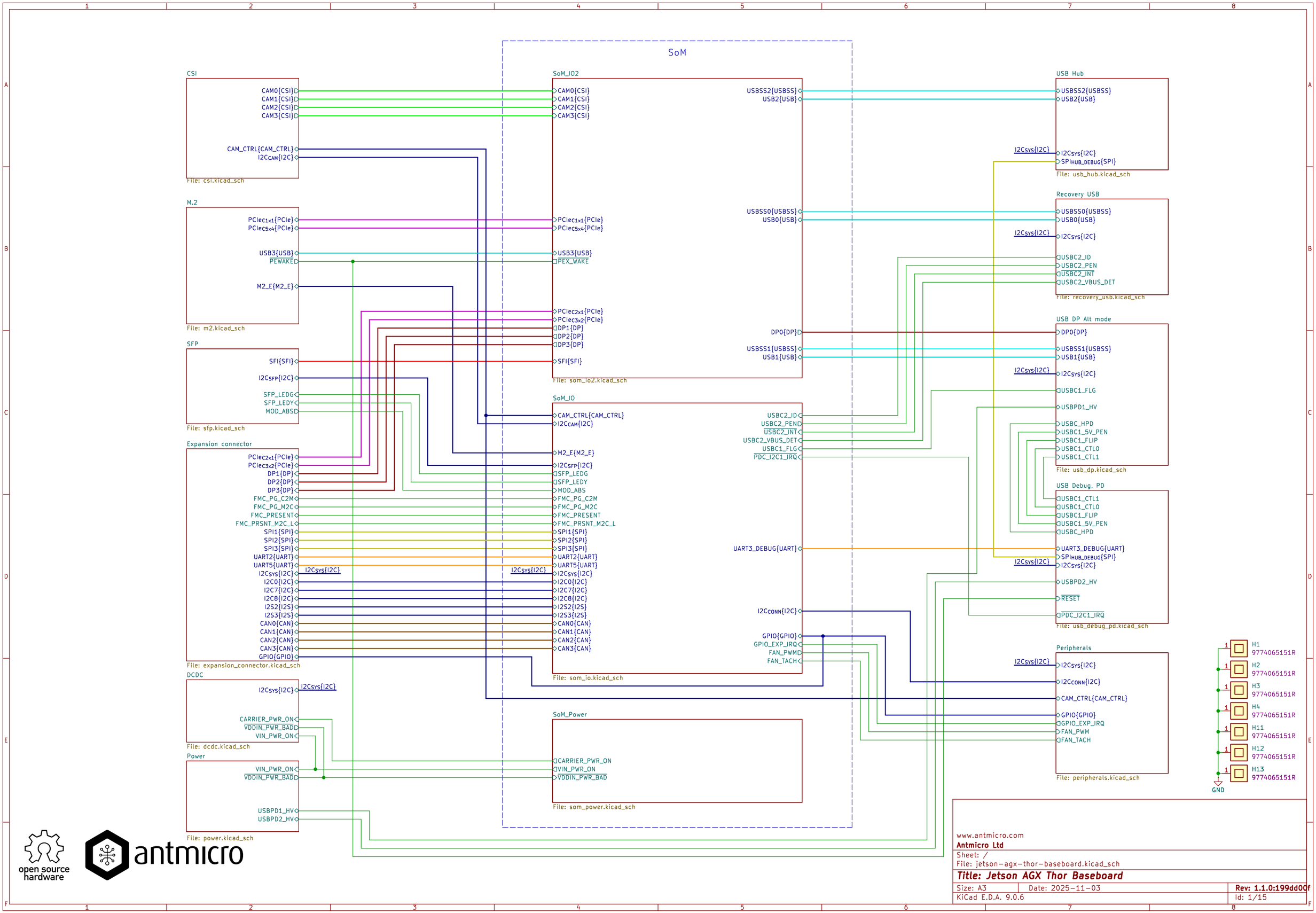
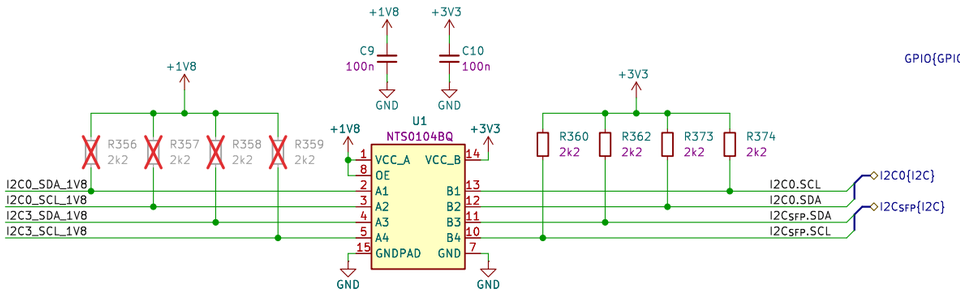
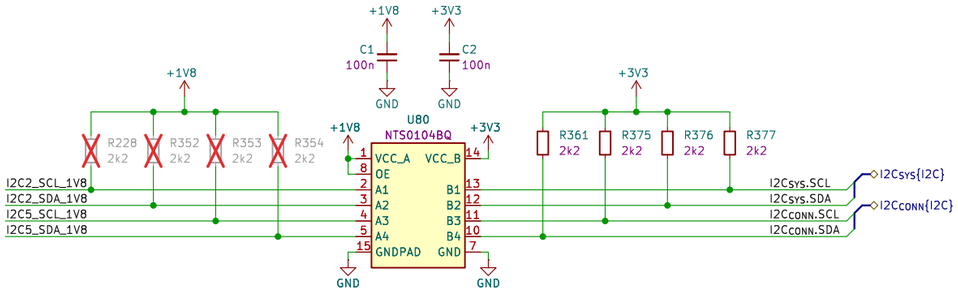
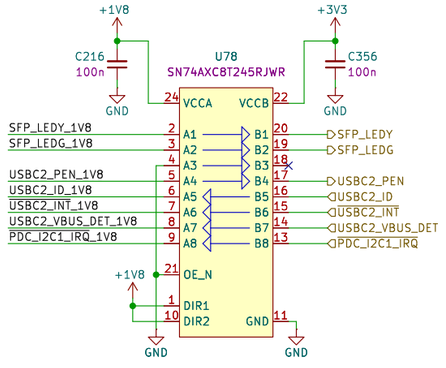
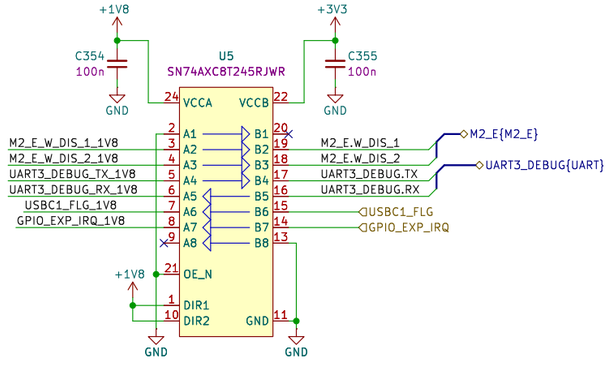

SoM
CSI
CAM0{CSI}
CAM1{CSI}
CAM2{CSI}
CAM3{CSI}
CAM_CTRL{CAM_CTRL}
I2CCAM{I2C}
File: csi.kicad_sch
M.2
PCIec1x1{PCIe}
PCIec5x4{PCIe}
USB3{USB}
PEWAKE
M2_E{M2_E}
File: m2.kicad_sch
SFP
SFI{SFI}
I2CSFP{I2C}
SFP_LEDG
SFP_LEDY
MOD_ABS
File: sfp.kicad_sch
Expansion connector
PCIec2x1{PCIe}
PCIec3x2{PCIe}
DP1{DP}
DP2{DP}
DP3{DP}
FMC_PG_C2M
FMC_PG_M2C
FMC_PRESENT
FMC_PRSNT_M2C_L
SPI1{SPI}
SPI2{SPI}
SPI3{SPI}
UART2{UART}
UART5{UART}
I2CSYS{I2C}
I2C0{I2C}
I2C7{I2C}
I2C8{I2C}
I2S2{I2S}
I2S3{I2S}
CAN0{CAN}
CAN1{CAN}
CAN2{CAN}
CAN3{CAN}
GPIO{GPIO}
File: expansion_connector.kicad_sch
DCDC
I2CSYS{I2C}
CARRIER_PWR_ON
VDDIN_PWR_BAD
VIN_PWR_ON
File: dcdc.kicad_sch
Power
VIN_PWR_ON
VDDIN_PWR_BAD
USBPD1_HV
USBPD2_HV
File: power.kicad_sch
SoM_IO2
CAM0{CSI}
CAM1{CSI}
CAM2{CSI}
CAM3{CSI}
PCIec1x1{PCIe}
PCIec5x4{PCIe}
USB3{USB}
PEX_WAKE
PCIec2x1{PCIe}
PCIec3x2{PCIe}
DP1{DP}
DP2{DP}
DP3{DP}
SFI{SFI}
File: som_io2.kicad_sch
SoM_IO
CAM_CTRL{CAM_CTRL}
I2CCAM{I2C}
M2_E{M2_E}
I2CSFP{I2C}
SFP_LEDG
SFP_LEDY
MOD_ABS
FMC_PG_C2M
FMC_PG_M2C
FMC_PRESENT
FMC_PRSNT_M2C_L
SPI1{SPI}
SPI2{SPI}
SPI3{SPI}
UART2{UART}
UART5{UART}
I2CSYS{I2C}
I2C0{I2C}
I2C7{I2C}
I2C8{I2C}
I2S2{I2S}
I2S3{I2S}
CAN0{CAN}
CAN1{CAN}
CAN2{CAN}
CAN3{CAN}
File: som_io.kicad_sch
SoM_Power
CARRIER_PWR_ON
VIN_PWR_ON
VDDIN_PWR_BAD
File: som_power.kicad_sch
USBSS2{USBSS}
USB2{USB}
USBSS0{USBSS}
USB0{USB}
DP0{DP}
USBSS1{USBSS}
USB1{USB}
USBC2_ID
USBC2_PEN
USBC2_INT
USBC2_VBUS_DET
USBC1_FLG
PDC_I2C1_IRQ
UART3_DEBUG{UART}
I2CCONN{I2C}
GPIO{GPIO}
GPIO_EXP_IRQ
FAN_PWM
FAN_TACH
USB Hub
USBSS2{USBSS}
USB2{USB}
I2CSYS{I2C}
SPIHUB_DEBUG{SPI}
File: usb_hub.kicad_sch
Recovery USB
USBSS0{USBSS}
USB0{USB}
I2CSYS{I2C}
USBC2_ID
USBC2_PEN
USBC2_INT
USBC2_VBUS_DET
File: recovery_usb.kicad_sch
USB DP Alt mode
DP0{DP}
USBSS1{USBSS}
USB1{USB}
I2CSYS{I2C}
USBC1_FLG
USBPD1_HV
USBC_HPD
USBC1_5V_PEN
USBC1_FLIP
USBC1_CTL0
USBC1_CTL1
File: usb_dp.kicad_sch
USB Debug, PD
USBC1_CTL1
USBC1_CTL0
USBC1_FLIP
USBC1_5V_PEN
USBC_HPD
UART3_DEBUG{UART}
SPIHUB_DEBUG{SPI}
I2CSYS{I2C}
USBPD2_HV
RESET
PDC_I2C1_IRQ
File: usb_debug_pd.kicad_sch
Peripherals
I2CSYS{I2C}
I2CCONN{I2C}
CAM_CTRL{CAM_CTRL}
GPIO{GPIO}
GPIO_EXP_IRQ
FAN_PWM
FAN_TACH
File: peripherals.kicad_sch
H1
9774065151R
H2
9774065151R
H3
9774065151R
H4
9774065151R
H11
9774065151R
H12
9774065151R
H13
9774065151R
GND
open source hardware
antmicro
www.antmicro.com
Antmicro Ltd
Sheet: /
File: jetson-agx-thor-baseboard.kicad_sch
Title: Jetson AGX Thor Baseboard
Size: A3
Date: 2025-11-03
Rev: 1.1.0:199dd00f
KiCad E.D.A. 9.0.6
Id: 1/15

Level shifters

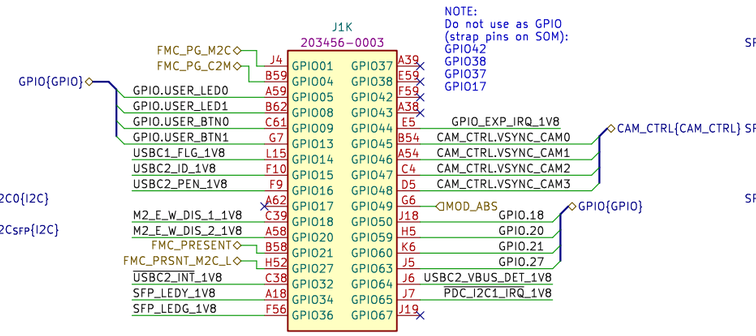








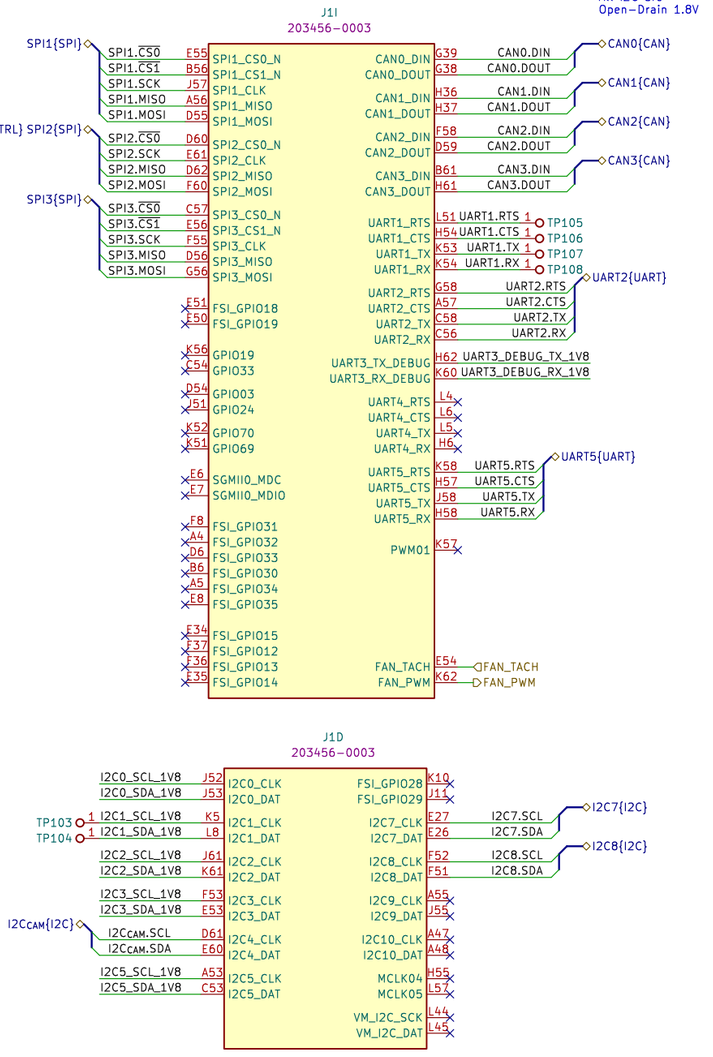
GPIO

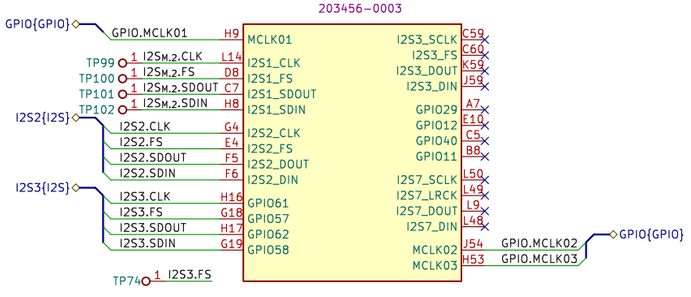


UART/I2C/SPI/CAN/FAN

All UART are CMOS – 1.8V

All CAN pins are CMOS – 3V3
All I2C are Open-Drain 1.8V





open source hardware

antmicro

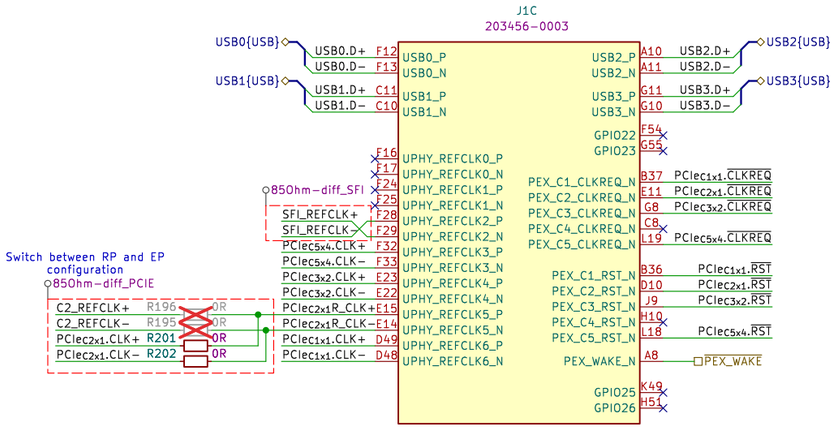
www.antmicro.com
Antmicro Ltd

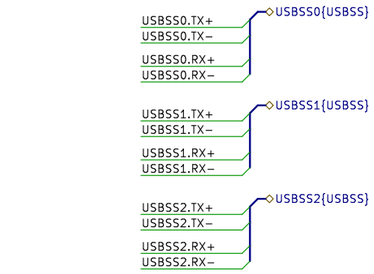
Sheet: /SoM_IO/
File: som_io.kicad_sch

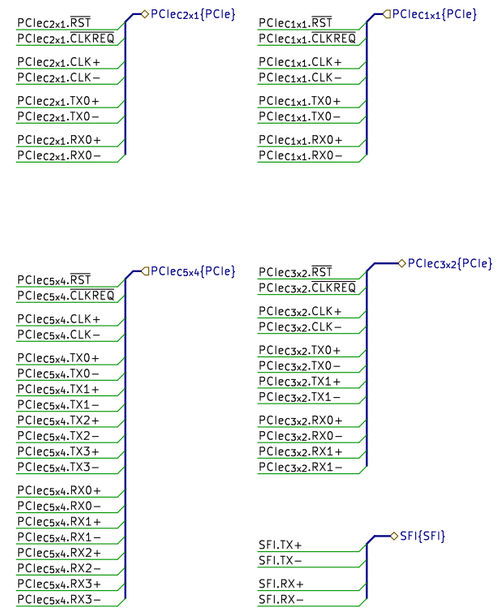
Title: Jetson AGX Thor Baseboard

Size: A3	Date: 2025-11-03	**Rev: 1.1.0:199dd00f**
KiCad E.D.A. 9.0.6		Id: 2/15

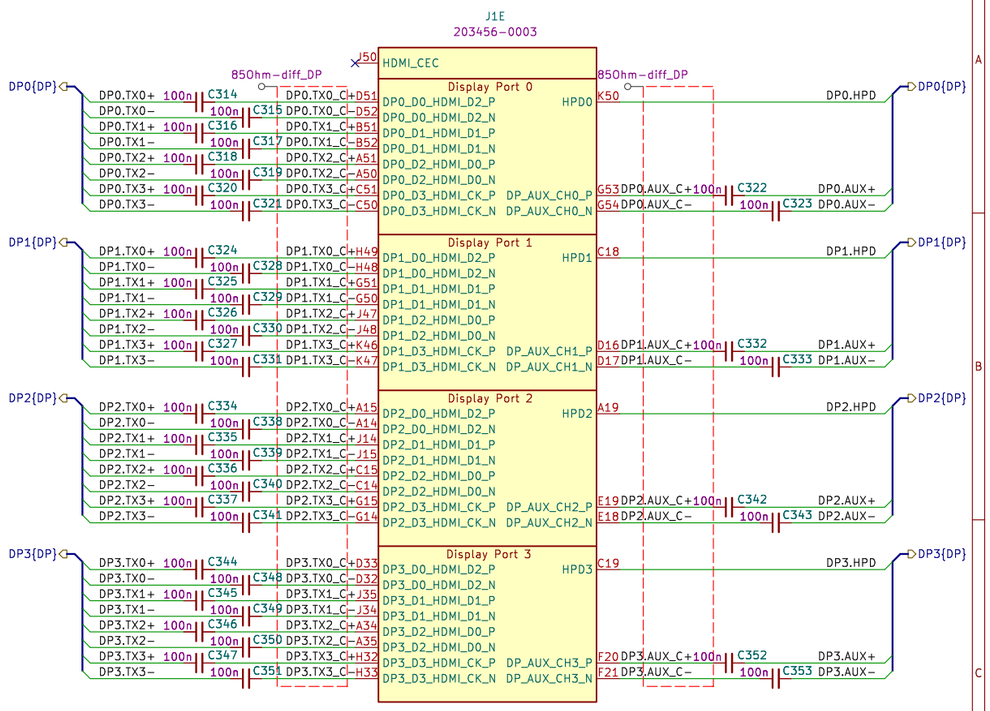
PCIe and USB3.0 SOM connections

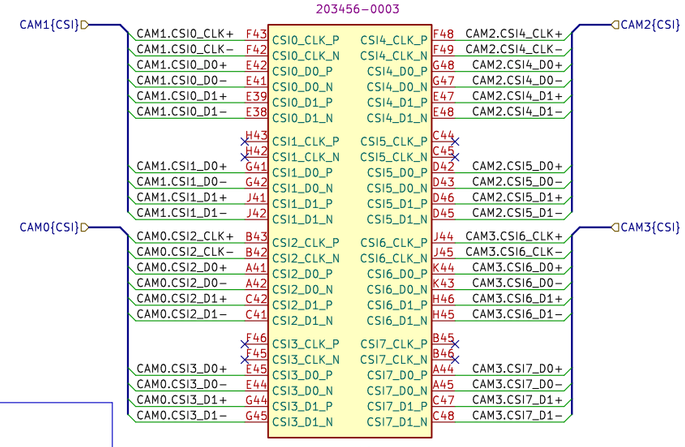


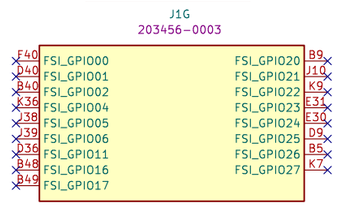




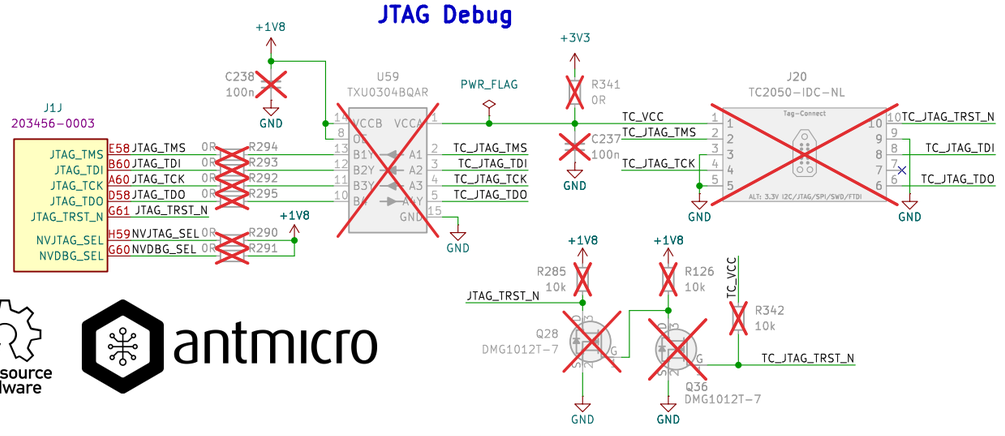
DP and CSI SOM connections



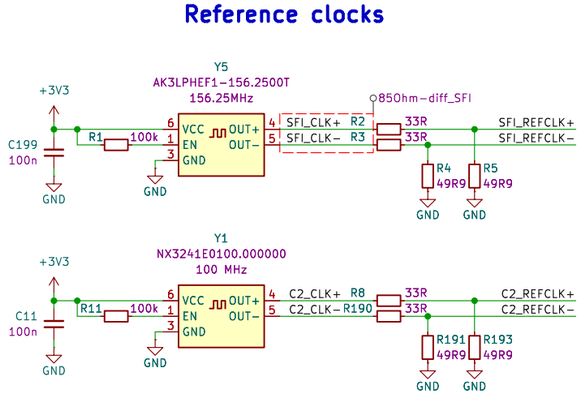




JTAG Debug



Reference clocks



www.antmicro.com
Antmicro Ltd

Sheet: /SoM_IO2/
File: som_io2.kicad_sch

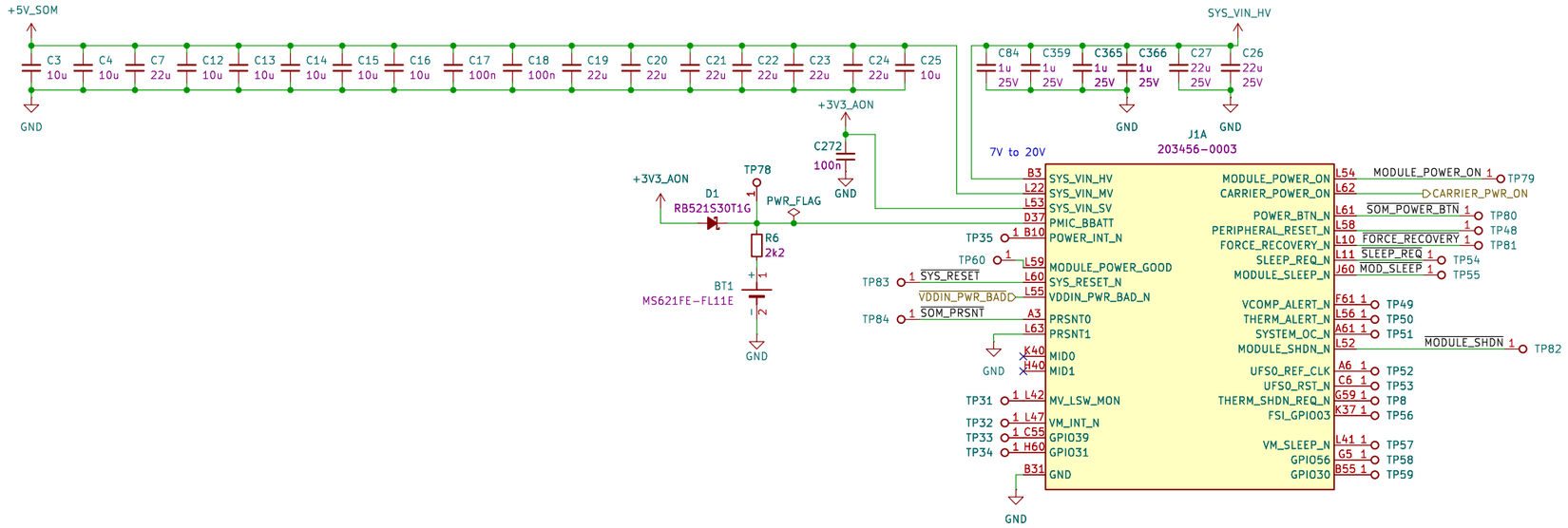
Title: Jetson AGX Thor Baseboard

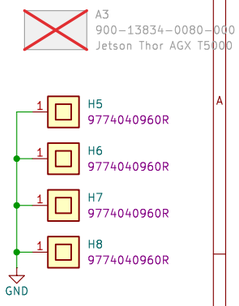
Size: A3	Date: 2025−11−03	**Rev: 1.1.0:199dd00f**
KiCad E.D.A. 9.0.6		Id: 3/15

open source hardware

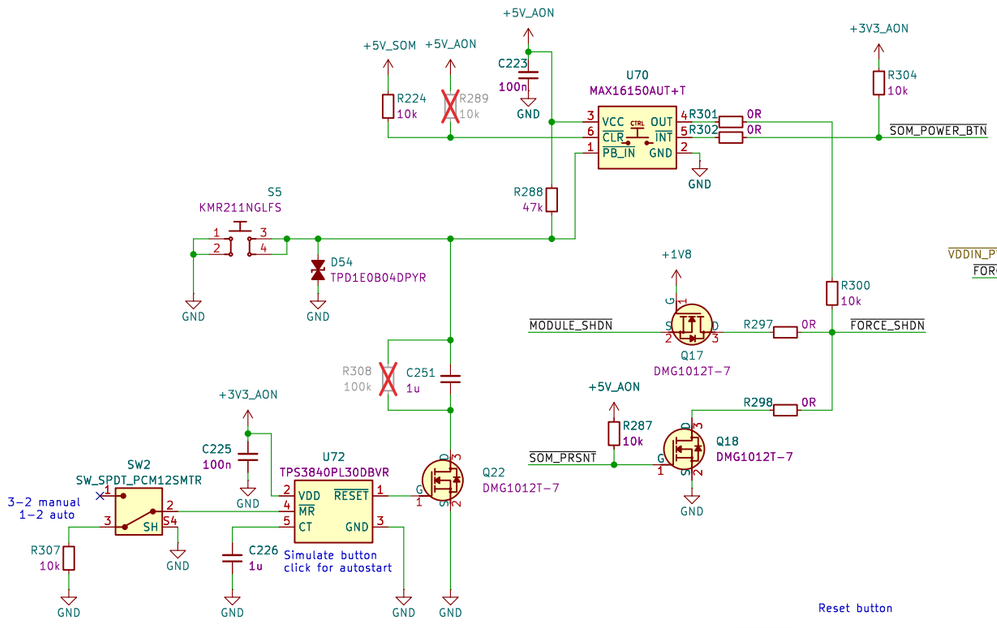
antmicro

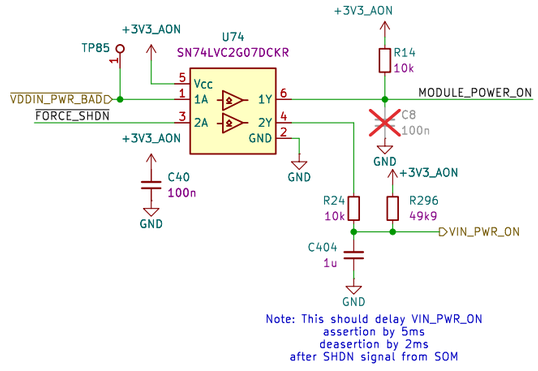
SoM Power

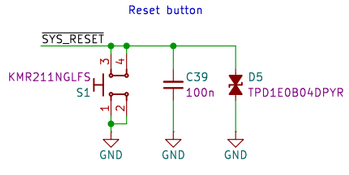




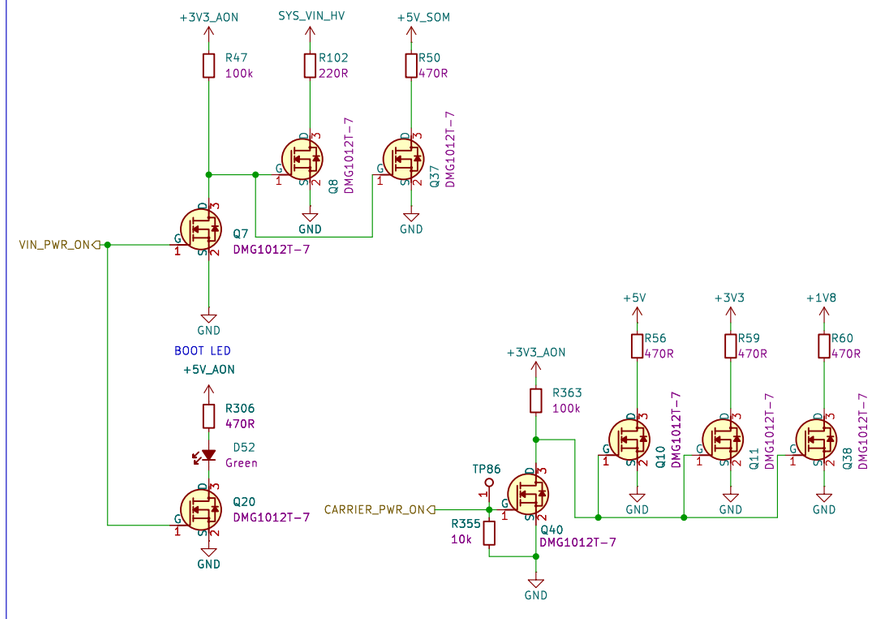
Power-up and reset







Discharge circut



open source hardware

antmicro

www.antmicro.com

Antmicro Ltd

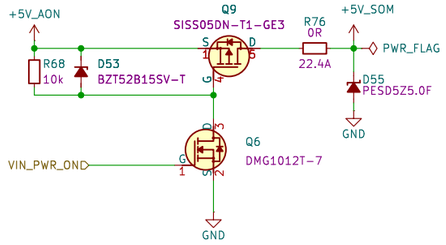
Sheet: /SoM_Power/

File: som_power.kicad_sch

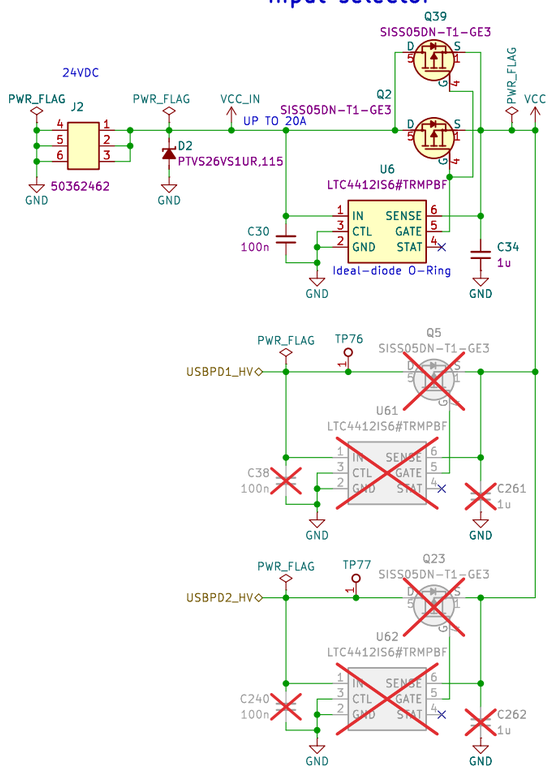
Title: Jetson AGX Thor Baseboard

Size: A3	Date: 2025-11-03	**Rev: 1.1.0:199dd00f**
KiCad E.D.A. 9.0.6		Id: 4/15

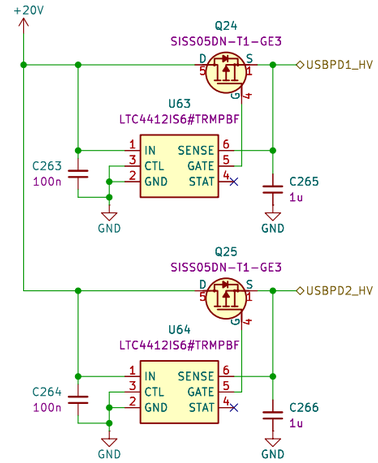
SoM Medium voltage power switch



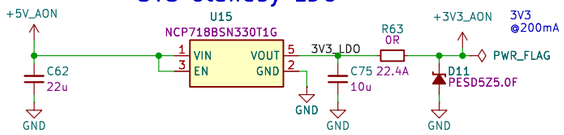
Input selector



USB PD Power Ideal Diodes

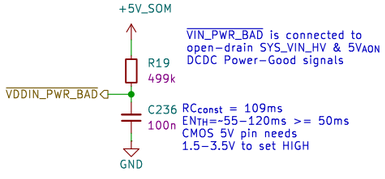


3V3 standby LDO

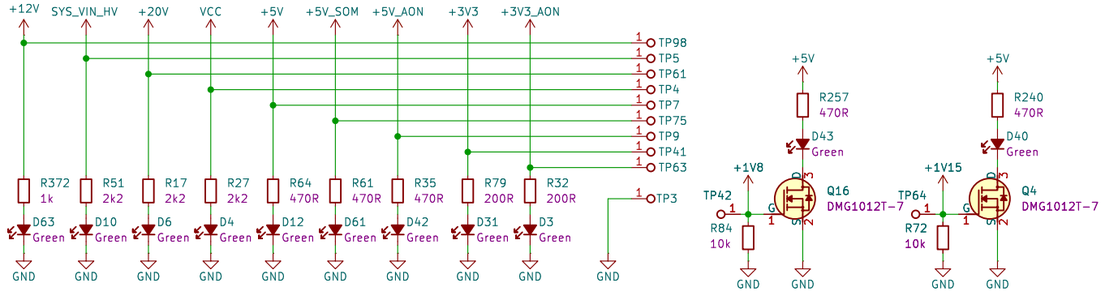


Power sequencing

Sequence	Power rail	EN_signal	Delay
1	VCC(24V)	–	0
2	+5V_AON	VCC pull-up	0
3	+3V3_AON	5V_AON	0
4	+5V_SOM	VIN_PWR_ON	>=20ms
	SYS_VIN_HV	VIN_PWR_ON	>=20ms
5	MODULE_POWER_ON	+5V_SOM & PG(SYS_VIN_HV)	>=50ms
6	+3V3	CARIER_POWER_ON	
	+1V8	CARIER_POWER_ON	
	+12V	CARIER_POWER_ON	
	+5V	CARIER_POWER_ON	



Power LEDs and testpoints



open source hardware

antmicro

www.antmicro.com
Antmicro Ltd

Sheet: /Power/
File: power.kicad_sch

Title: Jetson AGX Thor Baseboard

Size: A3	Date: 2025-11-03	**Rev: 1.1.0:199dd00f**
KiCad E.D.A. 9.0.6		Id: 5/15

USB hub

C311 22u, C358 100n, C86 100n, C88 100n, C90 100n, C92 100n, C95 100n, C97 100n, C99 100n, C100 100n — +1V15
C312 22u, C47 100n, C85 100n, C87 100n, C89 100n, C91 100n, C94 100n, C96 100n, C98 100n — +3V3
RESET

U21
USB7252CT-I/KDX

VCORE, VDD33, RESET_N
VBUS_MON_UP, USB3UP_TXDP, USB3UP_TXDM, USB3UP_RXDP, USB3UP_RXDM, USB2UP_DP, USB2UP_DM — UP PORT

PORT 1: DP1_VBUS_MON, DP1_CC1, DP1_CC2, USB3DN_RXDP1A, USB3DN_RXDM1A, USB3DN_TXDP1A, USB3DN_TXDM1A, USB3DN_RXDP1B, USB3DN_RXDM1B, USB3DN_TXDP1B, USB3DN_TXDM1B, USB2DN_DP1, USB2DN_DM1
PORT 2: DP2_VBUS_MON, DP2_CC1, DP2_CC2, USB3DN_RXDP2A, USB3DN_RXDM2A, USB3DN_TXDP2A, USB3DN_TXDM2A, USB3DN_RXDP2B, USB3DN_RXDM2B, USB3DN_TXDP2B, USB3DN_TXDM2B, USB2DN_DP2, USB2DN_DM2
PORT 3: USB3DN_TXDP3, USB3DN_TXDM3, USB3DN_RXDP3, USB3DN_RXDM3, USB2DN_DP3, USB2DN_DM3
PORT 4: USB2DN_DP4, USB2DN_DM4

USBC4_VBUS_MON → R261 43k → USBC4_VBUS; R92 49k9 → GND
USBC3_VBUS_MON → R263 43k → USBC3_VBUS; R262 49k9 → GND

USBSS2{USBSS}: USBSS2.RX+, USBSS2.RX−, USBSS2.TX+, USBSS2.TX− — 100n — C253 USBSS_TX_P, C255 USBSS_TX_N, C254 USBSS_RX_P, C256 USBSS_RX_N
USB2{USB}: USB2.D+, USB2.D−
900ohm−diff_USB_2.0
850ohm−diff_USB_SS

Note:
TX/RX cross is intentional
(it normally happens in USB cable)

R67 10k, RESET, C195 1n
R66 11k, VBUS_MON_UP, R82 49k9

TP67 DP1_VCONN1, TP68 DP1_VCONN2, TP65 DP2_DISCH, TP66 DP1_DISCH
TP69 DP2_VCONN1, TP70 DP2_VCONN2
TP6 PRT_CTL3
TP2 PRT_CTL2, TP40 PRT_CTL4, TP1 PRT_CTL1

I2Csys{I2C}: I2Csys.SDA R40 0R, I2Csys.SCL R71 0R

Y2 ECS-2016MV-250-CN-TR 25 MHz, C93 100n

R81 10k, R83 10k, R86 10k
R85 12k

CFG_STRAP1, CFG_STRAP2, CFG_STRAP3
TEST1, TEST2, TEST3, TESTEN, RBIAS, VSS

NOTE:
Configurations shown in USB7252CT-I/KDX datasheet table 3-5.
Currently set to configuration 1 (SMBus/I2C)

R87 10k, R78 200k, R80 200k, R91 200k

R58, R62, R21, R46 — 0R
R48, R57 — 0R

NOTE:
Configurations shown in USB7252CT-I/KDX documentaion table 3-2 and 3-3.
In this case it is set to:
– All ports removable
– Battery charging not enabled on any port

Alt modes:
SPI_CLK HUB_SPI_CLK
SPI_CE_N HUB_SPI_CE_N/CFG_BC_EN
SPI_D0 HUB_SPI_D0 /CFG_NON_REM
SPI_D1 HUB_SPI_D1
SPI_D2 HUB_SPI_D2
SPI_D3 HUB_SPI_D3

R323 10k, R321 10k
R194 100k, R239 100k, R327 100k, R325 100k, R324 200k, R322 200k

USB Hub flash

D15 RB521S30T1G, C111 100n, FLASH_PWR
U52 SST26VF064B-104I/SM
HUB_WP, HUB_HOLD
HUB_SPI_CE_N R90 0R, HUB_SPI_CLK R89 0R, HUB_SPI_D0 R88 0R, HUB_SPI_D1 R379 0R, HUB_SPI_D2 R379 0R, HUB_SPI_D3 R380 0R
SPIHUB_DEBUG{SPI}: SPIHUB_DEBUG.MISO, SPIHUB_DEBUG.MOSI, SPIHUB_DEBUG.SCK, SPIHUB_DEBUG.CS0

open source hardware

VCONN Switches

D57 RB521S30T1G, R330 2R2, USBC3_CC1 → DP2_VCONN1; R299 10k, R328 10k, Q21 DMC2400UV-7
D58 RB521S30T1G, R331 2R2, USBC3_CC2 → DP2_VCONN2; R303 10k, R329 10k, Q26 DMC2400UV-7
D59 RB521S30T1G, R336 2R2, USBC4_CC1 → DP1_VCONN1; R332 10k, R334 10k, Q27 DMC2400UV-7
D60 RB521S30T1G, R337 2R2, USBC4_CC2 → DP1_VCONN2; R333 10k, R335 10k, Q29 DMC2400UV-7

USB PORT 3

+5V, C77 100n, U18 AP22615AWU-7 (IN, FLG, EN, OUT, ISET, GND), USBC3_VBUS, USBC3_ISET, R73 2k2, PRT_CTL2
C78 22u, C80 100n, TP43, D45 PESD5Z5.0F, R74 470R, D47 Green
U28 TPD4E05U06QDQARQ1
J6 KUSBX-SL2-CS1N24-B-TR

USBC3_CC1, USBC3_CC2, USBC3_D+, USBC3_D−
USBC3_RX1+, USBC3_RX1−, USBC3_TX1+, USBC3_TX1− — C101 USBC3_CONN_TX1_N, C112 USBC3_CONN_TX1_P (100n)
USBC3_RX2+, USBC3_RX2−, USBC3_TX2+, USBC3_TX2− — C102 USBC3_CONN_TX2_N, C113 USBC3_CONN_TX2_P (100n)

U27 TPD4E05U06QDQARQ1, U24 TPD4E05U06QDQARQ1

USB PORT 4

+5V, C104 100n, U20 AP22615AWU-7 (IN, FLG, EN, OUT, ISET, GND), USBC4_VBUS, USBC4_ISET, R259 2k2, PRT_CTL1
C105 22u, C106 100n, TP44, D48 PESD5Z5.0F, R260 470R, D49 Green
U25 TPD4E05U06QDQARQ1
J5 KUSBX-SL2-CS1N24-B-TR

USBC4_CC1, USBC4_CC2, USBC4_D+, USBC4_D−
USBC4_RX1+, USBC4_RX1−, USBC4_TX1+, USBC4_TX1− — C81 USBC4_CONN_TX1_P, C83 USBC4_CONN_TX1_N (100n)
USBC4_RX2+, USBC4_RX2−, USBC4_TX2+, USBC4_TX2− — C82 USBC4_CONN_TX2_P, C103 USBC4_CONN_TX2_N (100n)

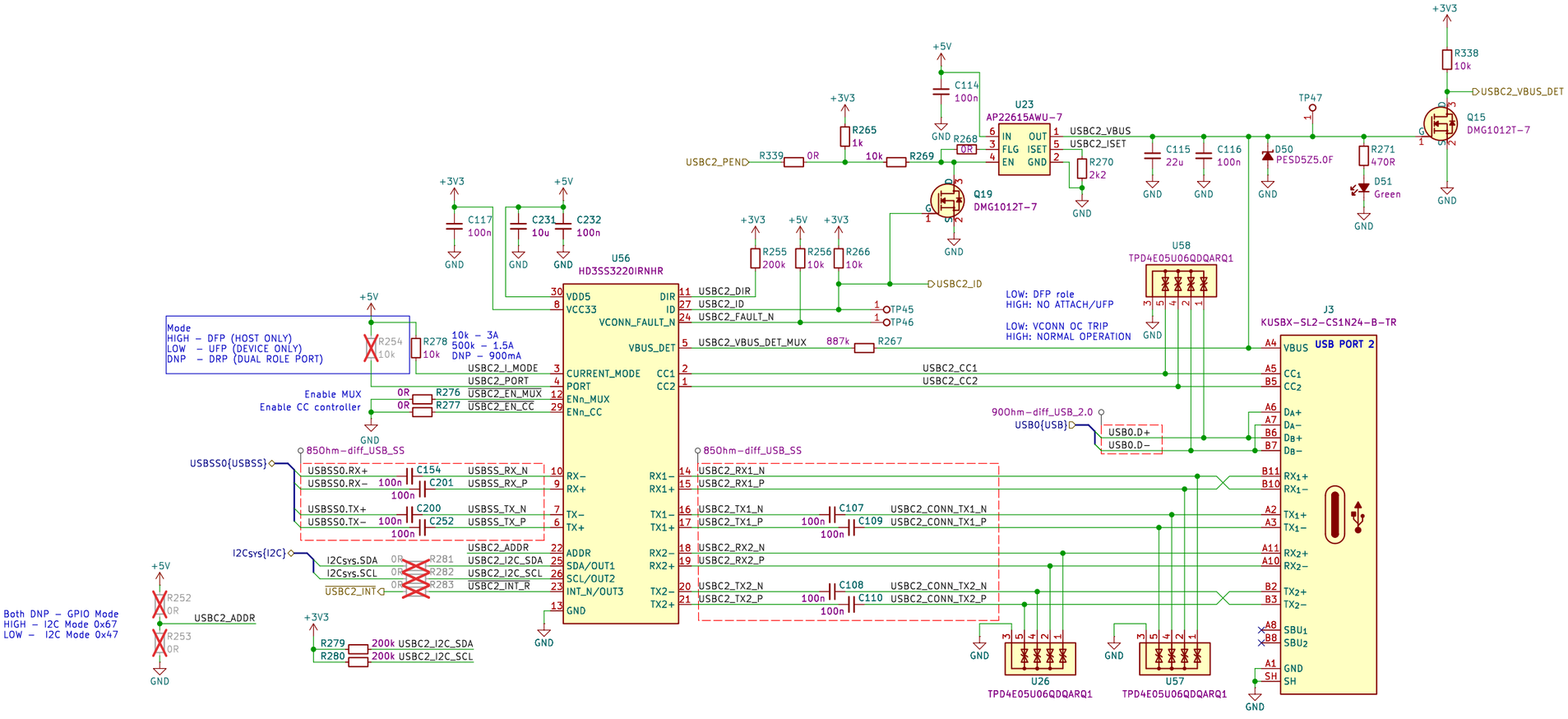
U17 TPD4E05U06QDQARQ1, U19 TPD4E05U06QDQARQ1

www.antmicro.com
Antmicro Ltd
Sheet: /USB Hub/
File: usb_hub.kicad_sch

Title: Jetson AGX Thor Baseboard

Size: A3	Date: 2025-11-03	**Rev: 1.1.0:199dd00f**
KiCad E.D.A. 9.0.6		Id: 6/15

Recovery USB Port 2



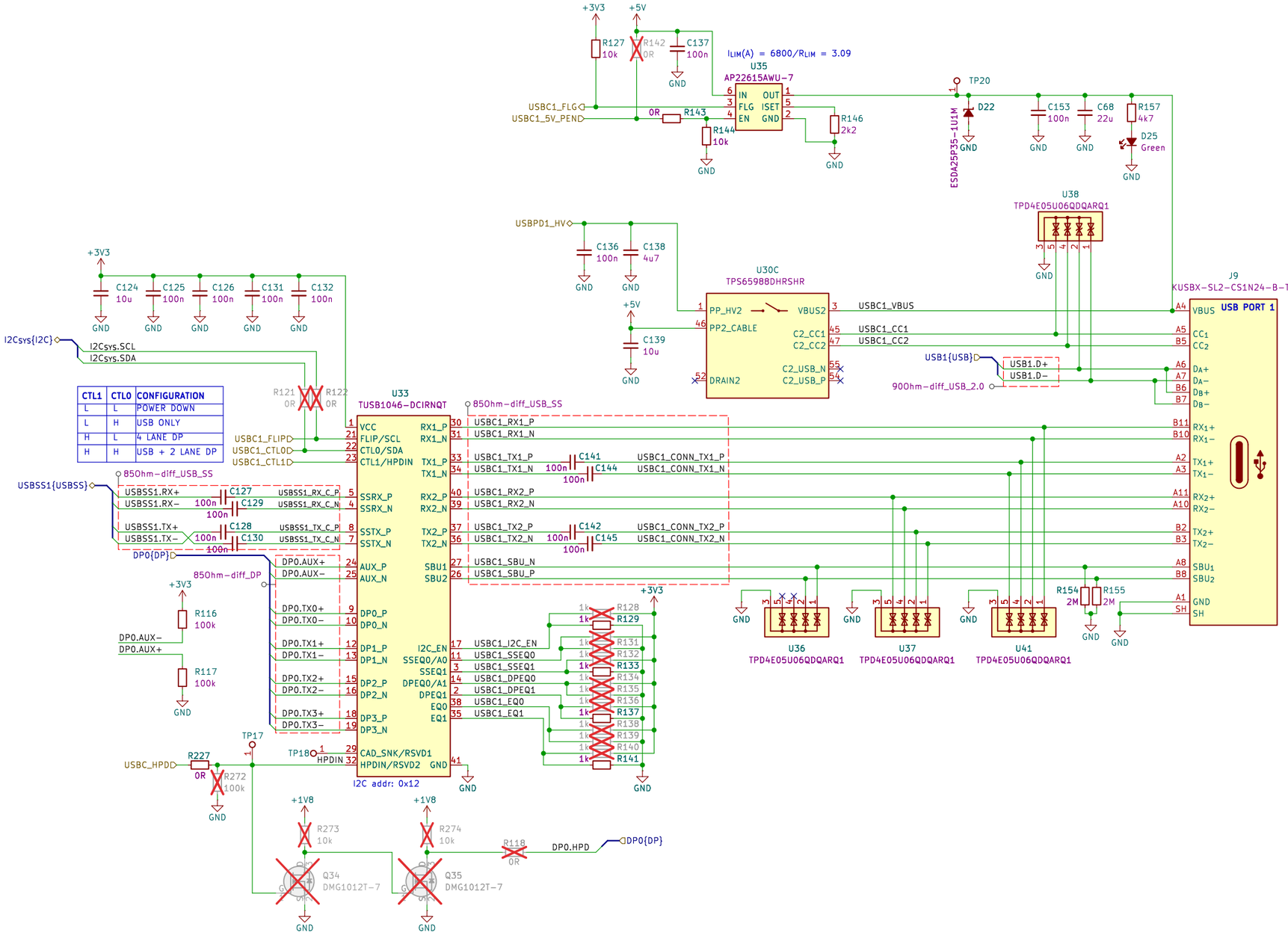
www.antmicro.com
Antmicro Ltd

Sheet: /Recovery USB/
File: recovery_usb.kicad_sch

Title: Jetson AGX Thor Baseboard

Size: A3	Date: 2025−11−03	**Rev: 1.1.0:199dd00f**
KiCad E.D.A. 9.0.6		Id: 7/15

USB Display port alt mode



www.antmicro.com
Antmicro Ltd

Sheet: /USB DP Alt mode/
File: usb_dp.kicad_sch

Title: Jetson AGX Thor Baseboard

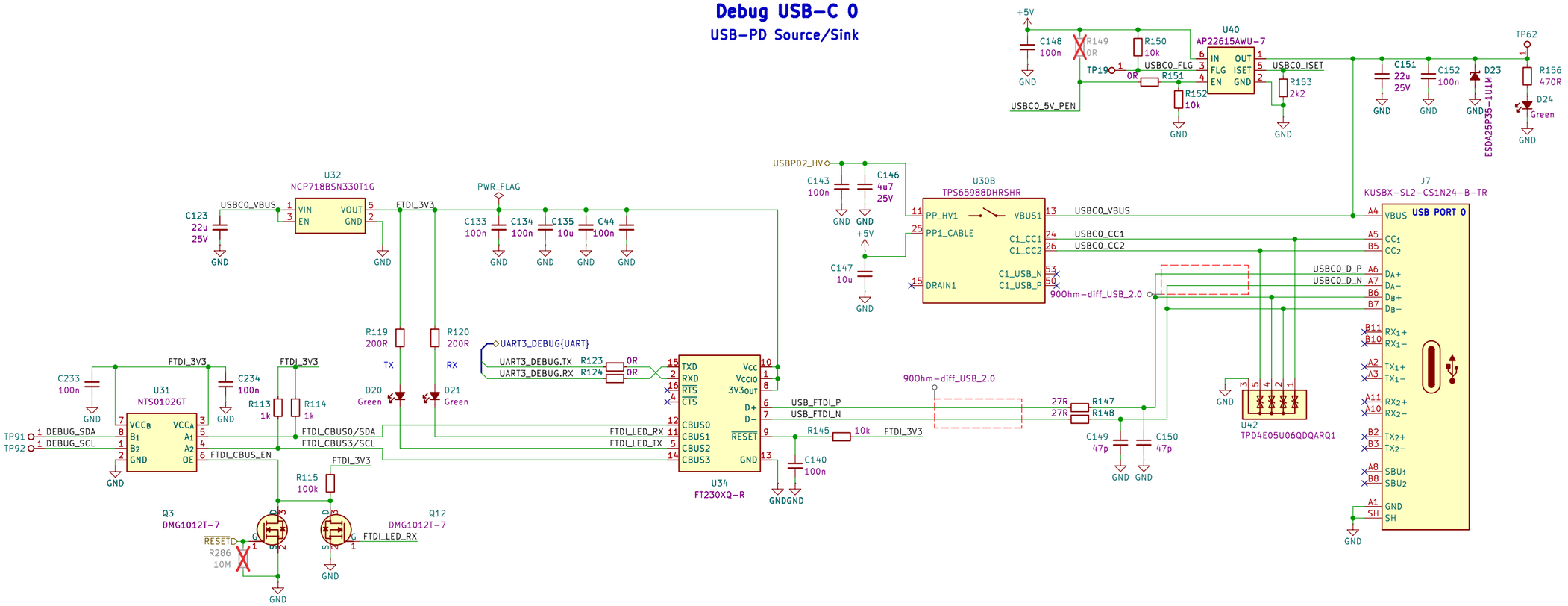
Size: A3	Date: 2025-11-03	**Rev: 1.1.0:199dd00f**
KiCad E.D.A. 9.0.6		Id: 8/15

open source hardware

antmicro

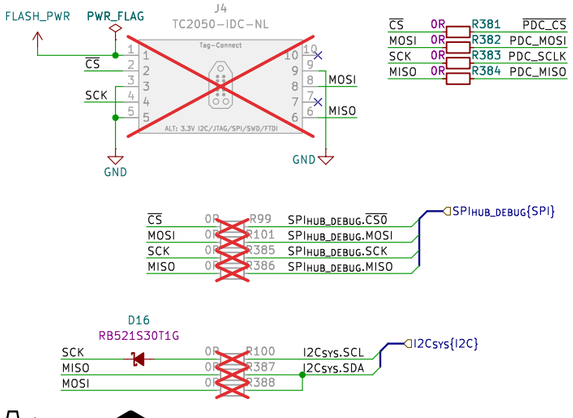
Debug USB-C 0

USB-PD Source/Sink



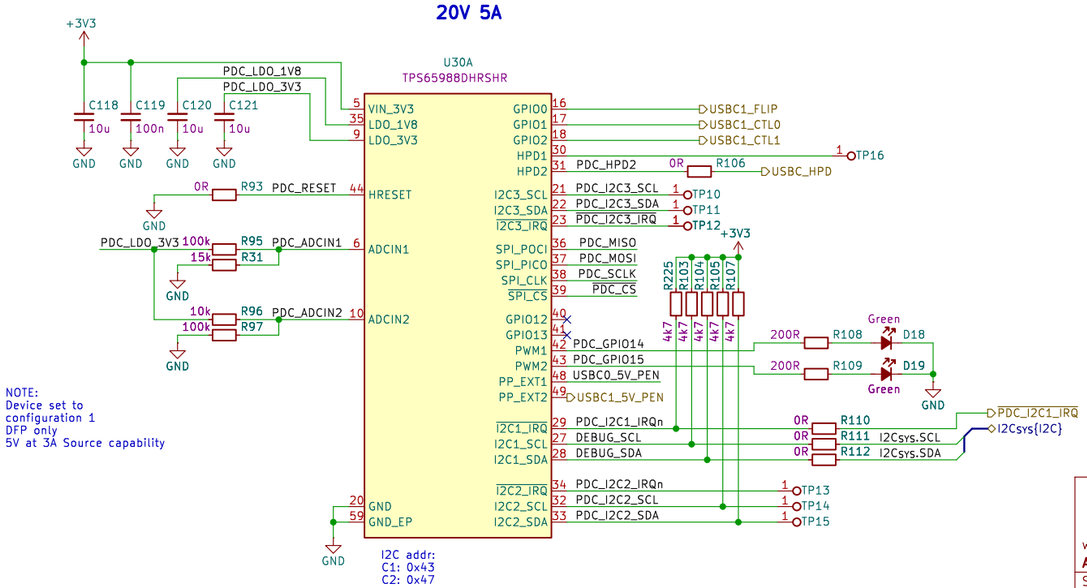
Debug connector

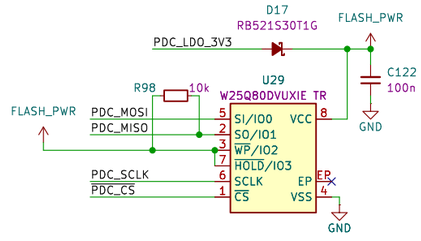
pinout compatible with
www.github.com/antmicro/ftdi-toolkit



USB PD controller

20V 5A





open source hardware

antmicro

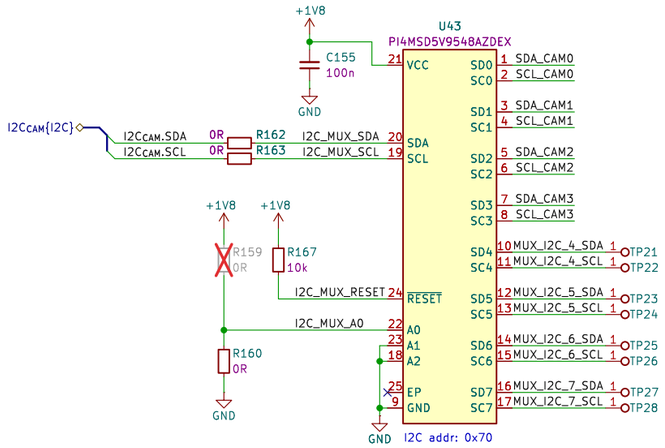
www.antmicro.com
Antmicro Ltd

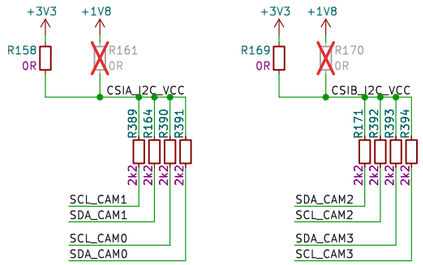
Sheet: /USB Debug, PD/
File: usb_debug_pd.kicad_sch

Title: Jetson AGX Thor Baseboard

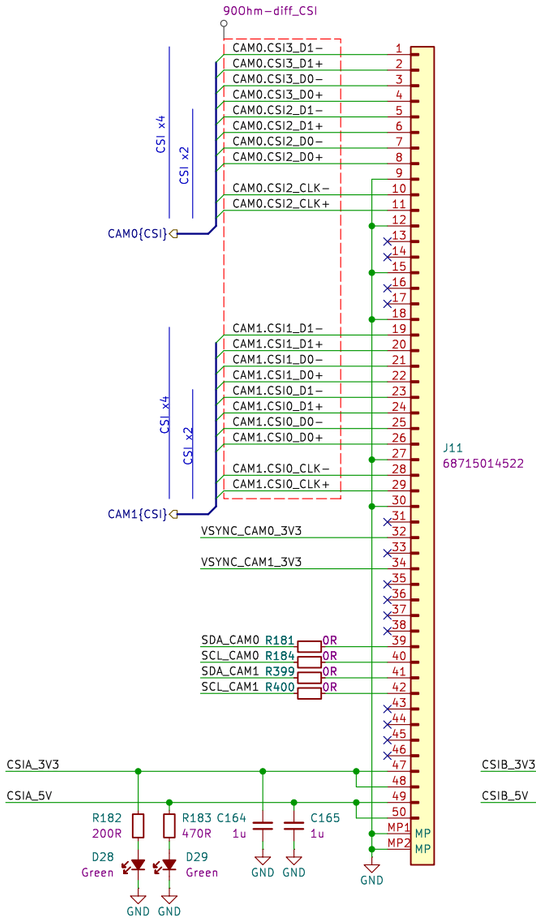
Size: A3	Date: 2025-11-03	**Rev: 1.1.0:199dd00f**
KiCad E.D.A. 9.0.6		Id: 9/15

I2C Mux

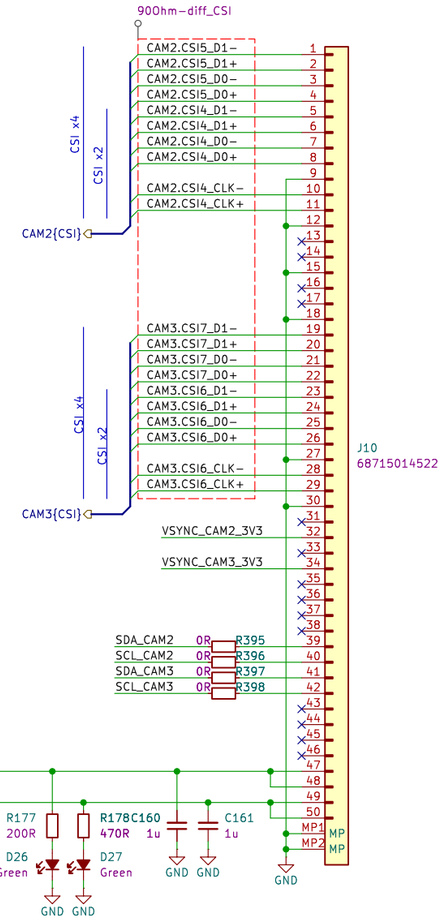




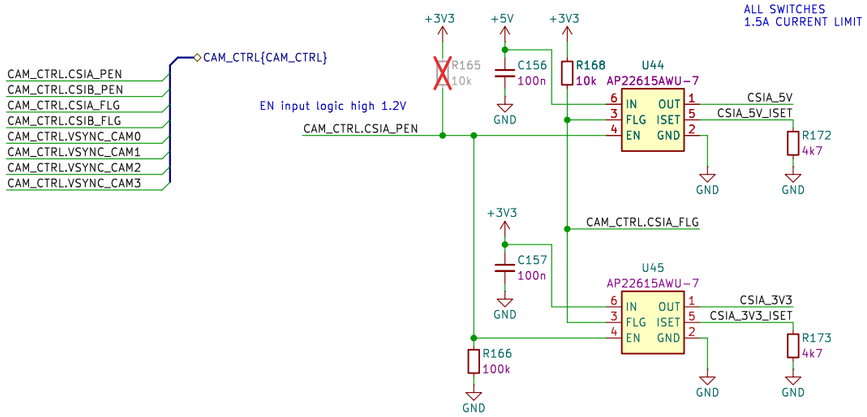
CSI Connector A

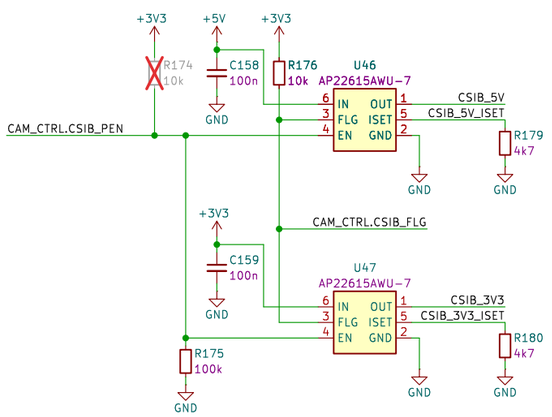


CSI Connector B

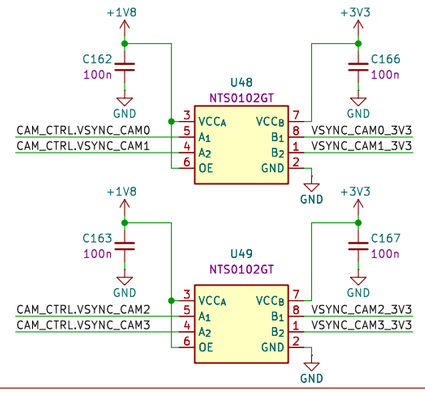


Power switches





Level shifters



www.antmicro.com

Antmicro Ltd

Sheet: /CSI/

File: csi.kicad_sch

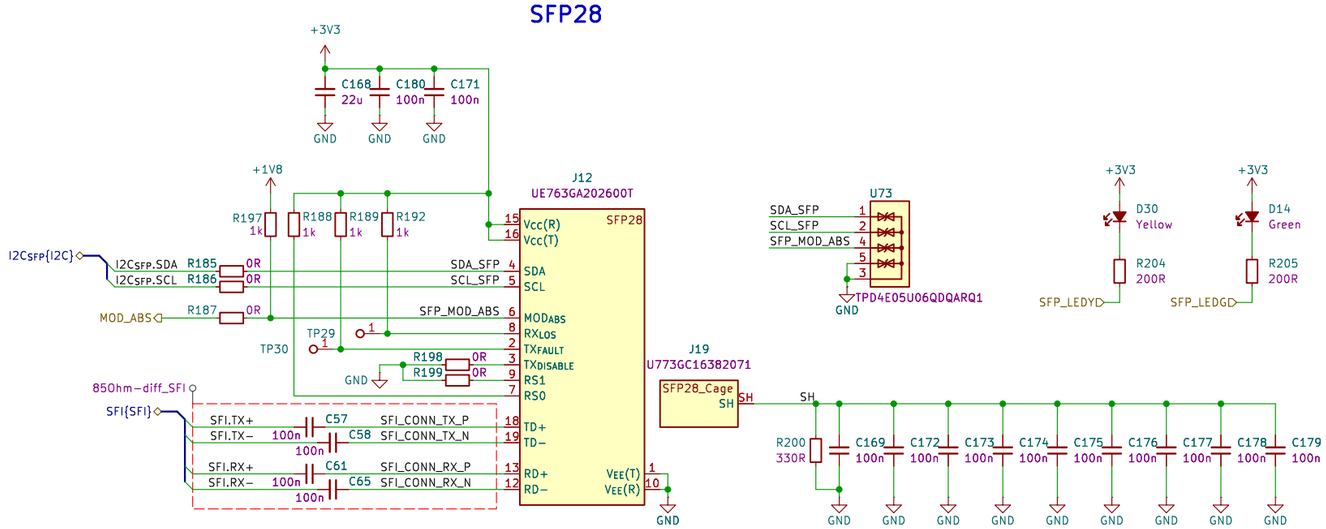
Title: Jetson AGX Thor Baseboard

Size: A3	Date: 2025-11-03	**Rev: 1.1.0:199dd00f**
KiCad E.D.A. 9.0.6		Id: 10/15

open source hardware

antmicro

SFP28



open source hardware

antmicro

www.antmicro.com
Antmicro Ltd

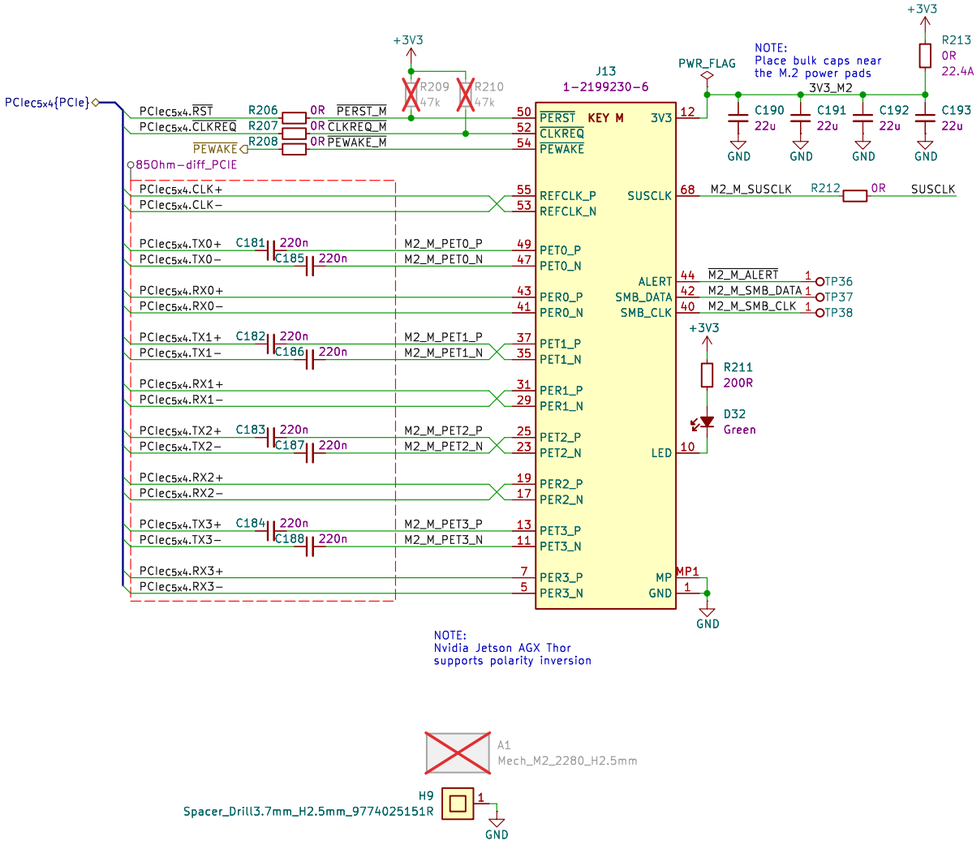
Sheet: /SFP/
File: sfp.kicad_sch

Title: Jetson AGX Thor Baseboard

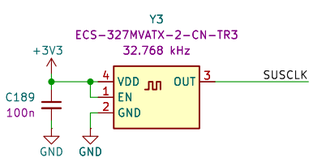
Size: A3	Date: 2025-11-03	**Rev: 1.1.0:199dd00f**
KiCad E.D.A. 9.0.6		Id: 11/15

M.2 key M

PCIe x4

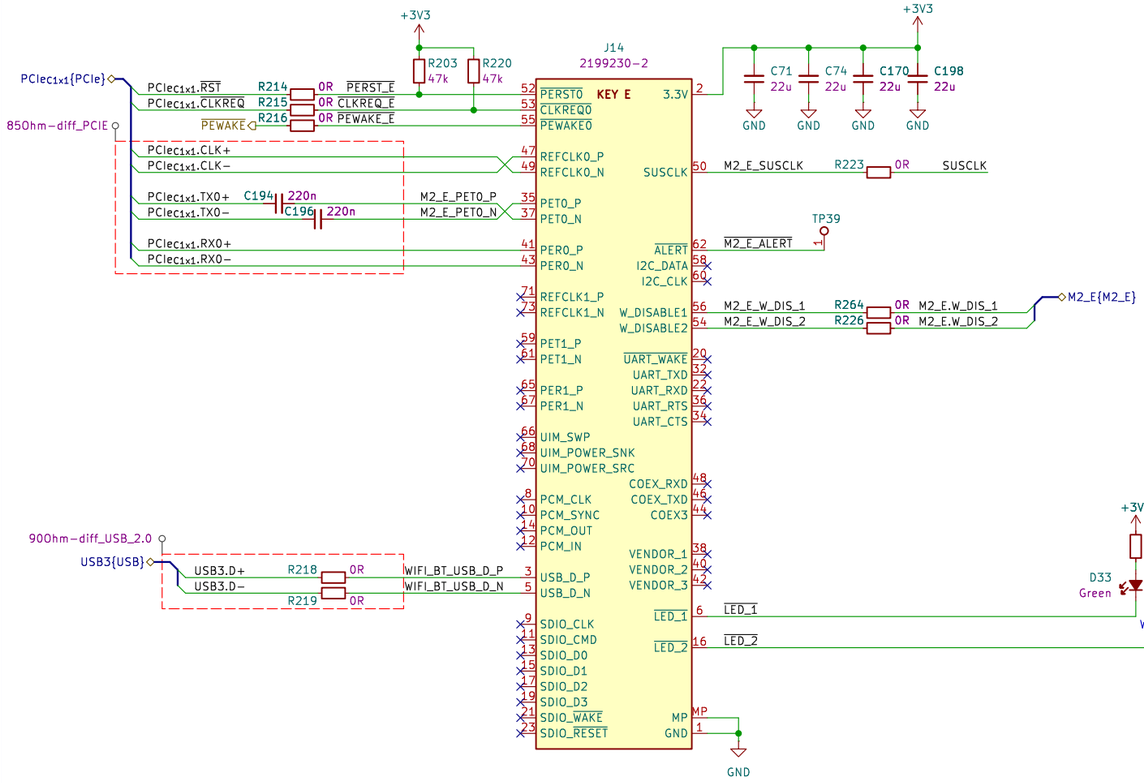


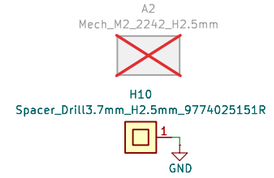
SUSCLK SOURCE



M.2 key E

2x PCIe x1, USB 2.0, I2C, UART and PCM





open source hardware

antmicro

www.antmicro.com

Antmicro Ltd

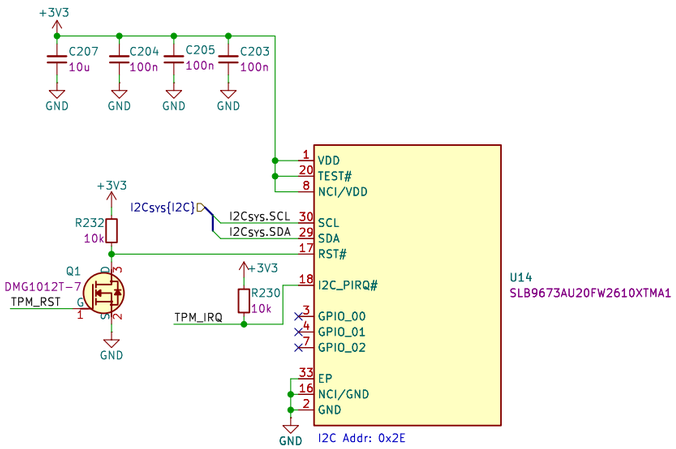
Sheet: /M.2/

File: m2.kicad_sch

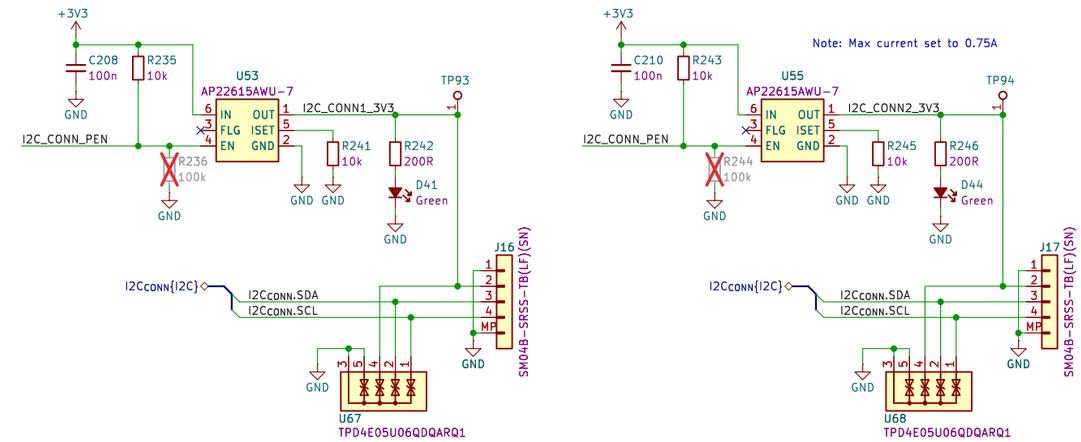
Title: Jetson AGX Thor Baseboard

Size: A3	Date: 2025-11-03	**Rev: 1.1.0:199dd00f**
KiCad E.D.A. 9.0.6		Id: 12/15

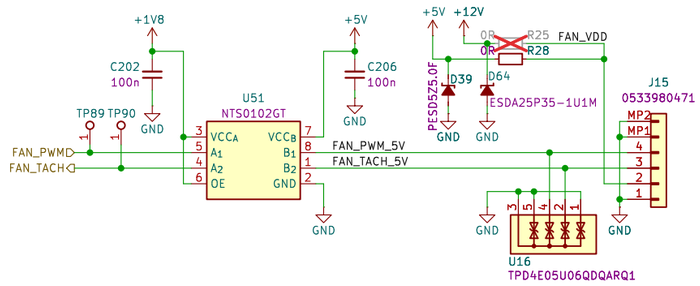
TPM



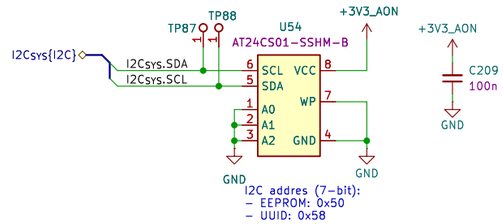
I2C connectors



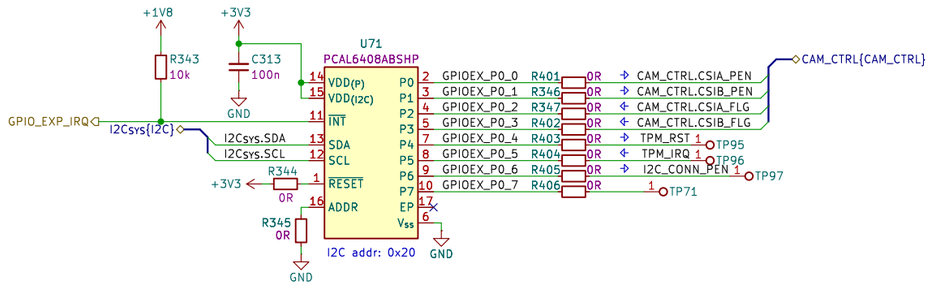
Fan connector



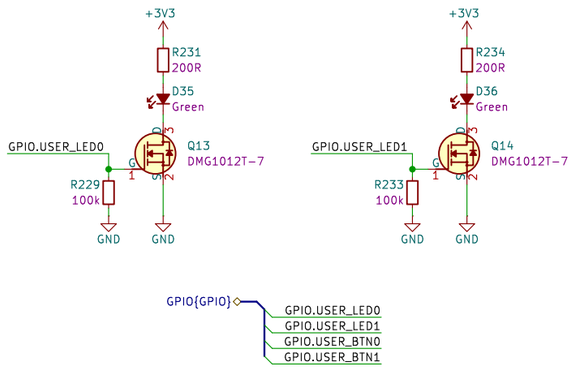
ID EEPROM



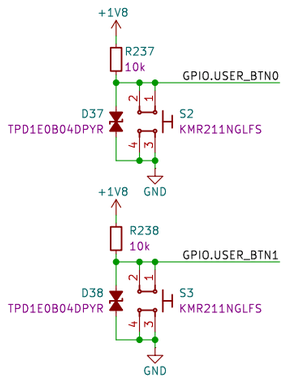
GPIO Expander



User LEDs



User Buttons



open source hardware

antmicro

www.antmicro.com

Antmicro Ltd

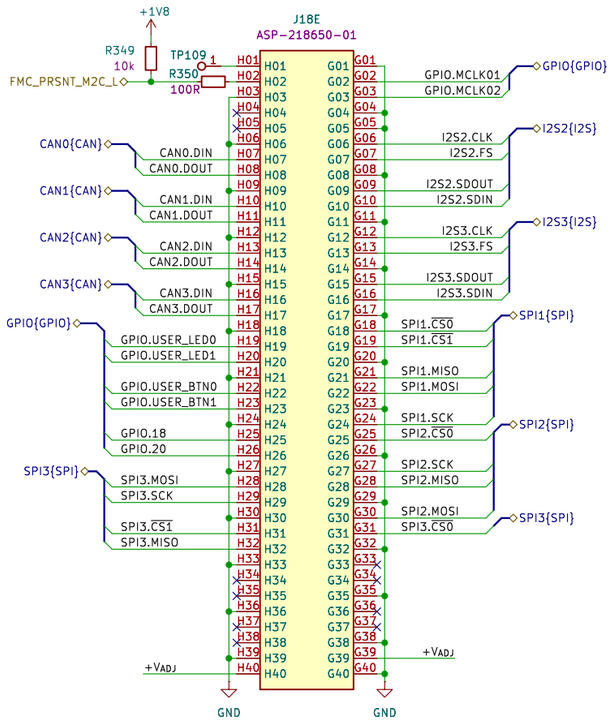
Sheet: /Peripherals/

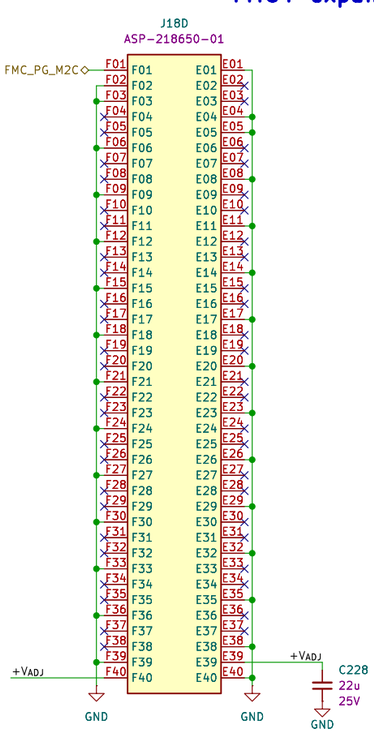
File: peripherals.kicad_sch

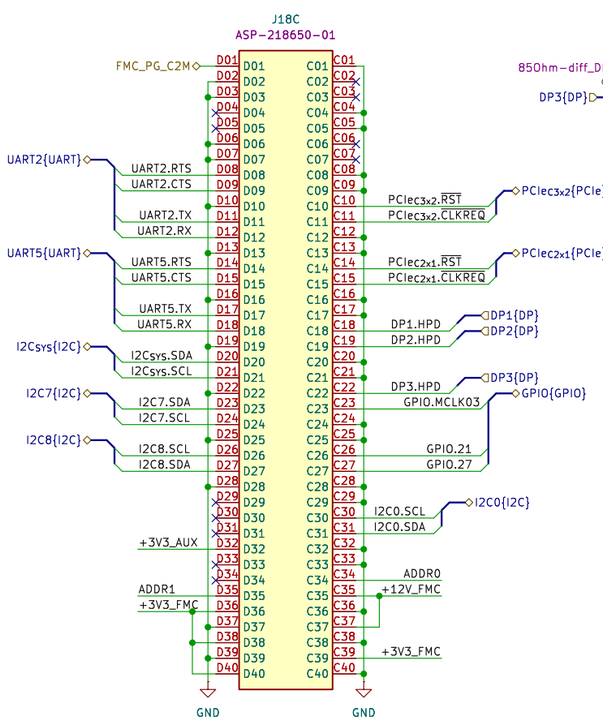
Title: Jetson AGX Thor Baseboard

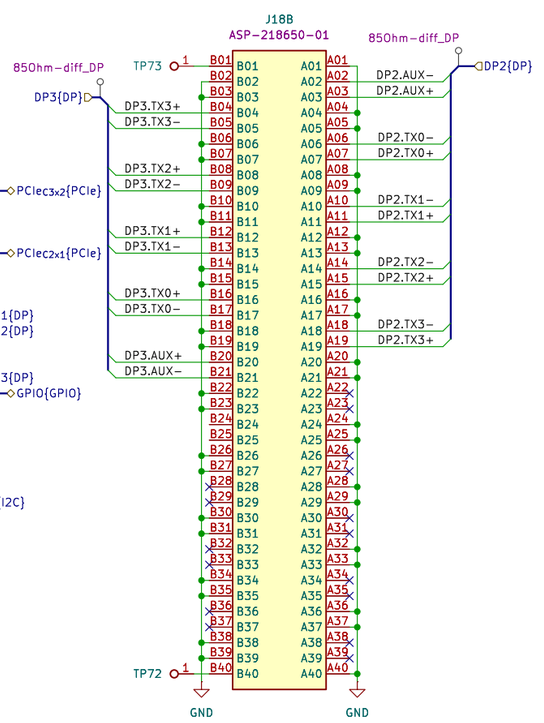
Size: A3	Date: 2025-11-03	**Rev: 1.1.0:199dd00f**
KiCad E.D.A. 9.0.6		Id: 13/15

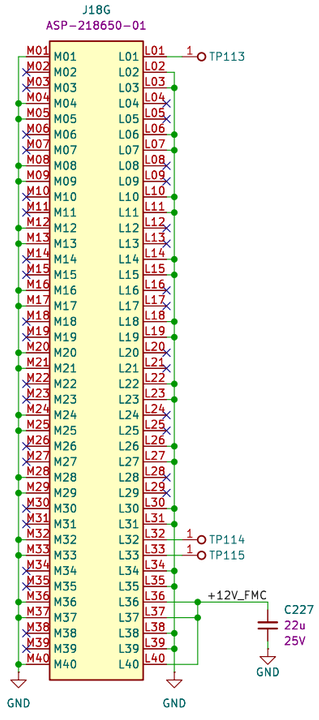
FMC+ expansion connector

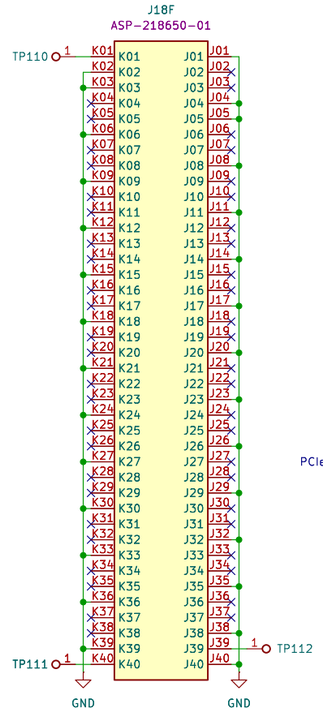


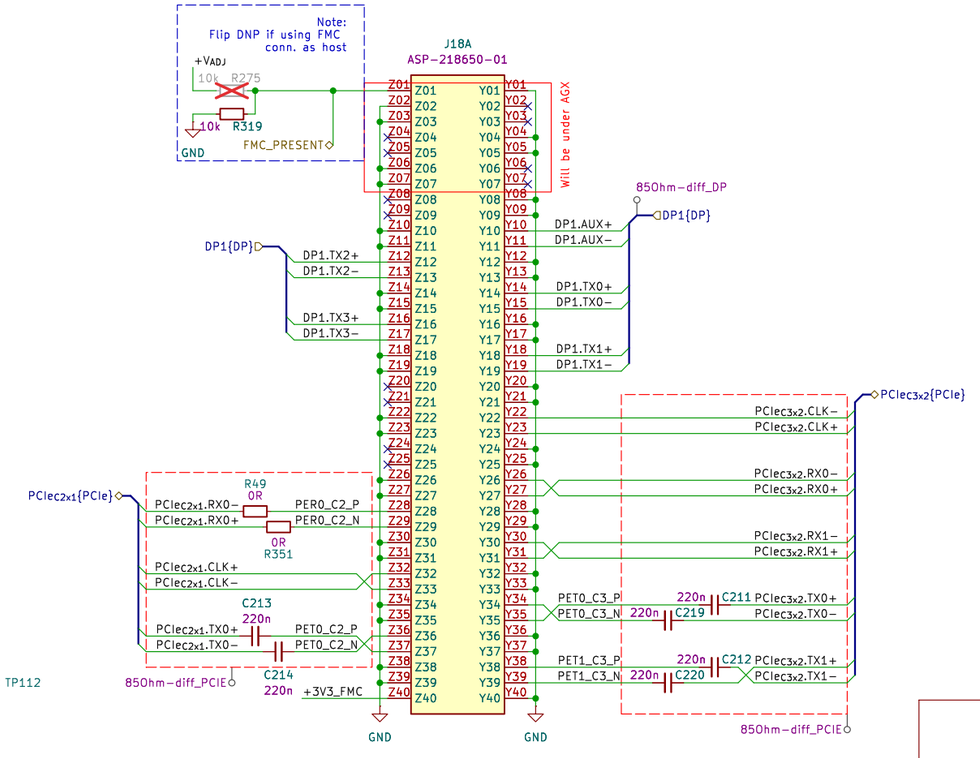




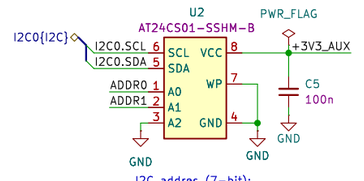




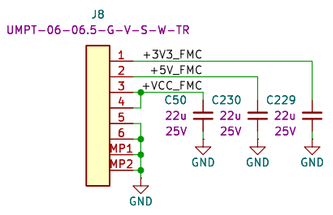


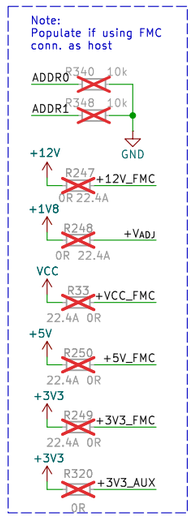


FMC Module ID



Power connector





open source hardware

antmicro

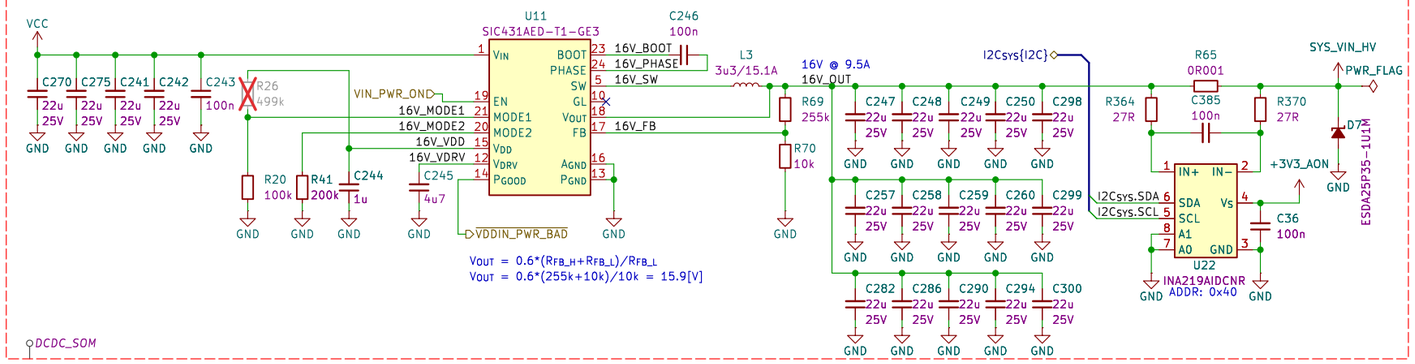
www.antmicro.com
Antmicro Ltd

Sheet: /Expansion connector/
File: expansion_connector.kicad_sch

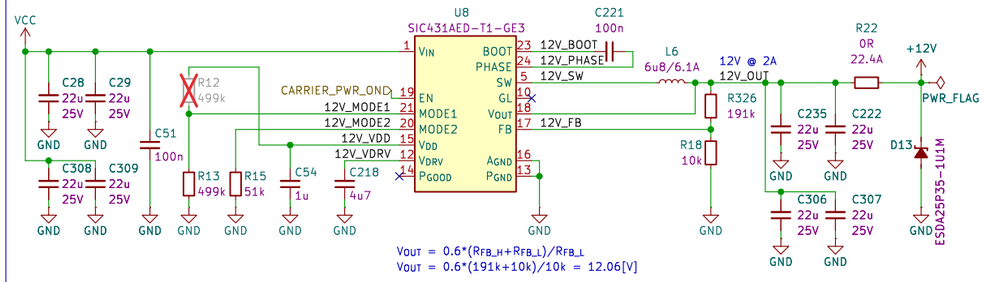
Title: Jetson AGX Thor Baseboard

Size: A3	Date: 2025-11-03	**Rev: 1.1.0:199dd00f**
KiCad E.D.A. 9.0.6		Id: 14/15

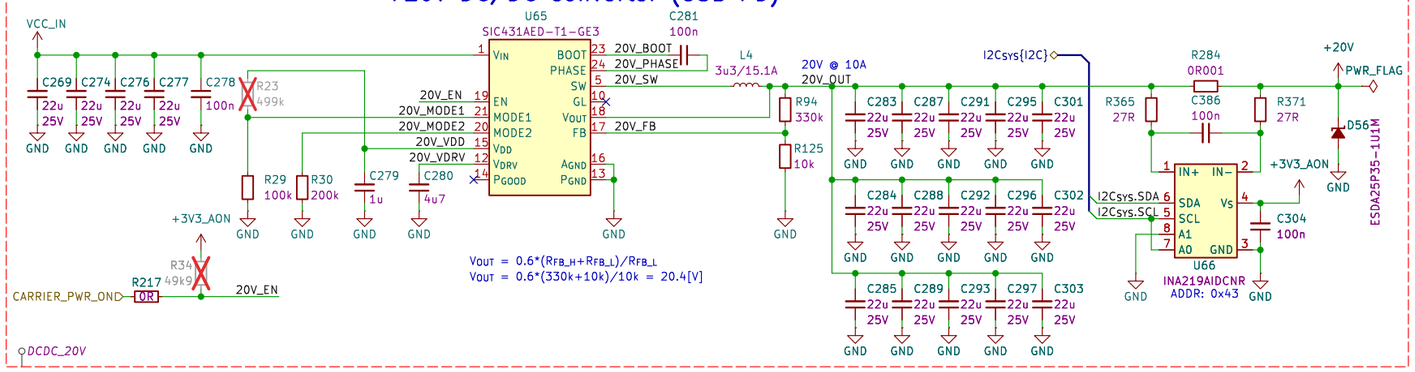
SoM High voltage DC/DC converter



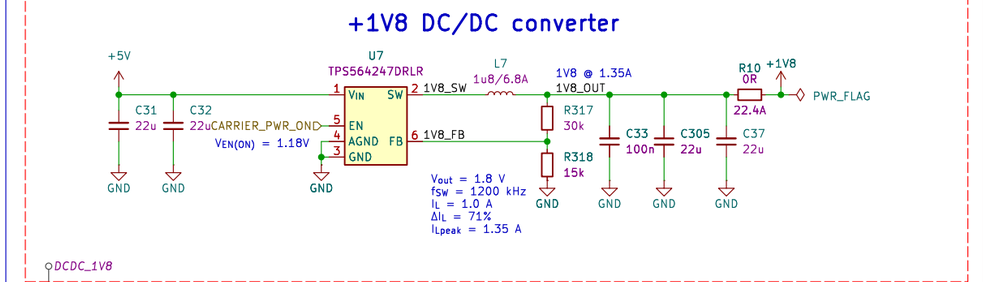
+12V DC/DC converter



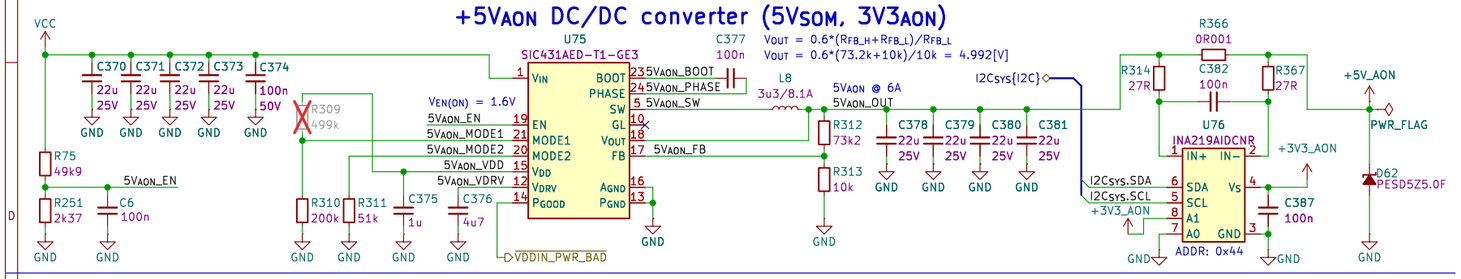
+20V DC/DC converter (USB PD)



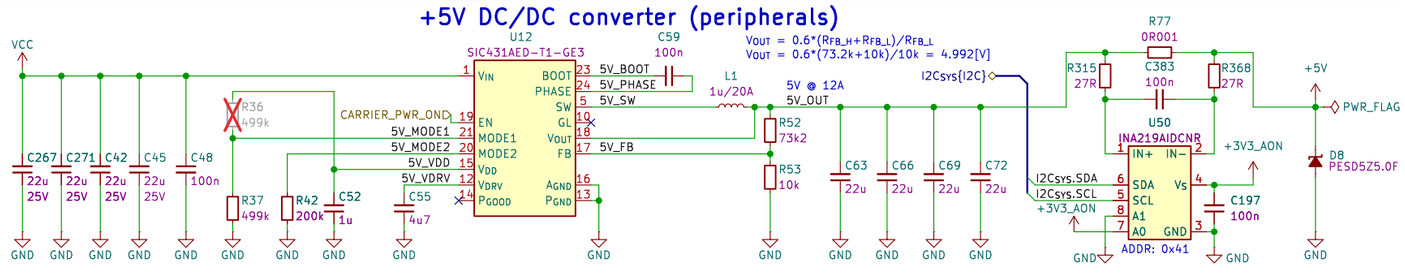
+1V8 DC/DC converter



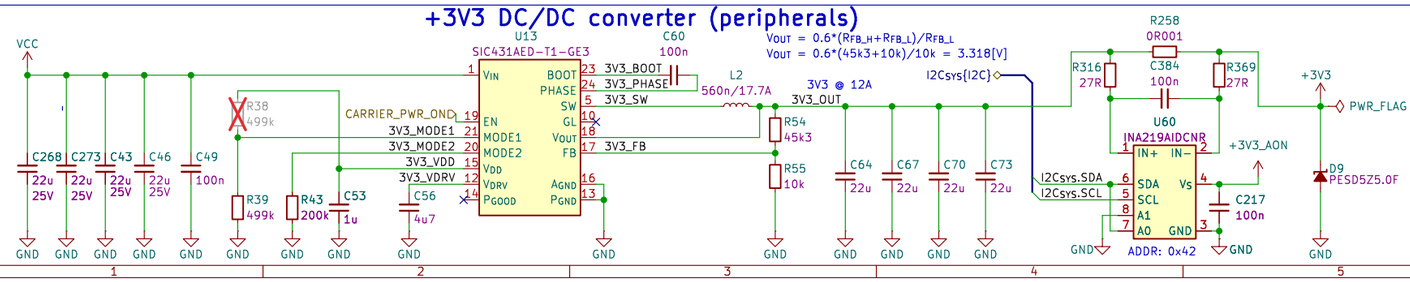
+5VAON DC/DC converter (5VSOM, 3V3AON)



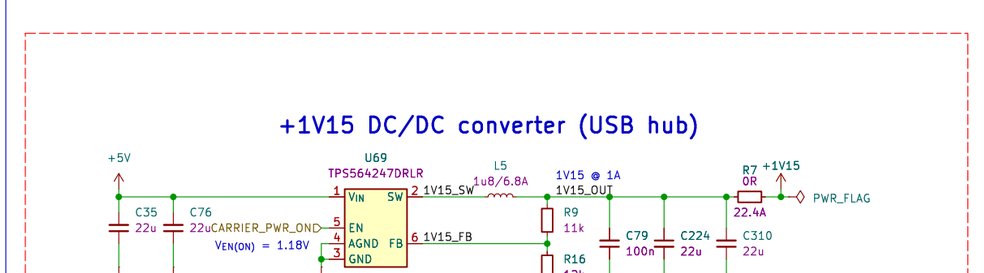
+5V DC/DC converter (peripherals)



+3V3 DC/DC converter (peripherals)



+1V15 DC/DC converter (USB hub)



open source hardware

antmicro

www.antmicro.com

Antmicro Ltd

Sheet: /DCDC/

File: dcdc.kicad_sch

Title: Jetson AGX Thor Baseboard

Size: A3	Date: 2025-11-03	**Rev: 1.1.0:199dd00f**
KiCad E.D.A. 9.0.6		Id: 23/15