Never solder any components while they are connected to a power supply (battery, power supply, USB port, ...)!

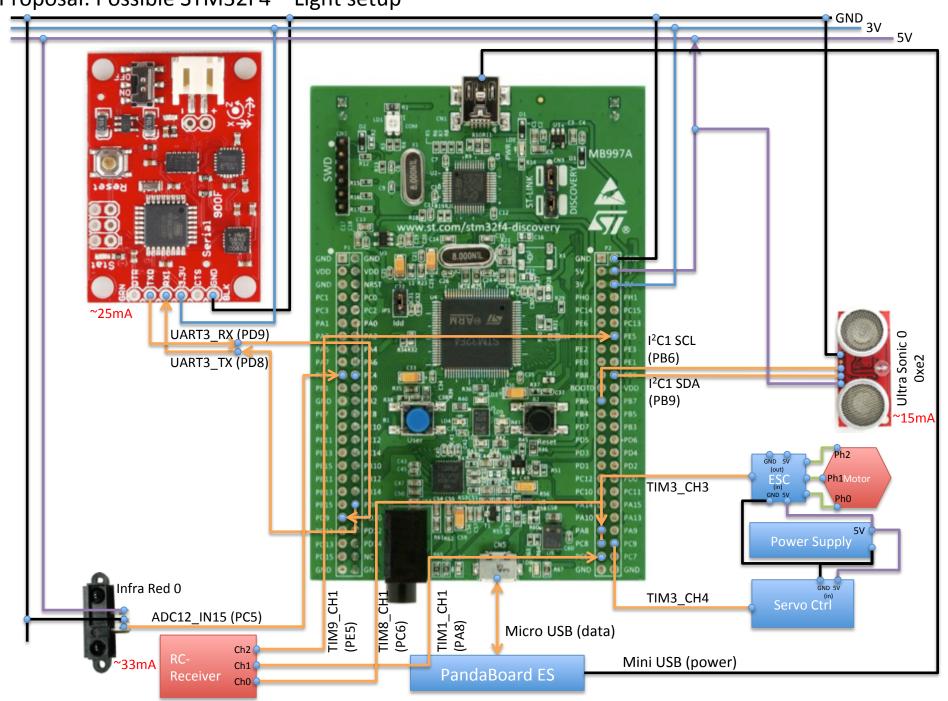
In the following, you'll find a proposal for connecting sensors and motors to the STM32F4 Discovery.

You are required to check your planned connections with the manuals of the involved components to avoid injuries, short-circuits, and damages of the involved components!

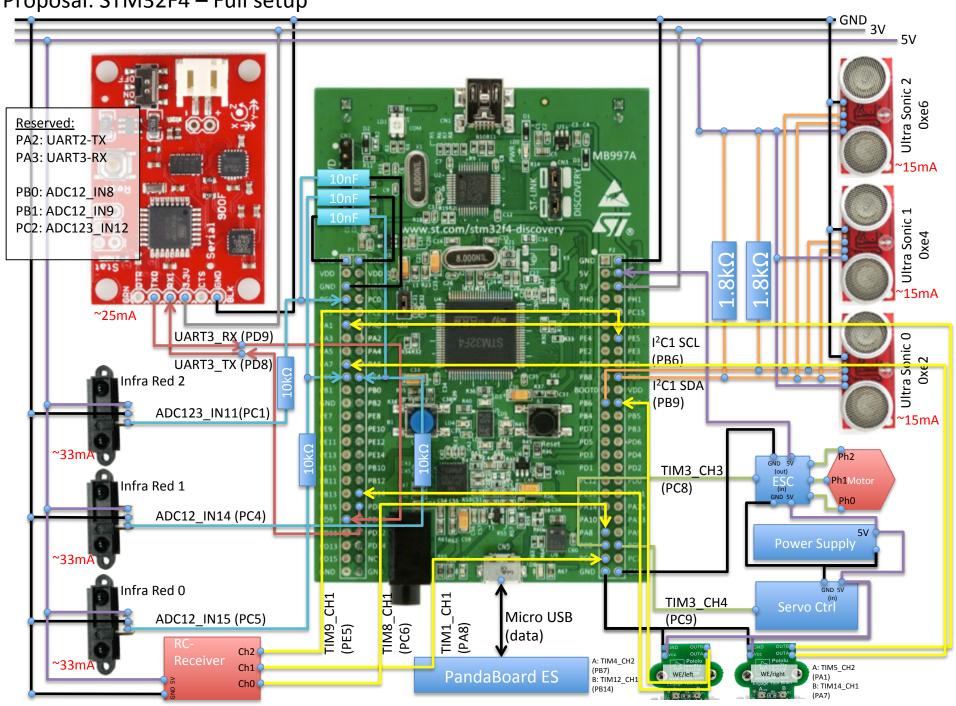
Check:

- STM32F4 Discovery Board manual
- Manuals or specifications of the sensors
- Manuals or specifications of the motors

Proposal: Possible STM32F4 – Light setup



Proposal: STM32F4 – Full setup



Proposal: STM32F4 – Full setup GND 3V Reserved: PA2: UART2 PA3: UART3 SerialDriver (UARTD3) PB0: ADC12 PB1: ADC12 PC2: ADC12 12CDriver (I2C1) ~25mA UART3_RX (PD9) I²C1 SCL (PB6) UART3_TX (PD8) Infra Red 2 I²C1 SDA (PB9) **SPIDriver** ADC123_IN11(PC1) (SPID1) TIM3 CH3 Infra Red 1 (PC8) **ADCDriver** ADC12 IN14 (PC4) (ADCD1) PWMDriver (PWMD4) **SerialUSB** Infra Red O TIM9_CH1 (PE5) H. TIM8_CH1 (PC6) TIM3 CH4 Driver **ICUDriver** JSB (PC9) (SDU1) (ICUD1, ICUD8, A: TIM4_CH2 ICUDriver (ICUD4, PandaBoard ES ICUD9) B: TIM12_CH1 ICUD5, ICUD12, ICUD14)

- PA8: TIM1 CH1 RC-Receiver Ch0
- PC6: TIM8 CH1 RC-Receiver Ch1
- PE5: TIM9 CH1 RC-Receiver Ch2
- PB6: I2C SCL
- PB9: I2C SDA
- PC1: ADC123 IN11 IR2
- PC4: ADC12 IN14 IR1
- PC5: ADC12 IN15 IR0
- PB0: ADC12_IN8 reserved for analog IN
- PB1: ADC12_IN9 reserved for analog IN
- PC2: ADC123_IN12 reserved for analog IN
- PC8: TIM3 CH3 PWM Motor
- PC9: TIM3_CH4 PWM Servo
- PD8: UART3 TX Razor
- PD9: UART3_RX Razor
- PA2: UART2 TX reserved for Faulhaber ESC RS232-RX
- PA3: UART2_RX reserved for Faulhaber ESC RS232-TX
- PB7: TIM4 CH2 Wheel encoder, left wheel, first sensor
- PB14: TIM12 CH1 Wheel encoder, left wheel, second sensor
- PA1: TIM5_CH2 Wheel encoder, right wheel, first sensor
- PA7: TIM14 CH1 Wheel encoder, right wheel, second sensor