

# Zo maak je een eigen spelcomputer

# TechDen Zwolle - Disclaimer



# TechDen Zwolle - Wat gaan we doen?

Onderwerpen vanavond;

- 1) Wie/wat/waarom TechDen
- 2) Wat hebben we zoal gedaan?
- 3) Ons nieuwe project; GameConsole
- 4) Inkijkje in de hardware
- 5) Workshop ideeën

# TechDen Zwolle - wie zijn wij?



Gerben



Jacko



Justin

Roland

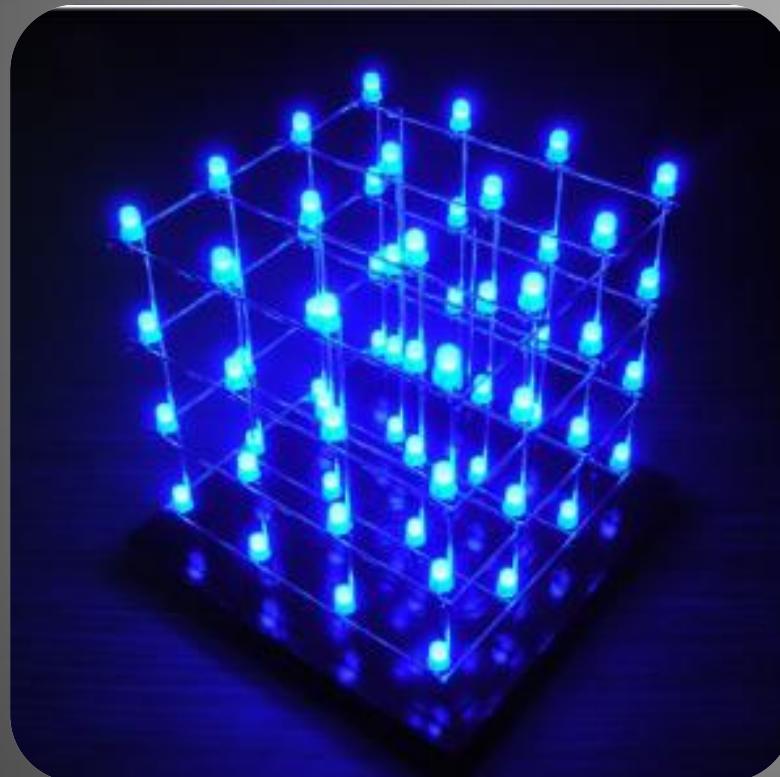


# TechDen Zwolle - Waarom?

Community



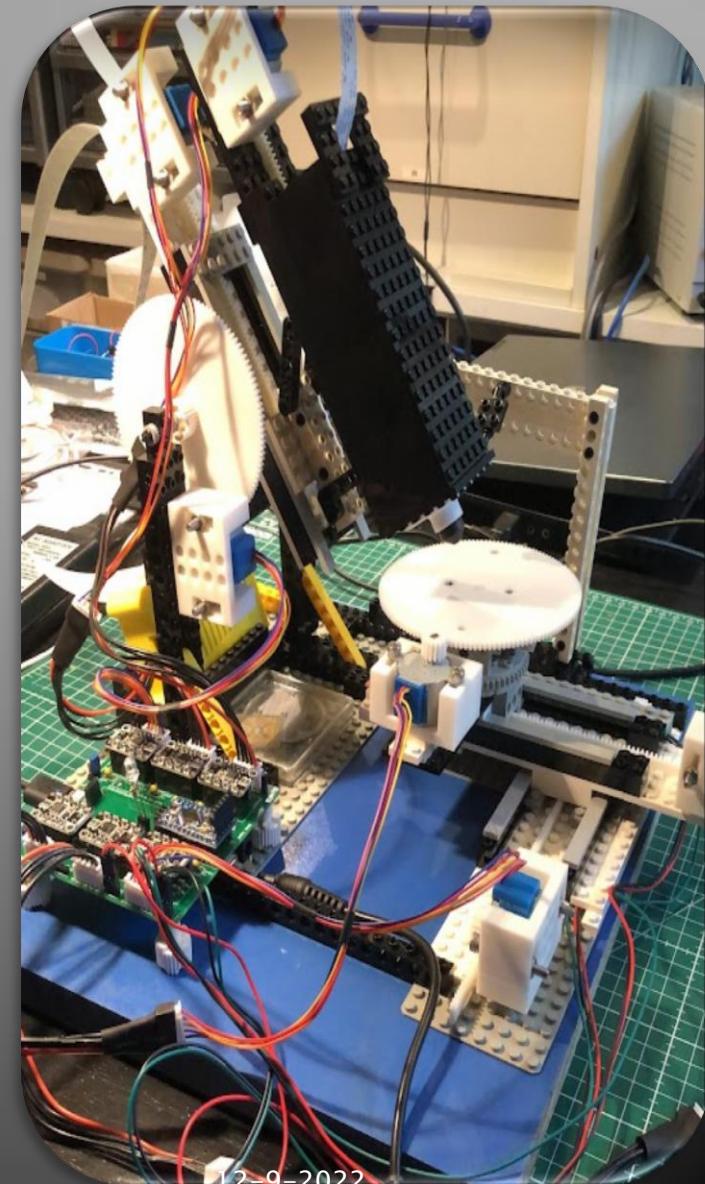
# Eigen projecten - LedCube



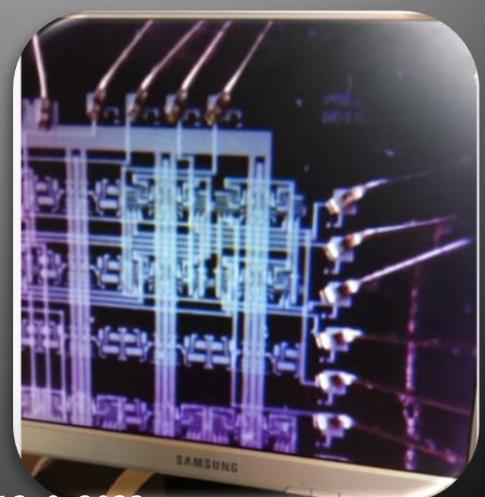
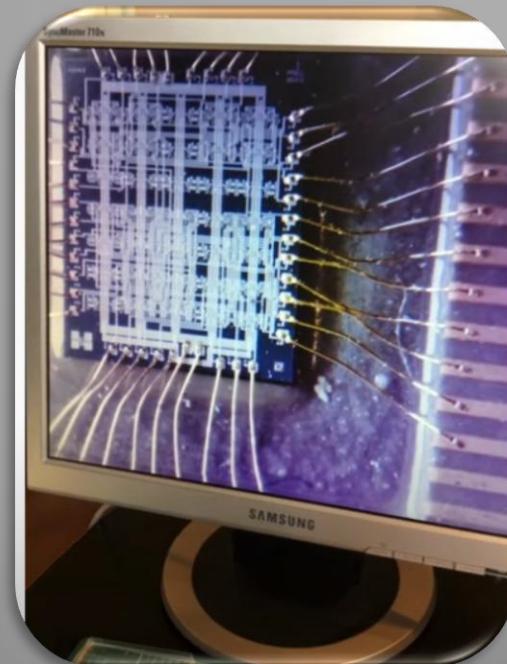
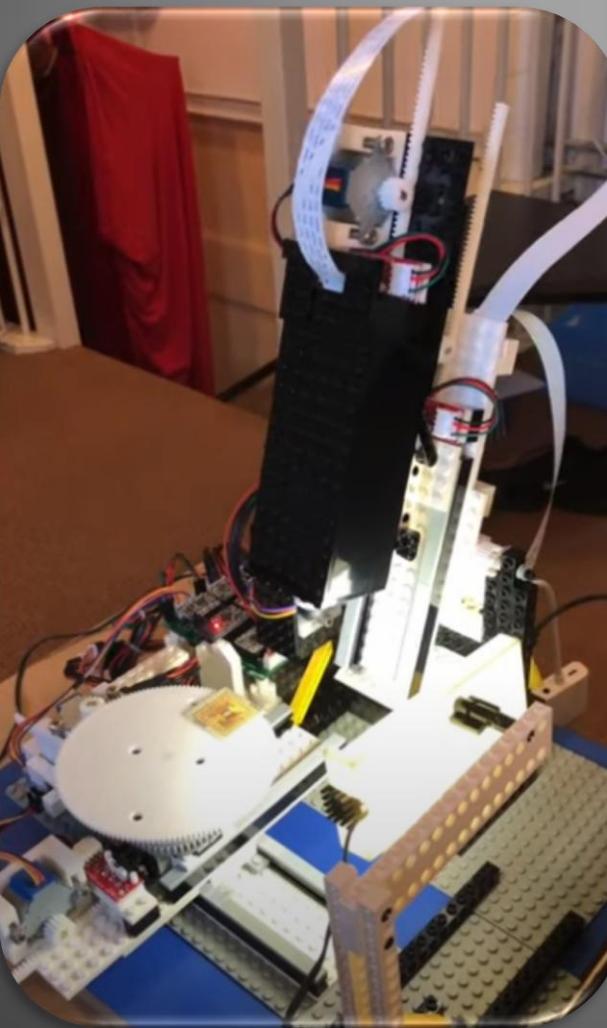
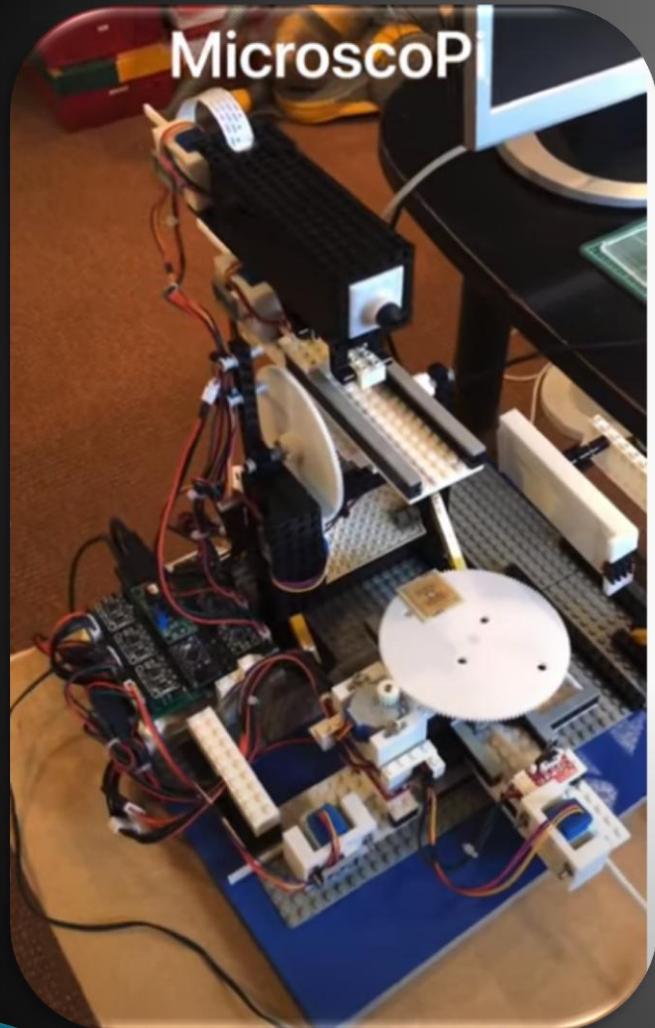
# Eigen projecten - Microscope

Dit DIY microscoop ontwerp combineert veel van mijn hobby's; Lego, elektronica, 3D printen, Arduino, Raspberry Pi, enz.

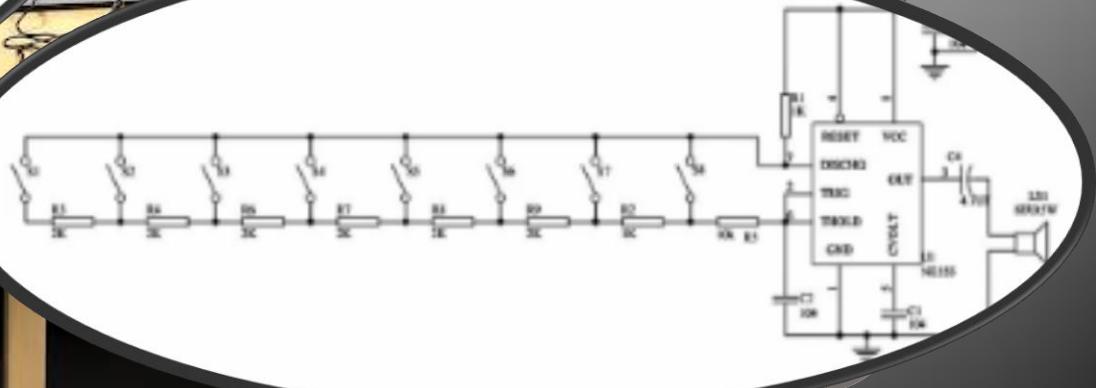
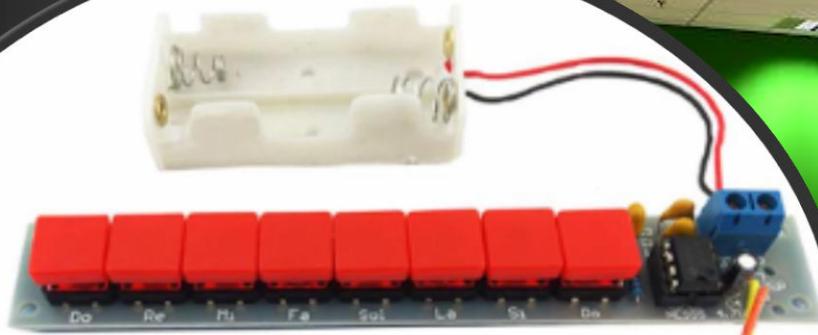
- ▶ Zie YouTube; [MyMicroscopi](#)



# Eigen projecten - Microscope



# Eerdere workshops Solderen



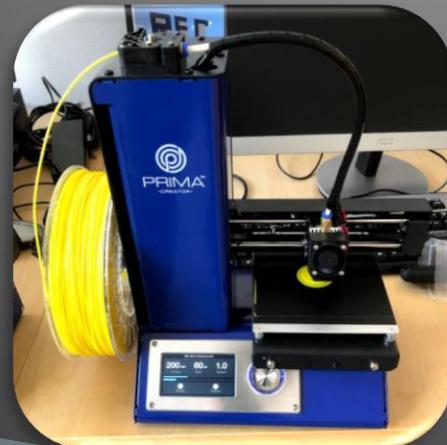
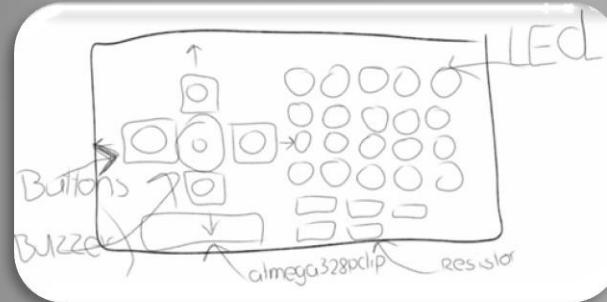
# Nadenken over nieuw project



Wat als.....  
.... we zelf iets  
ontwikkelen voor  
onze workshops !!

# Onze wensen

1. Uitdagend & Leuk
2. b.v. een Game Console
3. Gebaseerd op universele hardware
4. Zelf de Games ontwikkelen
5. Leren door te doen
6. Centraal thema voor diverse workshops



# Workshop ideeën

## Printjes Solderen



# Workshop ideeën

## Programmeren



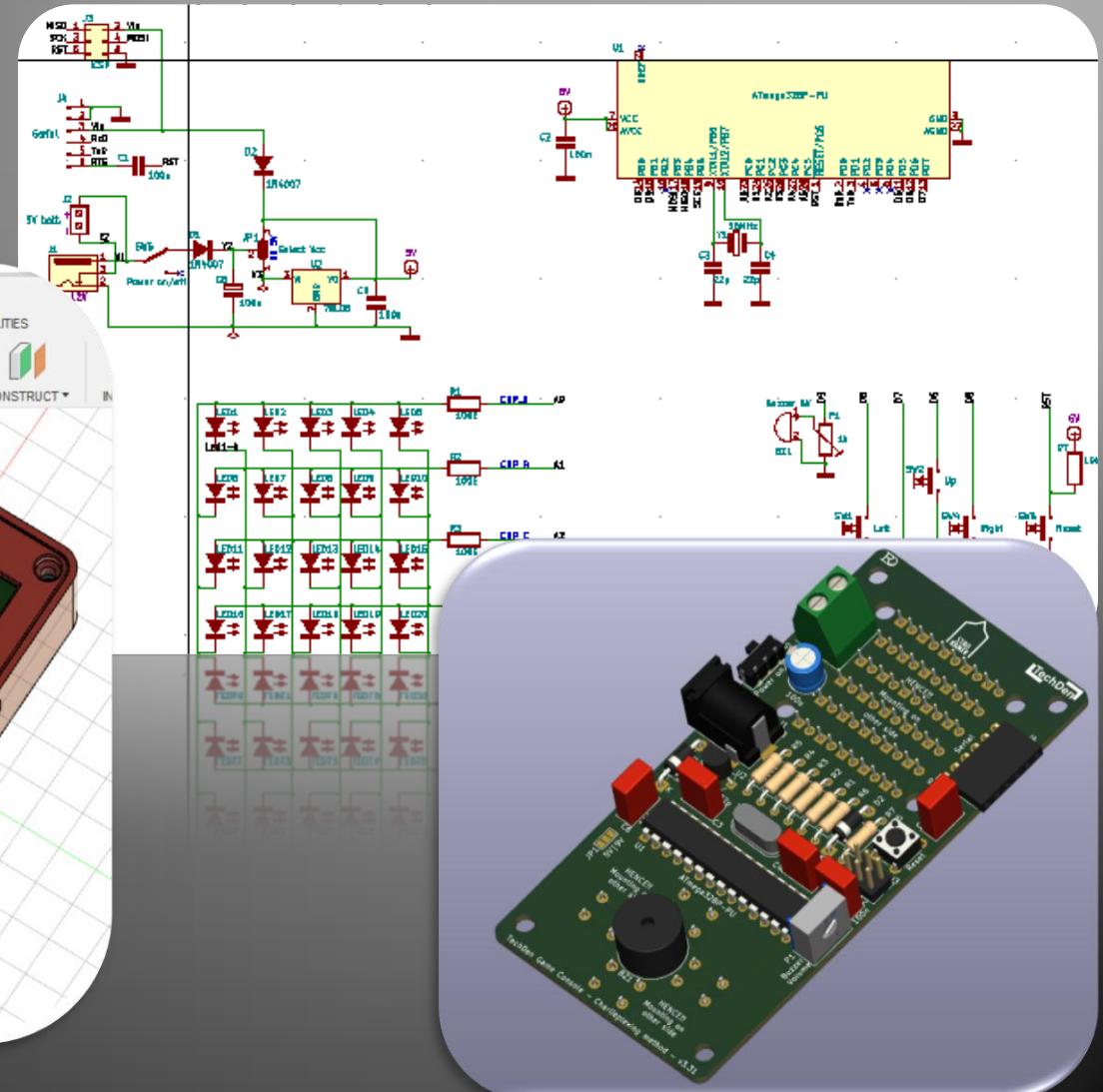
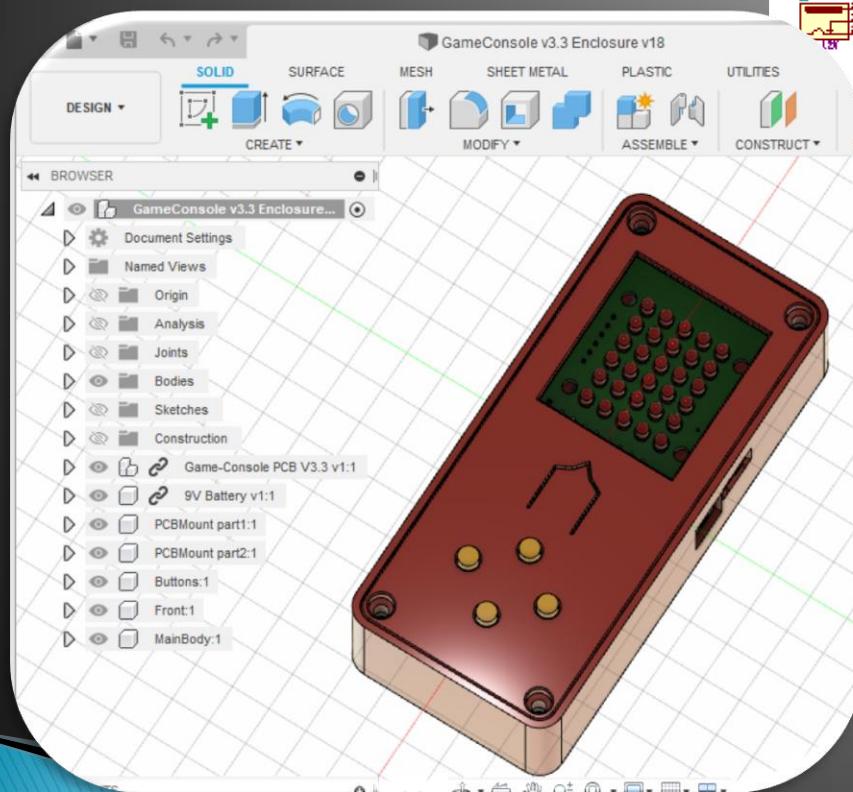
ATMega328\_Charlieplexing\_Atari | Arduino 1.8.15

Bestand Bewerken Schets Hulpmiddelen Help

```
ATMega328_Charlieplexing_Atari
136 uint8_t blinkcount = 0;
137 bool play_onetime=true;
138
139 void setup() {
140
141     // initialize serial communication:
142     Serial.begin(19200);
143     Serial.println("Charlieplexing pong");
144     Serial.println("");
145     Serial.print("press UP to play new ball");
146     Serial.println("");
147     pinMode(ALIVE_LED, OUTPUT);
148     //tatataadaa welcome
149     playSound(WELCOME);
150     // Setup the the buttons with an internal pull-up
151     pinMode(BUTTON_L, INPUT_PULLUP);
152     pinMode(BUTTON_D, INPUT_PULLUP);
153     pinMode(BUTTON_U, INPUT_PULLUP);
154     pinMode(BUTTON_R, INPUT_PULLUP);
155
156     updateFrameBuffer(); //initial led on
157     drawFrame();
158 }
159
160 void loop() {
161     uint8_t r;
```

# Workshop ideeën

## (3D/Schema) Ontwerpen

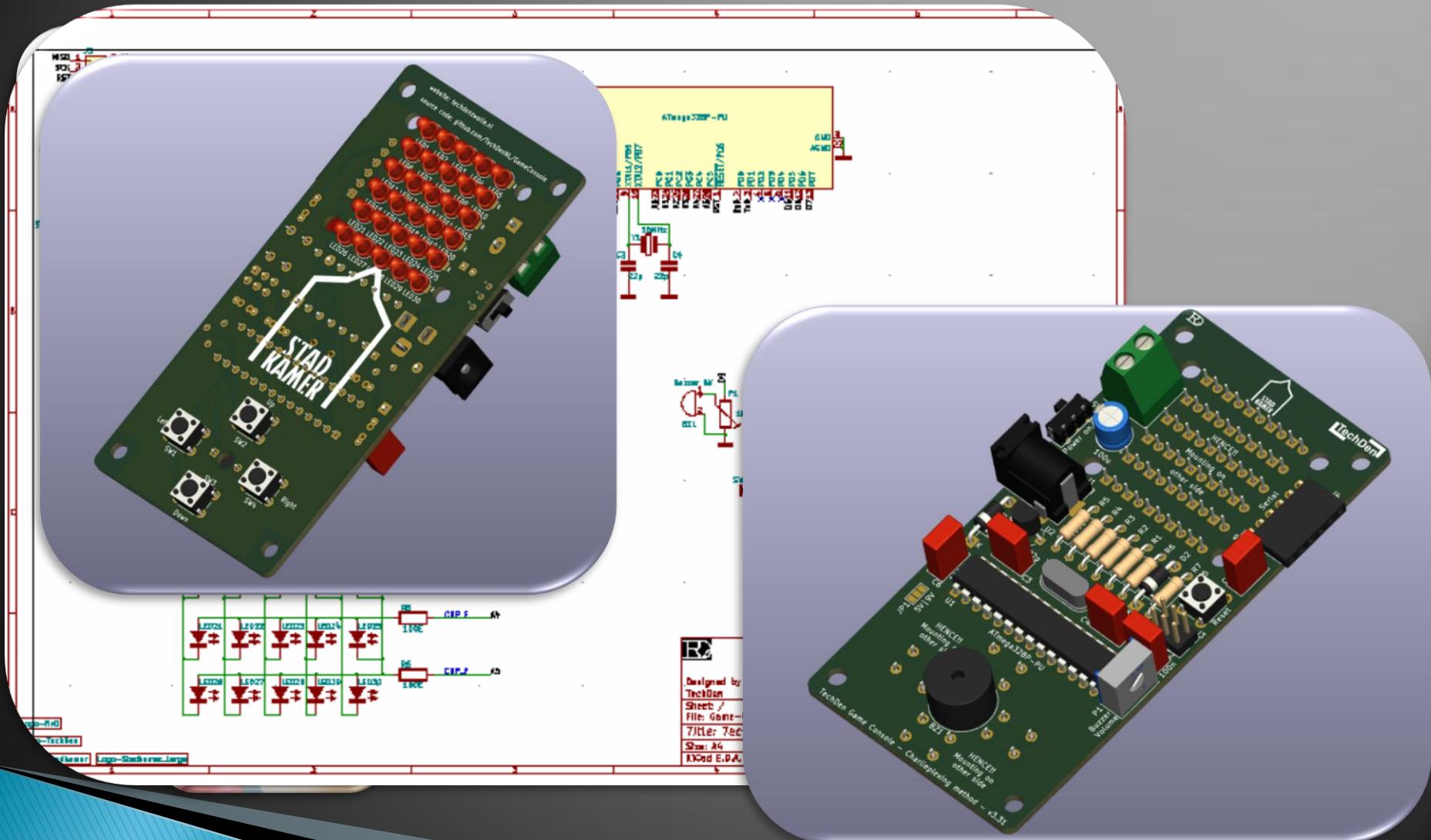


# Workshop ideeën

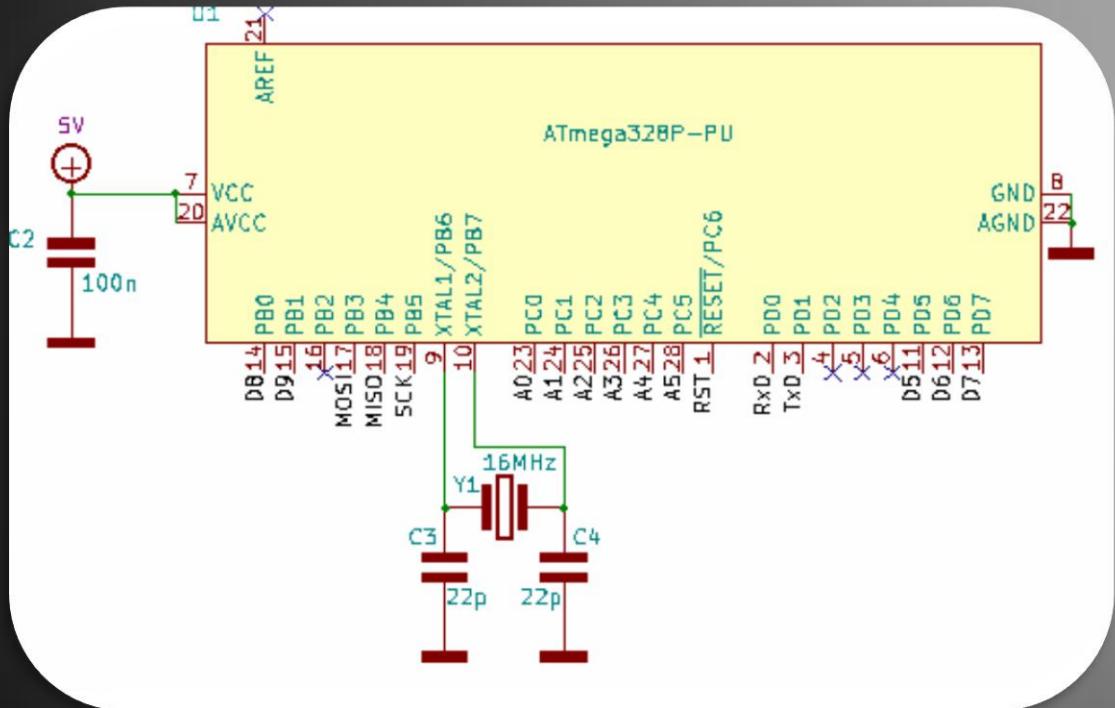
## 3D Printen



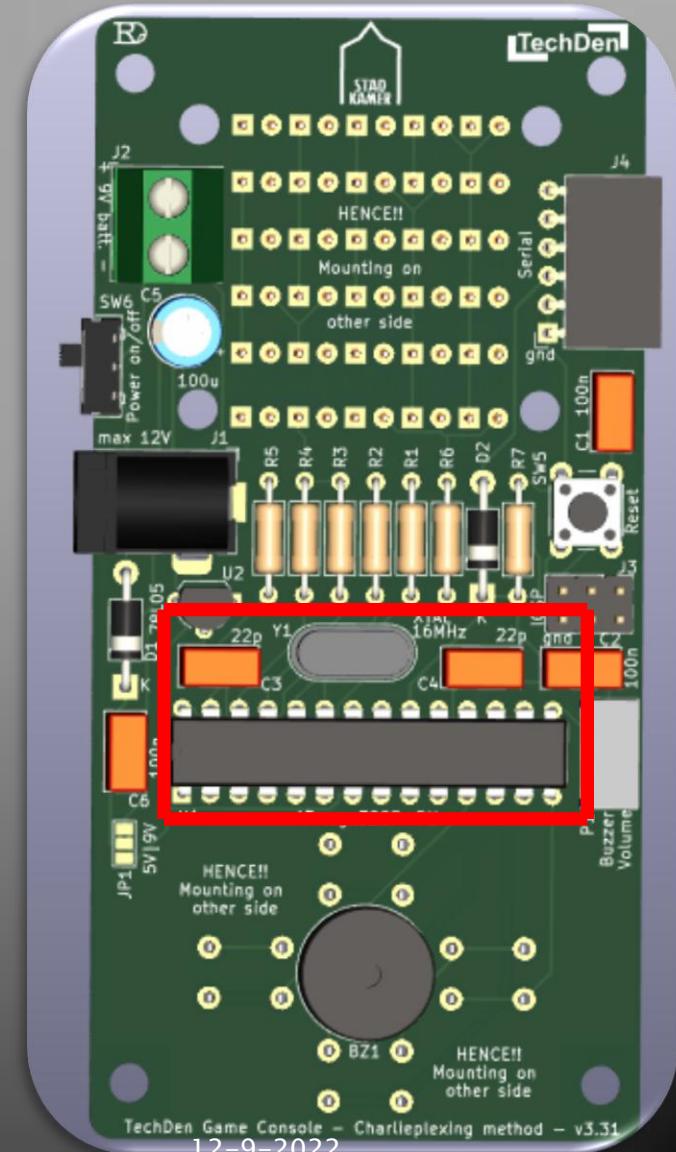
# Ontwikkelstappen Game Console



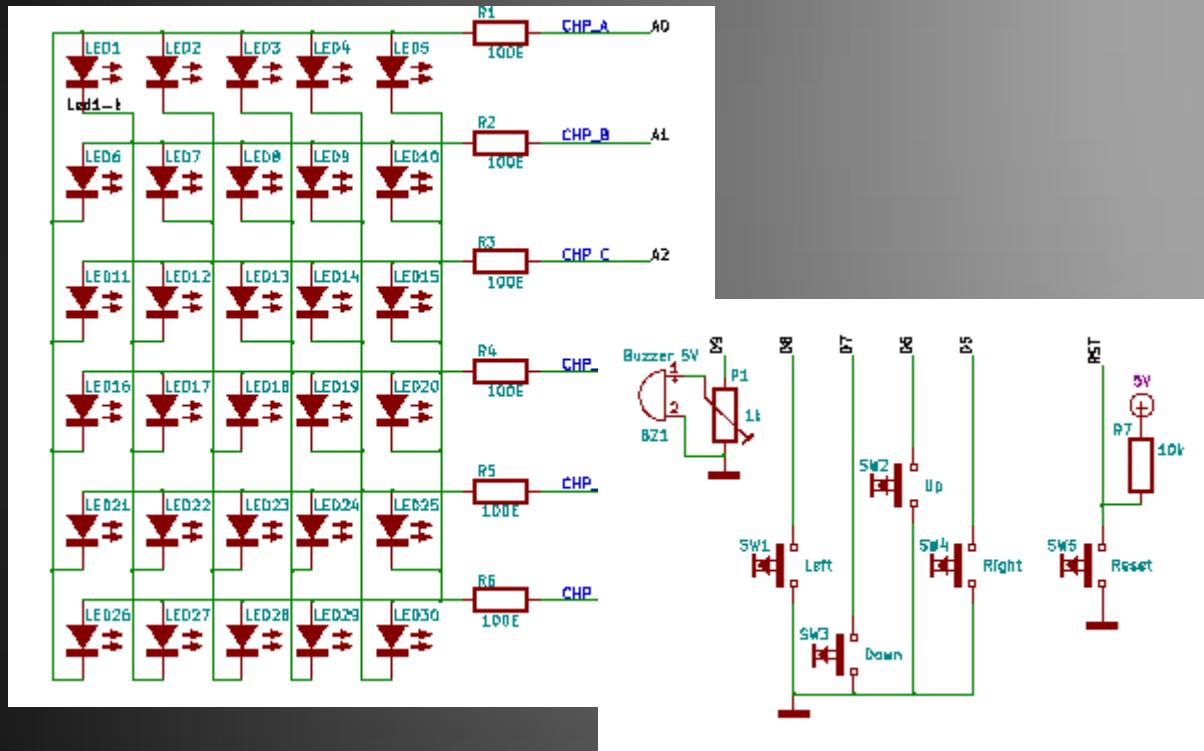
# TechDen GameConsole - Overview HW



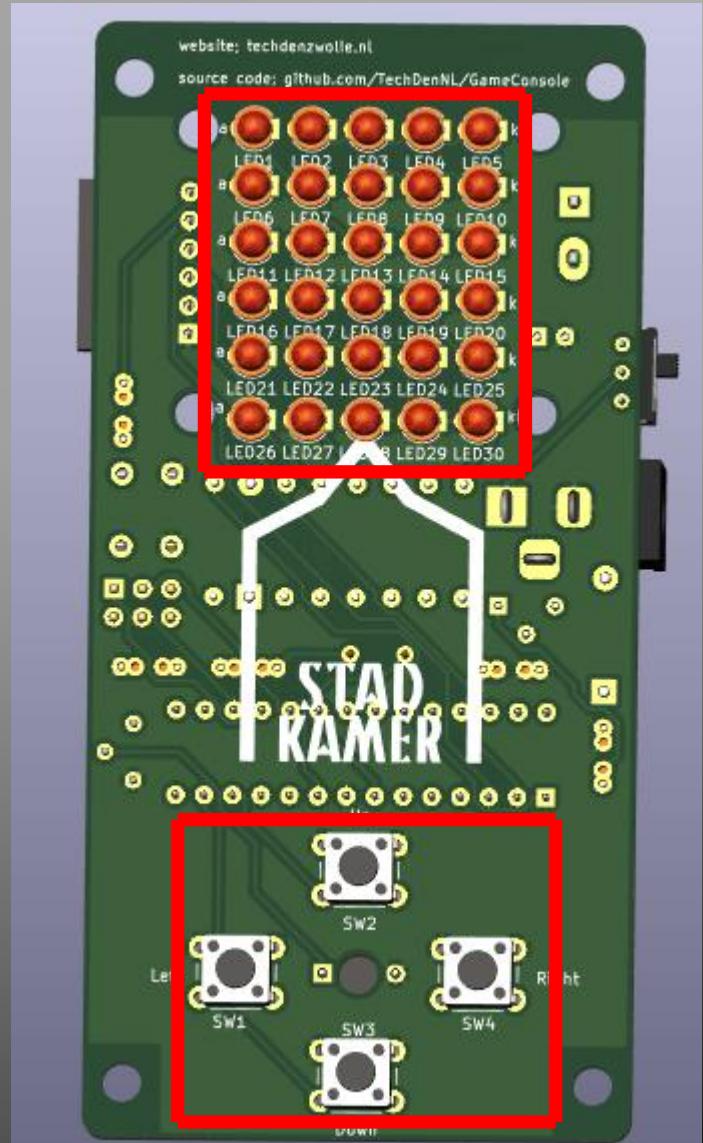
Bare Arduino - ATMega328 chip



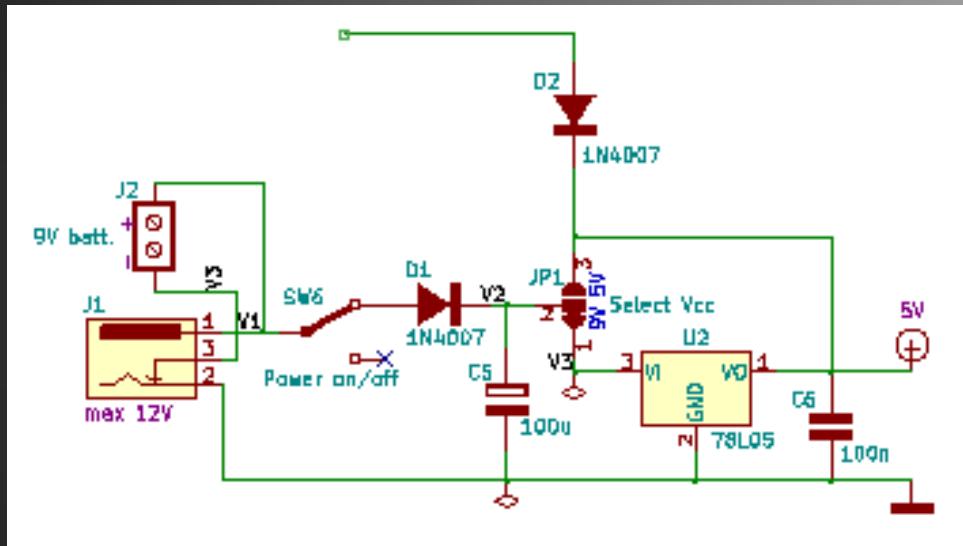
# TechDen GameConsole - Overview HW



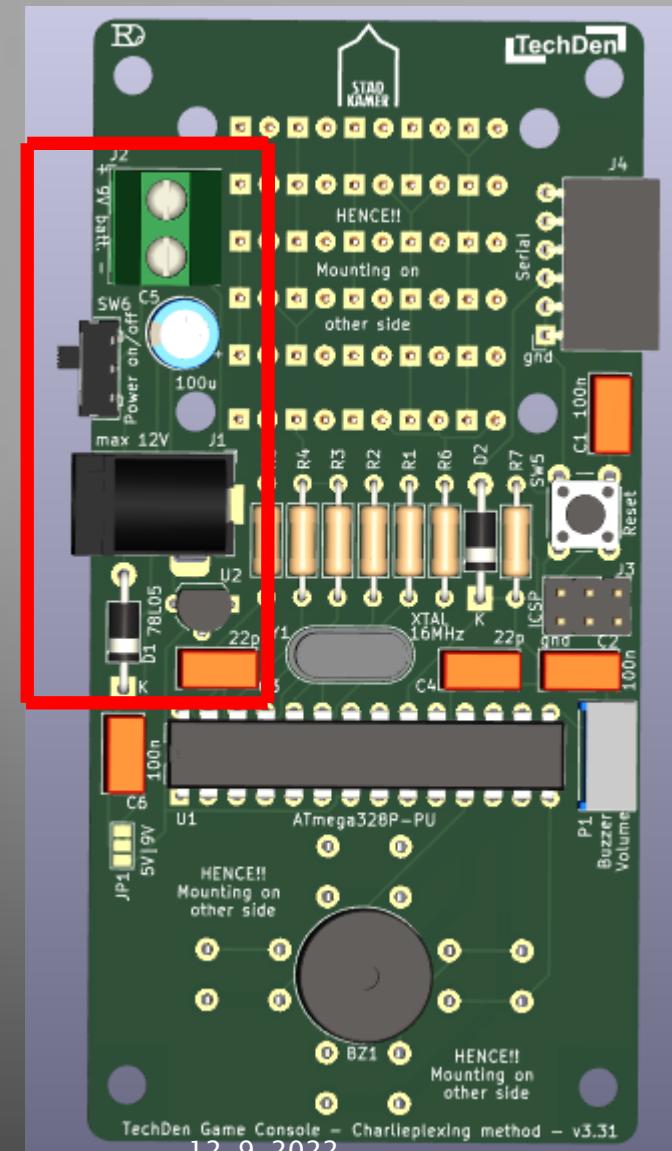
Leds & Buttons



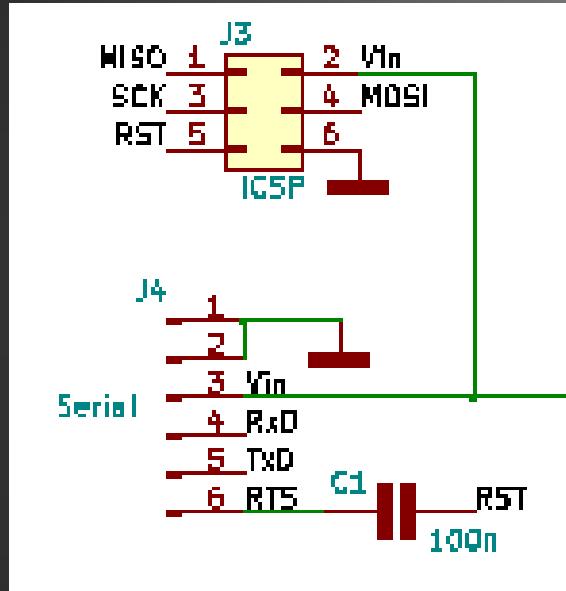
# TechDen GameConsole - Overview HW



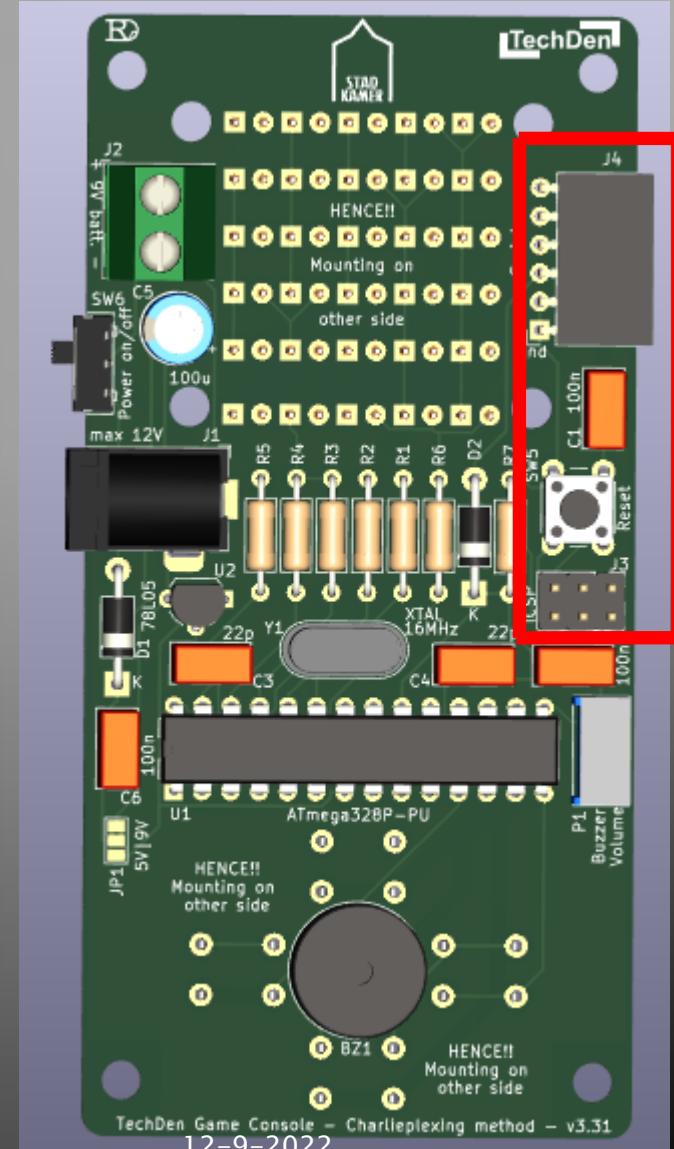
Batterij voeding



# TechDen GameConsole - Overview HW



Programmeer interfaces



# Nu gepland; Workshops Solderen

Workshop 1 - Solderen | 31 Oktober 2022

Workshop 2 - Solderen | 24 November 2022

Workshop 3 - Solderen | 26 Januari 2023

# TechDen Zwolle

- ▶ Schrijf je in voor de workshop Solderen
- ▶ Elke avond dat we open zijn; open inloop.
- ▶ Gasten zijn dan altijd welkom



