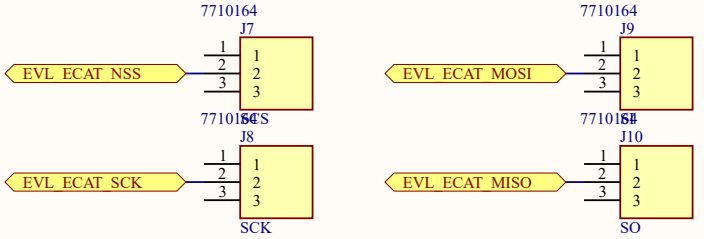
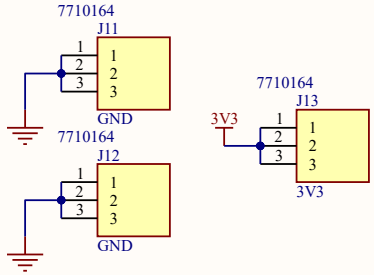
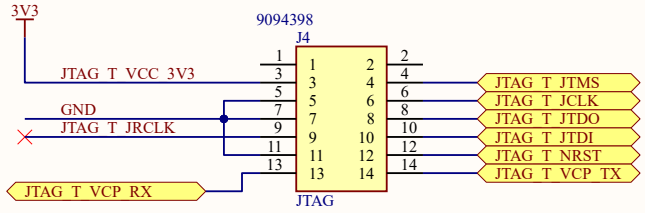
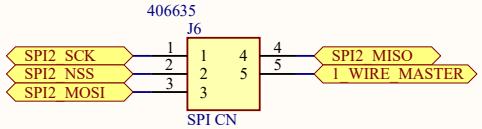
Adaptors to LAN9252_EVB_SPI



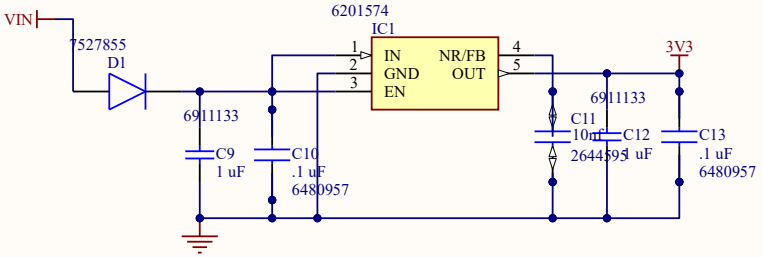


CONNECTORS





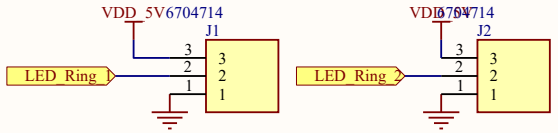
PWR

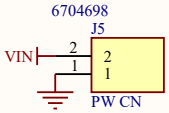


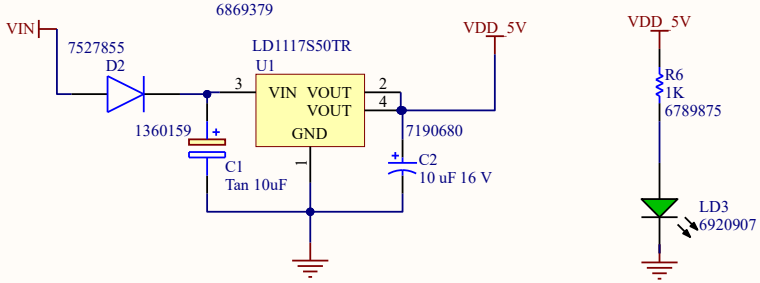
TODO LIST for second version (2020.08.03)

- Adapt an STM32F4xxx MCU of smaller package (QFN possible) to asses the following peripherals:
--- 2 PWM outputs with independent DMA access
--- 1 UART output with independent DMA access to run 1-Wire Master
--- 1 SPI Master Port (4 wires) for general communication with another sensor
--- 1 SPI Master Port specific for communication with LAN9252
-------- If possible SQI compatible (6 wire)
--- 1 I2C Port
--- SWD/JTAG compatible interface available (10-14 Pin)
--- At least 2 GPIOs available (status led and reset button)

Microcontroller should comply with a similar capabilities of STM32F446ZE + EEPROM*
*To avoid simulation by software



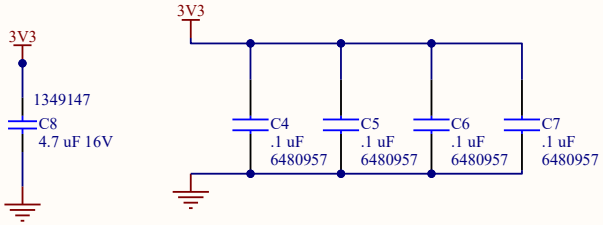




NOTES
The 3V3 Volts pin will be cut out and replaced for a regular male pin
QUAD SPI not considered for this first version

What type of connector? MOLEX53392-0871
XTAL needed or working with internal? NO, works with HSI

Consider PICO CLASP and MicroFit connectors + a stacked approach to shrink the size, similar to ELMO.



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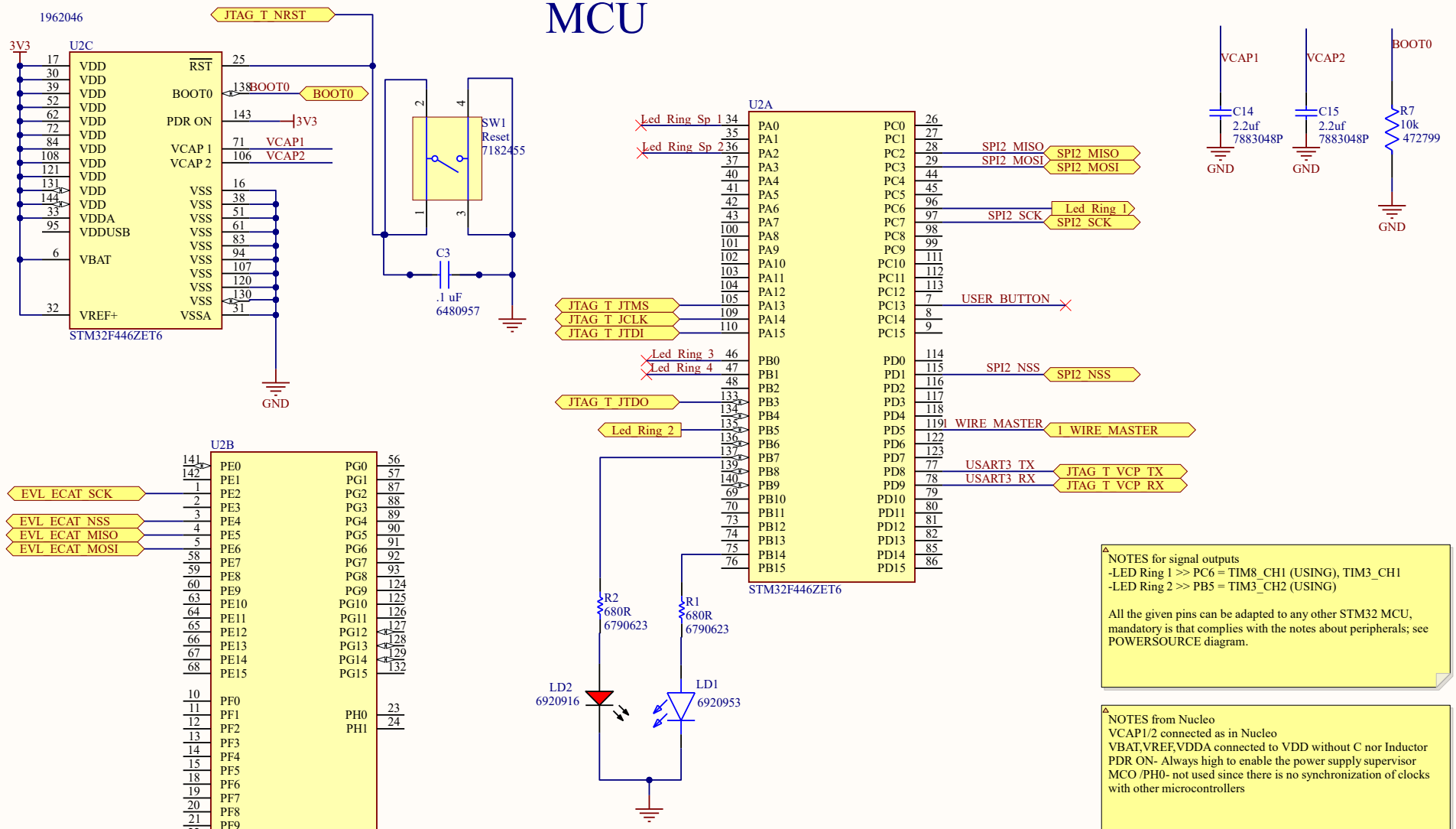
Size: A4	Number: 1	Revision: 3	
Date: 9/17/2020	Time: 11:16:22 PM	Sheet 1 of 2	
File: D:\PCB\Projektarbeit\PCB_AxisCommHub\PowerSource.SchDoc			

MCU



NOTES for signal outputs
-LED Ring 1 >> PC6 = TIM8_CH1 (USING), TIM3_CH1
-LED Ring 2 >> PB5 = TIM3_CH2 (USING)

All the given pins can be adapted to any other STM32 MCU, mandatory is that complies with the notes about peripherals; see POWERSOURCE diagram.

NOTES from Nucleo
VCAP1/2 connected as in Nucleo
VBAT,VREF,VDDA connected to VDD without C nor Inductor
PDR ON- Always high to enable the power supply supervisor
MCO /PH0- not used since there is no synchronization of clocks with other microcontrollers

Title	PCBAB0001v01A: MCU		Han's Robot Germany GmbH Barmbeker Straße 9a 22303 Hamburg Germany
Size: A4	Number: 1	Revision: 3	
Date: 9/17/2020	Time: 11:16:22 PM	Sheet 2 of 2	
File: D:\PCB\Projektarbeit\PCB_AxisCommHub\MCU.SchDoc			