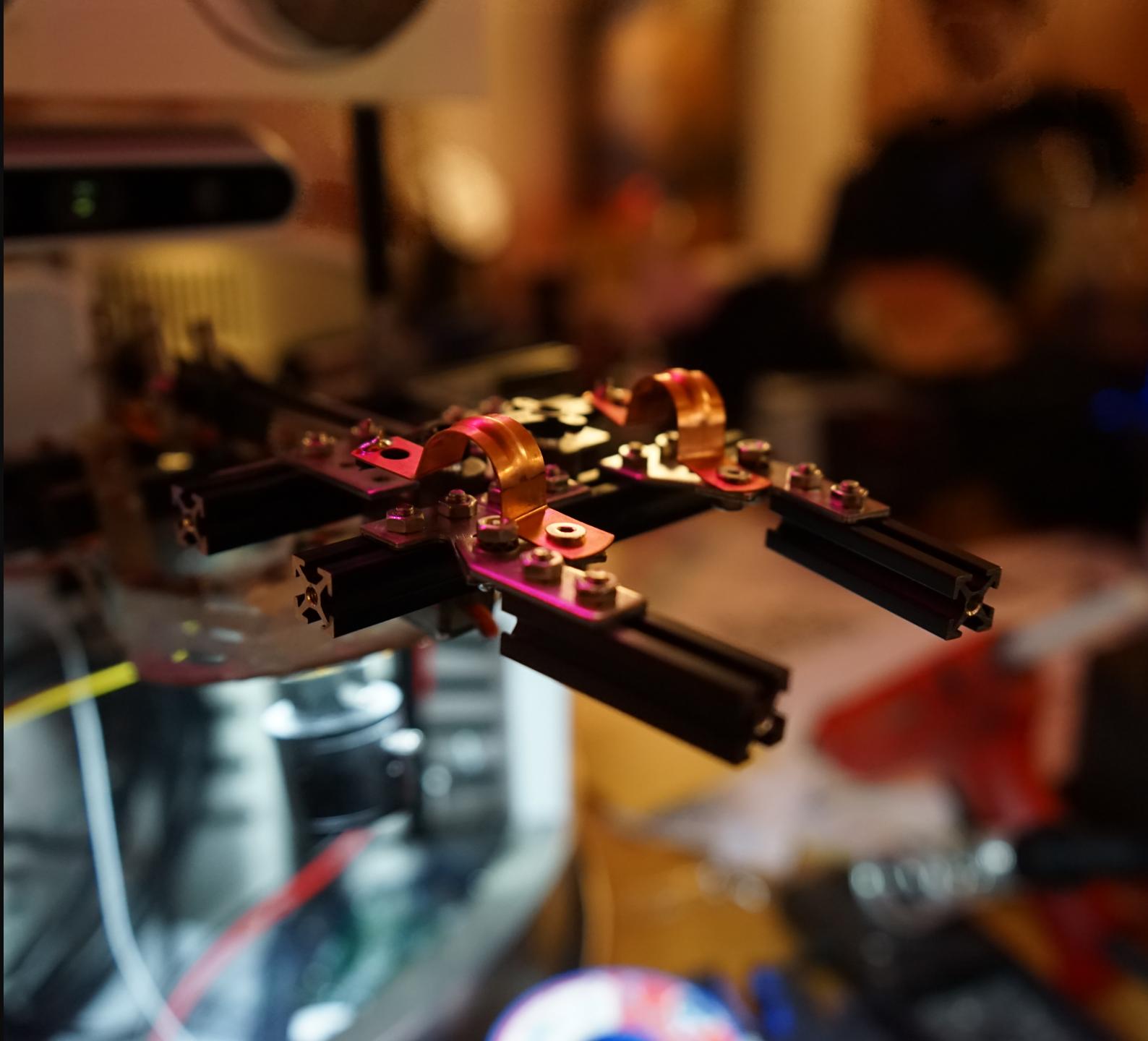
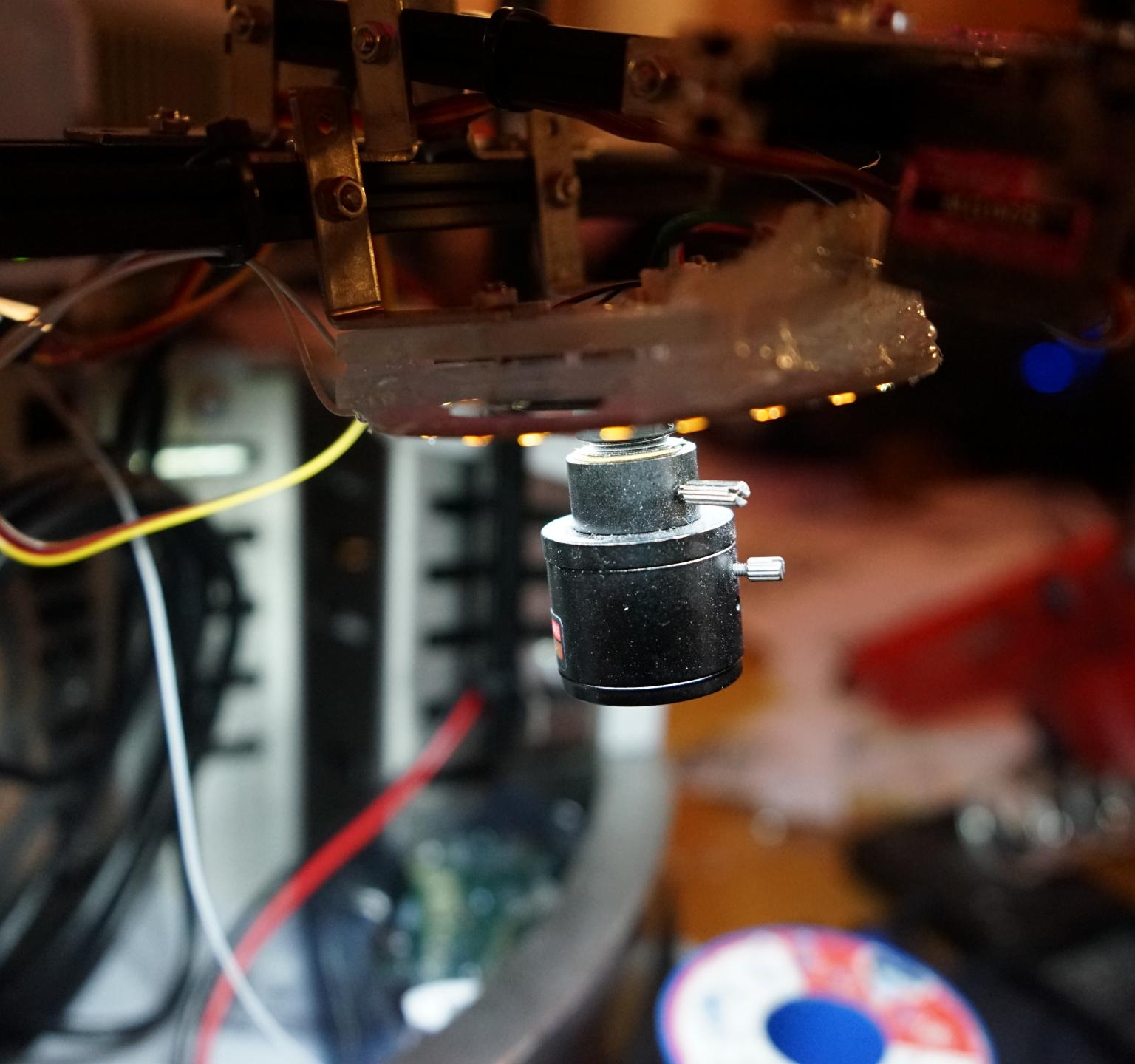


TEAM  
DARPA



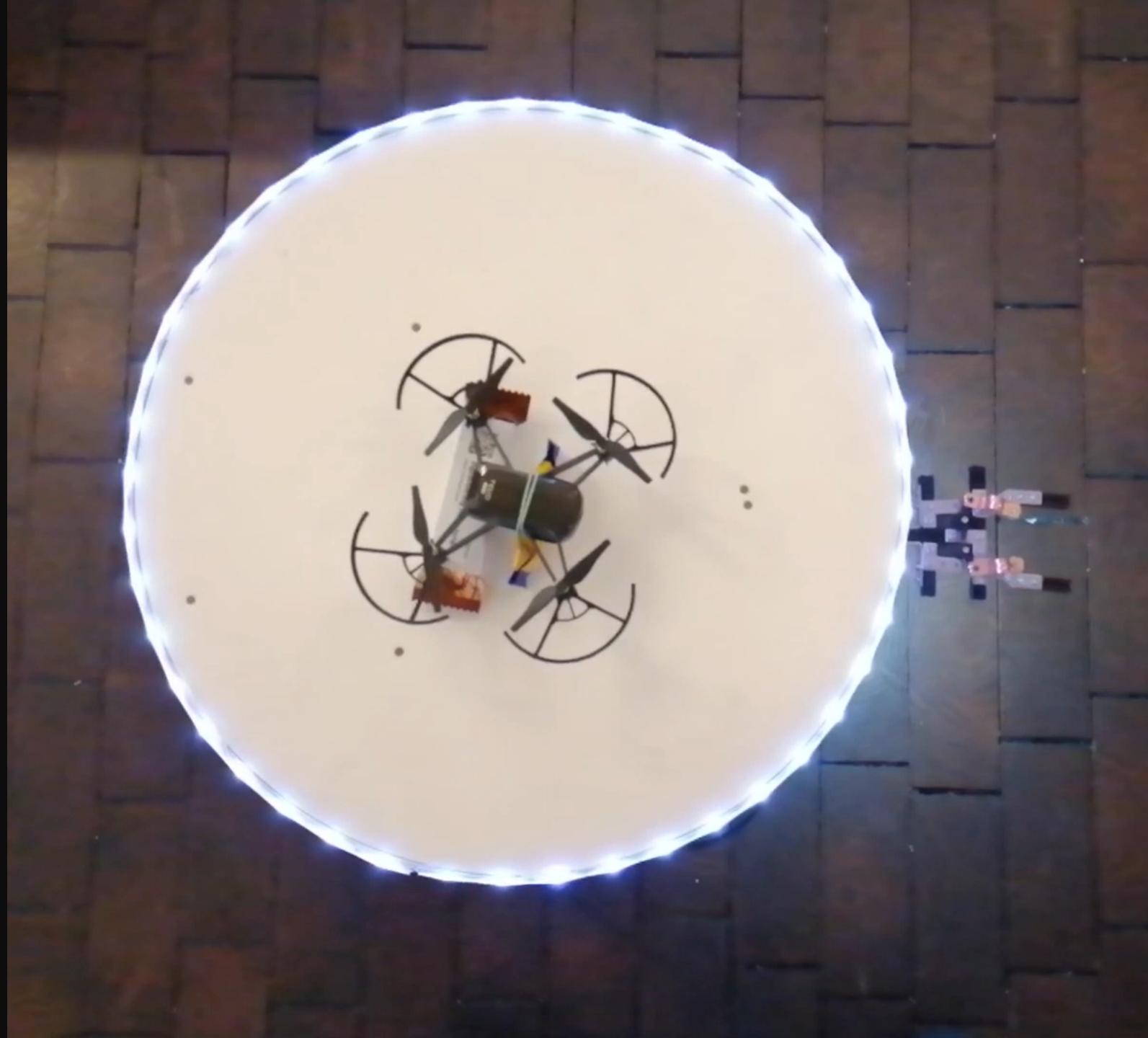
GRIPPER

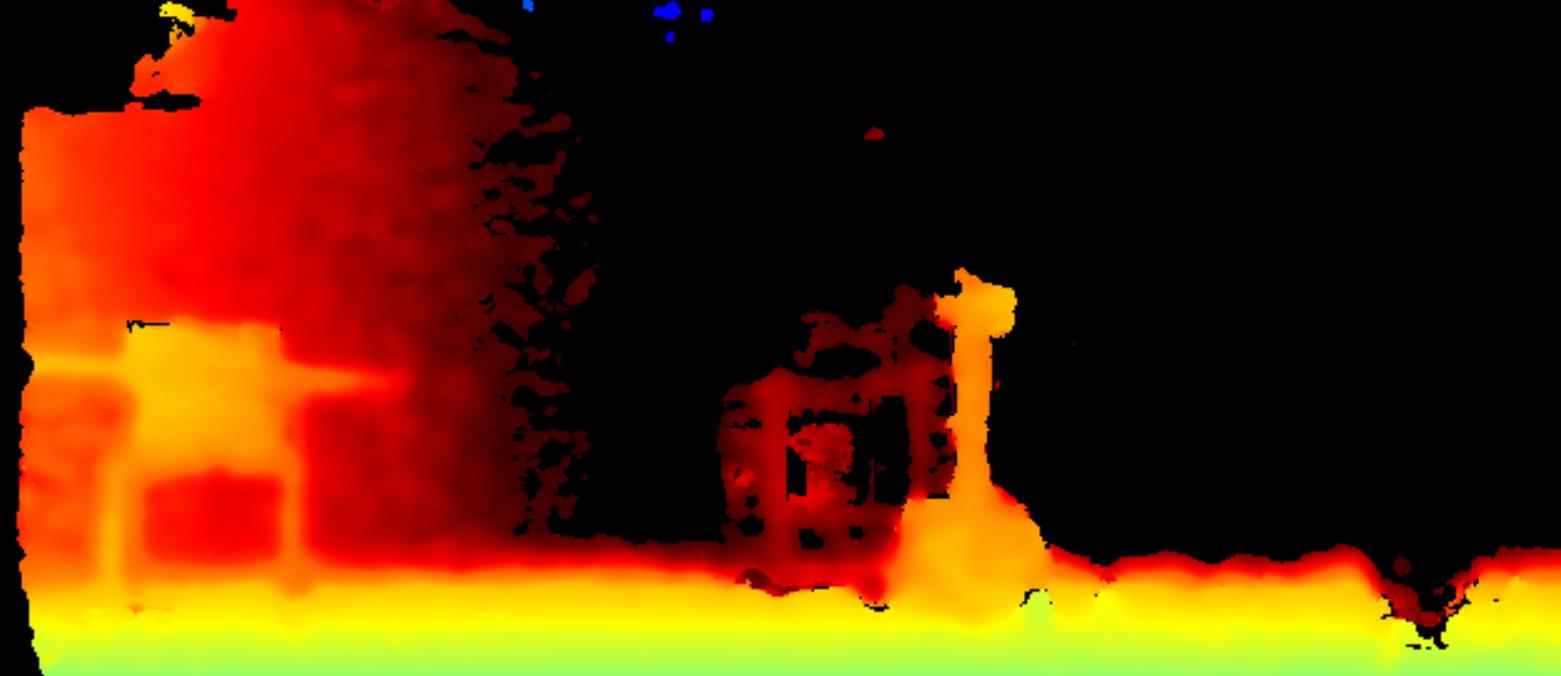




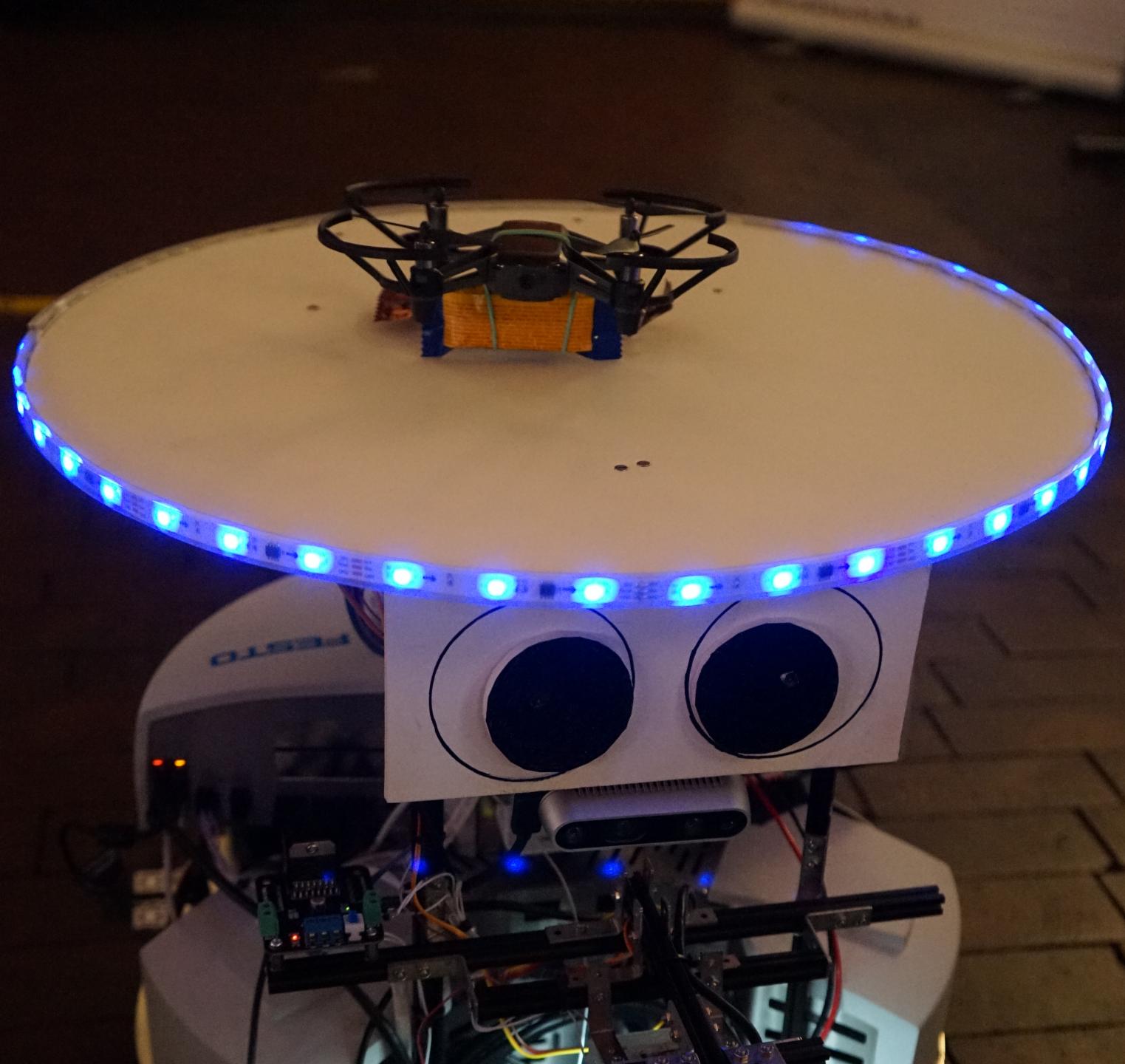
VISION SYSTEM

BATTERY  
INDICATOR





INTEL REAL  
SENSE



DELIVERY SYSTEM  
BASED ON  
ROBOTIN AND  
DJI TELLO

**Close all**

Transportation-Targets

Please choose a target for Robotino

Target 00 - Home Target 01 Target 02 Target 03

Remote Control

Control your Robotino!

Gripper open Gripper Close

Tailboard down Tailboard open

Video Stream



Robotino, here is only one Command possible. Robotino does not allow a second static address.

Sensor Data

Sensor	Wert
Battery Voltage	17 V
Low-Battery-Flag	BATTERY OK

About Robotino

Robotino V4 was modified to fulfill the Hackathon-Stuttgart-Task. The explanation on this side is limited to the additional Robotino-Hardware-Modifications.  
Following Text is originally taken from the FESTO Website:  
Robotino is a mobile robot platform for research and education. With its omnidirectional drive, sensors, integrated gripper and various extensions Robotino can be used very flexibly. The most important programming languages and systems are available for programming individual applications. For further information we warmly refer you to the Festo Website.  
<https://www.festo-didactic.com/int-en/services/robotino/?fbid=wsQ0LmViLJUHnx4ly4zNC4xMTY4>  
For handling packages or other handy materials Robotino got a gripper, which is constructed in Maker-Team-Materials. And controlled by a Gear-DC-Motor. A small board is mounted on top of the roof, which can flip in the back-direction to drop card materials, controlled by a simple DC-Motor.  
All these electrical additions are controlled by an Arduino NANO, getting electricity through a DC-Converter directly from Robotino. Arduino is connected to the Robotino Main-Controller to control all relevant options on one platform.

About the Team

**Close all**

Task	Name	ID
Teamleader/Programmer	Günz, Jonathan	183
Hardware-Robotino	Karle, Norman	176
Hardware-Robotino	Fischer, Valentin	189
Programming-Drone	Deptla, Martin	156
Programming-Drone	Spath, Leandro	173
Programming-Robotino	Osterendorf, Marcel	153
Programming-Robotino	Keunecke, Sophie	201

**DARPA takes your factory to the future! -smart and autonomously**

**Idea description:**

With our flexible Robotino omnidirectional robot system combined with lightweight and agile DJI Fello Drones we can handle your products, materials and packages. The Robotino can move around the factory and carry them autonomously to the specified target. It can delegate difficult to reach deliveries and picks up the attached drone. With its maximum flight time of 10 minutes it can move targets up to 2km away.  
No more slow and complicated transportation. Make it as fast as your ideas are!

**HACKATHON STUTTGART**

Festo Robotino  
Infrared Sensors, Ultrasonic, omnidirectional drive and bumper sensor (for Controller)  
DJI Fello Drone EDU  
Motor: 1x DC-Motor (LED), 2x Servo, Arduino Nano, 2x Stepper-Motor, 1x Gear-DC-Motor, Ethernet-Switch, Raspberry Pi, big amount of QR Codes  
Software:  
ROS-Robotino (Controlling) NodeJS, C++ (Arduino, Python (QR Code), MQTT (Data-Transfer), HTML+JS (HTML))

**Close all**

**Delivering A utonomously R obotino P leasure A viator**

We want to say a big "Thank you" to all Festo-Members, which gave us the chance to work with such an incredible robot!

**HACKATHON STUTTGART**

**FESTO**

**Robotino Transportation**

**DARPA**

**Close all**

Transportation-Targets

Remote Control

Video Stream

Sensor Data

About Robotino

About the Team

**Close all**

Transportation-Targets

Remote Control

Video Stream

Sensor Data

About Robotino

About the Team

**Close all**

**Delivering A utonomously R obotino P leasure A viator**

We want to say a big "Thank you" to all Festo-Members, which gave us the chance to work with such an incredible robot!

**HACKATHON STUTTGART**

[Close all](#)

## Transportation-Targets

*Please choose a target for Robotino*[Target 00 - Home](#)[Target 01](#)[Target 02](#)[Target 03](#)

## Remote Control

**Control your Robotino!**Gripper  
openGripper  
CloseTailboard  
downTailboard  
open

## Video Stream



Unfortunately, there is only one CameraStream possible. Robotino does not allow a second static stream.

## Sensor Data

Sensor	Wert
Battery Voltage	17 V
Low-Battery-Flag	BATTERY OK

DEMO



QUESTIONS?

