Duet 5+ Ethernet

Sheet: Processor

Processor

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Sheet: Stepper Driver & Endstops

Stepper Drivers

File: Stepper_Drv.sch

Sheet: Headers

Headers

File: Headers.sch

Sheet: IO

IO

File: io.sch

Sheet: MOSFETs and Buffers

MOSFET outputs
Buffers/Logic

File: FETsBuffers.sch

Sheet: Comms

Comms

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Power

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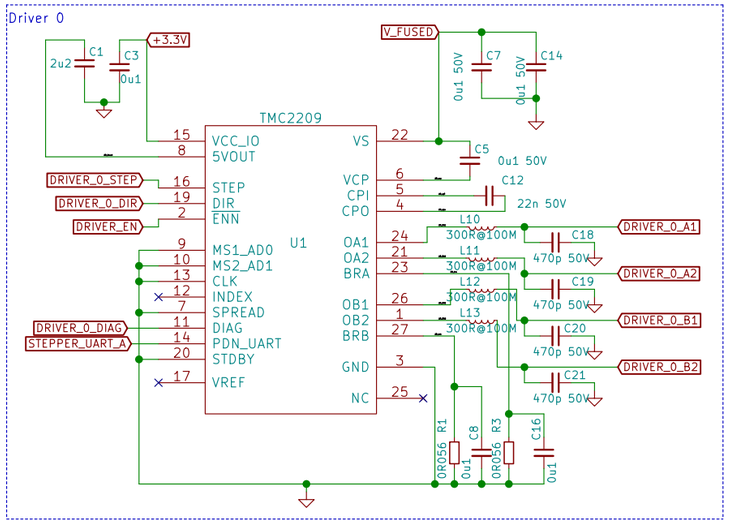
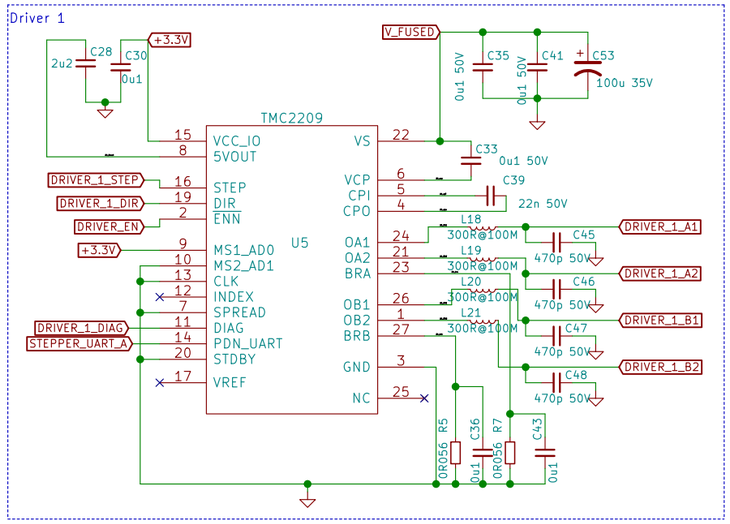
Duet3D

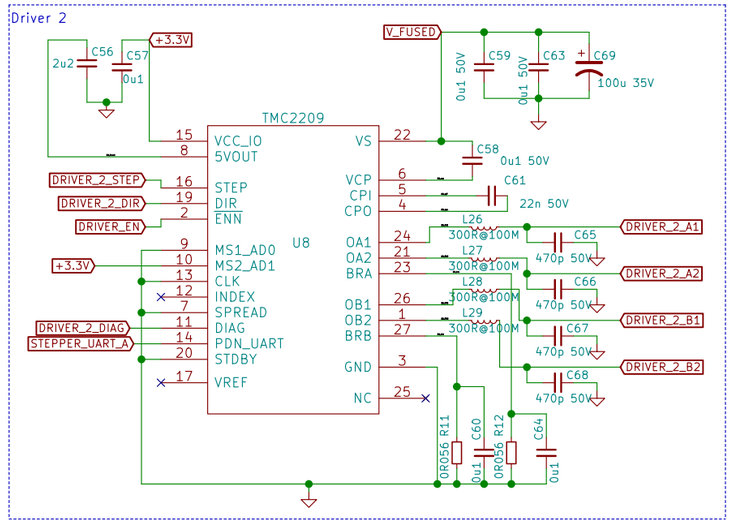
Sheet: /
File: Duet3_5+_Ethernet.sch

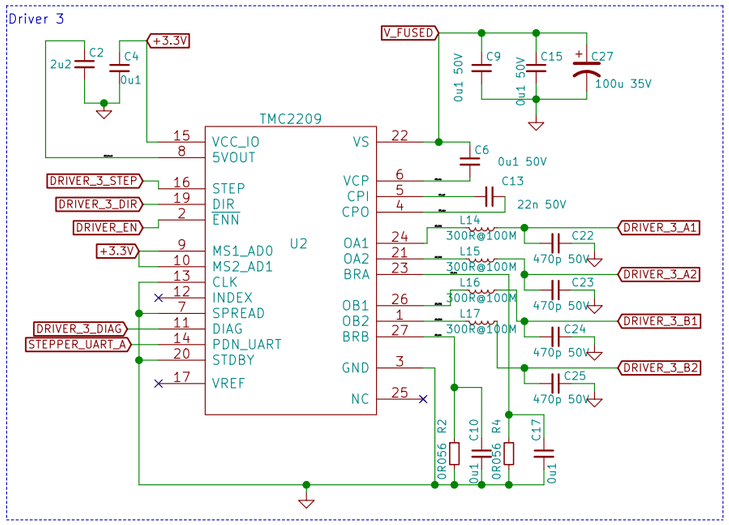
Title: Duet 3 Mini 5+ – Ethernet

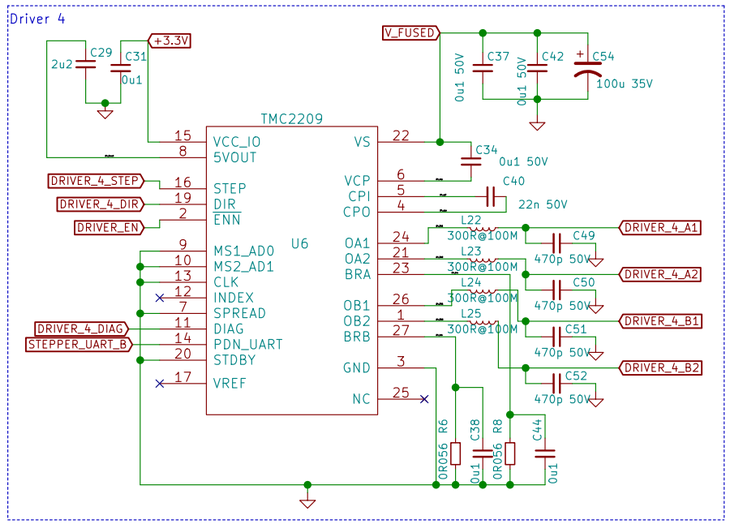
Size: A4	Date: 2020-12-15	**Rev: 1.0**
KiCad E.D.A. kicad (5.1.4)-1		Id: 1/8

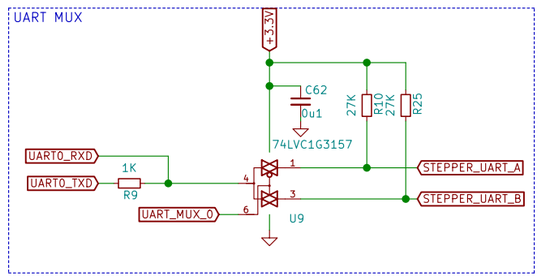












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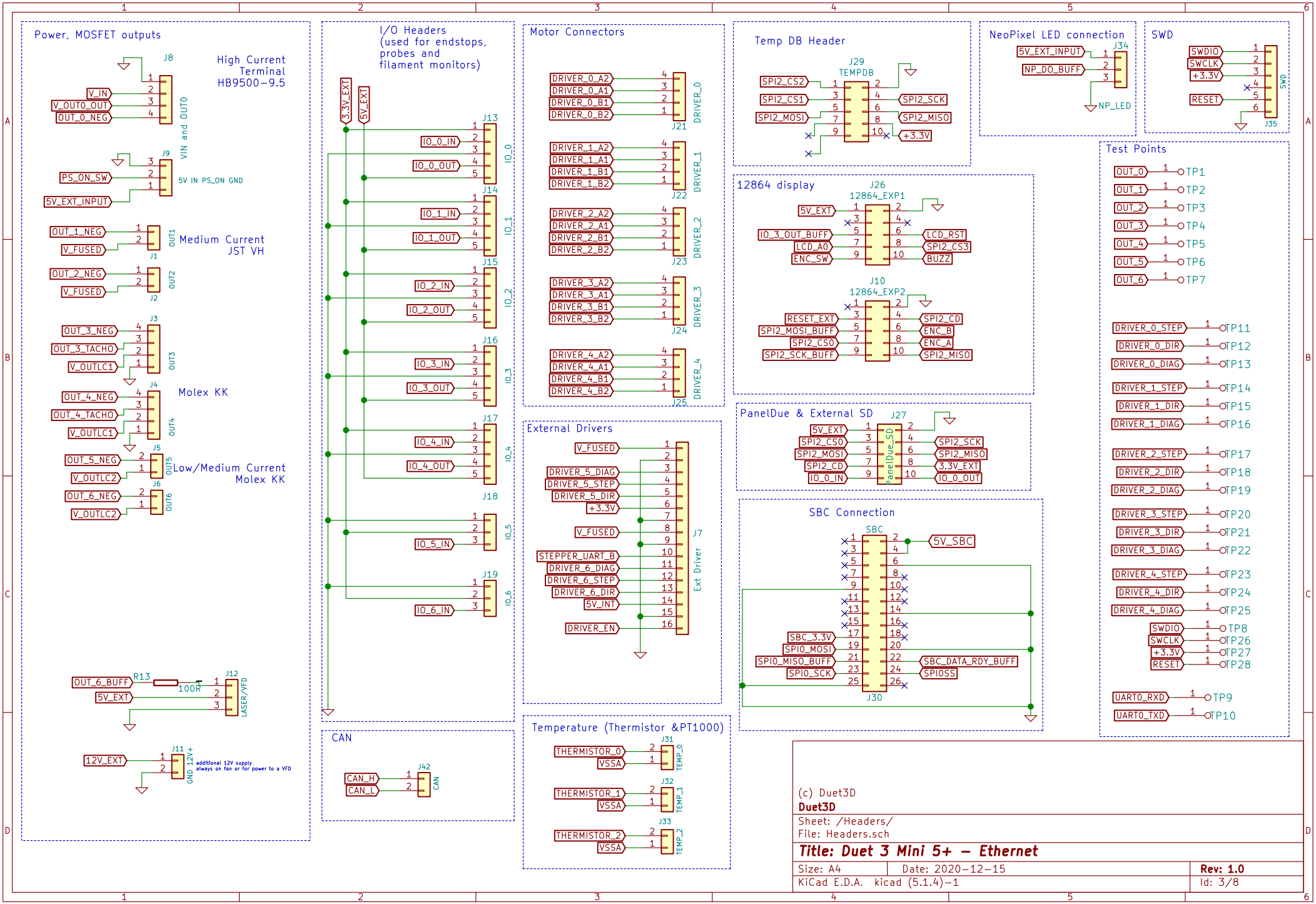
Sheet: /Stepper Driver & Endstops/
File: Stepper_Drv.sch

Title: Duet 3 Mini 5+ – Ethernet

Size: A3	Date: 2020-12-15	**Rev: 1.0**
KiCad E.D.A. kicad (5.1.4)-1		Id: 2/8


Power, MOSFET outputs
High Current Terminal HB9500-9.5
J8
V_IN
V_OUT0_OUT
OUT_0_NEG
VIN and OUT0
J9
PS_ON_SW
5V_EXT_INPUT
5V IN PS_ON GND
OUT_1_NEG
V_FUSED
OUT1
J1
Medium Current JST VH
OUT_2_NEG
V_FUSED
OUT2
J2
J3
OUT_3_NEG
OUT_3_TACHO
V_OUTLC1
OUT3
J4
OUT_4_NEG
OUT_4_TACHO
V_OUTLC1
OUT4
Molex KK
J5
OUT_5_NEG
V_OUTLC2
OUT5
Low/Medium Current Molex KK
J6
OUT_6_NEG
V_OUTLC2
OUT6
OUT_6_BUFF
R13
100R
5V_EXT
J12
LASER/VFD
12V_EXT
J11
GND 12V+
additional 12V supply always on fan or for power to a VFD
I/O Headers (used for endstops, probes and filament monitors)
3.3V_EXT
5V_EXT
J13
IO_0_IN
IO_0_OUT
IO_0
J14
IO_1_IN
IO_1_OUT
IO_1
J15
IO_2_IN
IO_2_OUT
IO_2
J16
IO_3_IN
IO_3_OUT
IO_3
J17
IO_4_IN
IO_4_OUT
IO_4
J18
IO_5_IN
IO_5
J19
IO_6_IN
IO_6
CAN
CAN_H
CAN_L
J42
CAN
Motor Connectors
DRIVER_0_A2
DRIVER_0_A1
DRIVER_0_B1
DRIVER_0_B2
J21
DRIVER_0
DRIVER_1_A2
DRIVER_1_A1
DRIVER_1_B1
DRIVER_1_B2
J22
DRIVER_1
DRIVER_2_A2
DRIVER_2_A1
DRIVER_2_B1
DRIVER_2_B2
J23
DRIVER_2
DRIVER_3_A2
DRIVER_3_A1
DRIVER_3_B1
DRIVER_3_B2
J24
DRIVER_3
DRIVER_4_A2
DRIVER_4_A1
DRIVER_4_B1
DRIVER_4_B2
J25
DRIVER_4
External Drivers
V_FUSED
DRIVER_5_DIAG
DRIVER_5_STEP
DRIVER_5_DIR
+3.3V
V_FUSED
STEPPER_UART_B
DRIVER_6_DIAG
DRIVER_6_STEP
DRIVER_6_DIR
5V_INT
DRIVER_EN
J7
Ext Driver
Temperature (Thermistor &PT1000)
THERMISTOR_0
VSSA
J31
TEMP_0
THERMISTOR_1
VSSA
J32
TEMP_1
THERMISTOR_2
VSSA
J33
TEMP_2
Temp DB Header
J29
TEMPDB
SPI2_CS2
SPI2_CS1
SPI2_MOSI
SPI2_SCK
SPI2_MISO
+3.3V
12864 display
J26
12864_EXP1
5V_EXT
IO_3_OUT_BUFF
LCD_A0
ENC_SW
LCD_RST
SPI2_CS3
BUZZ
J10
12864_EXP2
RESET_EXT
SPI2_MOSI_BUFF
SPI2_CS0
SPI2_SCK_BUFF
SPI2_CD
ENC_B
ENC_A
SPI2_MISO
PanelDue & External SD
J27
PanelDue_SD
5V_EXT
SPI2_CS0
SPI2_MOSI
SPI2_CD
IO_0_IN
SPI2_SCK
SPI2_MISO
3.3V_EXT
IO_0_OUT
SBC Connection
SBC
5V_SBC
SBC_3.3V
SPI0_MOSI
SPI0_MISO_BUFF
SPI0_SCK
SBC_DATA_RDY_BUFF
SPI0SS
J30
NeoPixel LED connection
5V_EXT_INPUT
NP_DO_BUFF
J34
NP_LED
SWD
SWDIO
SWCLK
+3.3V
RESET
J35
SWD
Test Points
OUT_0
OUT_1
OUT_2
OUT_3
OUT_4
OUT_5
OUT_6
TP1
TP2
TP3
TP4
TP5
TP6
TP7
DRIVER_0_STEP
DRIVER_0_DIR
DRIVER_0_DIAG
TP11
TP12
TP13
DRIVER_1_STEP
DRIVER_1_DIR
DRIVER_1_DIAG
TP14
TP15
TP16
DRIVER_2_STEP
DRIVER_2_DIR
DRIVER_2_DIAG
TP17
TP18
TP19
DRIVER_3_STEP
DRIVER_3_DIR
DRIVER_3_DIAG
TP20
TP21
TP22
DRIVER_4_STEP
DRIVER_4_DIR
DRIVER_4_DIAG
TP23
TP24
TP25
SWDIO
SWCLK
+3.3V
RESET
TP8
TP26
TP27
TP28
UART0_RXD
UART0_TXD
TP9
TP10
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Duet3D
Sheet: /Headers/
File: Headers.sch
Title: Duet 3 Mini 5+ – Ethernet
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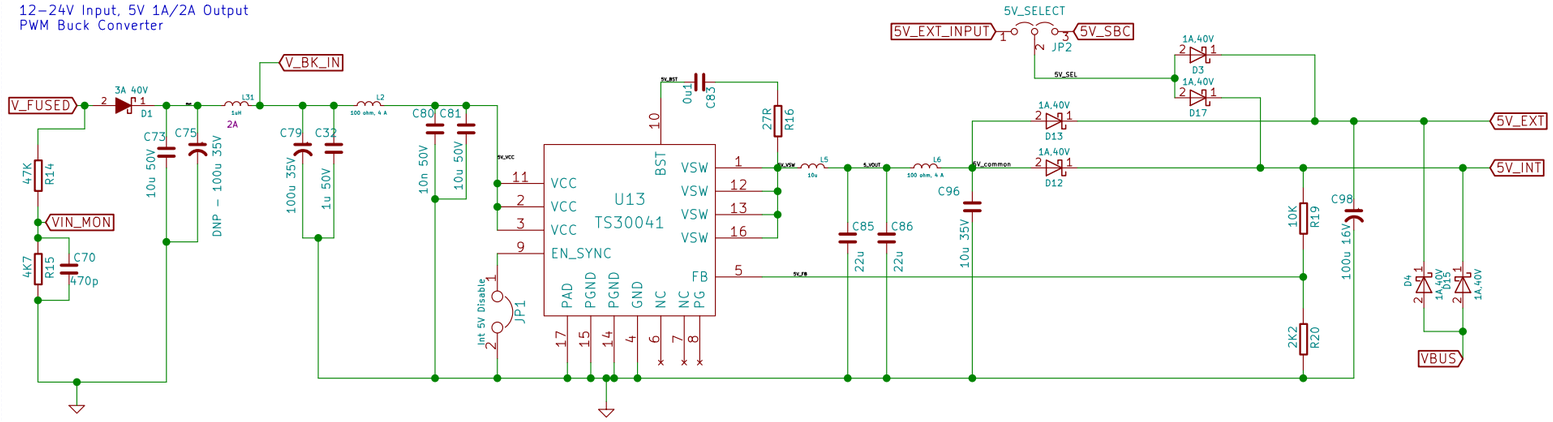
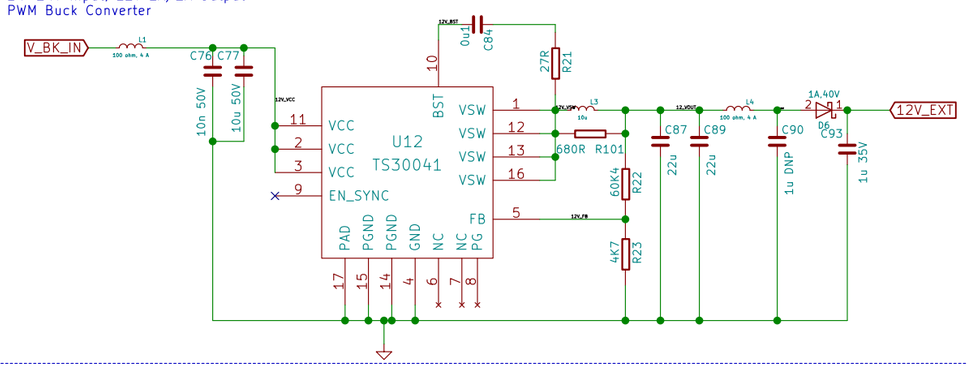
Date: 2020-12-15
Rev: 1.0
KiCad E.D.A. kicad (5.1.4)-1
Id: 3/8

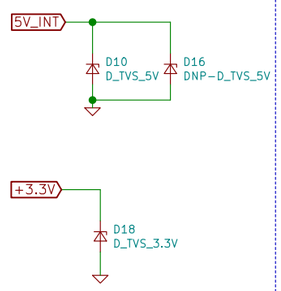
12–24V Input, 5V 1A/2A Output PWM Buck Converter



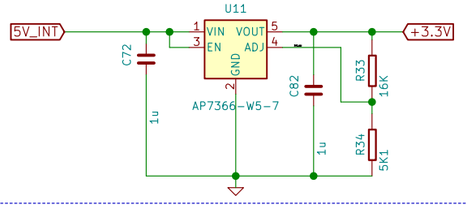
14–24V Input, 12V 1A/2A Output PWM Buck Converter



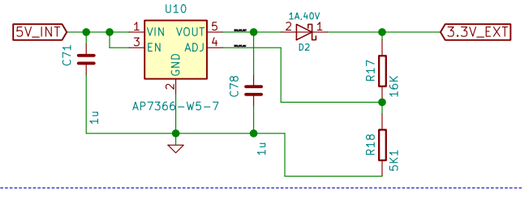
ESD protection for 5V_INT



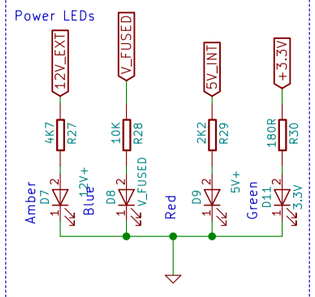
5V Input, 3.3V Output for internal use only Low Drop–Out Linear Regulator



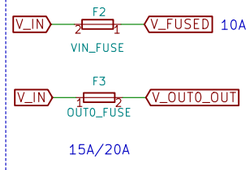
5V Input, 3.3V Output for external use only Low Drop–Out Linear Regulator



Power LEDs



Mini Blade Fuses



Duet3D

Sheet: /Power/
File: Power.sch

Title: Duet 3 Mini 5+ – Ethernet

Size: A3	Date: 2020–12–15	**Rev: 1.0**
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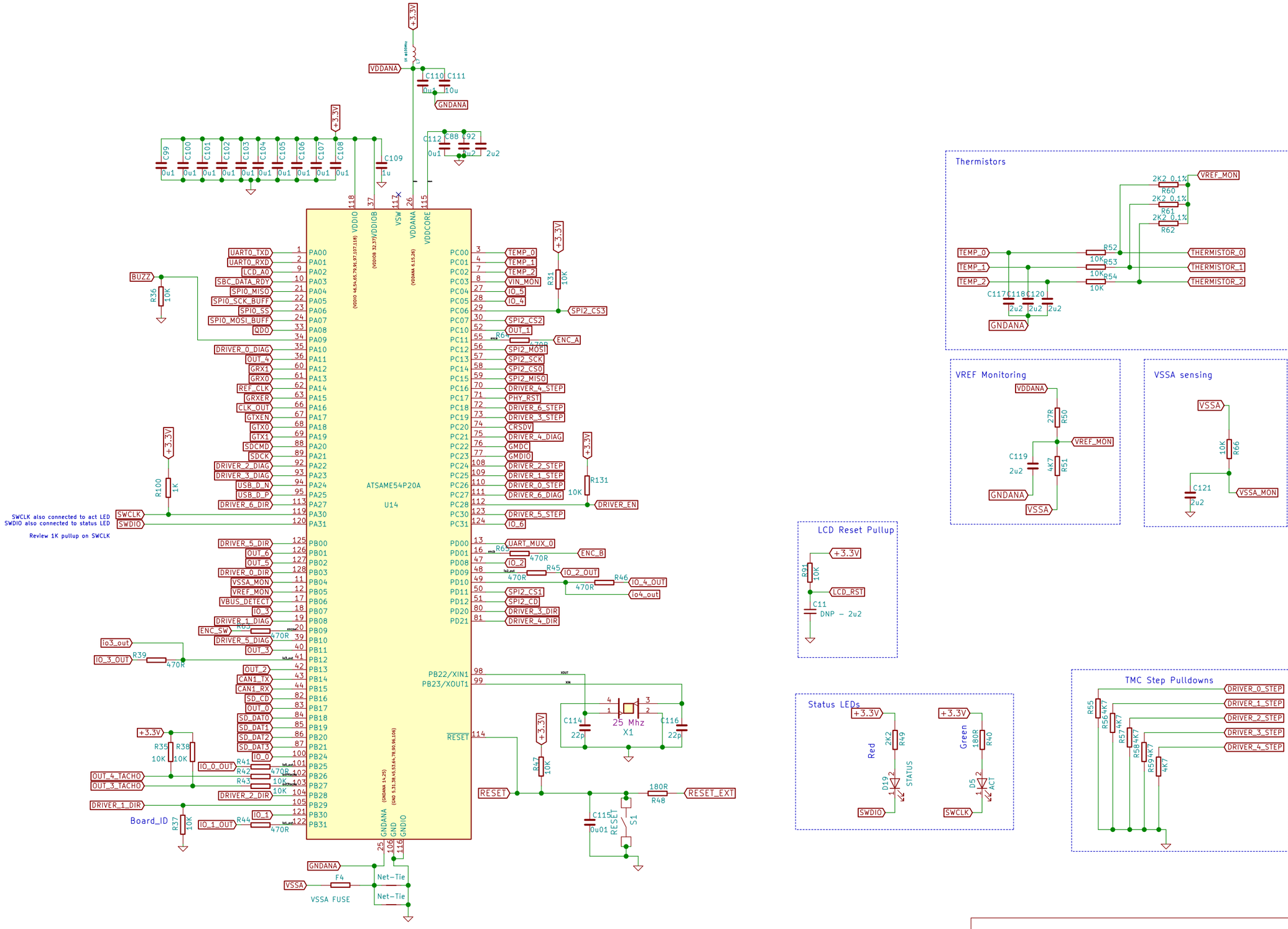
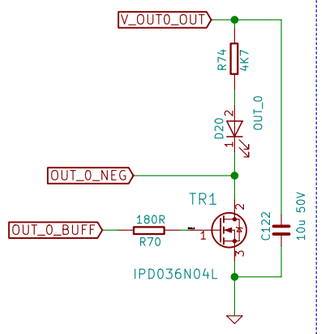


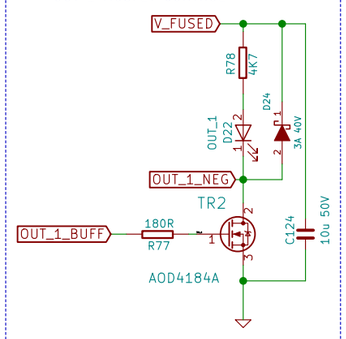
Duet3D		
Sheet: /Processor/		
File: Processor.sch		
Title: Duet 3 Mini 5+ – Ethernet		
Size: A3	Date: 2020-12-15	**Rev: 1.0**
KiCad E.D.A. kicad (5.1.4)-1		Id: 5/8

OUT0 – OUT3 – High current MOSFETs

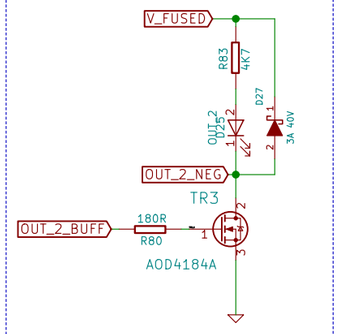
OUT 0 MOSFET CONTROL



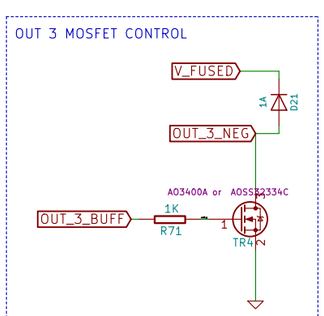
OUT 1 MOSFET CONTROL



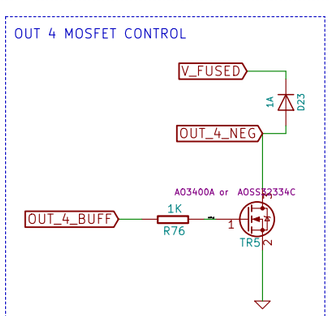
OUT 2 MOSFET CONTROL



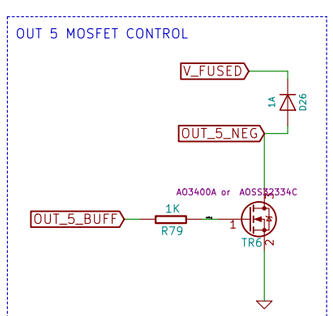
OUT 3 MOSFET CONTROL



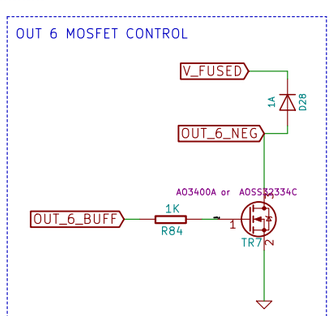
OUT 4 MOSFET CONTROL



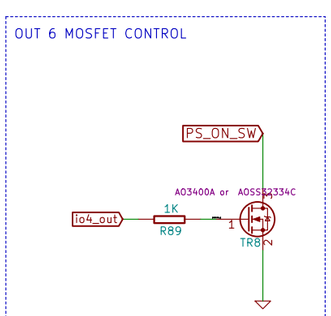
OUT 5 MOSFET CONTROL



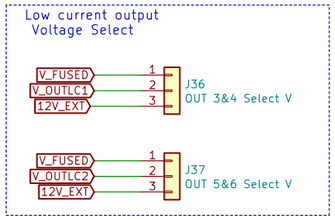
OUT 6 MOSFET CONTROL



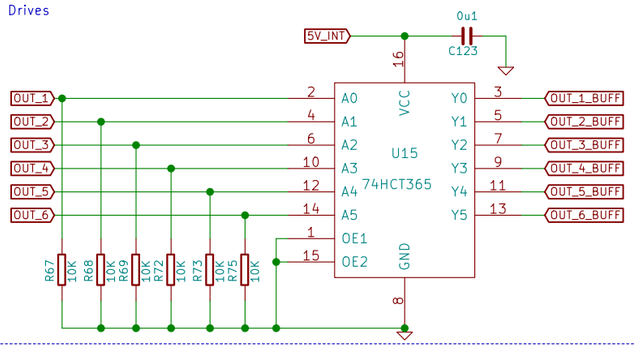
OUT 6 MOSFET CONTROL

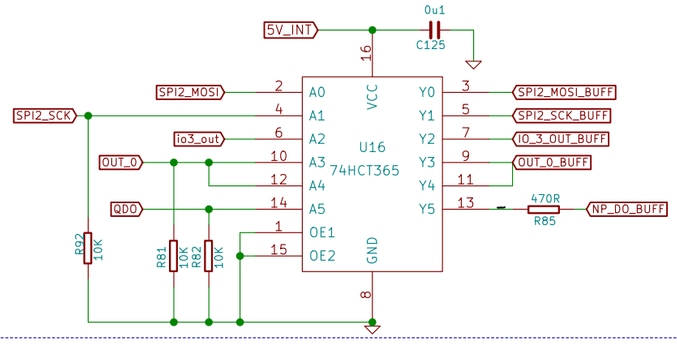


Low current output Voltage Select

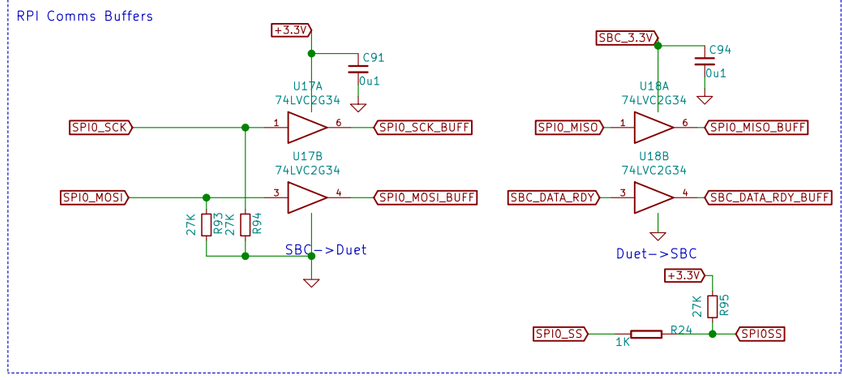


FET Drives





RPI Comms Buffers



Duet3D

Sheet: /MOSFETs and Buffers/
File: FETsBuffers.sch

Title: Duet 3 Mini 5+ – Ethernet

Size: A3	Date: 2020-12-15	**Rev: 1.0**
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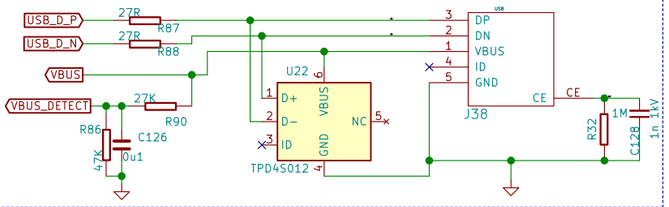
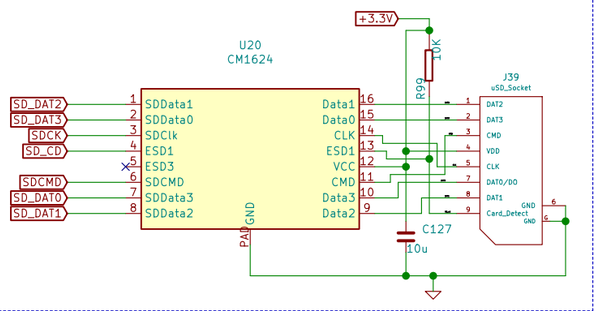
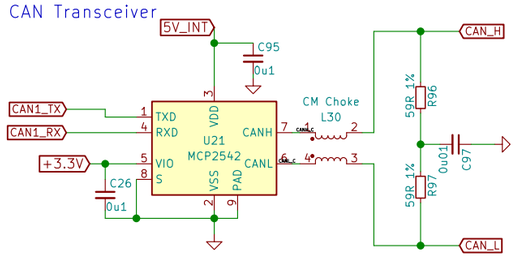
USB



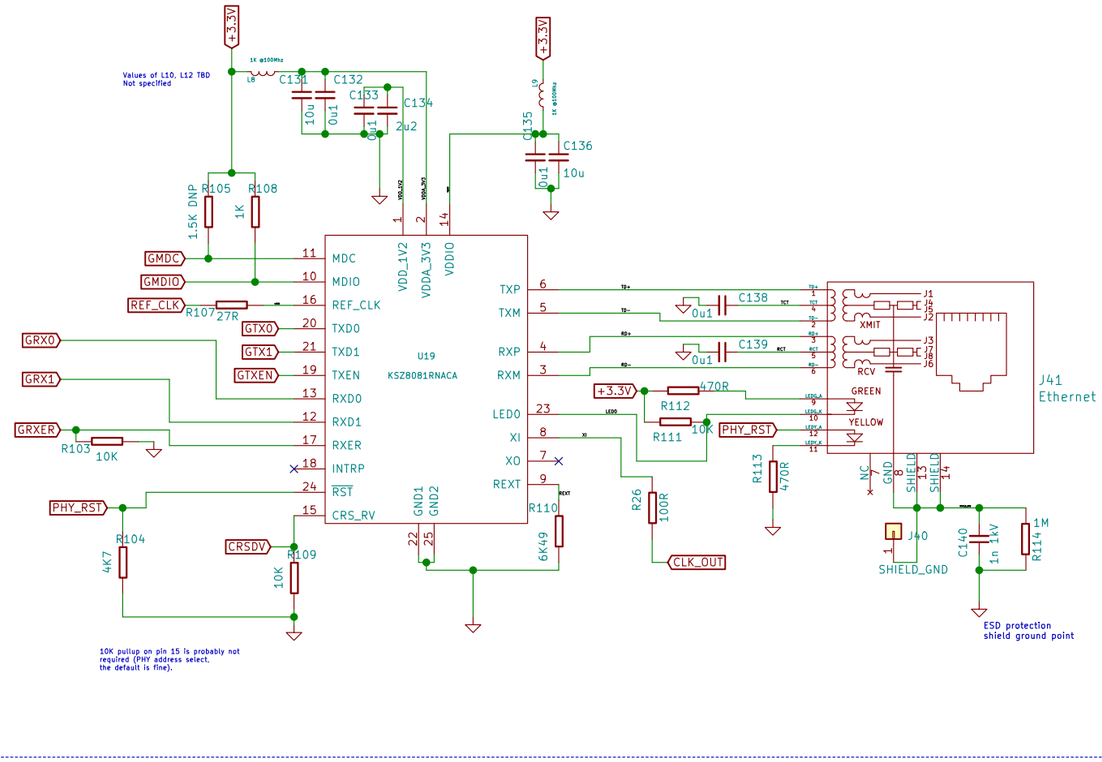
uSD



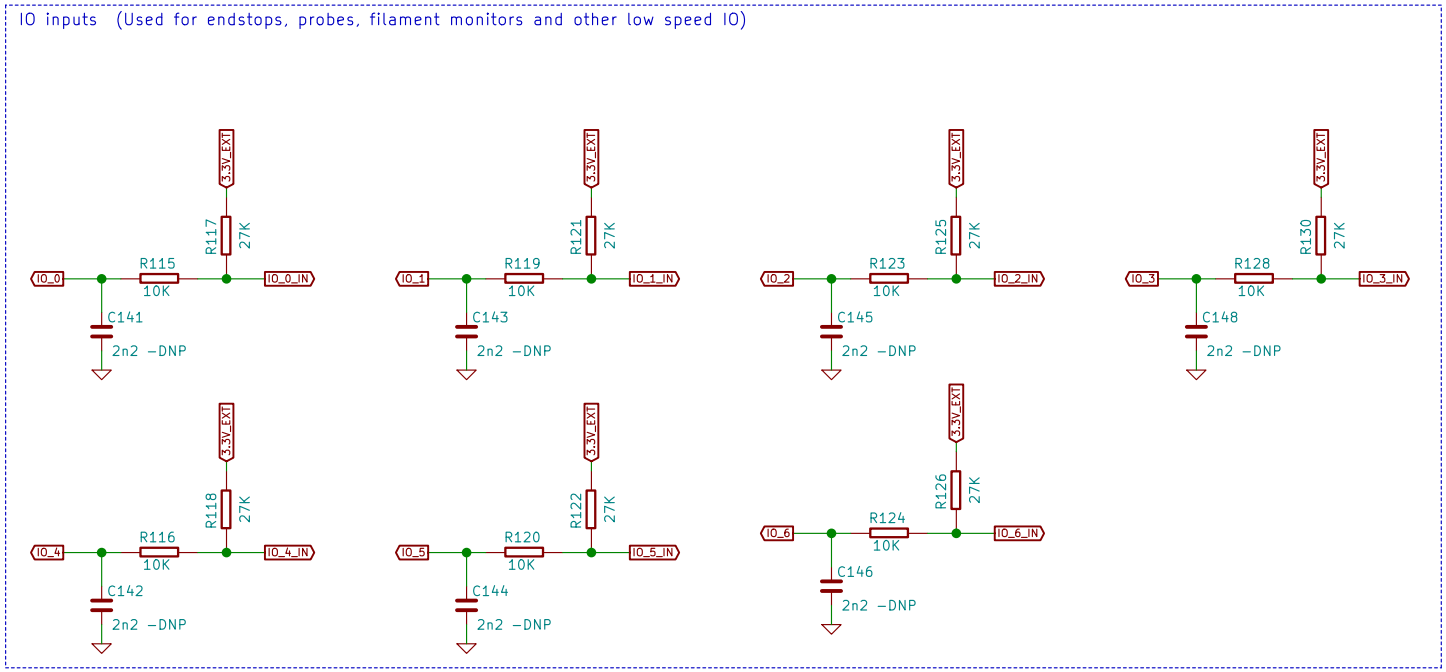
CAN Transceiver

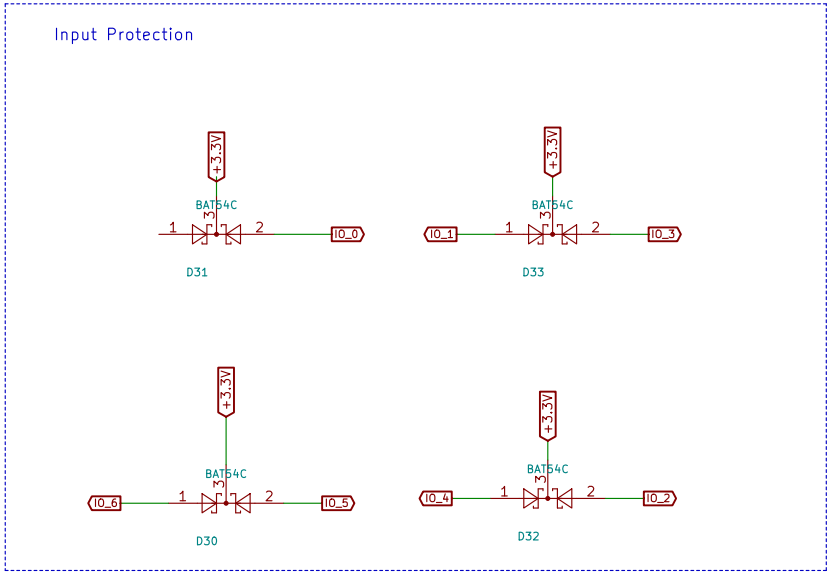


Ethernet



Duet3D		
Sheet: /Comms/ File: Comms.sch		
Title: Duet 3 Mini 5+ – Ethernet		
Size: A3	Date: 2020-12-15	**Rev: 1.0**
KiCad E.D.A. kicad (5.1.4)-1		Id: 7/8





(c) Duet3D
Duet3D
Sheet: /IO/
File: io.sch

Title: Duet 3 Mini 5+ – Ethernet

Size: A4	Date: 2020-12-15	**Rev: 1.0**
KiCad E.D.A. kicad (5.1.4)-1		Id: 8/8