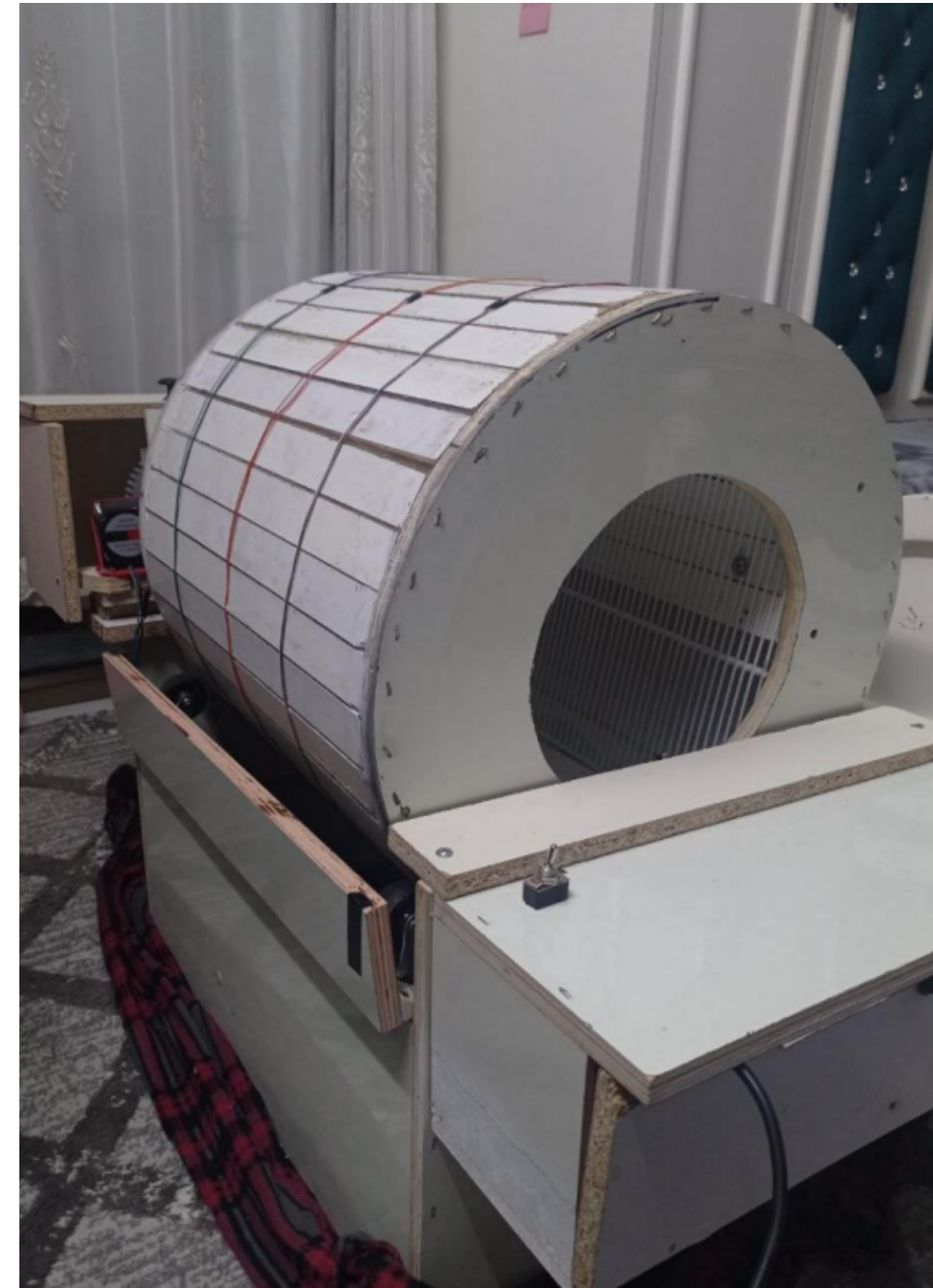


Switch Button

The Result



Feeder



Litterbox

Future work:

1

Cameras for remote cat monitoring.

2

Customize feeding schedules and preferences by using app.

