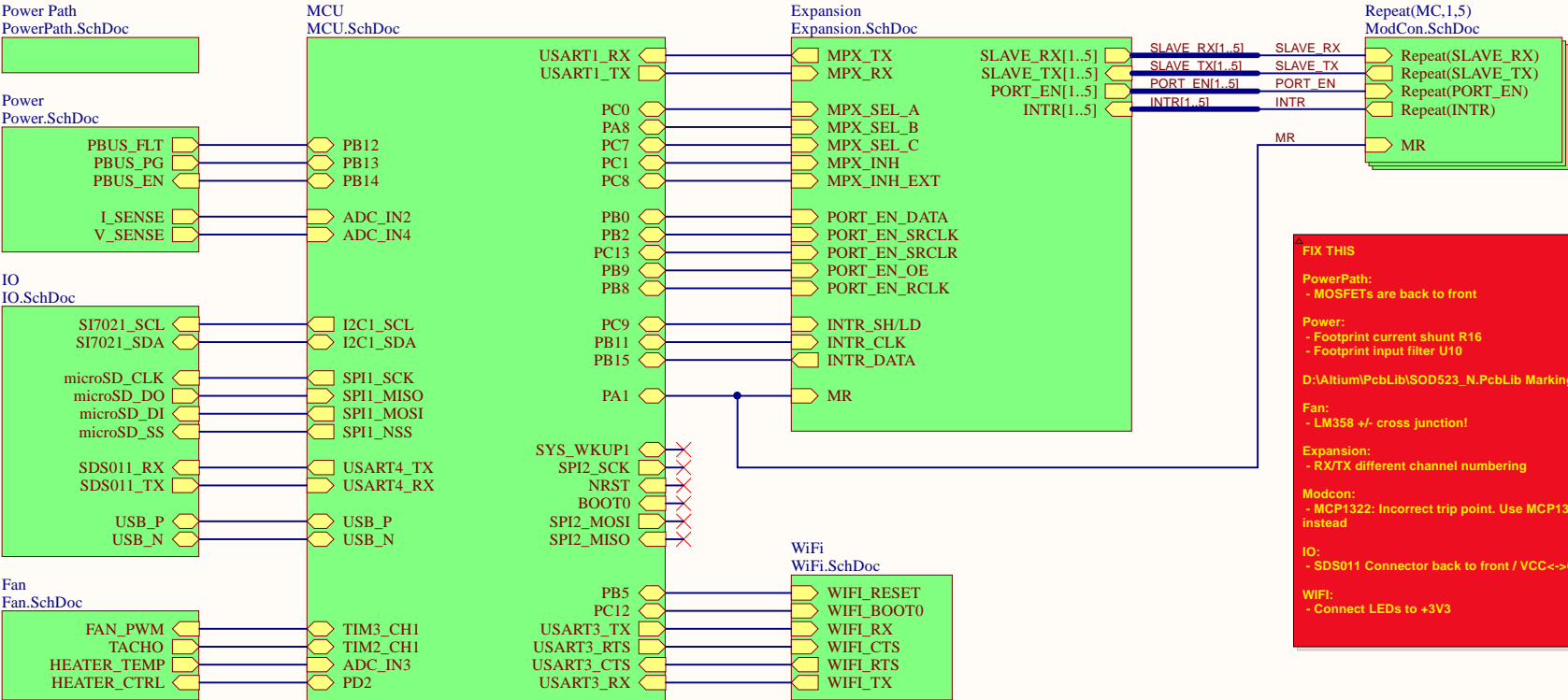


Project Tunguska



FIX THIS

PowerPath:

- MOSFETs are back to front

Power:

- Footprint current shunt R16
- Footprint input filter U10

D:\Altium\PcbLib\SOD523_N.PcbLib Marking

Fan:

- LM358 +/- cross junction!

Expansion:

- RX/TX different channel numbering

Modcon:

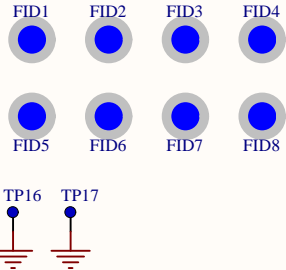
- MCP1322: Incorrect trip point. Use MCP1322-30 or -33 instead

IO:

- SDS011 Connector back to front / VCC<->GND

WiFi:

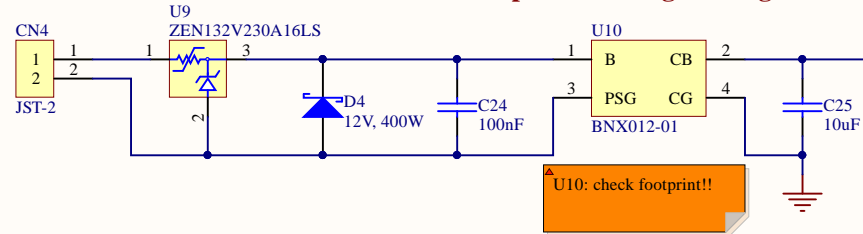
- Connect LEDs to +3V3



Title		
Project Tunguska - Main Sheet		
Size	Number	Revision
A4	*	A
Date:	19.04.2019	Sheet 2 of 0
File:	C:\Users\...Tunguska.SchDoc	Drawn By: A. Küllenberg

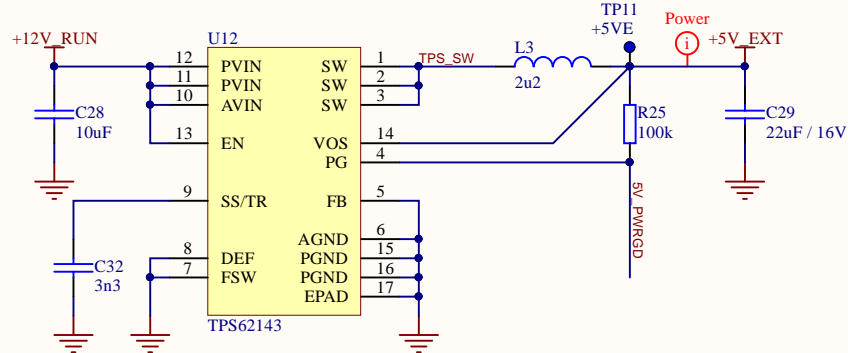
Power Supply

12V Input / Filtering / Voltage & Current Sensing

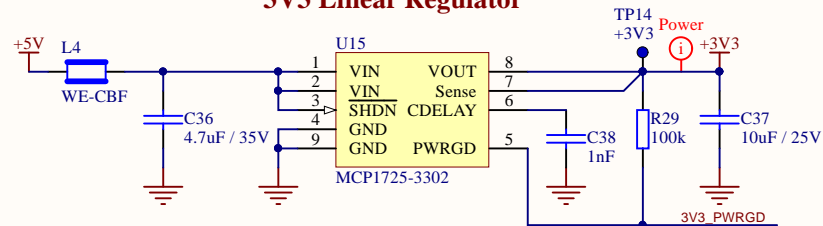


U10: check footprint!!

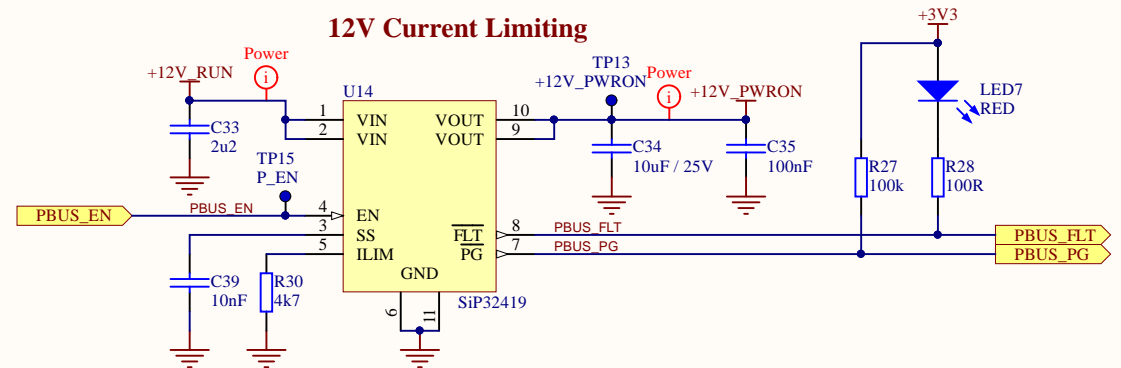
5V Switching Regulator



3V3 Linear Regulator



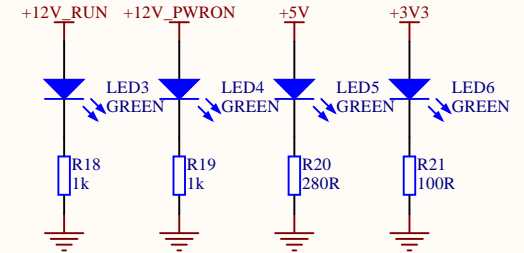
12V Current Limiting



▲ R30 current limit
4k7: 1.25A
3k3: 2A

Change to 3k3 later!!

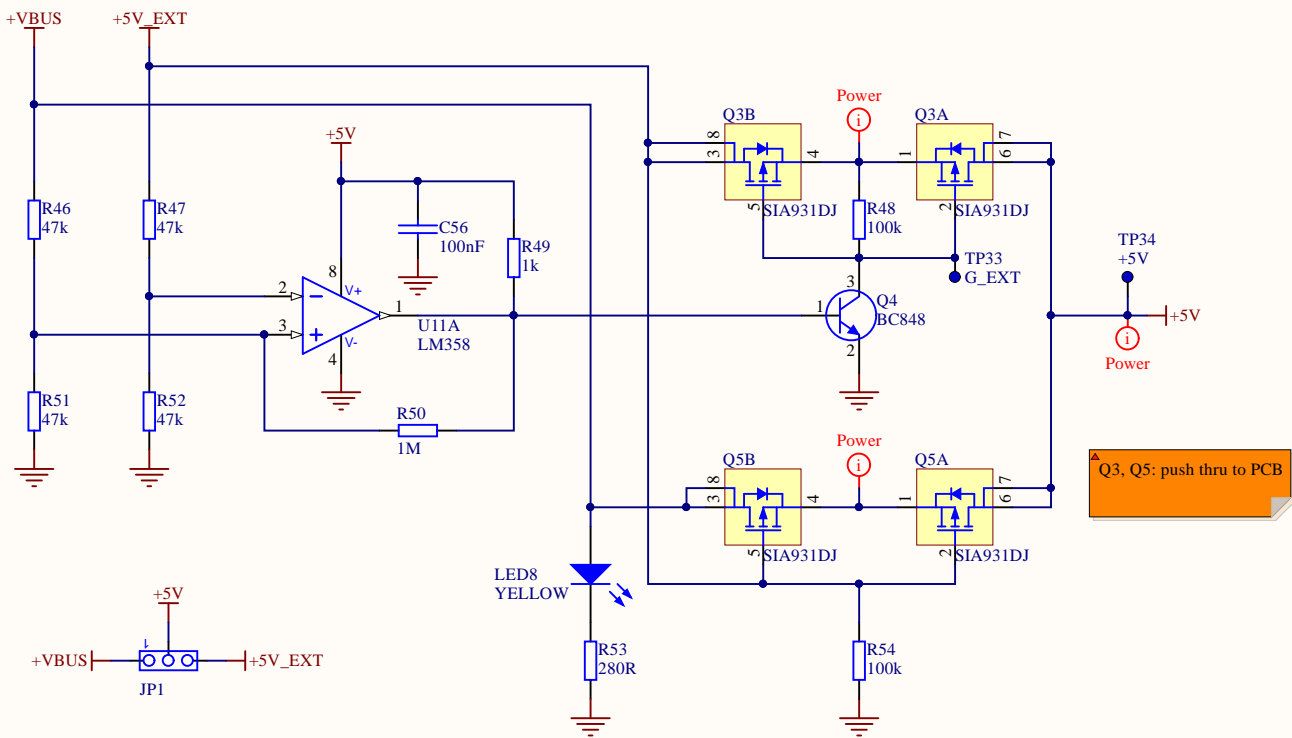
Status LEDs



Title Power Supply			
Size A4	Number *		Revision A
Date:	19.04.2019	Sheet 3	dif
File:	C:\Users\...\Power.SchDoc	Drawn By:	A. Küllenberg

Power Path

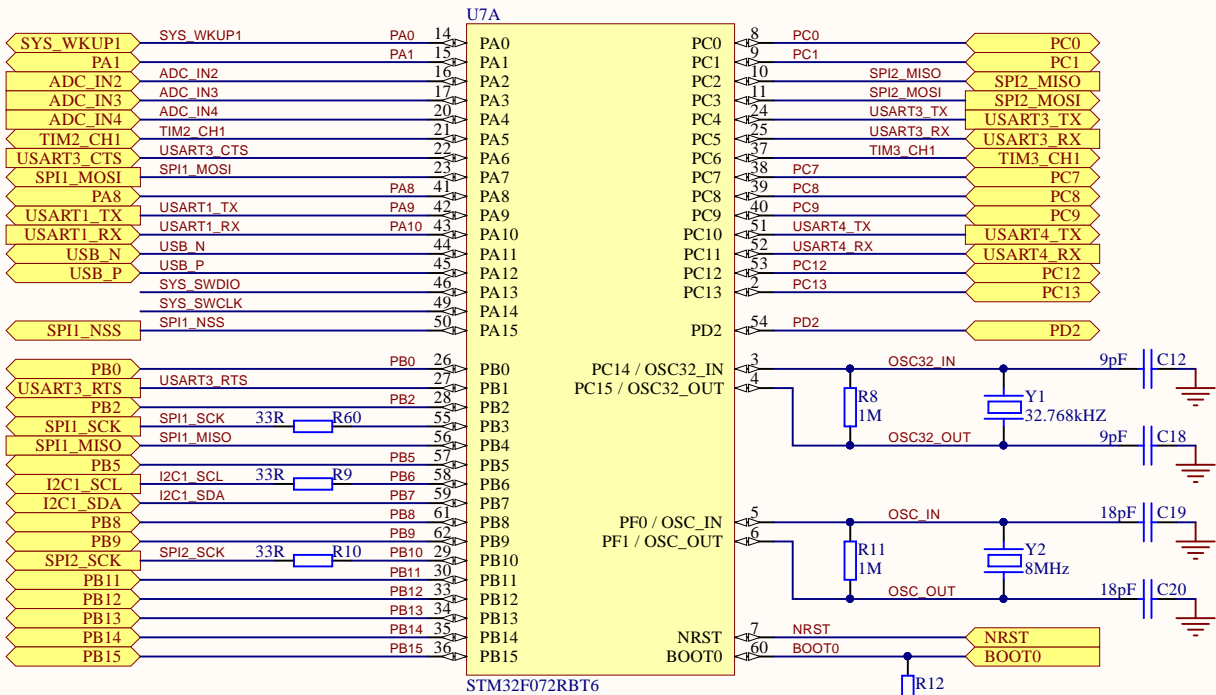
+VBUS / +5V_EXT Auto-Select



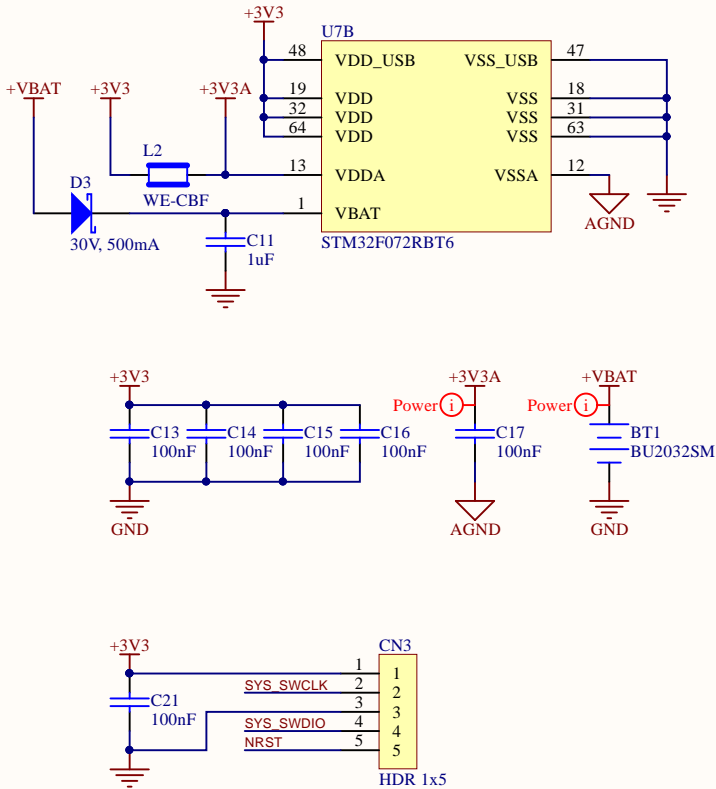
Title Power Path			
Size A4	Number *		Revision A
Date:	19.04.2019	Sheet 4	df0
File:	C:\Users\...\PowerPath.SchDoc	Drawn By: A. Küllenberg	

Microcontroller

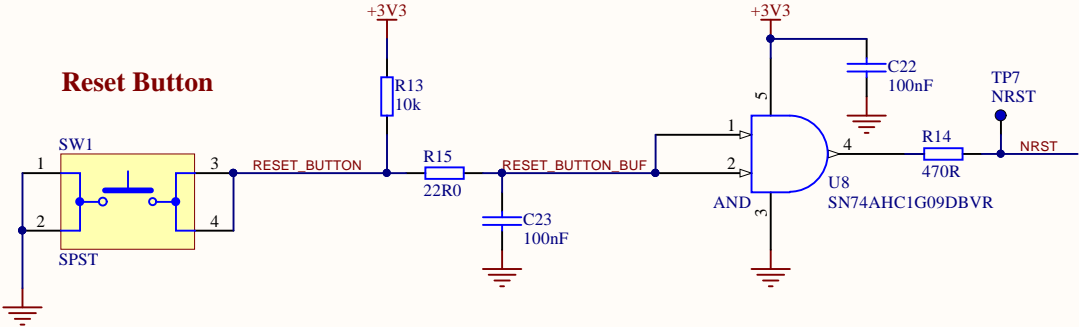
STM32 ARM Cortex M0



Power Supply

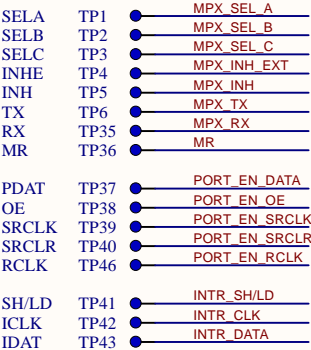


Reset Button

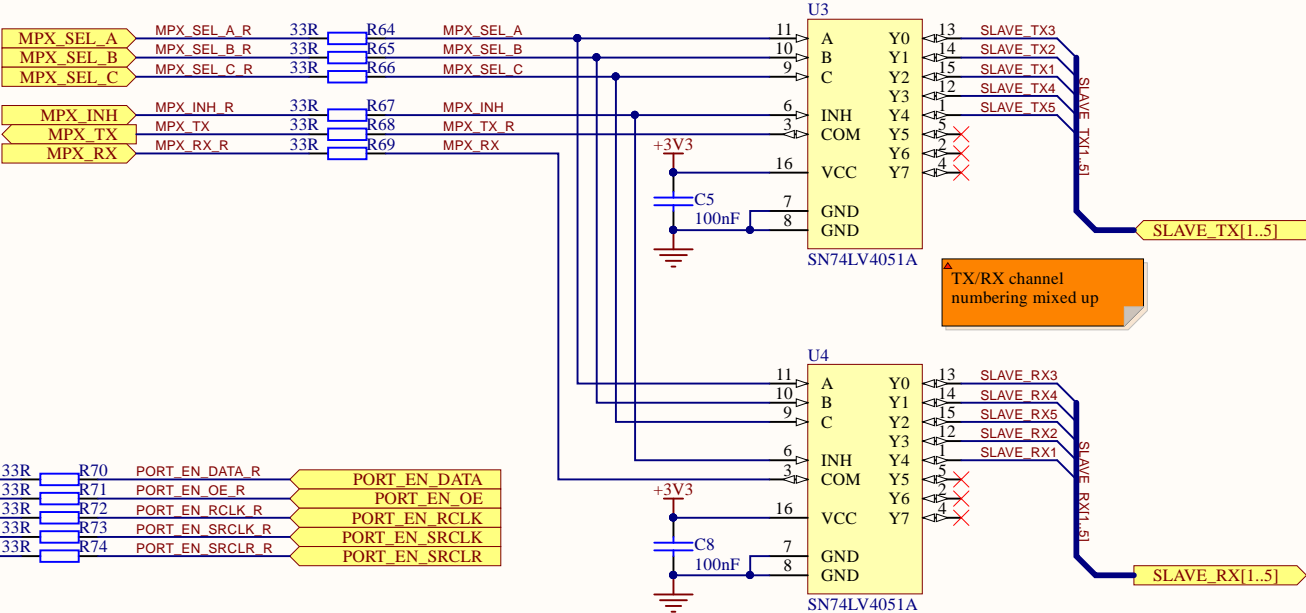


Title		
Microcontroller		
Size	Number	Revision
A4	*	A
Date:	19.04.2019	Sheet 5 of 10
File:	C:\Users\...MCU.SchDoc	Drawn By: A. Küllenberg

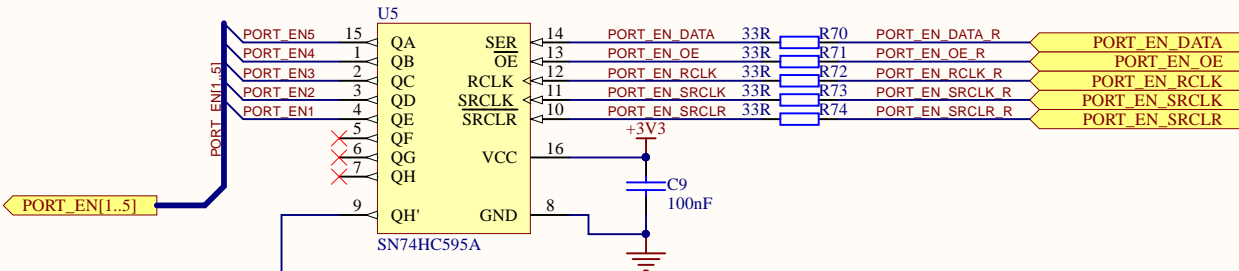
Port Expansion



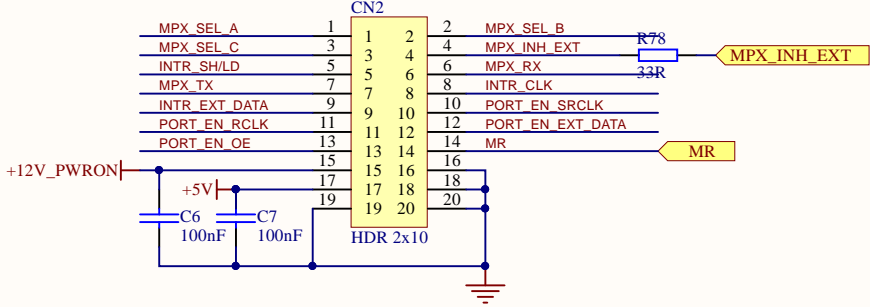
UART Multiplexer



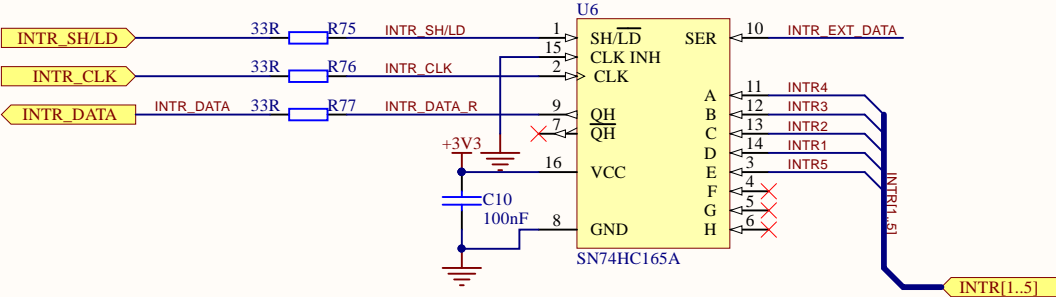
Port Enable Register



Port Expansion Header

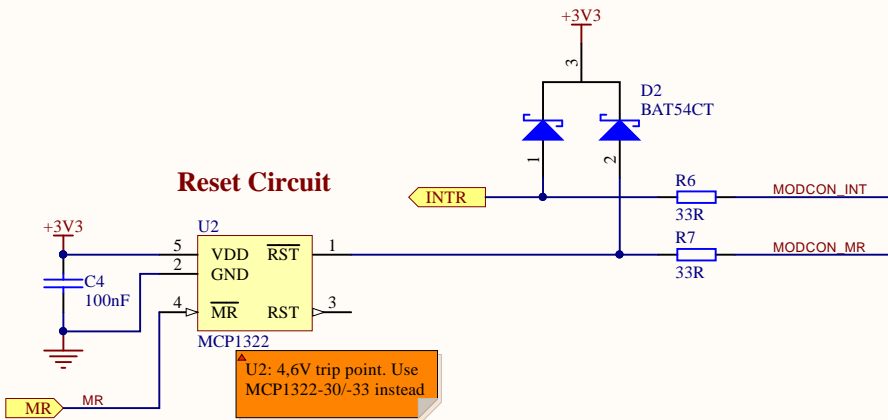
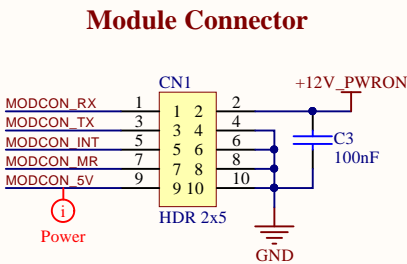
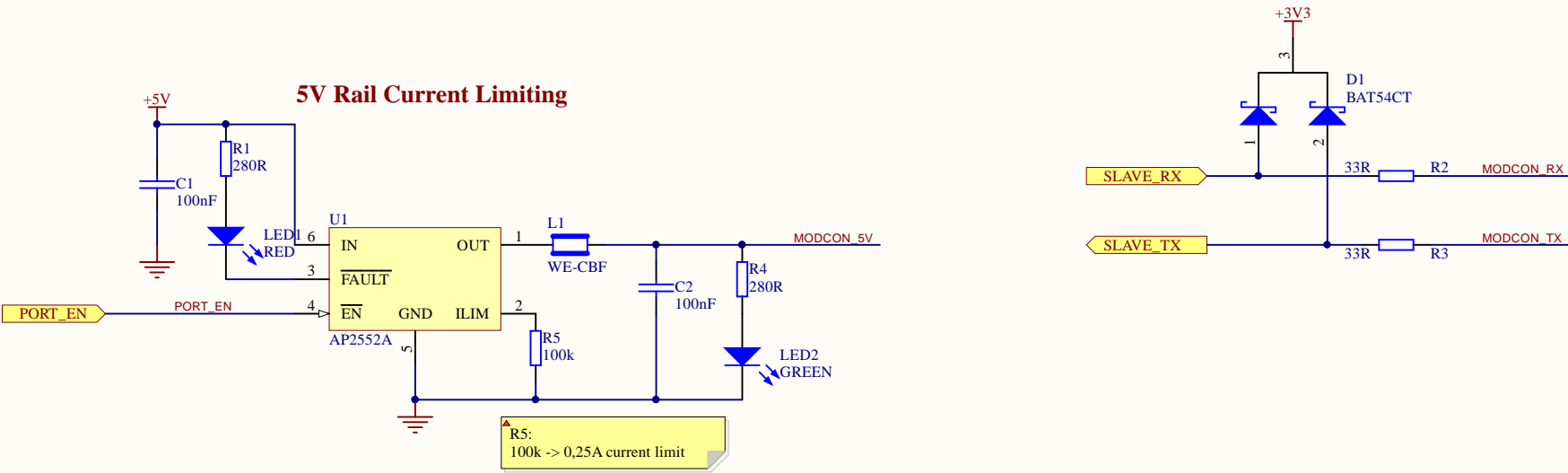


Interrupt Register



Title		
Port Expansion		
Size	Number	Revision
A4	*	A
Date:	19.04.2019	Sheet 6 of 0
File:	C:\Users\...\Expansion.SchDoc	Drawn By: A. Küllenberg

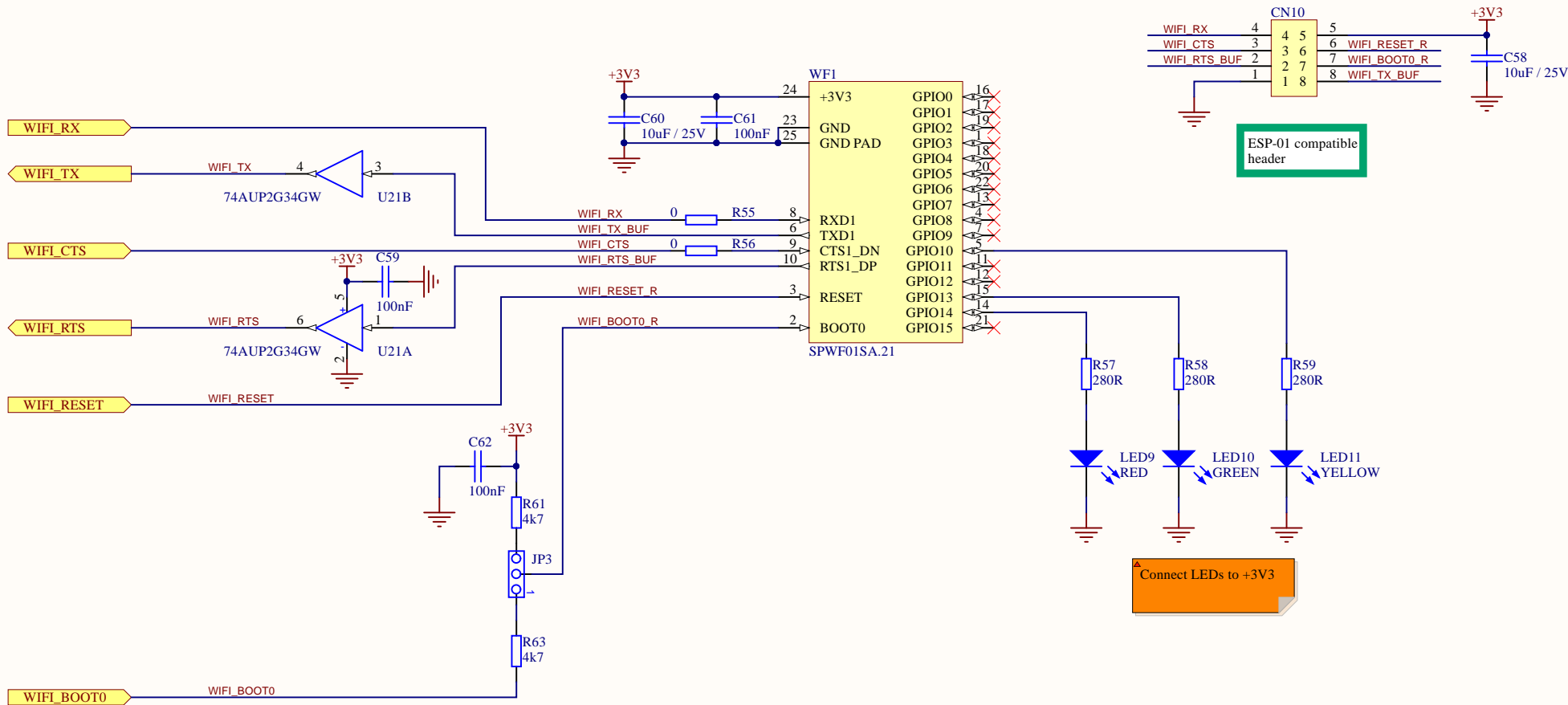
Module Connector (5 Channels)



Title		
Module Connector		
Size	Number	Revision
A4	*	A
Date:	19.04.2019	Sheet 7 of 0
File:	C:\Users\...ModCon.SchDoc	Drawn By: A. Küllenberg

WiFi Module

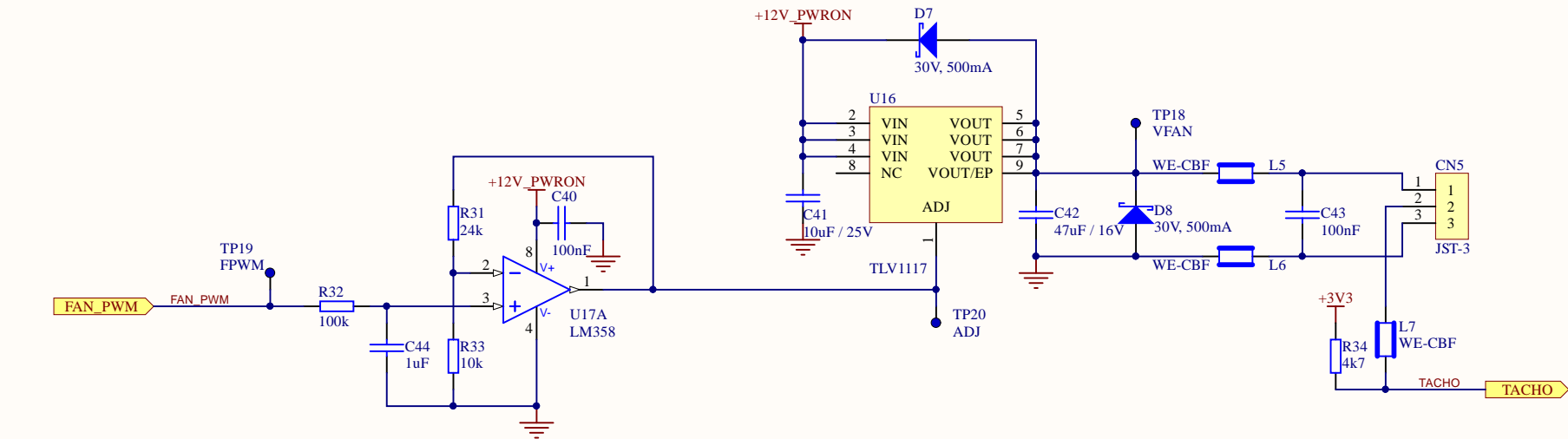
External Module Connector



Title		
WiFi Module		
Size	Number	Revision
A4	*	A
Date:	19.04.2019	Sheet 8 of 10
File:	C:\Users\...\WiFi.SchDoc	Drawn By: A. Küllenberg

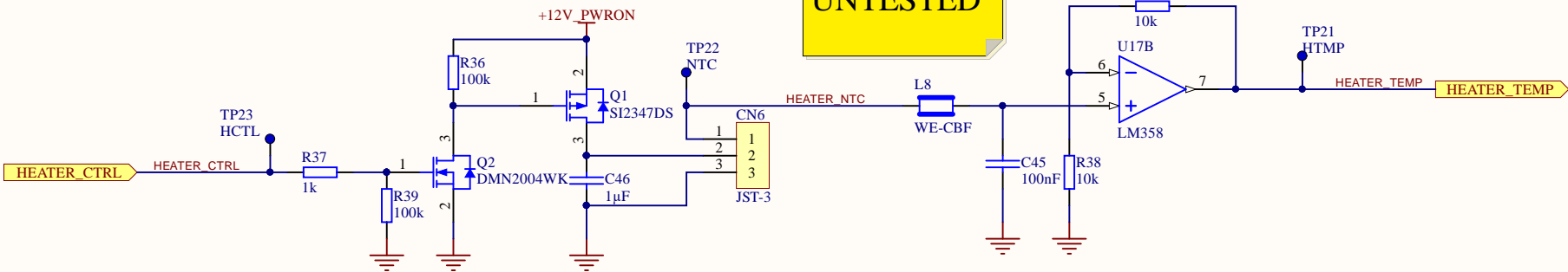
Fan & Heater Control

Fan Control



Heater Control

UNTESTED



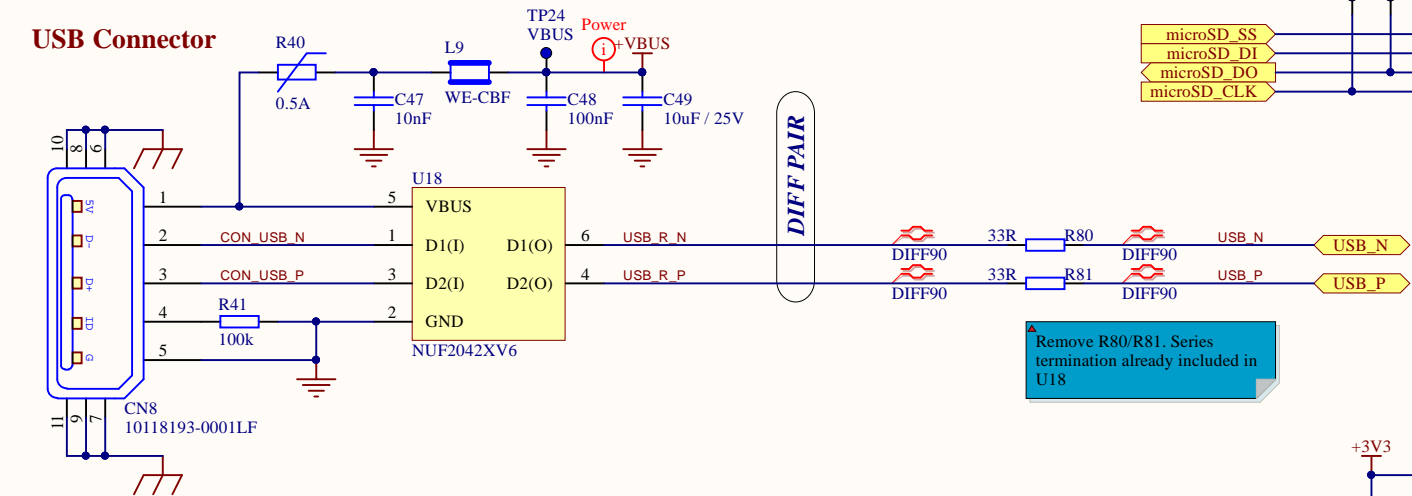
Title		
Fan & Heater Control		
Size	Number	Revision
A4	*	A
Date:	19.04.2019	Sheet 9 of 10
File:	C:\Users\...\Fan.SchDoc	Drawn By: *

USB, microSD Card & Sensor Interface

UNTESTED

microSD Card Connector

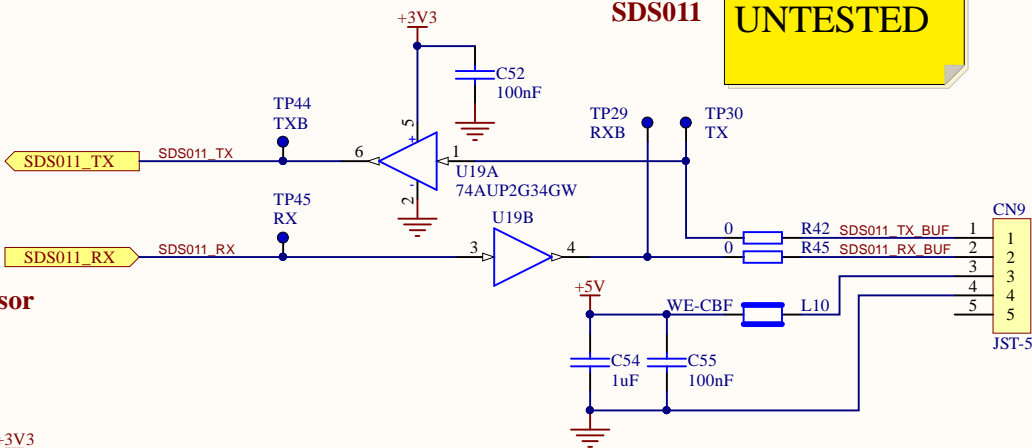
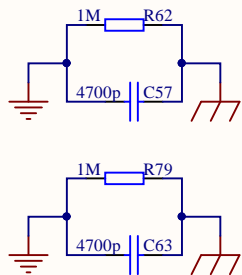
USB Connector



Humidity & Temperature Sensor

SDS011

UNTESTED



Title		
USB, microSD Card & Sensor Interface		
Size	Number	Revision
A4	*	A
Date:	19.04.2019	Sheet 10 of 10
File:	C:\Users\...IO.SchDoc	Drawn By: A. Küllenberg