

HEINS

hardware for the internet of things

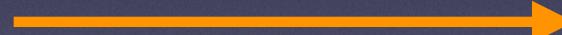


Internet of Things

Sensors as Datasource



Sensors as Datasource



How I can get my signals to the Cloud?



Home & Hacks

3,3 V
5 V

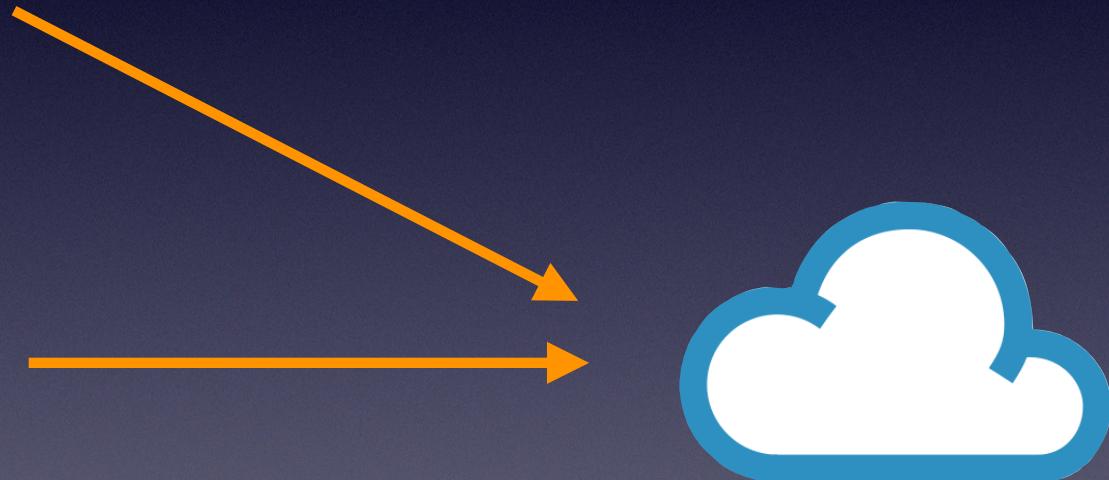


Industrial Voltage

24V



3,3 V
5 V



Programming Language Controllers

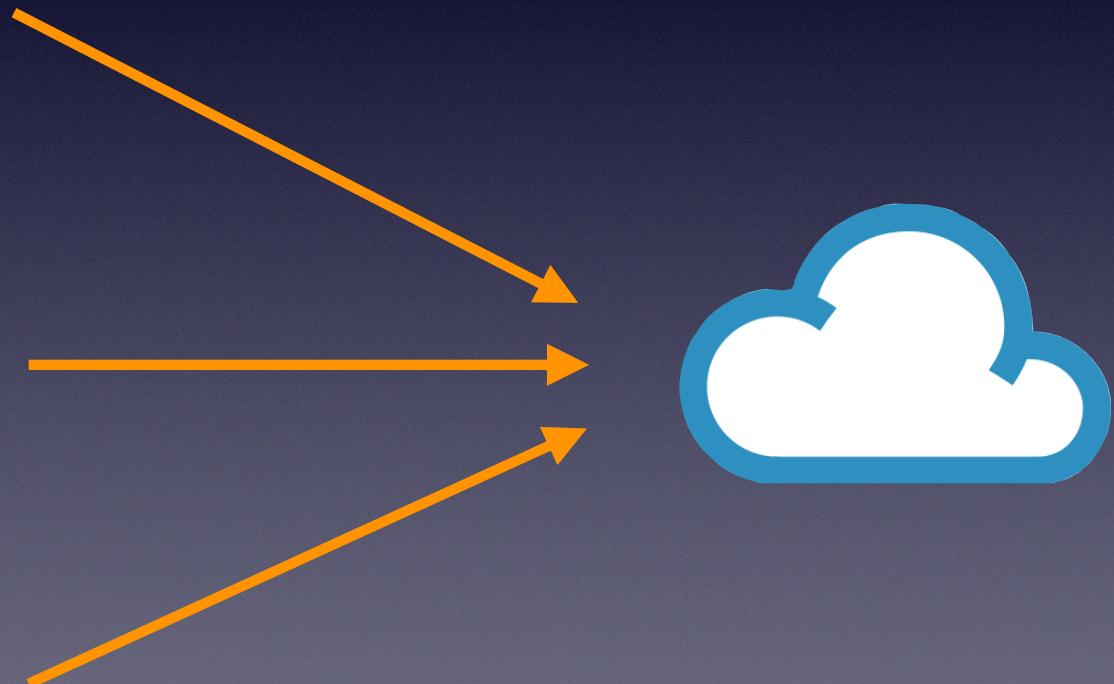
24V



3,3 V
5 V



Field-
bus



Why do we need some Hardware?

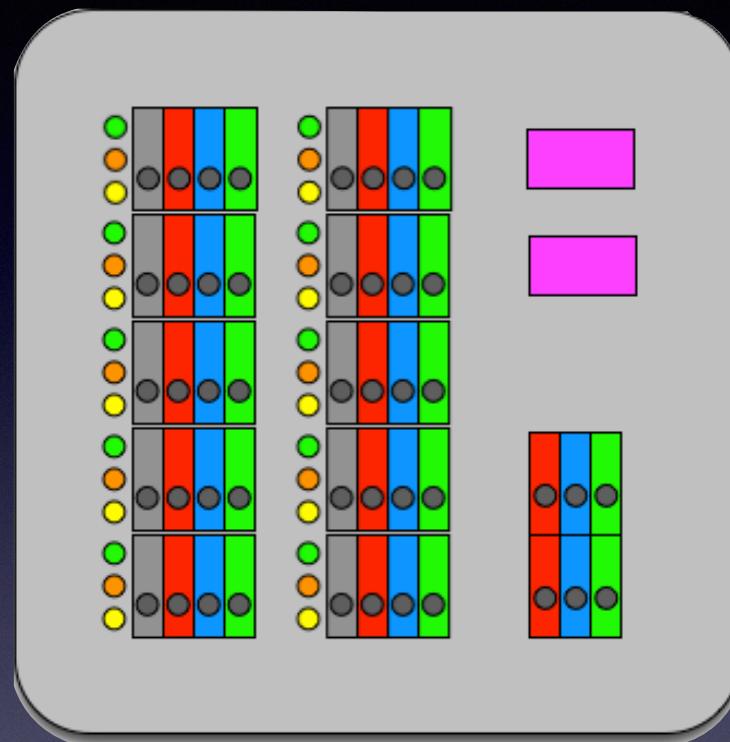
- No cheap and easy ready-to-use device in market.
- Missing 24 V Voltage Level
- Missing connectors for every wire of my sensor (Signal, L+, M, PE).
- No device for both world: home & industrial which uses the advantage of IoT- and Web-technology

What want we do with this piece of hardware?

- Learning
- Having fun!
- Temporary measuring data for some experiments and testing
- Use it in for our projects trying something out!

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data.collection.box for internet of things



Internet of Things

Industrial Fieldbus

24 V

Data Visualization

3,3 V

Personal Cloud

10 V

WAN

12 V

Analog Output

LAN

Wifi

Power Supply Unit

USB

MQTT

Analog Input

Database

Wireless Sensor Network

Modbus

ZigBee

CANopen

Bluetooth LE

Profibus

Digital Output

IO-Expander

PLC

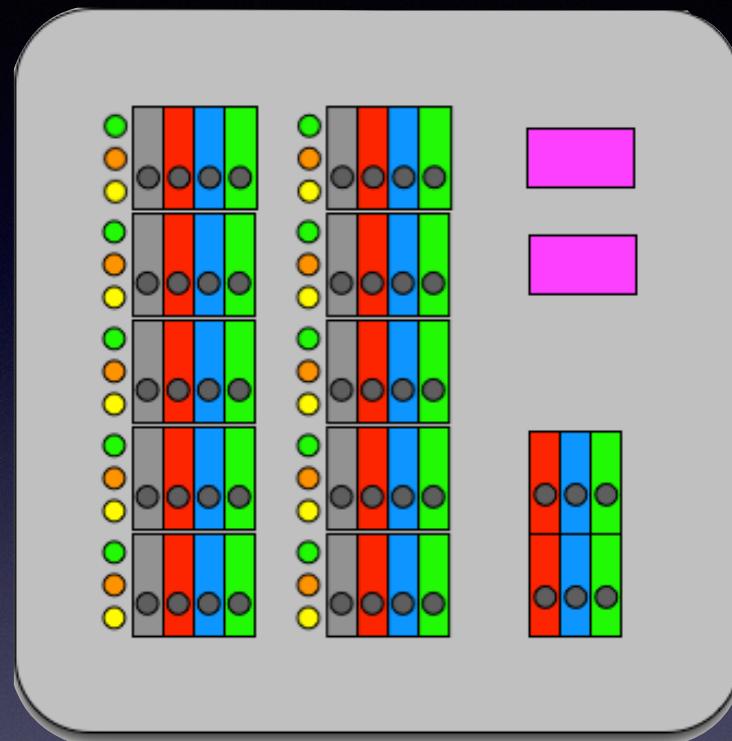
CAN

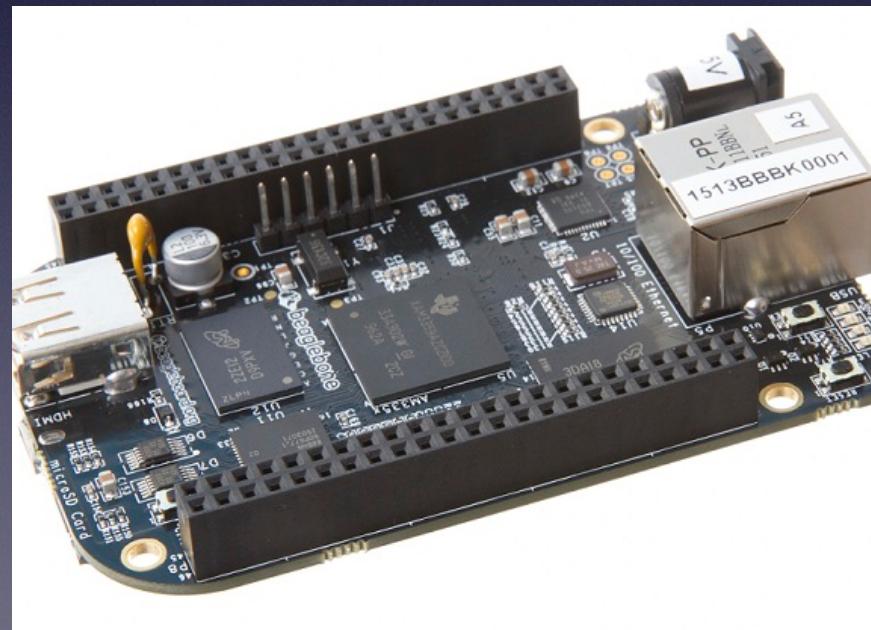
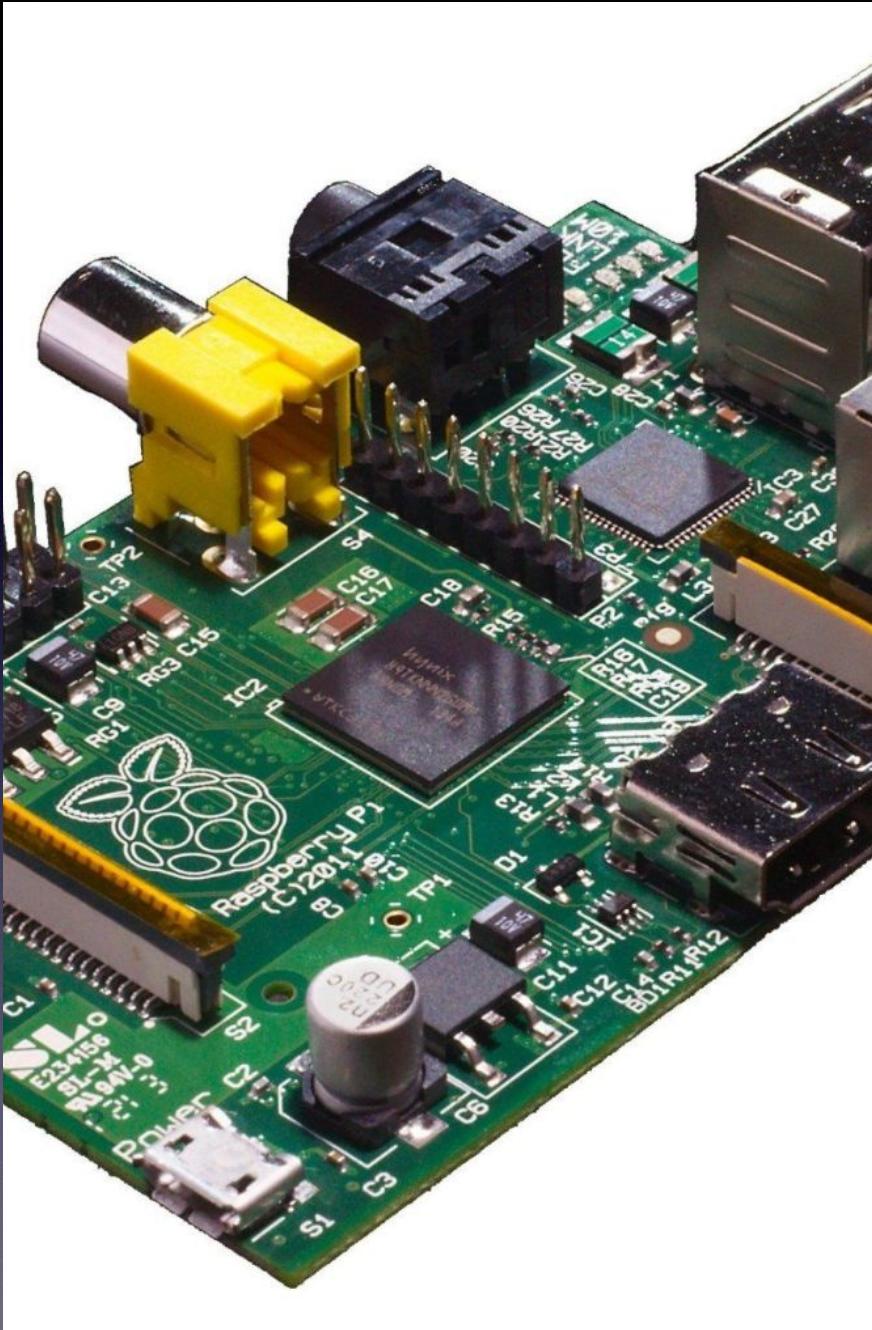
Digital Input

Profinet

Aktors

Sensors

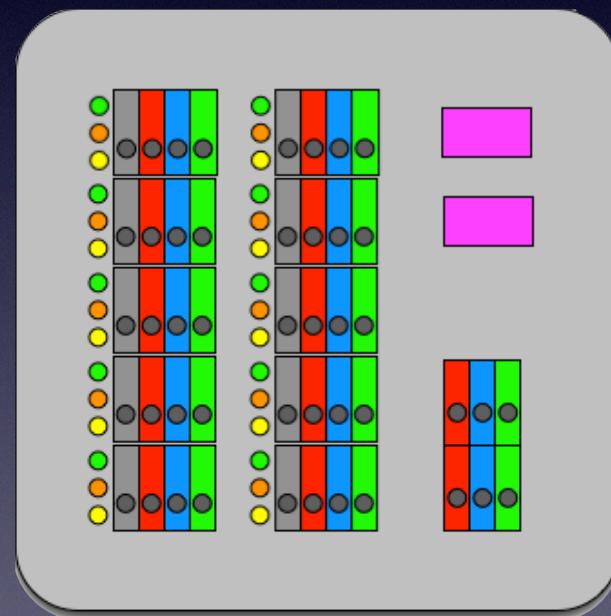




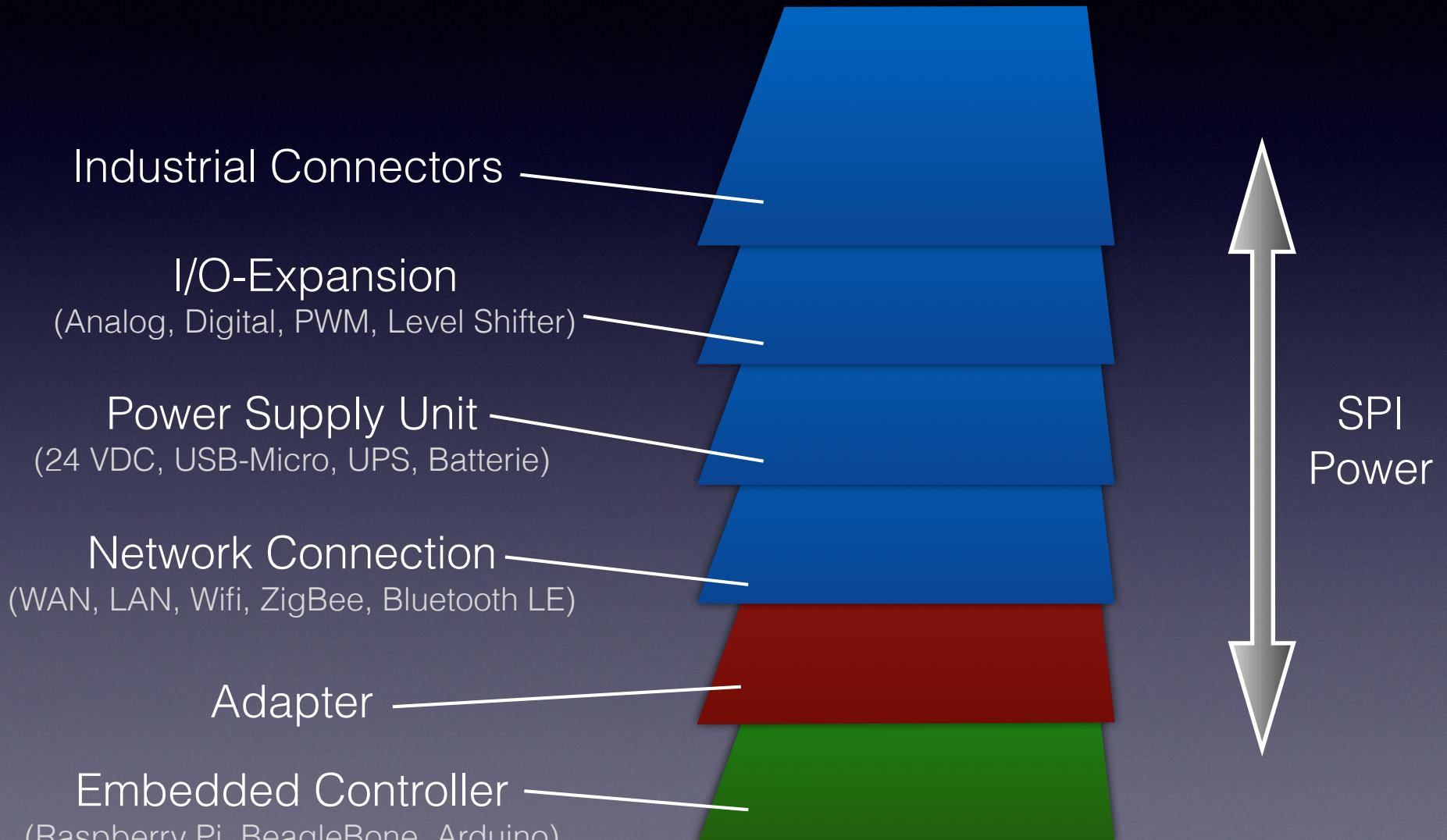
Linux based embedded controllers

I/O-Expansion for Embedded Controllers

- 10 Channels
- Digital Input/Output
- Analog Input/Output
- PWM
- Wireless Sensor Network
- Up to +/- 36 V
- Network WAN, LAN, Wifi, 3G/4G
- Industrial Connectors

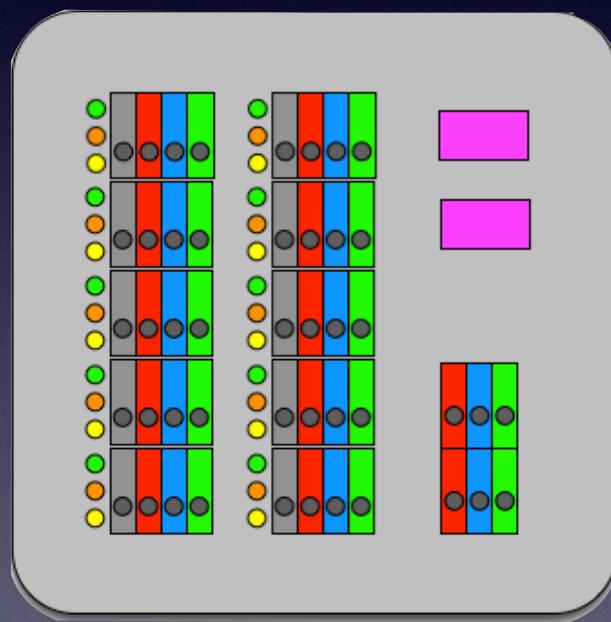


Part 1: Boards



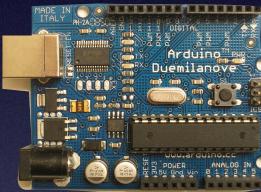
Targetgroup: For Hackers!

Part 2: All in one Box

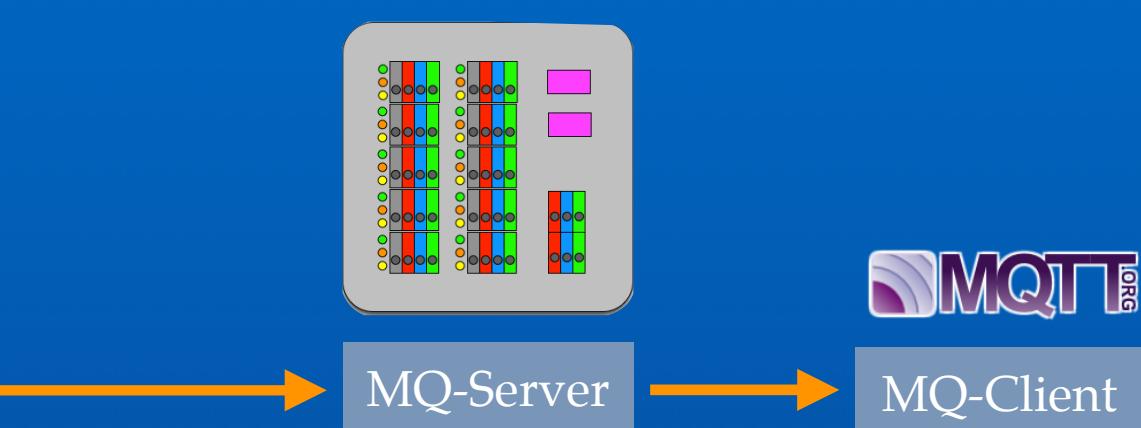


Targetgroup: Ready to use!

Inside HEINS



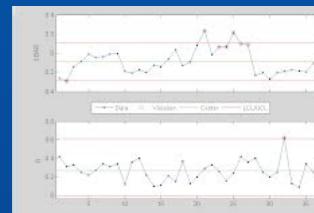
Sensors



Complex Event Processor



Database



Data Visualization

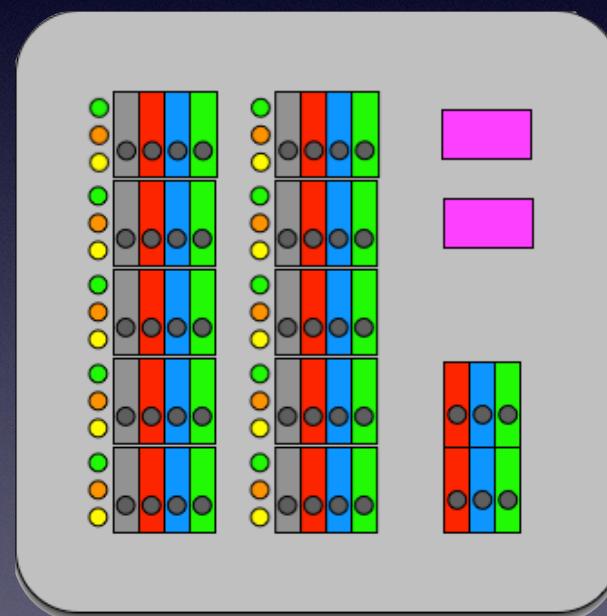


xivley.com



Variants

- 10 I/O-Channels
- Measuring Environmental Data
(Temperature, Humidity, ..., GPS, Compass, iBeacon)
- Wireless Sensor Network Access Point + Energyless Sensors
- Industrial Fieldbus (Profibus, Profinet, CAN, CANopen, Modbus, ...)



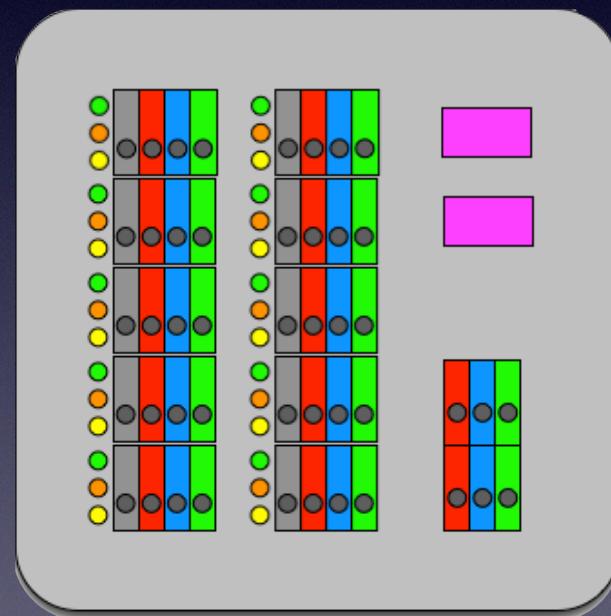
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open source hardware project



TaskList

- Hardware Design I/O-Expander
- Prototyping
- Hardware Testing
- Coding (C/C++, node.js, PHP)
- Documentation
- Bring it to the people!
- Having Fun!! :-)



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