UPWARD FACING PORT(UFP)

P1
USB_C_Plug

VBUS A4 — VBUS
CC A5 — C_CC1
VCONN B5 — VCONN
D− A7 — USB_D−
D+ A6 — USB_D+
RX1− B10 — CRX1_n
RX1+ B11 — CRX1_p
TX1− A3 — CTX1_n
TX1+ A2 — CTX1_p
RX2− A10 — CRX2_n
RX2+ A11 — CRX2_p
TX2− B3 — CTX2_n
TX2+ B2 — CTX2_p
SBU1 A8 — CSBU1
SBU2 B8 — CSBU2
SHIELD — GND

R1 5.1K
C1 0.1uF
USB_CHASIS
GND
Connected to computer(host).

INTERFACE SECTION

USB C MUX

ESD PROTECTION
D4 ESD1220MXR — USB_D+ / USB_D−
D6 ESD122DMXR — CRX1_n / CRX1_p
D5 ESD122DMXR — CTX1_n / CTX1_p
D3 ESD122DMXR — CTX2_n / CTX2_p
D2 ESD122DMXR — CRX2_n / CRX2_p
C2 0.1uF
C3 0.1uF
C4 0.1uF
C5 0.1uF

U1
HD3SS460

CRX1p CRX1n
CTX1p CTX1n
CTX2p CTX2n
CRX2p CRX2n
CSBU1 CSBU2
VCC — +3.3V
POL AMSEL EN — AB_OUT
SSTX_n SSTX_p
SSRX_n SSRX_p
LnA_n LnA_p
LnB_n LnB_p
LnC_n LnC_p
LnD_n LnD_p
SBU1 SBU2 — AUX+ AUX−
P10 28 13 — GND
R2 1M
R3 1M

TO THE DISPLAY PORT CONTROLLER

USB C HUB(HIGH SPEED)

Sheet: USB_HUB_CTRL
File: USB_HUB_CTRL.sch

USB_D+ USB_D−
USB2UP_DP USB2UP_DN
USB3UP_TXDN USB3UP_TXDP USB3UP_RXDP USB3UP_RXDN
I2C_SDI I2C_SDO I2S_SCK I2C_LRCK I2C_MCLK
I2C_CLK I2C_DATA MIC_DET
I2S_SDI I2S_SDO I2S_SCK I2S_LRCK I2S_MCLK

USB2DN_DP1 USB2DN_DN1 USB3DN_RXDP1 USB3DN_RXDN1 USB3DN_TXDP1 USB3DN_TXDN1
USB2DN_DP2 USB2DN_DN2 USB3DN_RXDP2 USB3DN_RXDN2 USB3DN_TXDP2 USB3DN_TXDN2
USB2DN_DP3 USB2DN_DN3 USB3DN_RXDN3 USB3DN_RXDP3 USB3DN_TXDN3 USB3DN_TXDP3
USB2DN_DP4 USB2DN_DN4 USB3DN_RXDP4 USB3DN_RXDN4 USB3DN_TXDP4 USB3DN_TXDN4
USB3DN_RXDP5 USB3DN_RXDN5 USB3DN_TXDP5 USB3DN_TXDN5
USB2DN_DP6 USB2DN_DN6
USB_SSTXP USB_SSTXM USB_SSRXP USB_SSRXM USB_DP USB_DM

USB C HUB EXTENSION

Sheet: USB_HUB_EXTENSION
File: USB_HUB_EXTENSION.sch

DP1 DM1 DP2 DM2 DP3 DM3 DP4 DM4
USB−_MICRO USB+_MICRO USB_DM_ETH USB_DP_ETH USB2DN_DP4_UHS USB2DN_DN4_UHS

POWER SECTION

USB PD CONTROLLER (POWER SOURCE)

Sheet: UFP_PD_CONTROLLER

VCONN C_CC1 AB_OUT
CC1 CC2 AB_OUT

D2 ESD1220MXR — ESD PROTECTION

This section has a PD controller that Advertizes itself as a source to the connected device(UFP). It then checks the needs of the Device and supplies the needed power. (THUS THE HUB MEETS THE USB PD STANDARDS)

File: UFP_PD_CTRL + VAR_V_SOURCE.sch

CHARGER INPUT TYPE C RECEPTACLE

J1
USB_C_Receptacle

PWR_IN — VBUS
CC1_PWR — CC1
CC2_PWR — CC2
D− D− D+ D+ RX1− RX1+ TX1− TX1+ RX2− RX2+ TX2− TX2+ SBU1 SBU2
SHIELD — GND — S1

UNUSED IN THE TYPE C CHARGING INPUT

The input receptacle receives input from a TYPE C charging brick that can deliver upto 100W (20V at 5A), the level of power sourced from the brick is NEGOTIATED by the PD controller

PD CONTROLLER INPUT SINK

Sheet: ST_PD CHARGING

PWR_IN CC1_PWR CC2_PWR

This PD handles power negtiation with the charger (the power source) it advertises itself as the sink. Request for 100W (20V 5A)

File: ST_PD CHARGING CONTROLLER.sch

POWER CONVERSION SECTION

Sheet: 3V3_BUCK
File: 3V3_BUCK.sch

OUTPUT SECTION (DFP)

USB 3.2 Gen2 type C

U3
SY6280
+5V — C9 10uF — IN EN GND OUT ISET — C12 100nF — C15 10uF — R5 6.8K
OVER CURRENT & SHORT CIRCUIT PROTETION
Iset=6800/rs 1A limit r2=6.8k

J4
USB_C_Receptacle

USB2DN_DN1 USB2DN_DP1
USB3DN_RXDN1 USB3DN_RXDP1 USB3DN_TXDN1 USB3DN_TXDP1
USB3DN_RXDN2 USB3DN_RXDP2 USB3DN_TXDN2 USB3DN_TXDP2
VBUS CC1 CC2 D− D− D+ D+ RX1− RX1+ TX1− TX1+ RX2− RX2+ TX2− TX2+ SBU1 SBU2 GND SHIELD S1

Sheet: sheet639E178A
File: ESD_PROTECTION.sch

USB 3.2 gen1 type A

U5
SY6280
+5V — C11 10uF — IN EN GND OUT ISET — C16 100nF — C19 10uF — R7 6.8K
Iset=6800/rs 1A limit r2=6.8k
OVER CURRENT & SHORT CIRCUIT PROTETION

J2
USB3_A

USB2DN_DN2 USB2DN_DP2
USB3DN_RXDN2 USB3DN_RXDP2 USB3DN_TXDN2 USB3DN_TXDP2
VBUS D− D+ SSRX− SSRX+ SSTX− SSTX+ GND DRAIN SHIELD

Sheet: ESD_PROTECTION
File: ESD_PROTECTION.sch
ESD PROTECTION

USB 3.2 gen1 type A(NO. 2)

U4
SY6280
+5V — C10 10uF — IN EN GND OUT ISET — C14 100nF — C17 10uF — R6 6.8K
Iset=6800/rs 1A limit r2=6.8k
OVER CURRENT & SHORT CIRCUIT PROTETION

J3
USB3_A

USB2DN_DN3 USB2DN_DP3
USB3DN_RXDN3 USB3DN_RXDP3 USB3DN_TXDN3 USB3DN_TXDP3
VBUS D− D+ SSRX− SSRX+ SSTX− SSTX+ GND DRAIN SHIELD

Sheet: sheet6317B010
File: ESD_PROTECTION.sch

type C connect to Ipad

U2
SY6280
+5V — C8 10uF — IN EN GND OUT ISET — C13 10uF — C18 100nF — R4 6.8K
Iset=6800/rs 1A limit r2=6.8k

P2
USB_C_Plug_USB2.0

USB2DN_DP6 USB2DN_DN6
VBUS CC VCONN D− D+ GND SHIELD

D14
ESD122DMXR

Sheet: ETHERNET
USB_DP_ETH USB_DM_ETH
EHERNET DFP PORT
File: LAN7850 ETHERNET.sch

Sheet: SD_CARD_UHS
USB2DN_DP4_UHS USB2DN_DN4_UHS
UHS SD
File: SD_CARD_UHS.sch

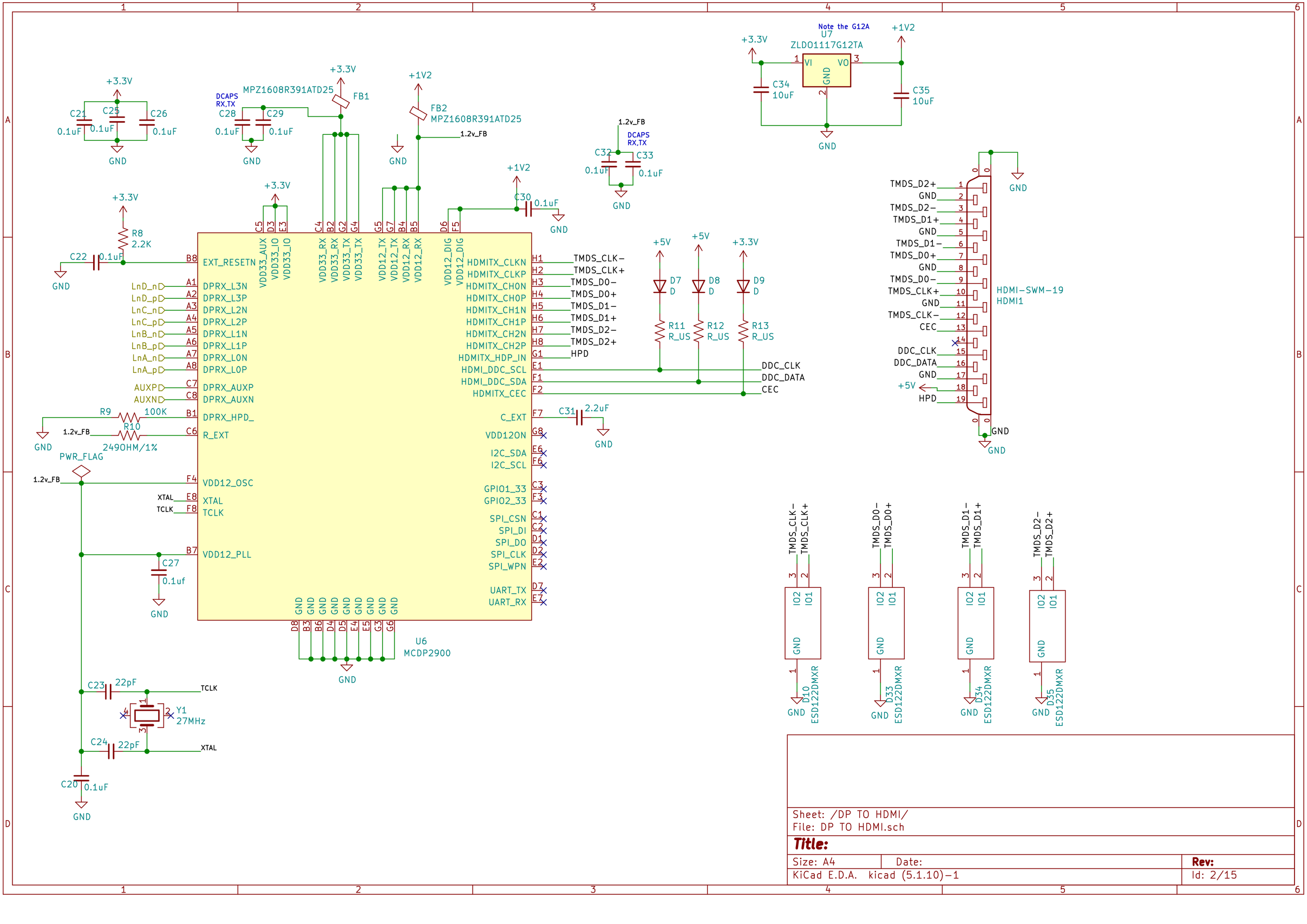
Sheet: MICRO SD CARD_INTERFACE
USB+_MICRO USB−_MICRO
MICRO SD
File: MICRO SD CARD.sch

I2C_CLK I2C_DATA MIC_DET I2S_SDO I2S_SDI I2S_LRCK I2S_SCK I2S_MCLK
Sheet: HEADPHONE DFP
File: AUDIO CODEC.sch

USB_DM USB_DP USB_SSRXM USB_SSRXP USB_SSTXM USB_SSTXP
SATA
Sheet: SATA INTERFACE
File: USB TO SATA.sch

AUX− AUX+ LnD_p LnD_n LnC_p LnC_n LnB_p LnB_n LnA_p LnA_n
HDMI
Sheet: DP TO HDMI
File: DP TO HDMI.sch

Sheet: /
File: USB_C_HUB.sch
Title:
Size: A2 | Date: | Rev:
KiCad E.D.A. kicad (5.1.10)−1 | Id: 1/15



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Title:

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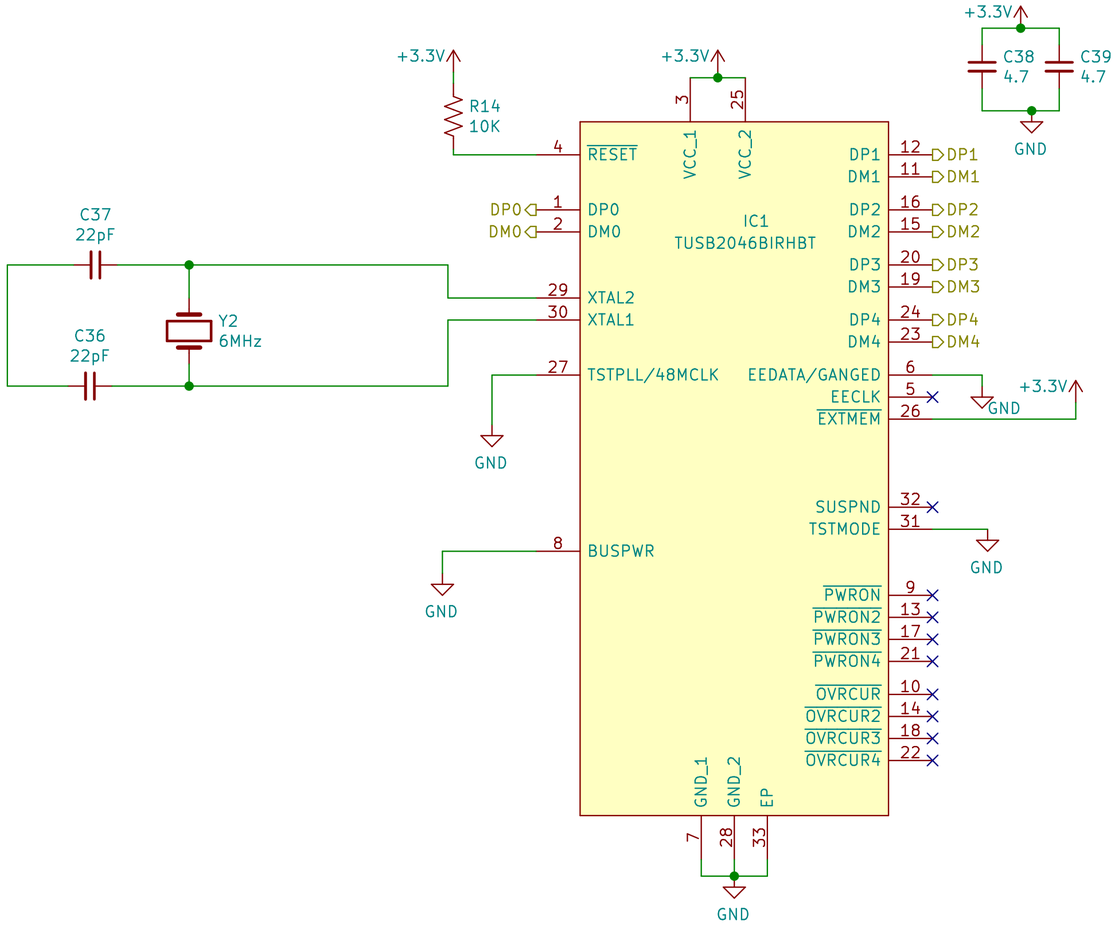

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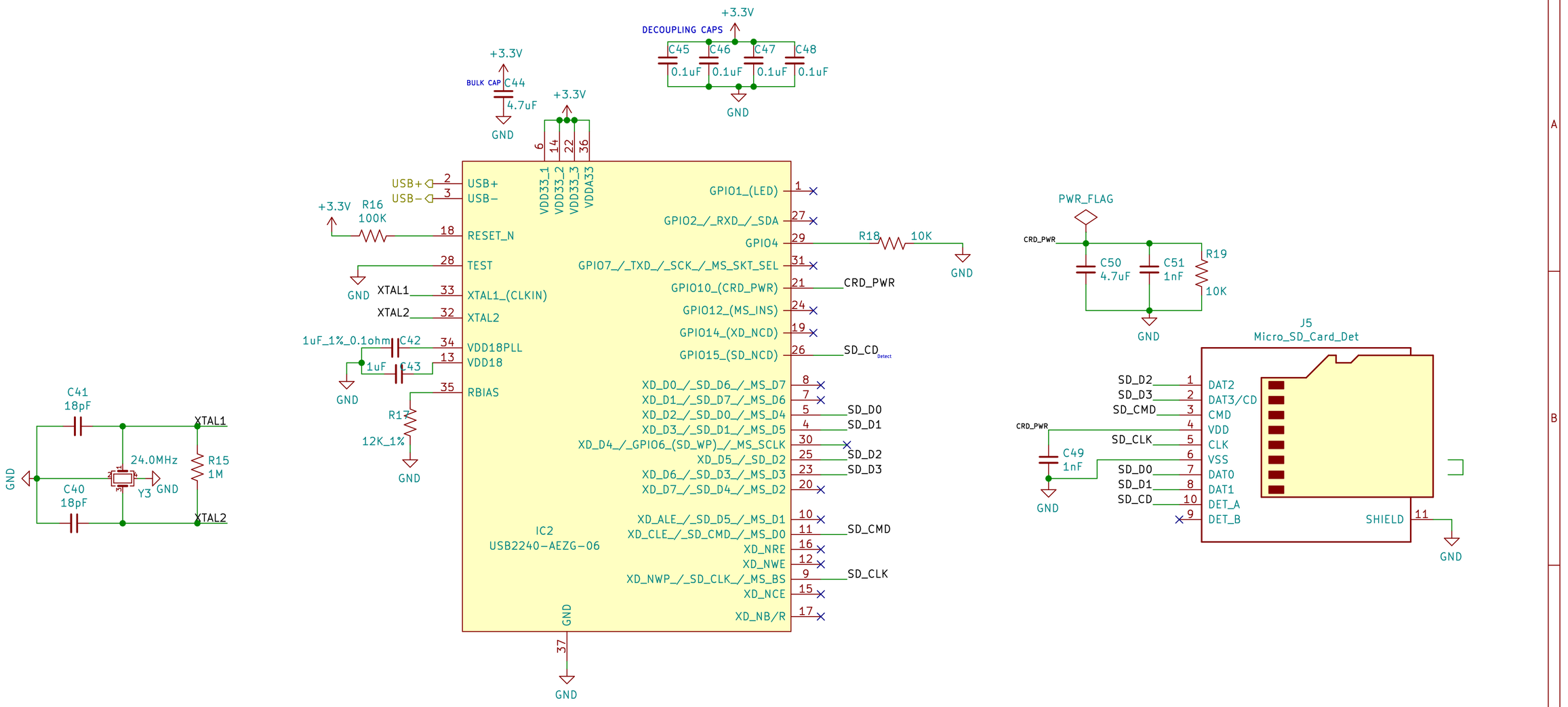
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (5.1.10)-1		Id: 3/15



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File: MICRO SD CARD.sch	
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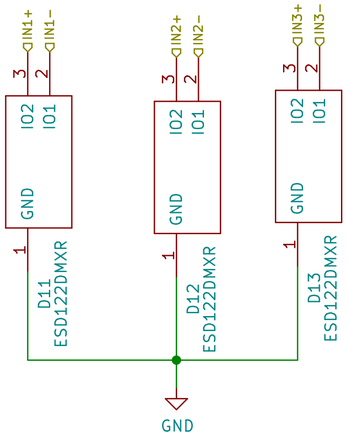
Size: A4	Date:
KiCad E.D.A. kicad (5.1.10)−1	Id: 4/15



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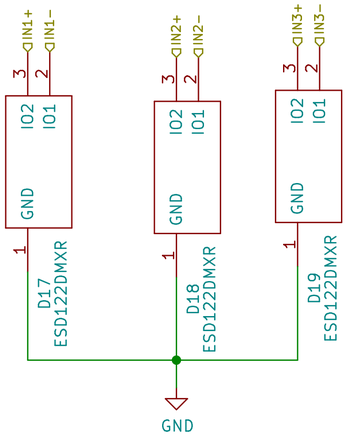
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (5.1.10)-1		Id: 5/15



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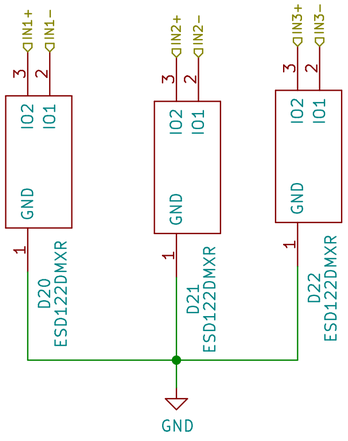
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (5.1.10)-1		Id: 6/15



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File: ESD_PROTECTION.sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (5.1.10)-1		Id: 7/15

+3.3V
R20
10K
vbus_det

C53
22pF
oscin
Y4
GND
25MHz_402F2501XIAR
C52
22pF
oscout

+3.3V
R21
1K
reset

U8
LAN7850

29	CONNECT/GPIO6	TR0P	1 T4+
30	HSIC_SEL	TR0N	2 T4−
		TR1P	4 T3−
35	STROBE	TR1N	5 T3+
38	DATA	TR2P	7 T2−
vbus_det 27	VBUS_DET	TR2N	8 T2+
USB_DP 36	USB_DP	TR3P	10 T1−
USB_DM 37	USB_DM	TR3N	11 T1+
oscin 46	XI	REF_REXT	55
oscout 47	XO	REF_FILT	56
R22 12K_1% 43	USBRBIAS	SUSPEND_N/GPIO5	28
R23 10K 40	TEST	PME_N	39
reset 41	RESET_N/PME_CLEAR	LED0/GPIO7	31
		PME_MODE/GPIO8	32
14	TDI	LED1/GPIO9	49
15	TDO	LED2/GPIO10	50
16	TCK/GPIO0	LED3/GPIO11	51
17	TMS		
21	EECS/GPIO1	VDD25A	3
22	EEDI/GPIO2	VDD25A	6
23	EEDO/GPIO3	VDD25A	9
24	EECLK/GPIO4	VDD25A	12
19	VDD_SW_IN	VDD25_REG_OUT	53
13	VDDVARIO	VDD12_SW_FB	20
25	VDDVARIO	VDD12_SW_OUT	18
42	VDDVARIO	VDD12CORE	48
45	VDDVARIO	VDD12CORE	26
44	VDD33A	VDD12A	33
54	VDD33_REG_IN	VDD12HSIC	34
		VDD12A	52
		VSS	57

R24
2K_1%
C66
1uF
GND

+3.3V
C56
10uF
GND
+3.3V
GND
1uF
C57

C65
1uF
GND

VDD12
L1
33uH
C69
1uF
C71
1uF
GND

VDD12

PULSE TRANSFORMER T1
H5008FNL

tc1 1	TCT1	MCT1	24 mc1
T1− 2	TD1+	MX1+	23
T1+ 3	TD1−	MX1−	22
tc2 4	TCT2	MCT2	21 mc2
T2− 5	TD2+	MX2+	20
T2+ 6	TD2−	MX2−	19
tc3 7	TCT3	MCT3	18 mc3
T3− 8	TD3+	MX3+	17
T3+ 9	TD3−	MX3−	16
tc4 10	TCT4	MCT4	15 mc4
T4+ 11	TD4+	MX4+	14
T4− 12	TD4−	MX4−	13

RJ 45 CONNECTOR
J6
RJ45_LED_Shielded
SH
C78
1nF_2KV
GND

tc4 C73 0.1uF
tc3 C74 0.1uF
tc2 C75 0.1uF
tc1 C76 0.1uF
GND

mc4 R25 75
mc3 R26 75
mc2 R27 75
mc1 R28 75
C77
1nF_2KV

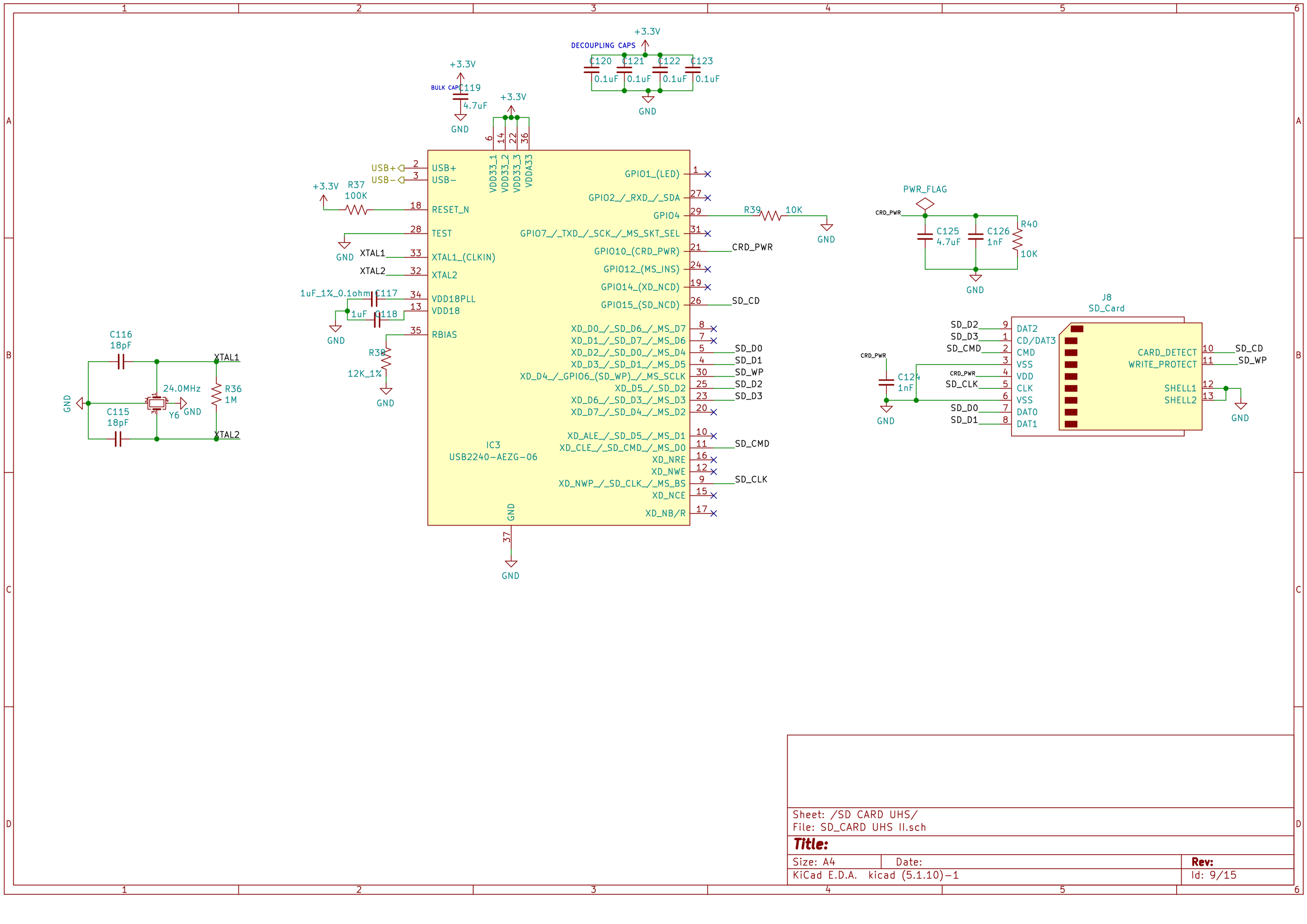
DECOUPLING CAPACITORS FOR ALL VOLTAGES

+3.3V
C54 0.1uF
C55 0.1uF
C58 0.1uF
C59 0.1uF
GND

VDD12
C60 0.1uF
C61 0.1uF
C62 0.1uF
C63 0.1uF
C64 0.1uF
GND

VDD25
C67 0.1uF
C68 0.1uF
C70 0.1uF
C72 0.1uF
GND

Sheet: /ETHERNET/
File: LAN7850 ETHERNET.sch
Title:
Size: A4 | Date: | Rev:
KiCad E.D.A. kicad (5.1.10)-1 | Id: 8/15


DECOUPLING CAPS
+3.3V
C120 0.1uF
C121 0.1uF
C122 0.1uF
C123 0.1uF
GND
BULK CAP
C119 4.7uF
+3.3V
GND
+3.3V
6
14
22
36
VDD33_1
VDD33_2
VDD33_3
VDDA33
USB+ 2
USB- 3
USB+
USB-
+3.3V
R37 100K
18
RESET_N
28
TEST
GND
XTAL1 33
XTAL1_(CLKIN)
XTAL2 32
XTAL2
1uF_1%_0.1ohm
C117
1uF
C118
34
13
VDD18PLL
VDD18
GND
35
RBIAS
R38 12K_1%
GND
C116 18pF
XTAL1
24.0MHz
R36 1M
GND
C115 18pF
Y6
GND
XTAL2
IC3
USB2240-AEZG-06
GPIO1_(LED) 1
GPIO2_/_RXD_/_SDA 27
GPIO4 29
R39 10K
GND
GPIO7_/_TXD_/_SCK_/_MS_SKT_SEL 31
GPIO10_(CRD_PWR) 21
CRD_PWR
GPIO12_(MS_INS) 24
GPIO14_(XD_NCD) 19
GPIO15_(SD_NCD) 26
SD_CD
XD_D0_/_SD_D6_/_MS_D7 8
XD_D1_/_SD_D7_/_MS_D6 7
XD_D2_/_SD_D0_/_MS_D4 5
SD_D0
XD_D3_/_SD_D1_/_MS_D5 4
SD_D1
XD_D4_/_GPIO6_(SD_WP)_/_MS_SCLK 30
SD_WP
XD_D5_/_SD_D2 25
SD_D2
XD_D6_/_SD_D3_/_MS_D3 23
SD_D3
XD_D7_/_SD_D4_/_MS_D2 20
XD_ALE_/_SD_D5_/_MS_D1 10
XD_CLE_/_SD_CMD_/_MS_D0 11
SD_CMD
XD_NRE 16
XD_NWE 12
XD_NWP_/_SD_CLK_/_MS_BS 9
SD_CLK
XD_NCE 15
XD_NB/R 17
GND
37
GND
PWR_FLAG
CRD_PWR
C125 4.7uF
C126 1nF
R40 10K
GND
J8
SD_Card
SD_D2 9
SD_D3 1
SD_CMD 2
CRD_PWR 4
SD_CLK 5
SD_D0 7
SD_D1 8
DAT2
CD/DAT3
CMD
VSS
VDD
CLK
VSS
DAT0
DAT1
CARD_DETECT 10
WRITE_PROTECT 11
SHELL1 12
SHELL2 13
SD_CD
SD_WP
GND
CRD_PWR
C124 1nF
GND
Sheet: /SD CARD UHS/
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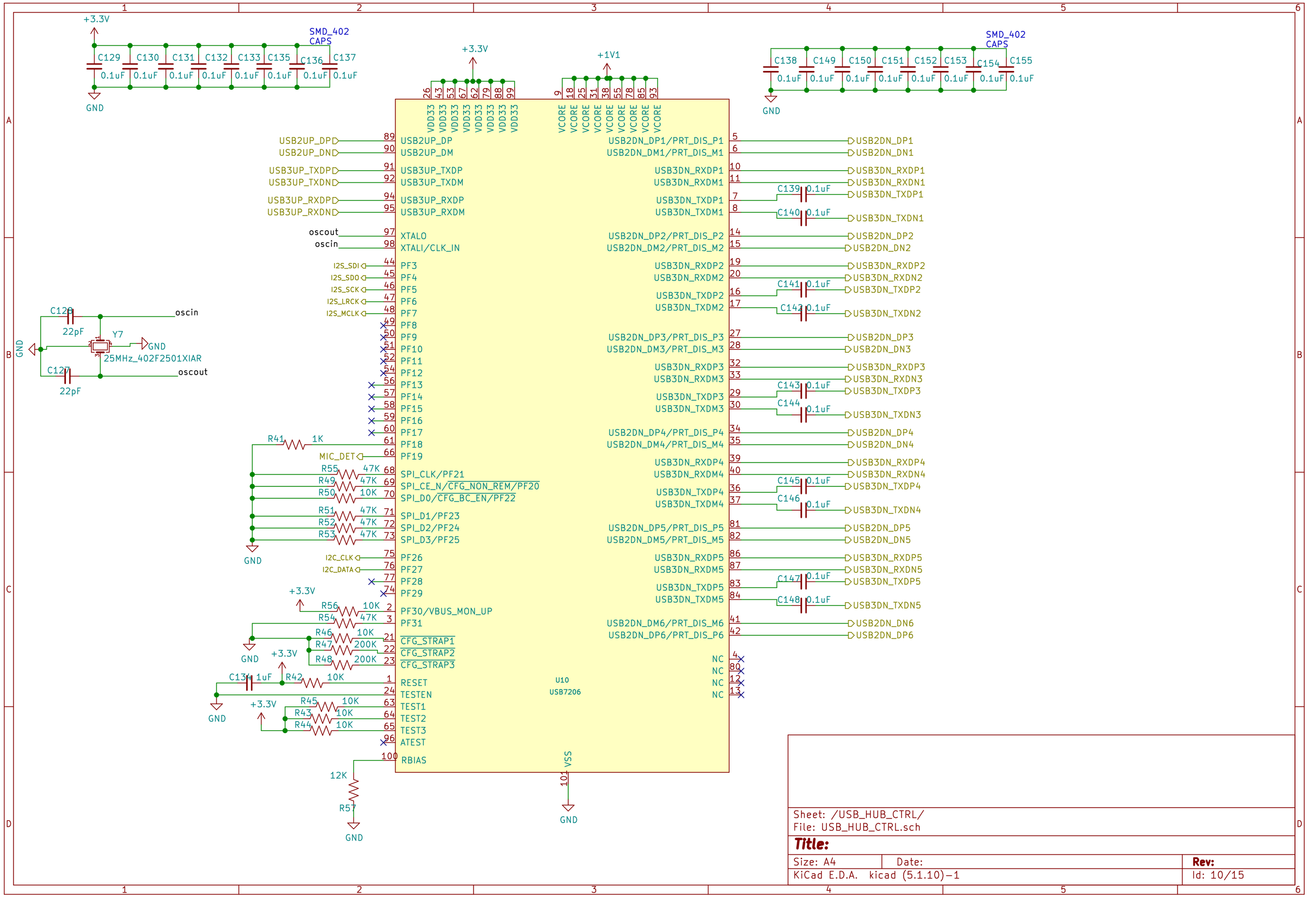
Size: A4
Date:
Rev:
KiCad E.D.A. kicad (5.1.10)-1
Id: 9/15


+3.3V
SMD_402
CAPS
C129 0.1uF
C130 0.1uF
C131 0.1uF
C132 0.1uF
C133 0.1uF
C135 0.1uF
C136 0.1uF
C137 0.1uF
GND
+3.3V
+1V1
SMD_402
CAPS
C138 0.1uF
C149 0.1uF
C150 0.1uF
C151 0.1uF
C152 0.1uF
C153 0.1uF
C154 0.1uF
C155 0.1uF
GND
VDD33 26 43 53 67 62 79 88 99
VCORE 9 18 25 31 38 55 78 85 93
USB2UP_DP 89
USB2UP_DN 90
USB3UP_TXDP 91
USB3UP_TXDN 92
USB3UP_RXDP 94
USB3UP_RXDN 95
oscout 97
oscin 98
I2S_SDI 44
I2S_SDO 45
I2S_SCK 46
I2S_LRCK 47
I2S_MCLK 48
MIC_DET 66
I2C_CLK 75
I2C_DATA 76
USB2UP_DP
USB2UP_DM
USB3UP_TXDP
USB3UP_TXDM
USB3UP_RXDP
USB3UP_RXDM
XTALO
XTALI/CLK_IN
PF3
PF4
PF5
PF6
PF7
PF8
PF9
PF10
PF11
PF12
PF13
PF14
PF15
PF16
PF17
PF18
PF19
SPI_CLK/PF21
SPI_CE_N/CFG_NON_REM/PF20
SPI_DO/CFG_BC_EN/PF22
SPI_D1/PF23
SPI_D2/PF24
SPI_D3/PF25
PF26
PF27
PF28
PF29
PF30/VBUS_MON_UP
PF31
CFG_STRAP1
CFG_STRAP2
CFG_STRAP3
RESET
TESTEN
TEST1
TEST2
TEST3
ATEST
RBIAS
VSS 101
U10
USB7206
USB2DN_DP1/PRT_DIS_P1 5
USB2DN_DM1/PRT_DIS_M1 6
USB3DN_RXDP1 10
USB3DN_RXDM1 11
USB3DN_TXDP1 7
USB3DN_TXDM1 8
USB2DN_DP2/PRT_DIS_P2 14
USB2DN_DM2/PRT_DIS_M2 15
USB3DN_RXDP2 19
USB3DN_RXDM2 20
USB3DN_TXDP2 16
USB3DN_TXDM2 17
USB2DN_DP3/PRT_DIS_P3 27
USB2DN_DM3/PRT_DIS_M3 28
USB3DN_RXDP3 32
USB3DN_RXDM3 33
USB3DN_TXDP3 29
USB3DN_TXDM3 30
USB2DN_DP4/PRT_DIS_P4 34
USB2DN_DM4/PRT_DIS_M4 35
USB3DN_RXDP4 39
USB3DN_RXDM4 40
USB3DN_TXDP4 36
USB3DN_TXDM4 37
USB2DN_DP5/PRT_DIS_P5 81
USB2DN_DM5/PRT_DIS_M5 82
USB3DN_RXDP5 86
USB3DN_RXDM5 87
USB3DN_TXDP5 83
USB3DN_TXDM5 84
USB2DN_DM6/PRT_DIS_M6 41
USB2DN_DP6/PRT_DIS_P6 42
NC 4
NC 80
NC 12
NC 13
C139 0.1uF
C140 0.1uF
C141 0.1uF
C142 0.1uF
C143 0.1uF
C144 0.1uF
C145 0.1uF
C146 0.1uF
C147 0.1uF
C148 0.1uF
USB2DN_DP1
USB2DN_DN1
USB3DN_RXDP1
USB3DN_RXDN1
USB3DN_TXDP1
USB3DN_TXDN1
USB2DN_DP2
USB2DN_DN2
USB3DN_RXDP2
USB3DN_RXDN2
USB3DN_TXDP2
USB3DN_TXDN2
USB2DN_DP3
USB2DN_DN3
USB3DN_RXDP3
USB3DN_RXDN3
USB3DN_TXDP3
USB3DN_TXDN3
USB2DN_DP4
USB2DN_DN4
USB3DN_RXDP4
USB3DN_RXDN4
USB3DN_TXDP4
USB3DN_TXDN4
USB2DN_DP5
USB2DN_DN5
USB3DN_RXDP5
USB3DN_RXDN5
USB3DN_TXDP5
USB3DN_TXDN5
USB2DN_DN6
USB2DN_DP6
C126 22pF
Y7
25MHz_402F2501XIAR
C127 22pF
oscin
oscout
GND
R41 1K
R55 47K
R49 47K
R50 10K
R51 47K
R52 47K
R53 47K
R56 10K
R54 47K
R46 10K
R47 200K
R48 200K
C134 1uF
R42 10K
R45 10K
R43 10K
R44 10K
12K
R57
+3.3V
GND
Sheet: /USB_HUB_CTRL/
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Title:
Size: A4
Date:
Rev:
KiCad E.D.A. kicad (5.1.10)-1
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3.3V 5A BUCK CONVERTER

SYS_PWR

Low ESR caps at
1uF, Check DC Equivalent
resistance at 20V

C159 1uF_GRT155C81E105KE13_402
C158 1uF_GRT155C81E105KE13_402
C160 1uF_GRT155C81E105KE13_402
GND

C161
100nF

U12
LM3150MH
EN
VIN
RON
VCC
SS
HG
BST
SW
ILIM
LG
FB
SGND
PGND

Ron1
65.4K

C164
2.2uF(1mOHM)
C167
15nF
GND

GND

Q2
SI4842BDY-T1-GE3

C170
470nF(0.mOHM)

R61
1.24K

L4
4.5uH_13.5mOHM.

Q3
IRF3710ZSTRLPBF
GND

+3V3

C174
56pF(1.mOHM)

R68
46.3K

R69
10K

C175
220uF

GND

BOOST CONVERTER 5A 5V

R63
1K
GND

R64
2.94K

FB

+3V3

L2
1uH_5.6mOHM.

D24
STPS30L30DJF-TR

+5V

U11
LM3478MM_NOPB
ISEN
COMP
FB
FA/SD
VIN
DR
AGND
PGND

C157
220uF

C159
100nF

C162
1nF

C165
22nF

R58
2.55K

R59
26.7K

GND

ISENSE

Q1
SI4842BDY-T1-GE3

R62
100

C168
10pF

R65
6m

GND

C171
270uF(8mOHM)

electrolytic alluminium
hv little esr

270uF(8mOHM)
C173

1.1V BUCK CONVERTER
HIGHLY EFFICIENT

+3V3

IC4
TPS62824ADMQR
VIN
EN
PG
GND
SW
FB

C163
1uF

C166
4.7uF

R60
100K

L3
470nH_30m

120Pf_1mOHM
C169

R66
82.5K

R67
100K

10uF_1mOHM_402
C172

+1V1

GND

Sheet: /3V3_BUCK/		
File: 3V3_BUCK.sch		
Title:		
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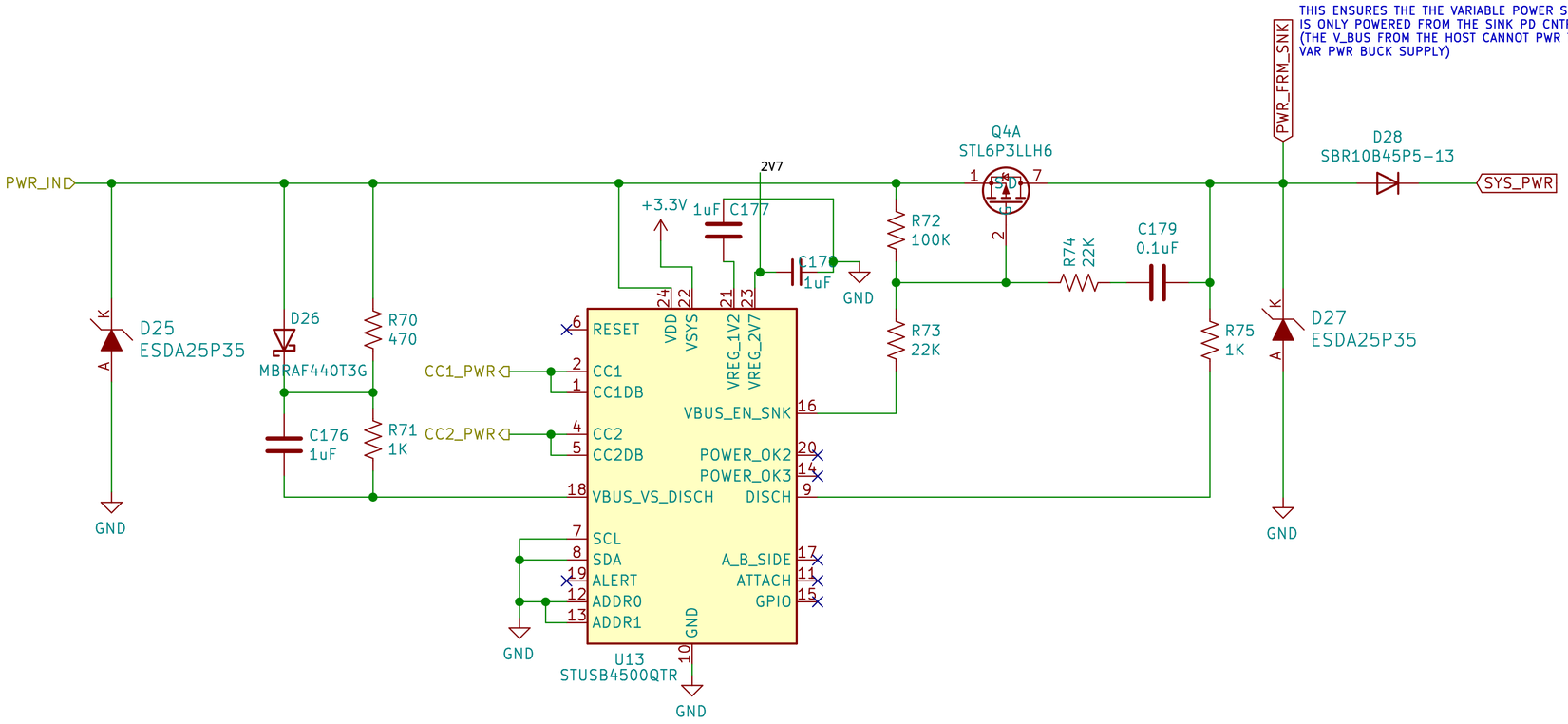

Sheet: /ST_PD CHARGING/
File: ST_PD CHARGING CONTROLLER.sch

Title:

Size: A4	Date:	**Rev:**
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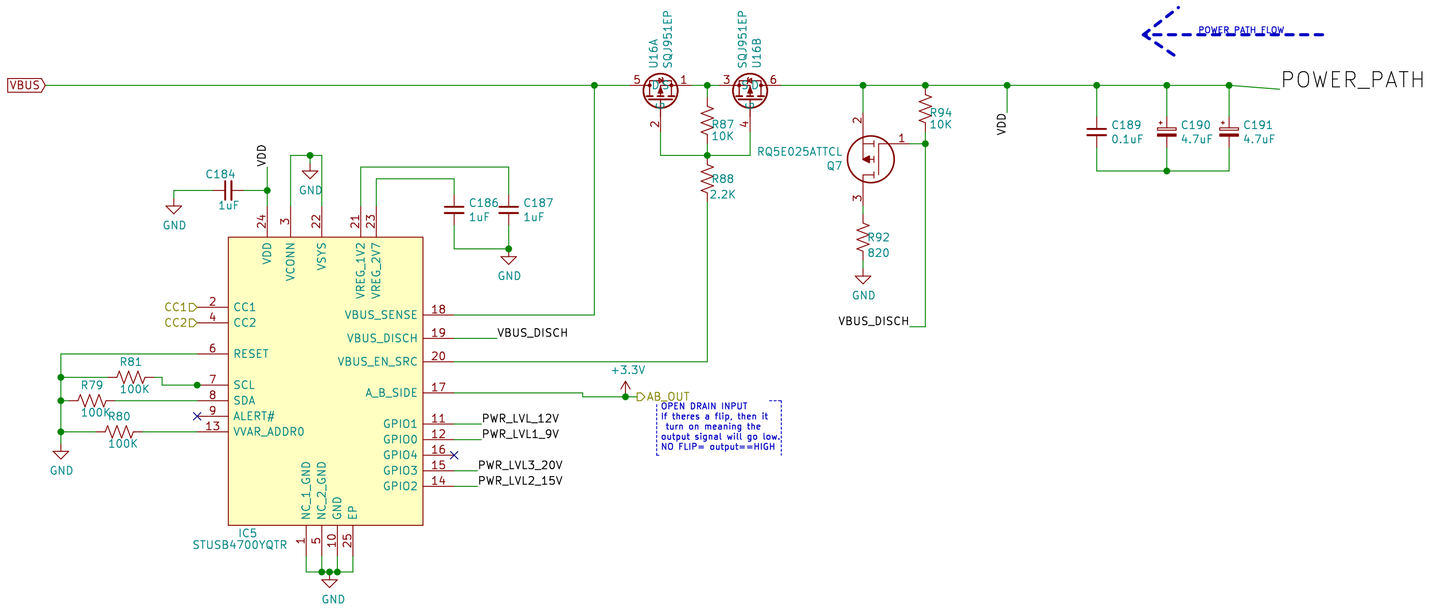

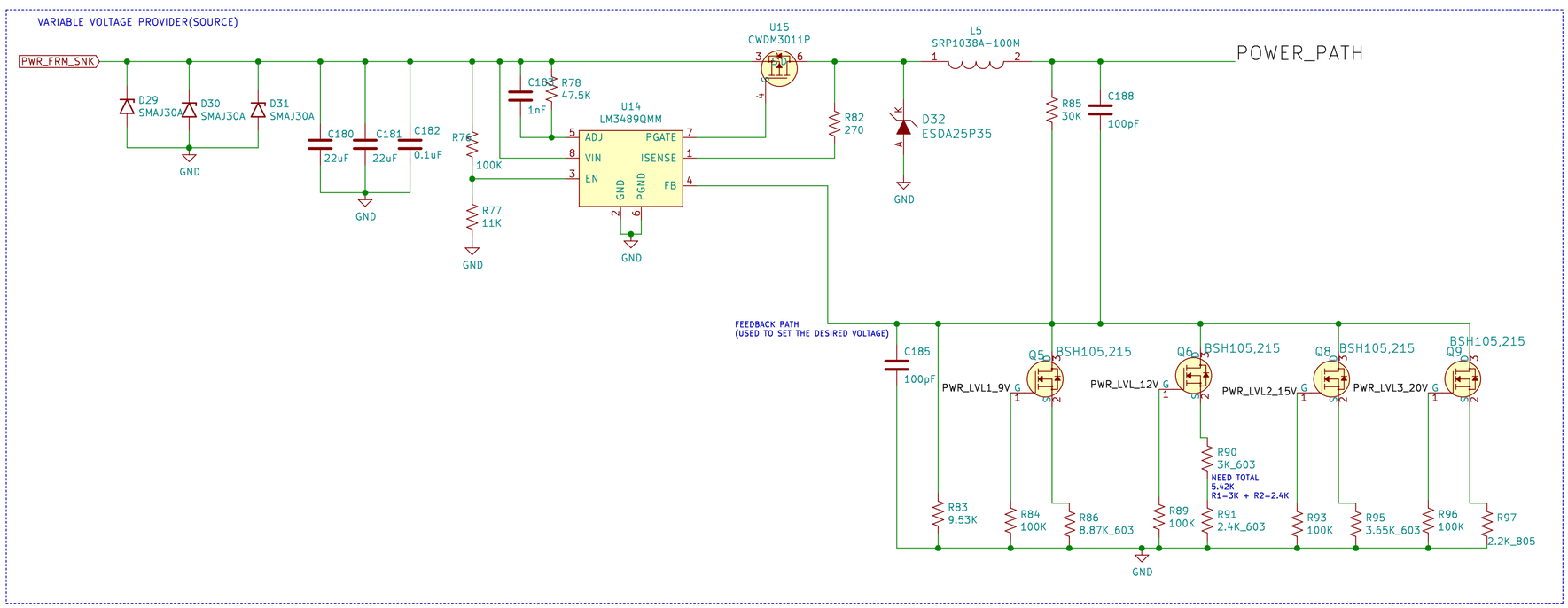

Sheet: /UFP_PD_CONTROLLER/		
File: UFP_PD_CTRL + VAR_V_SOURCE.sch		
Title:		
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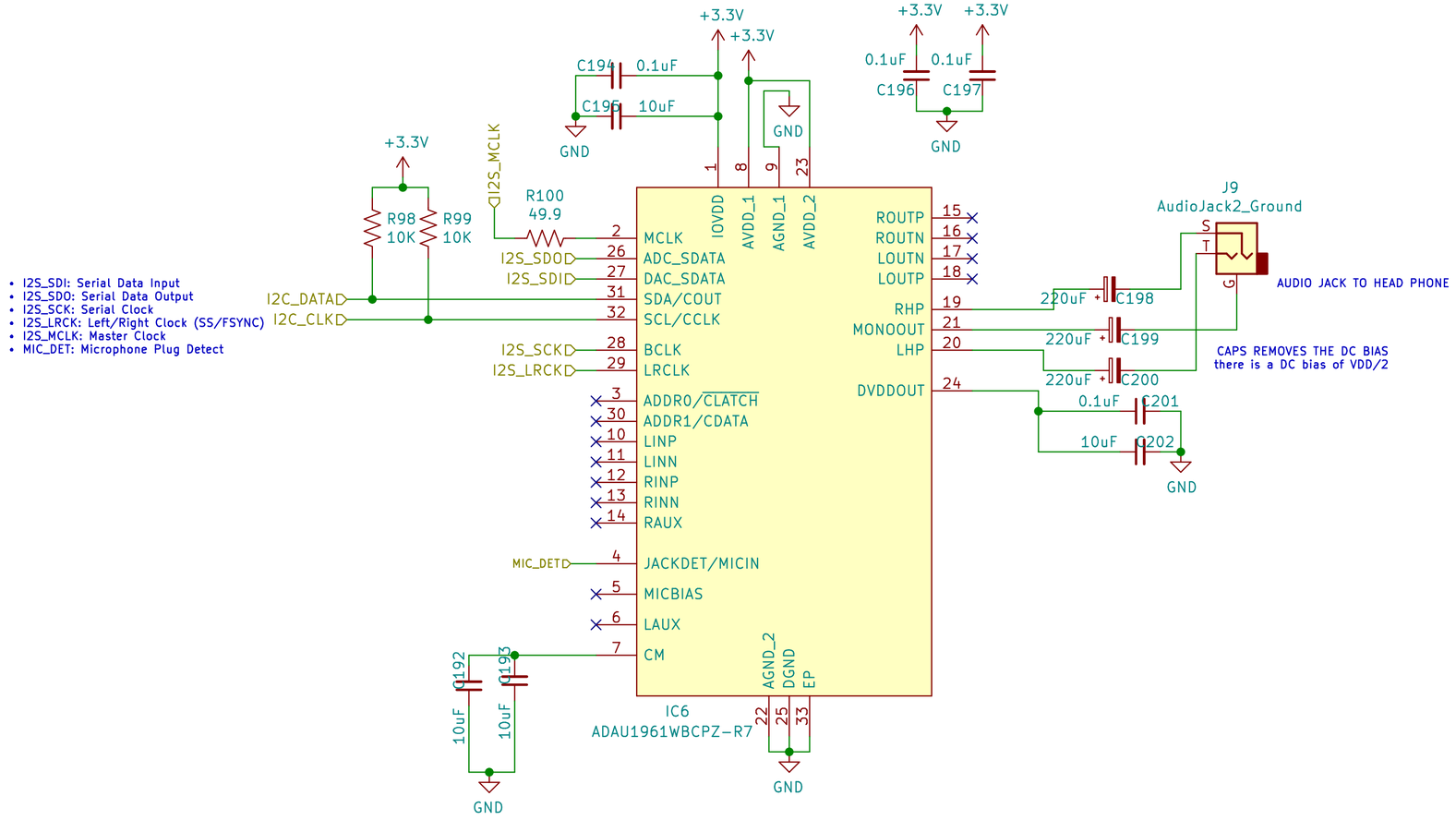

Sheet: /HEADPHONE DFP/ File: AUDIO CODEC.sch		
Title:		
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DECOUPLING CAPS

+1V1

C79 0.01uF
C82 0.01uF
C83 0.01uF
C85 0.01uF
C86 0.01uF
C87 0.01uF
C88 0.01uF
C89 0.01uF
C90 0.01uF
C91 0.01uF
C92 0.01uF

GND

DECOUPLING CAPS

+3.3V

C93 0.1uF
C94 0.1uF
C95 0.1uF

GND

BULK CAPS

+3.3V

C100 1uF
C101 22uF

GND

DECOUPLING CAPS

+3.3V

C102 0.1uF
C103 0.1uF
C104 0.1uF
C105 0.1uF

GND

DECOUPLING CAPS

+3.3V

C106 0.1uF
C107 0.1uF
C108 0.1uF
C109 0.1uF
C110 0.1uF
C111 0.1uF
C112 0.1uF
C113 0.1uF
C114 0.1uF

GND

+1V1

+3.3V

U9
TUSB9261

VDD 1, 12, 19, 33, 32, 41, 47, 49, 55, 61, 63
VDD33 7, 24, 51
VDDA33 34, 40, 48, 62
VSS 44, 53, 58, 65

GRESTz 4
XI 52
XO 54
FREQSEL_0 30
FREQSEL_1 31

USB_SSTXP 43
USS_SSSTXM 42
USB_SSRXP 46
USS_SSRXM 45
USB_DP 36
USB_DM 35
USB_VBUS 50
USB_R1 38
USB_R1RTN 39

NC 64
NC 37

SATA_TXP 57
SATA_TXM 56
SATA_RXP 60
SATA_RXM 59

SPI_SCLK 17
SPI_DATA_OUT 18
SPI_DATA_IN 20
SPI_CS0 21
SPI_CS2/GPIO11 23
SPI_CS1/GPIO10 22

JTAG_TCK 25
JTAG_TDI 26
JTAG_TDO 27
JTAG_TMS 28
JTAG_TRSTz 29

GPIO7 16
GPIO6 15
GPIO5 14
GPIO4 13
GPIO3 11
GPIO2 10
GPIO1 9
GPIO0 8

PWM0 2
PWM1 3

GPIO8/UART_RX 5
GPIO9/UART_TX 6

vssosc

R33 4.7K
R31 4.7K
R32 4.7K
R30 10K_1%
R29 90.9K
C81 1uF
+5V
GND

C96 0.01uF PCIE0_TX+_SATA0_TX+
C97 0.01uF PCIE0_TX-_SATA0_TX
C98 0.01uF PCIE0_RX-_SATA0_RX+
intentionally swapped
C99 0.01uF PCIE0_RX+_SATA0_RX

D23
SSD_COMM_ON
R34 4.7K
GND

XI
XO
Y5
40MHz
C80 12pF
C84 12pF
vssosc

m.2 connector (M-KEY)

+3.3V

J7
Bus_M.2_Socket_M

PERST(O)(0_3.3V)_NC 50
CLKREQ 52
PEWAKE 54

PCIE0_TX+_SATA0_TX+ 49
PCIE0_TX-_SATA0_TX 47
PCIE0_RX+_SATA0_RX 43
PCIE0_RX-_SATA0_RX+ 41
PETp1_PCIE1_TX+ 37
PETn1_PCIE1_TX- 35
PERp1_PCIE1_RX+ 31
PERn1_PCIE1_RX- 29
PETp2_PCIE2_TX+ 25
PETn2_PCIE2_TX- 23
PERp2_PCIE2_RX+ 19
PERn2_PCIE2_RX- 17
PETp3_PCIE3_TX+ 13
PETn3_PCIE3_TX- 11
PERp3_PCIE3_RX+ 7
PERn3_PCIE3_RX- 5

PETp0/SATA-A+
PETn0/SATA-A-
PERp0/SATA-B-
PERn0/SATA-B+
PETp1
PETn1
PERp1
PERn1
PETp2
PETn2
PERp2
PERn2
PETp3
PETn3
PERp3
PERn3

3.3V 2
DAS/DSS/LED1 10
PEDET 69
DEVSLP 38
SUSCLK 68
PCIE_CLK- 55
PCIE_CLK+ 53
REFCLKp
REFCLKn
GND 1

PEWAKE
R101 4.7K
GND

PEDET
R35 4.7K
GND
PEET=LOW
ENABLE SATA
INTERFACE

Sheet: /SATA INTERFACE/
File: USB TO SATA.sch

Title:

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