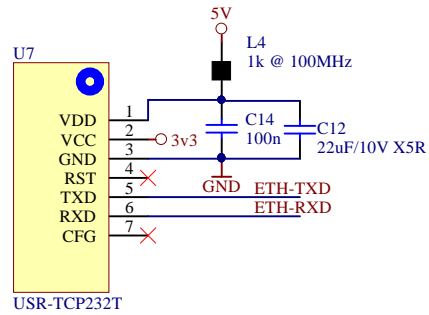
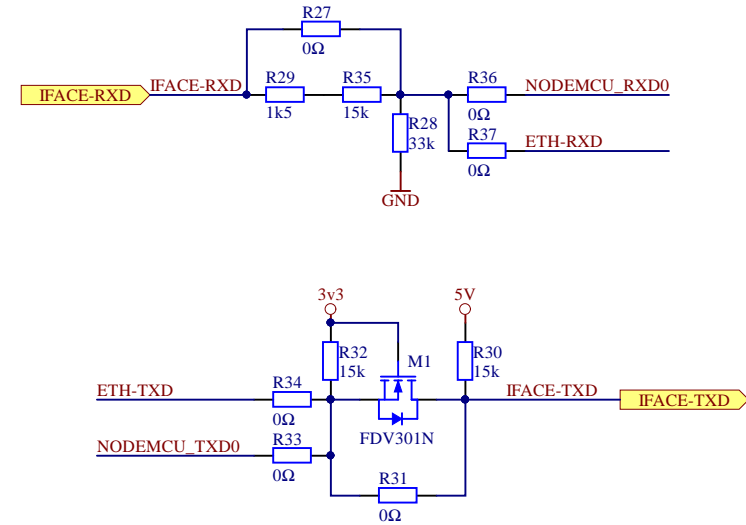


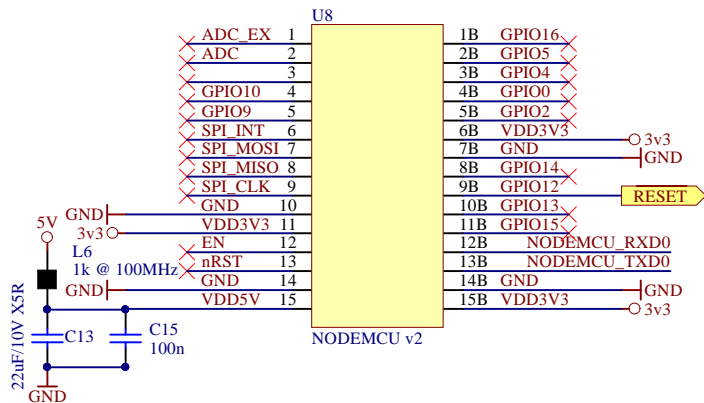
USR-TCP232T ethernet module



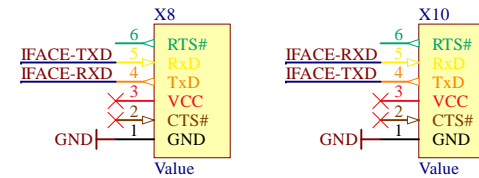
Optional TxD/RxD 5v <-> 3v3 level translator



NodeMCU v2 WiFi module



FTDI cable debug headers



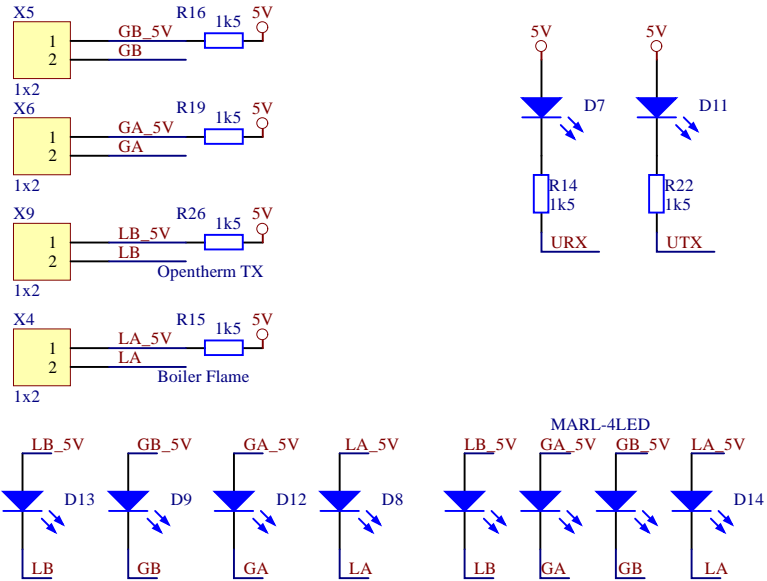
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2

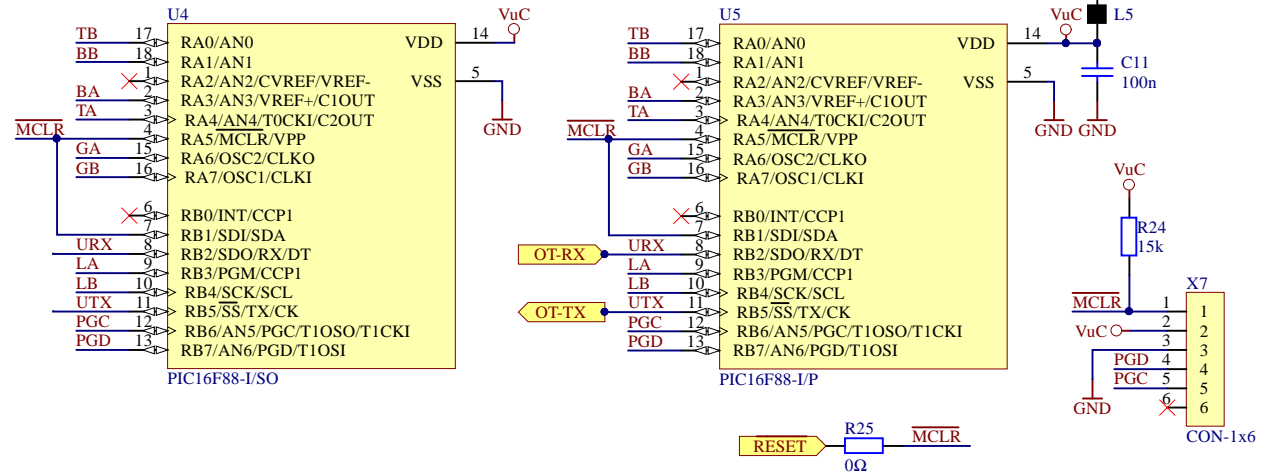
3

4

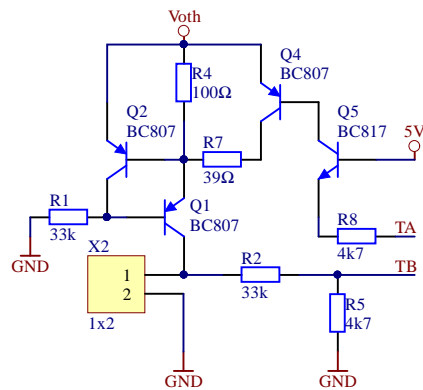
LED's and optional IO



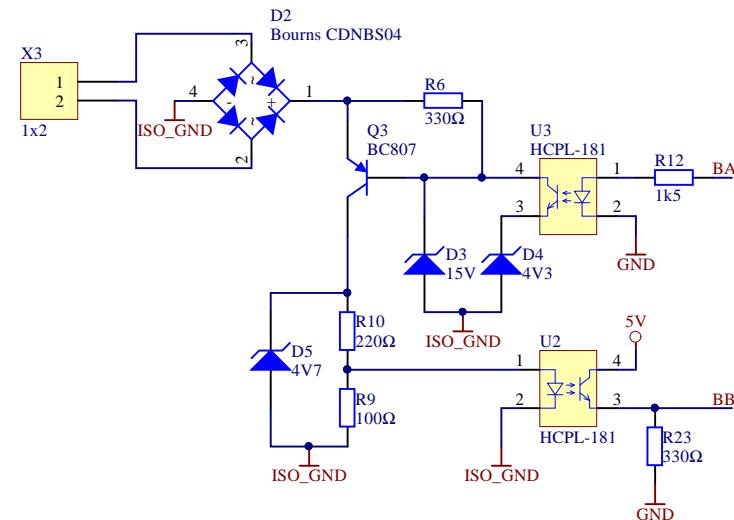
OpenTherm microcontroller



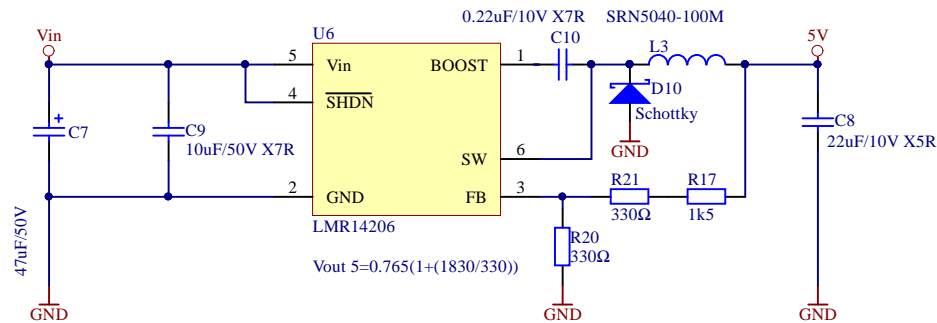
OpenTherm Thermostat interface



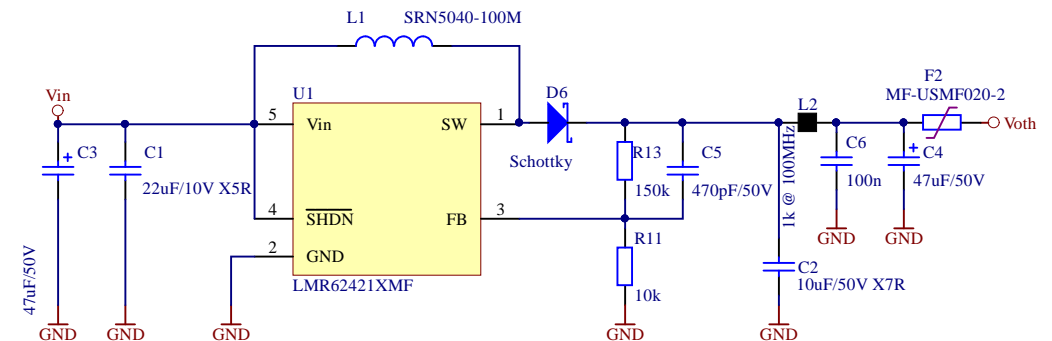
OpenTherm Boiler interface



15-24V Input -> 5v buck converter



5-12V Input -> 20v (for OpenTherm) boost converter



Input power options

Power options:

Option 1: 5V input on connector or NodeMCU usb connector

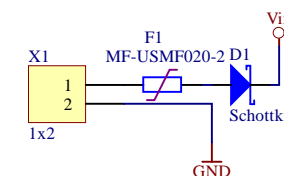
Needed: Boost converter for 20V OpenTherm voltage.

Option 2: 15-24V input on connector (for example from boiler)

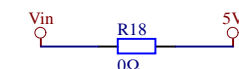
Needed: Buck converter for 5V, input voltage is used for OpenTherm voltage

Option 3: 6-12V input on connector

Needed: Boost converter for 20V OpenTherm voltage
+ Buck converter for 5V electronics voltage.



Option 1 (not nodeMCU)



Option 2

