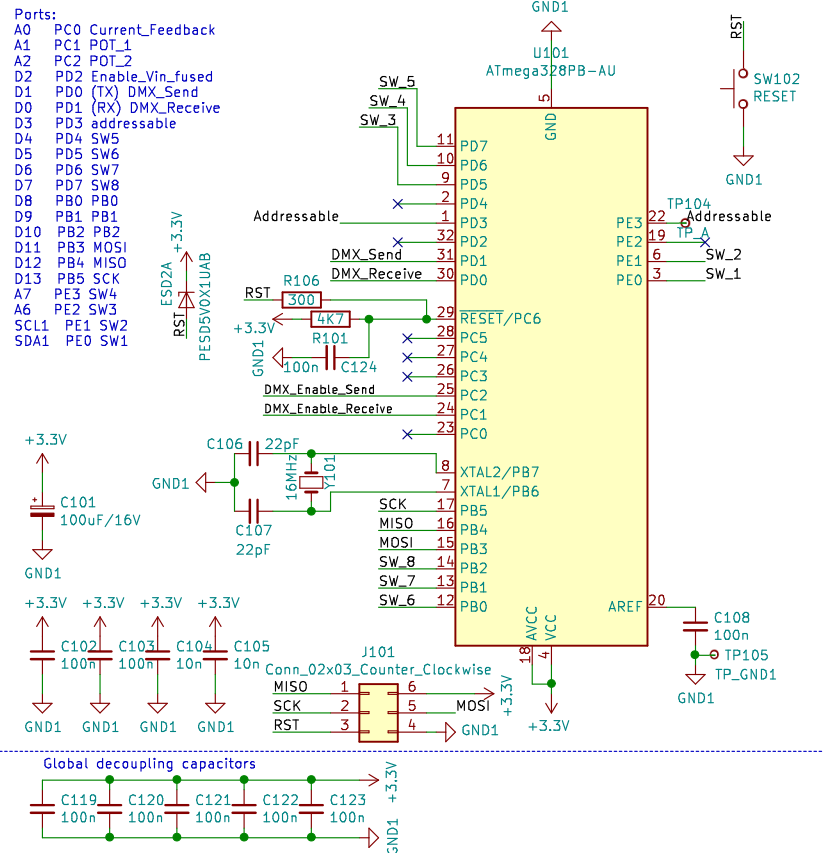


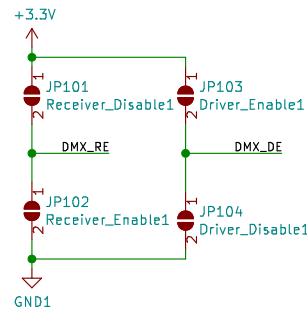
MCU Option ATMEGA328



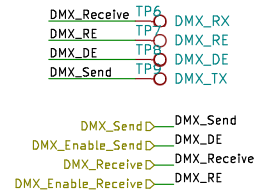
Configure Transceiver (Rx & Tx) RS-485 Transceiver

To receive data on the DMX bus; RE (Receiver Enable) must be pulled low, or high for disable.
For sending data; Tx to Rx link must be enabled, and DE (Driver Enable) must be pulled high, or low to disable.

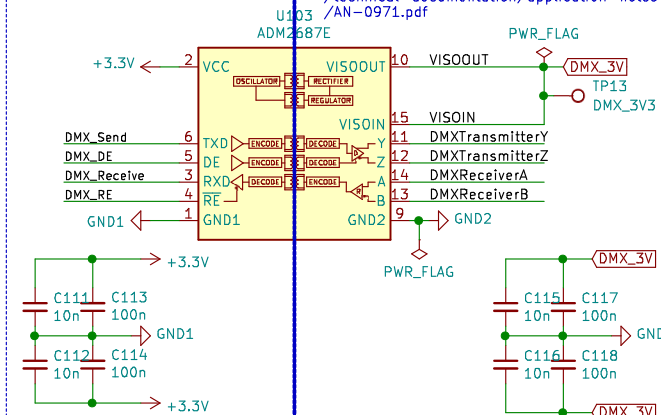
RE and DE can be controlled from the MCU, or hard coded via these jumper links.



MCU Interface

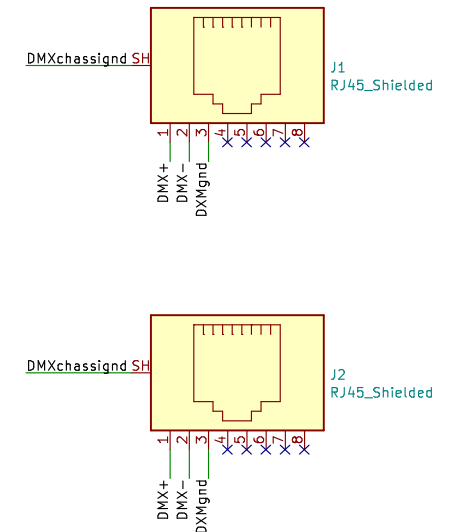


For sending and receiving DMX512 a Analog Devices ADM2687E is used which isolates the RS-485 bus from the low voltage micro controller side



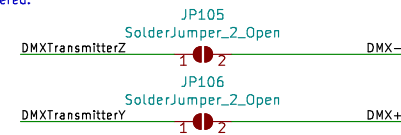
DMX Connectors

Neutrik female (NC3FAAH2) and male (NC3MAAH) 3 pin XLR connector is used for DMX512.



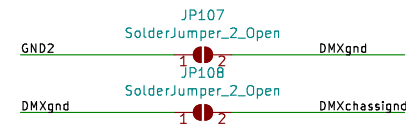
Link Tx to Rx (Optional)

For enabling sending on the DMX bus, these two jumper links must be soldered.



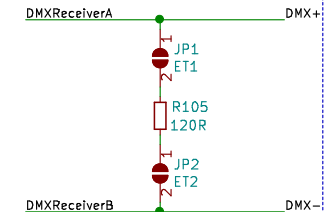
Link Ground (Optional)

Options for linking ground and shield of XLR connectors with RS-485 side of the transceiver.



Terminators

A RS-485 bus is terminated by a 120 ohm resistor. This can be mounted here if needed.



Intergalektik d.o.o.

Sheet: /RS485_transciever/

File: RS485_transciever.sch

Title: RS-485

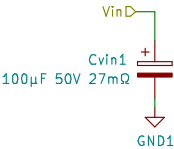
Size: A4 Date: 2020-09-11

KiCad E.D.A. kicad 5.1.9+dfsg1-1bpo10+1

Rev:

Id: 2/4

Decoupling and Breakout Pin Header



Classic Fuse (Option 1)

A much cheaper option then the high side switch, but one time use only.
Populate with a appropriate 1206 fast blow fuse.
Example: Fuse Fast Blow 10A 1206 MCCFB1206TFF/10



Highside Power Switch (Option 2)

The Infineon BTS50055-1TMC is a highside high current power switch with buildt in reverse polarity and temperature protection.
It's also used to measure current consumption; Current_Feedback as analog output.
To enable the high power switch Enable_Vin_fused must be driven low.
Both Current_Feedback and Enable_Vin_fused goes to the MCU so it can act on over current and act as a breaker.

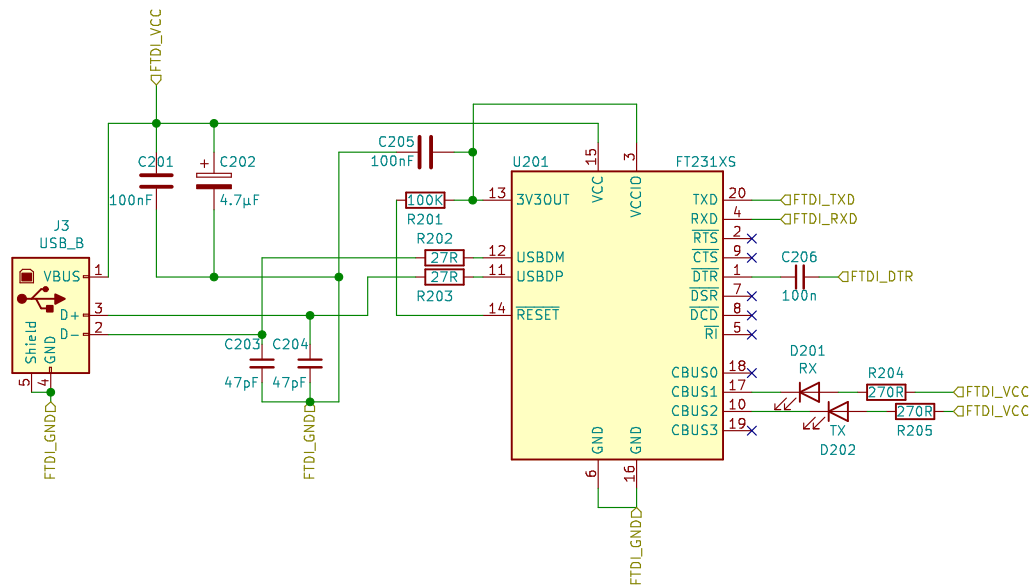
Intergalaktik d.o.o.

Sheet: /input_protection/
File: input_protection.sch

Title: Input protection

Size: A4 Date: 2020-09-11
KiCad E.D.A. kicad 5.1.9+dfsg1-1bpo10+1

Rev:
Id: 3/4



Sheet: /USB-serial/
File: USB-serial.sch

Title:

Size: A4
KiCad E.D.A. kicad 5.1.9+dfsg1-1bpo10+1

Date:

Rev:
Id: 4/4