

Trends und ihre Umsetzungen...



Arduino bis ESP32

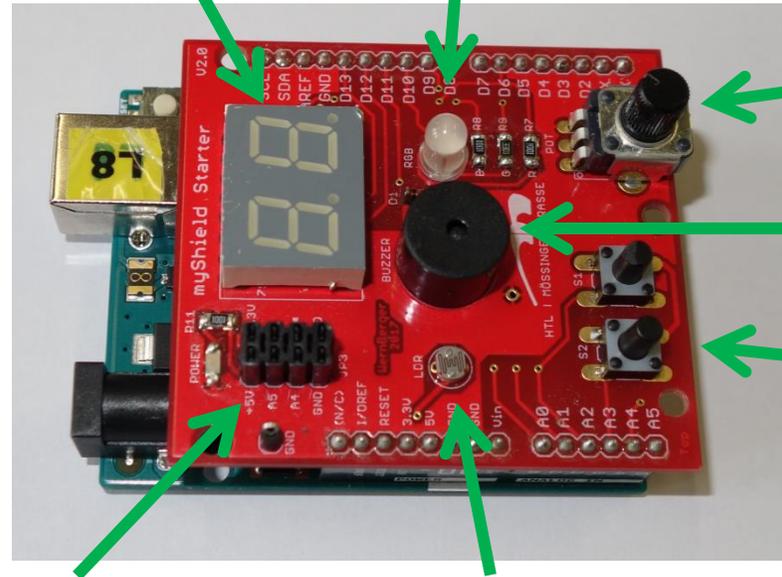
Hello World...



...aber wie ohne HW?

Hello World...

2x 7 Segment RGB-LED



Potentiometer

Buzzer

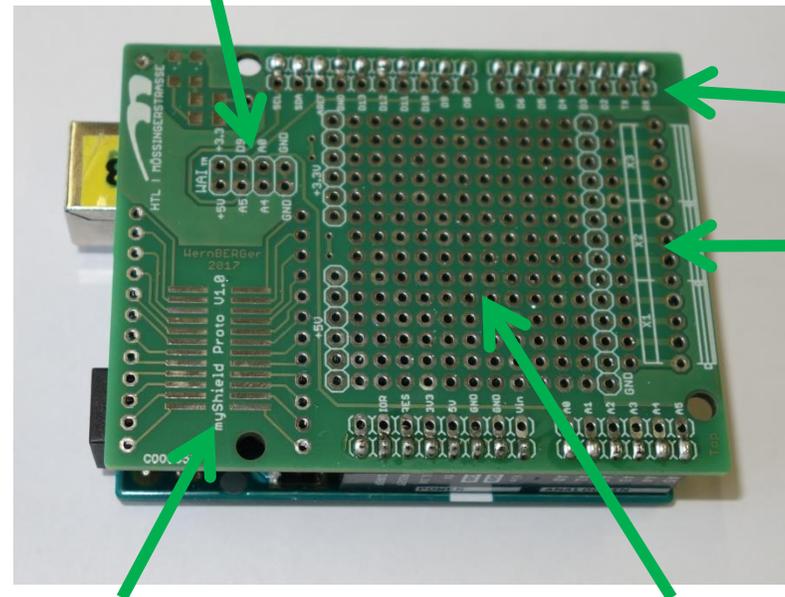
2 Taster

Interface (I2C, ADC, I2C)DR

...geht dann nur so!

Hello World...

Interface (I2C, ADC, IO)



2te Pinreihe (Buchsen?)

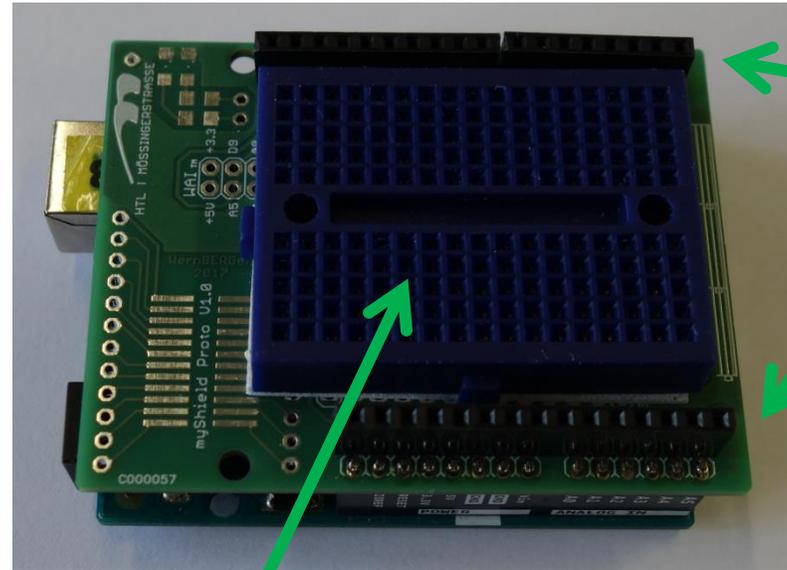
GND und +5V

SMD-Area

Prototyping Area

...oder so!

Hello World...



2te Pinreihe (Buchsen)

Prototyping Board

...oder so!

Und los geht die Reise...



...mit je 18 Stücke für Übungen!

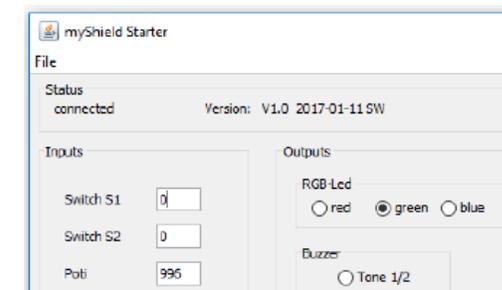
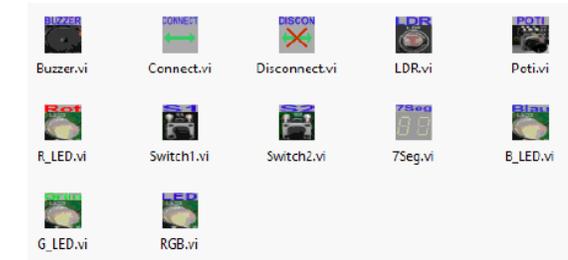
Und los geht die Reise...



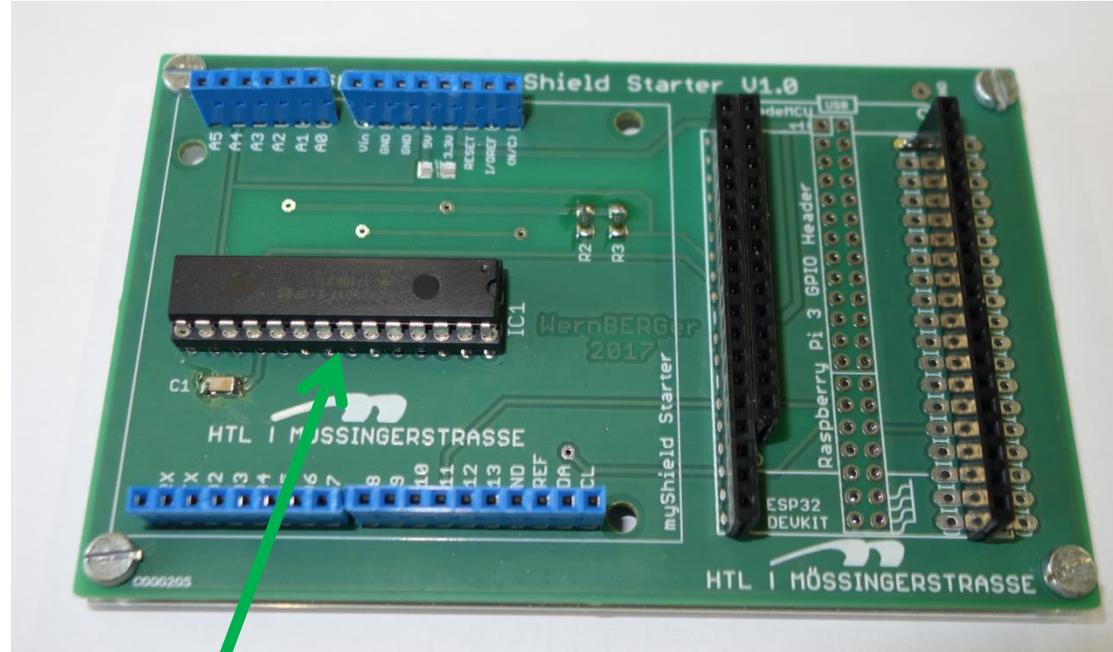
...mit je 8 Stücke fürs Labor!

Software dazu...

- **Firmware für den Arduino**
(String-Befehle z.B. XLR1, XA0, usw.)
- **LabVIEW-Library** `myMyShieldStarter.llb`
- **MATLAB-Klasse** `myMyShieldStarter`
- **Java-Library** `JMyShieldStarter.jar`
- **Doku und Beispielprogramme**



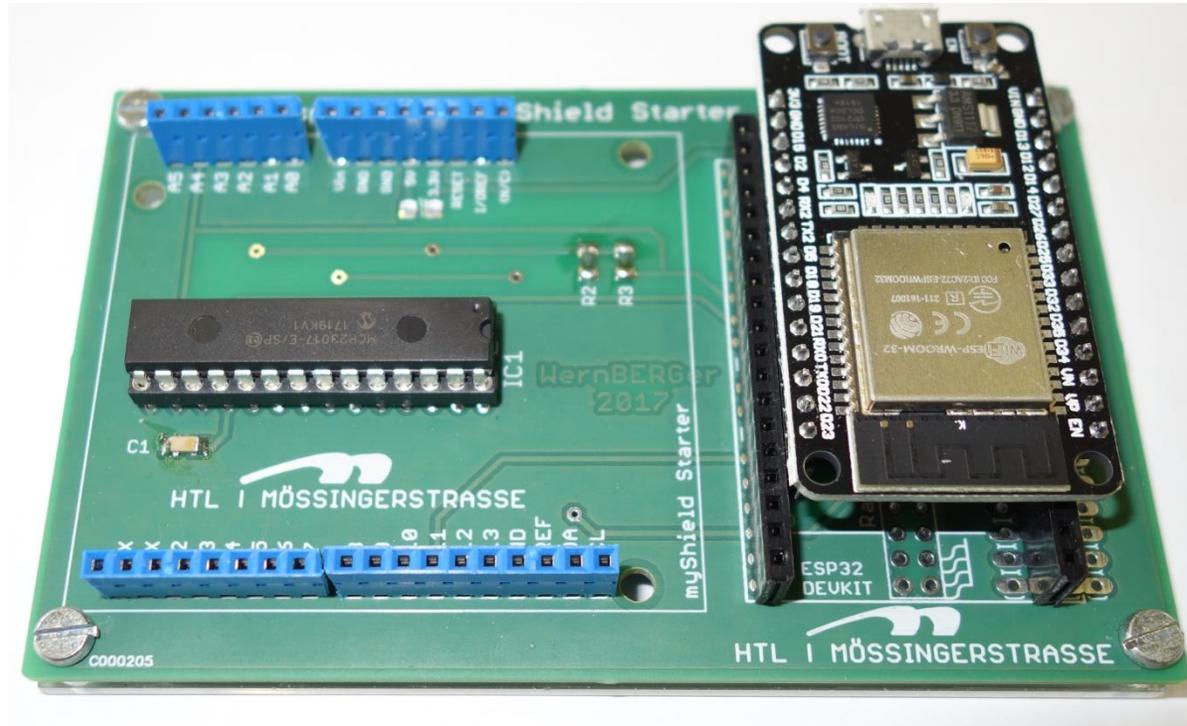
Hello WiFi...



I2C – Board-Expander

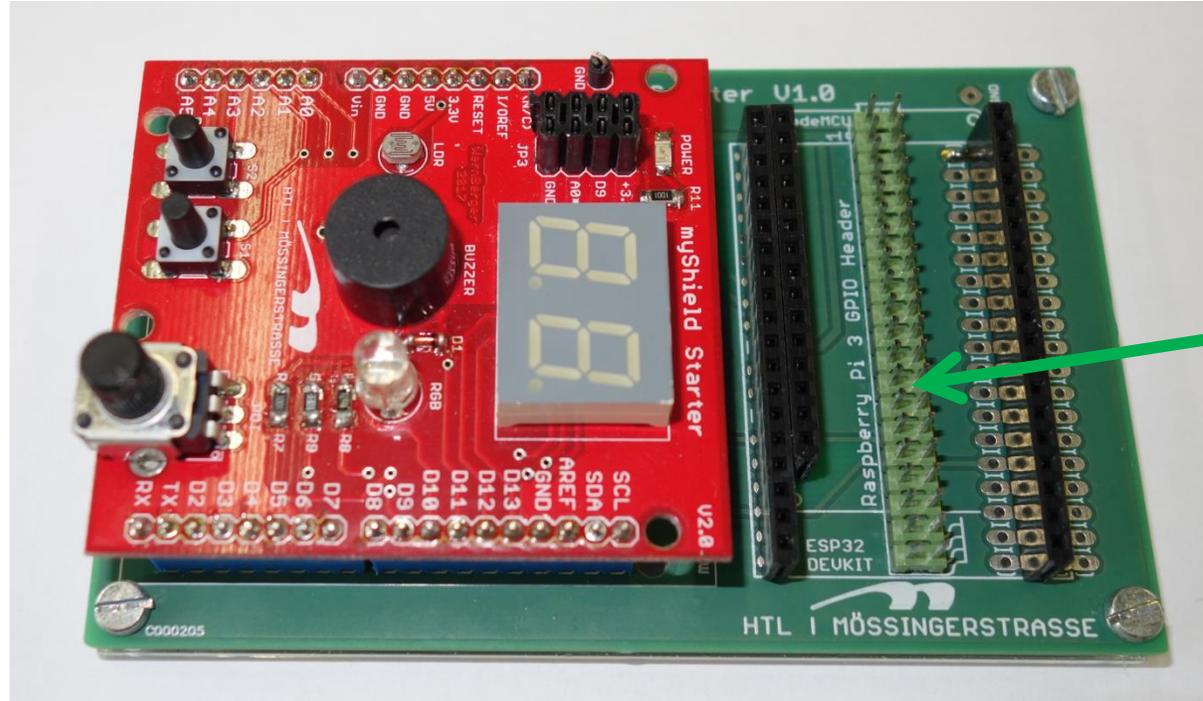
...und wie?

Hello WiFi...



...ESP8266/ESP32?

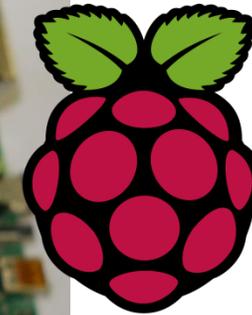
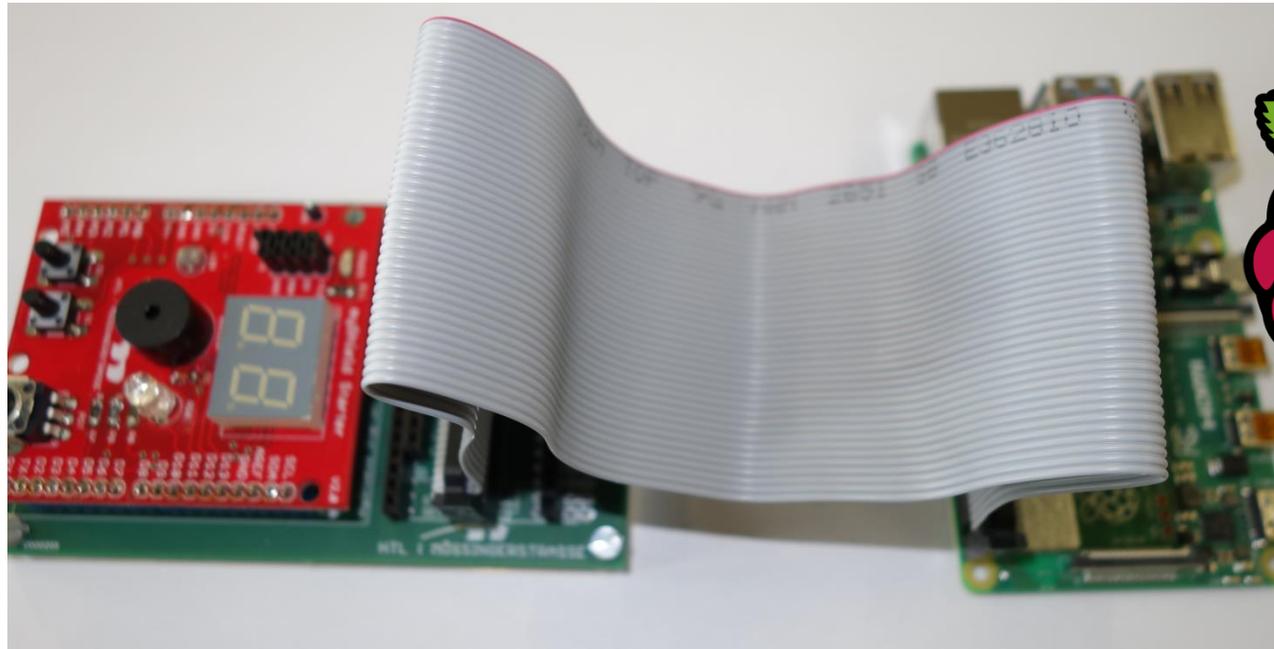
Hello WiFi...



RasPI - Stecker

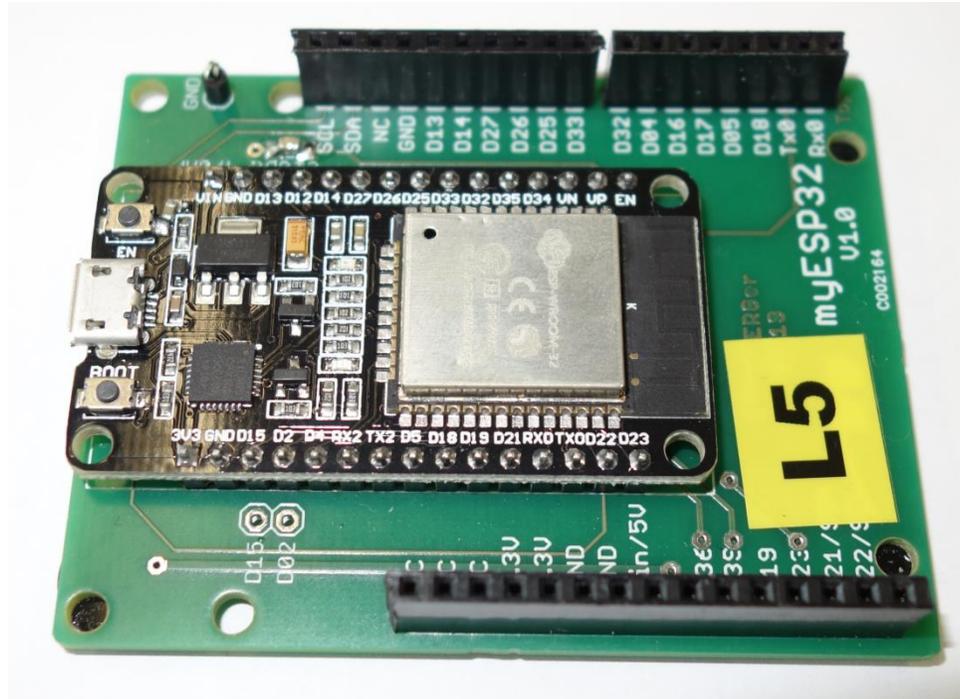
...myShieldStarter?

Hello Raspberry Pi...



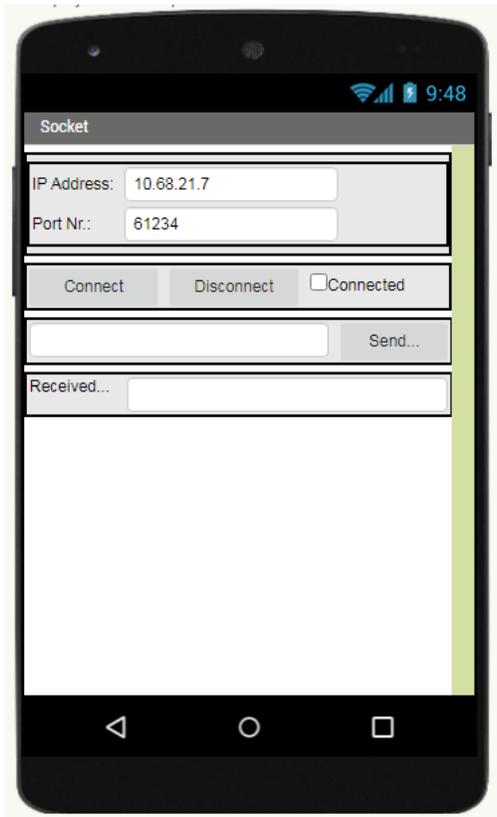
...myShieldStarter?

Hello WiFi und BLE...



...myShieldStarter?

Hello App Inv. (BT & WiFi)...



Socket

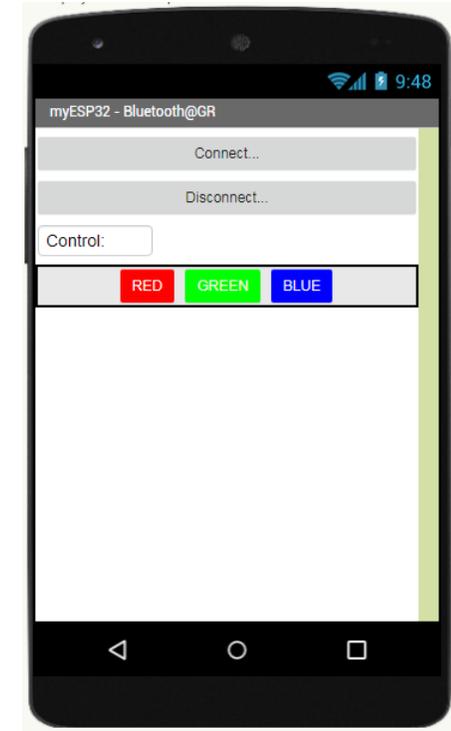
```

when Screen1.Initialize
do
  call MqttTCP1.Connect
  ipAdreess "193.36.189.42"
  port 1883
  idDevice "grApp"
  userName "htl-IoT"
  password "iot..2015"

when buttonON.Click
do
  call MqttTCP1.Publish
  topic "htl/gr/led"
  message "1"
  retained true
  qos 0

when buttonOFF.Click
do
  call MqttTCP1.Publish
  topic "htl/gr/led"
  message "0"
  retained true
  qos 0
    
```

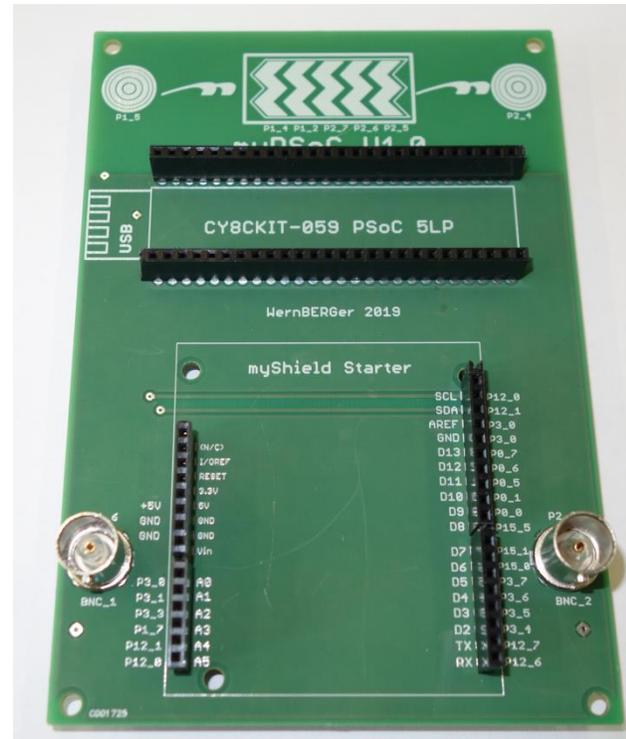
MQTT



Bluetooth

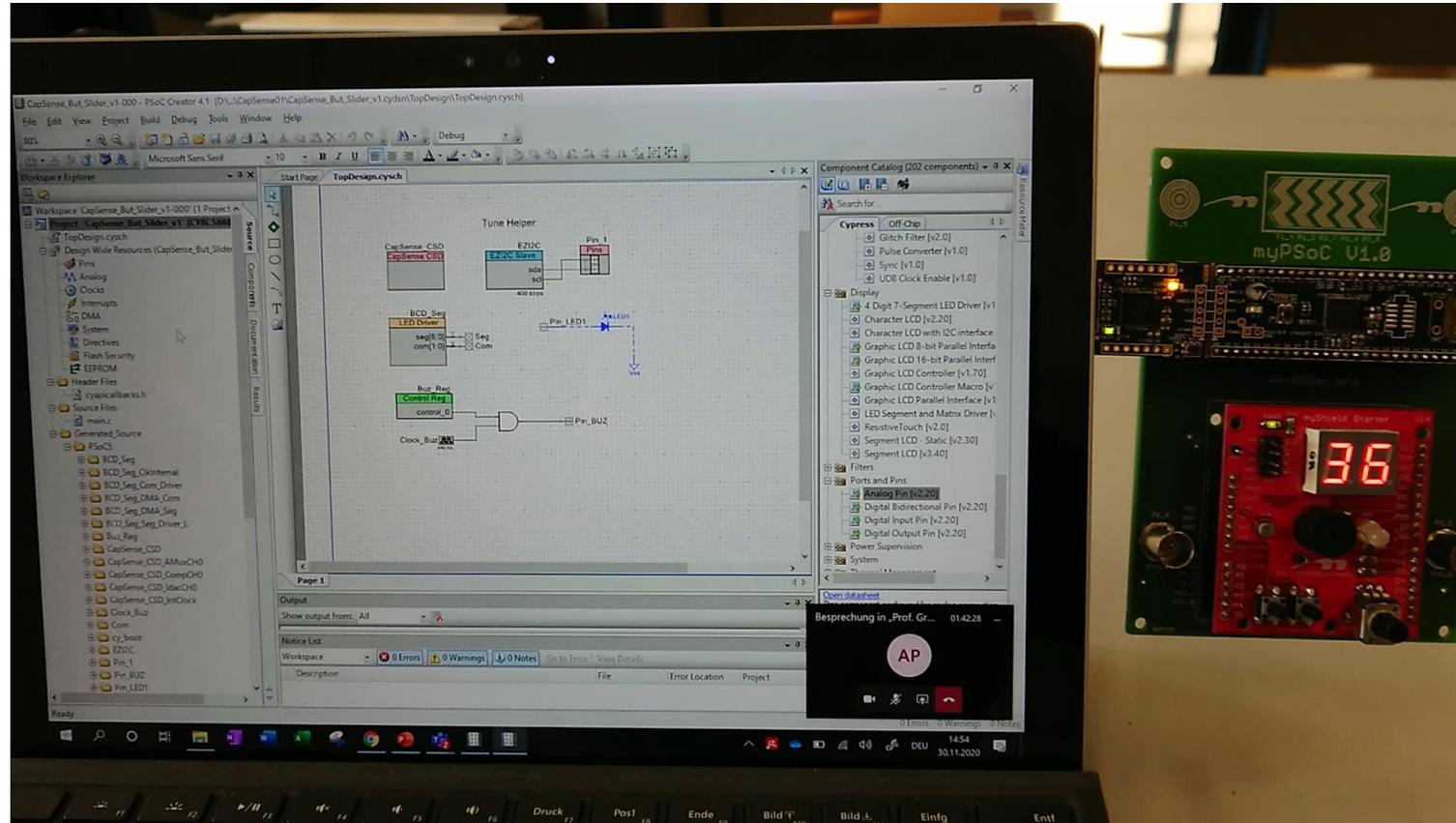
...myShieldStarter?

Hello PSoC...



...myShieldStarter?

Hello PSoC...Demo



Projekte

- mySmartDisplay (1BHEL)
- myXmasTree (1CHEL)



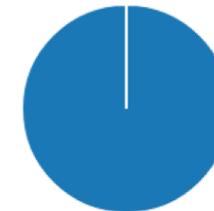
1. Wie würden Sie das Gesamtprojekt "mySmartDisplay" bewerten?

33
Antworten

★★★★☆
Durchschnittliche Bewertung 4.42

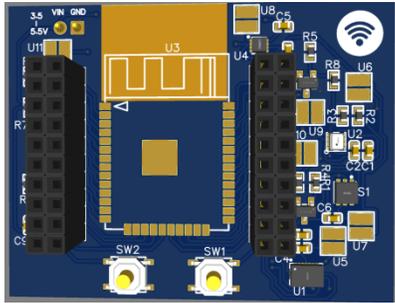
11. Sollten in Zukunft alle 1. Jahrgänge so ein Projekt durchführen?

● Ja 33
● Nein 0

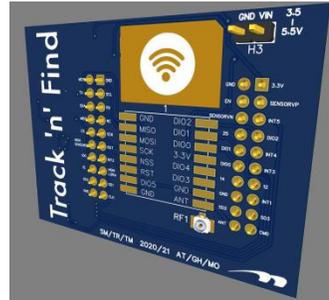


„Agiles Transitionsprojekt“

Comming soon...



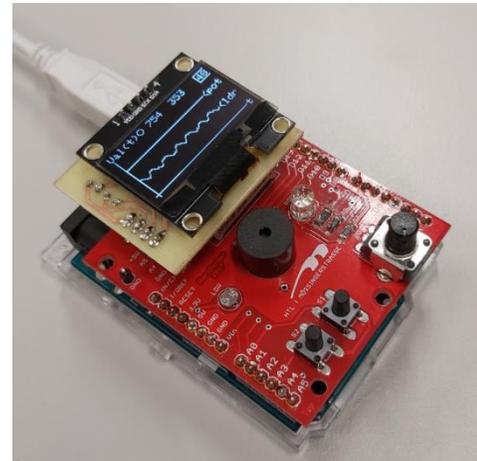
Long Range Wide Area Network



LoRa-Modul

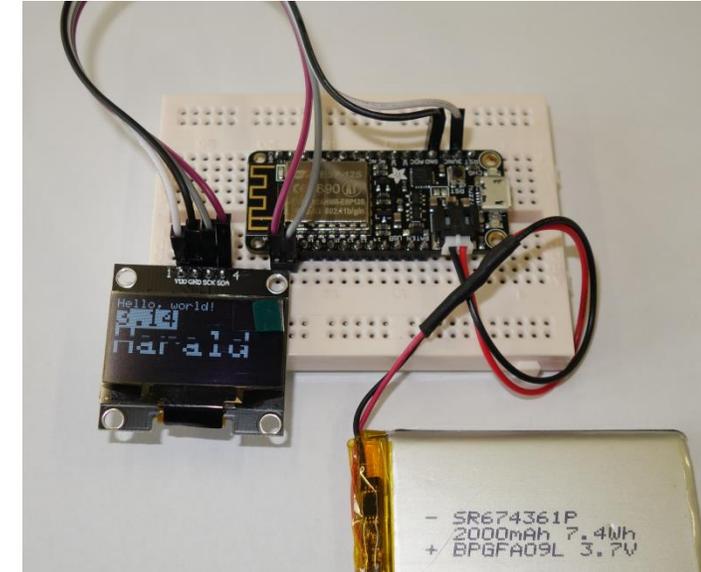
- LoRa (RFM95)
- BMP280
- SHT21
- BMX055
- ESP32

ca. 25€ bei 15 Stk.



myOLED

SSD1306 128x64 / 128x32



Adafruit HUZAZH32

G'sund bleiben!

