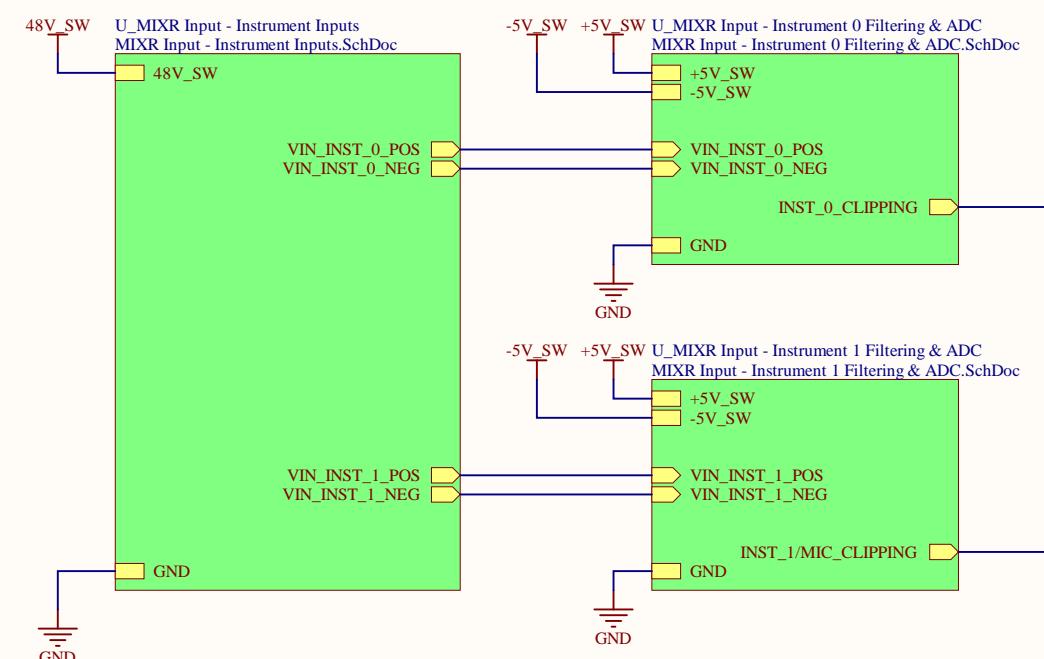
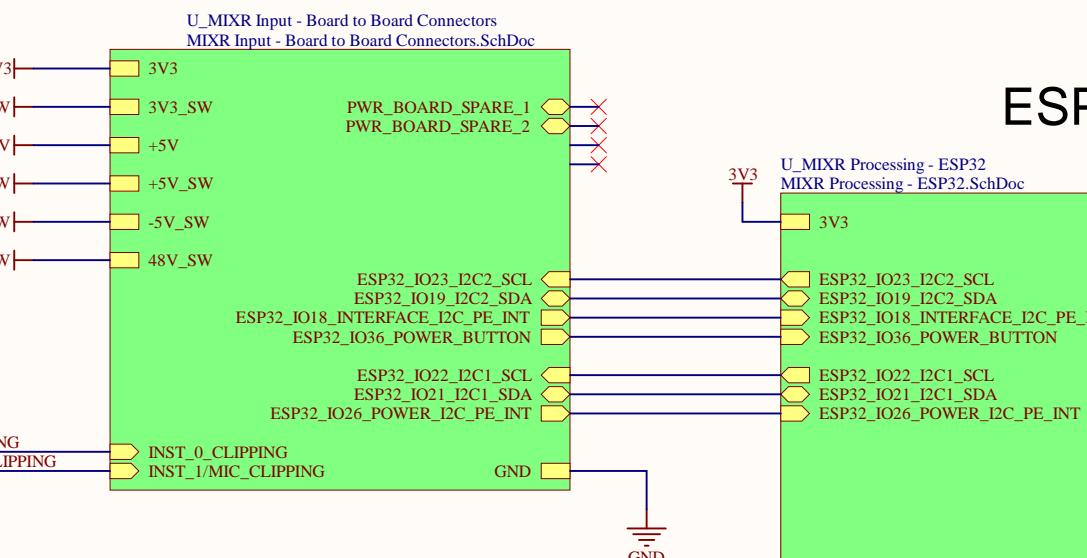


# Instrument Input & ADC

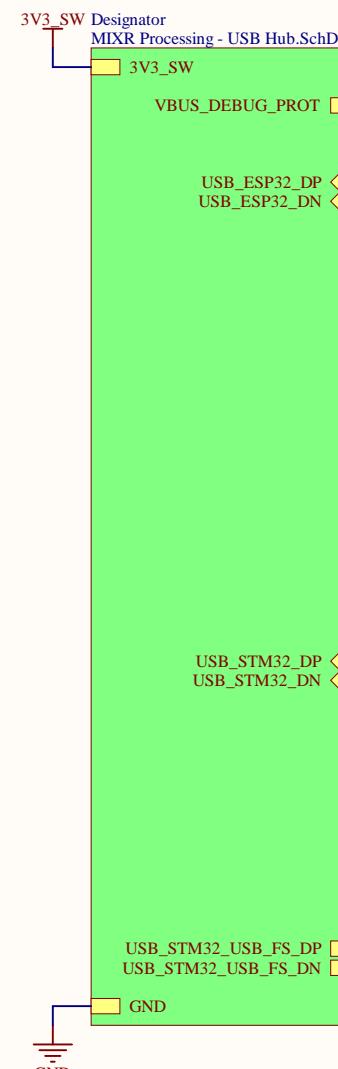


## Board to Board Connectors

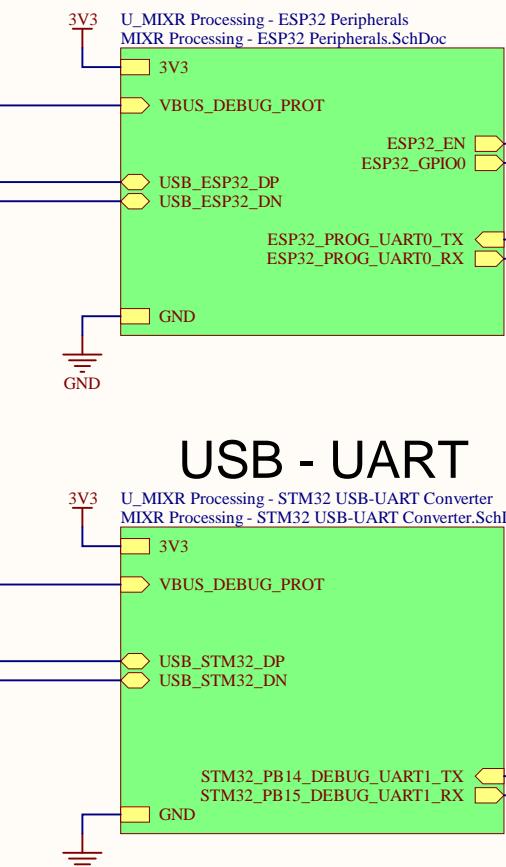


ESP32

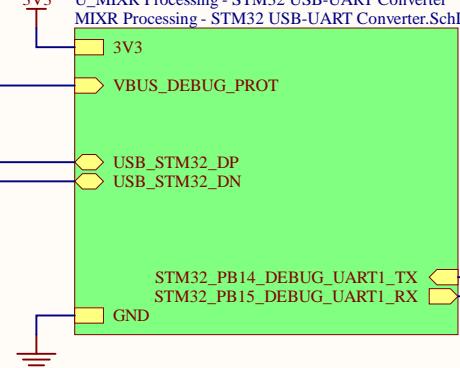
## USB 1:4 Hub



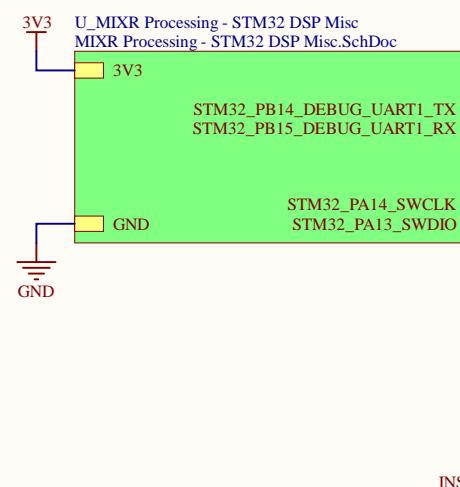
USB - UART



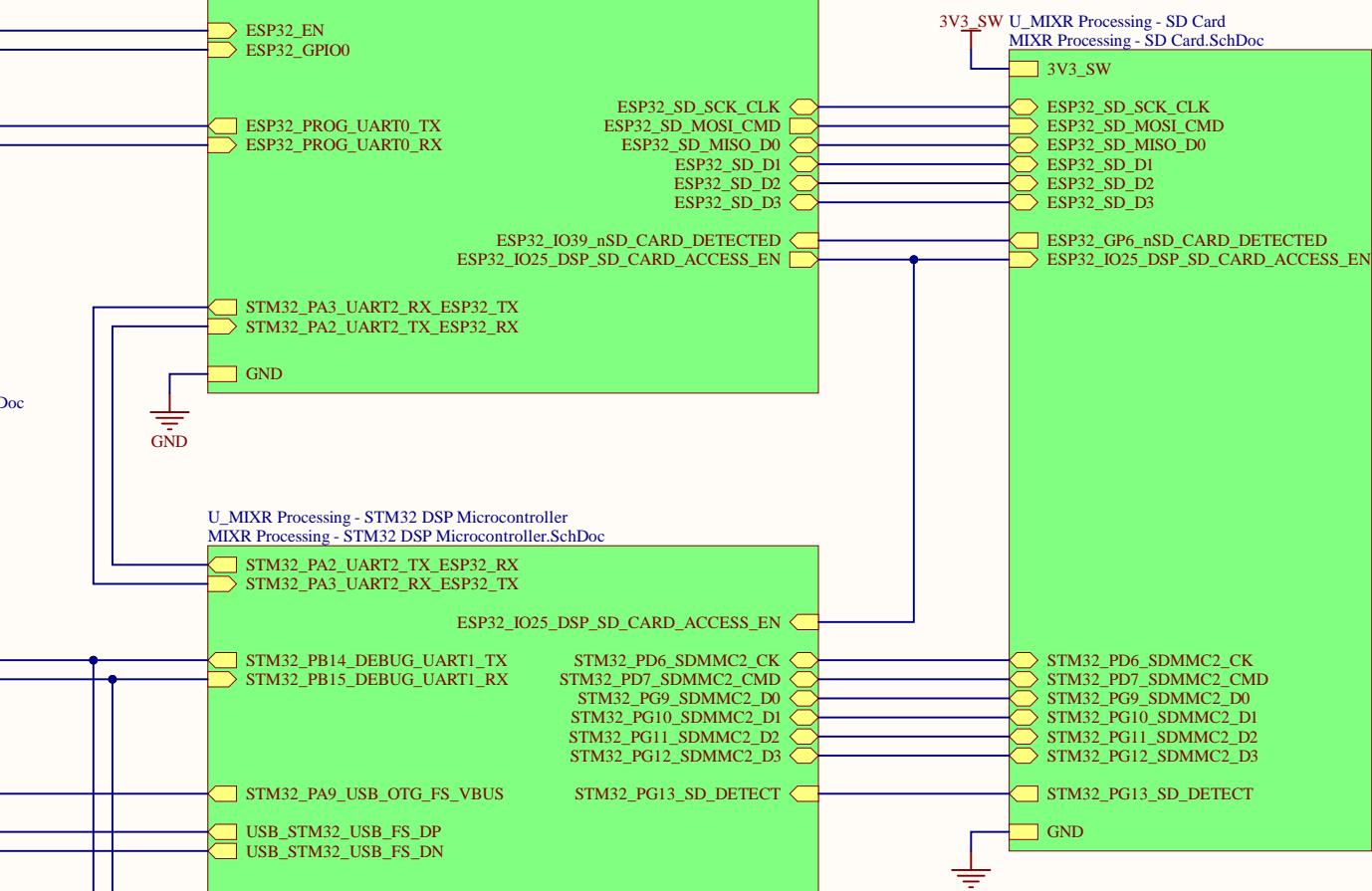
USB - UART



# Debug Connector



# Micro SD Card

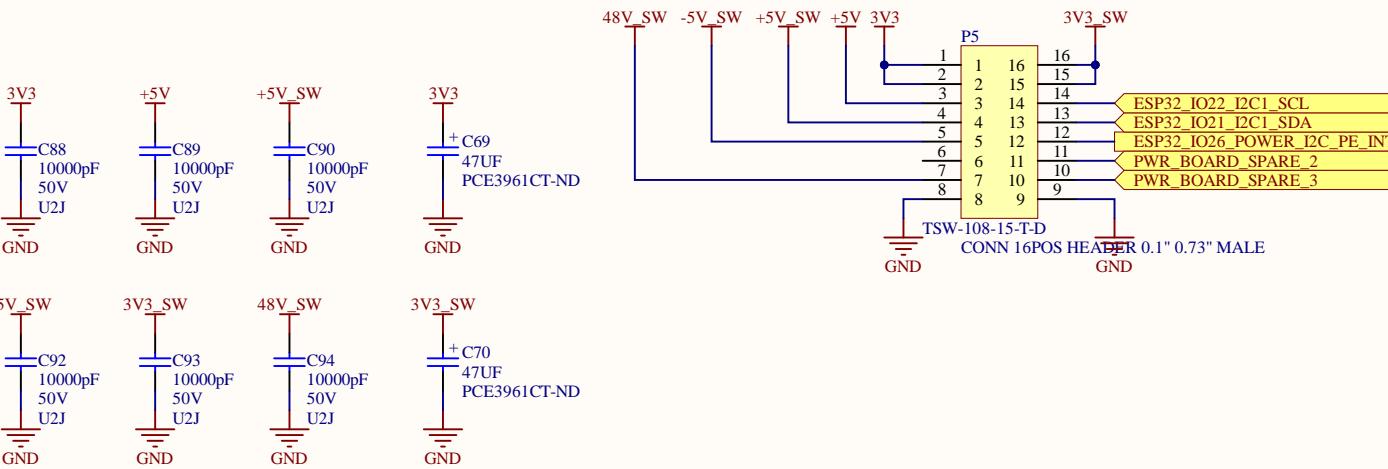


**STM32F769**

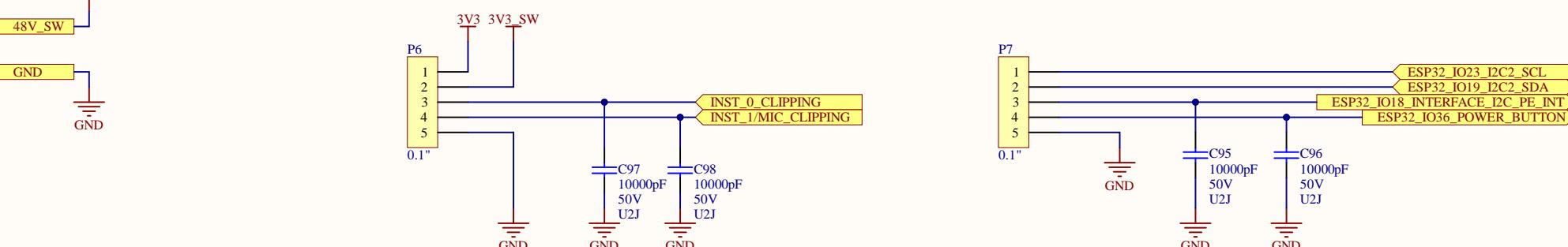
PROJECT	MIXR Input and Processing.PrjPcb		
DOCUMENT	MIXR Input & Processing - Top Sheet		
PART NUMBER	[No Variations]		
DRAWN BY	Taiping Li		
LAST MODIFIED	2020-02-03	SHEET 1 OF 14	

**MIXR**

## Power Board



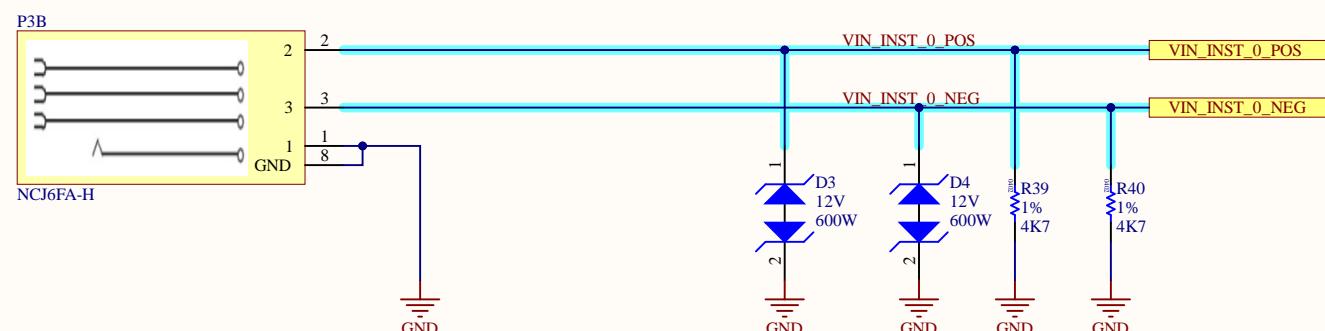
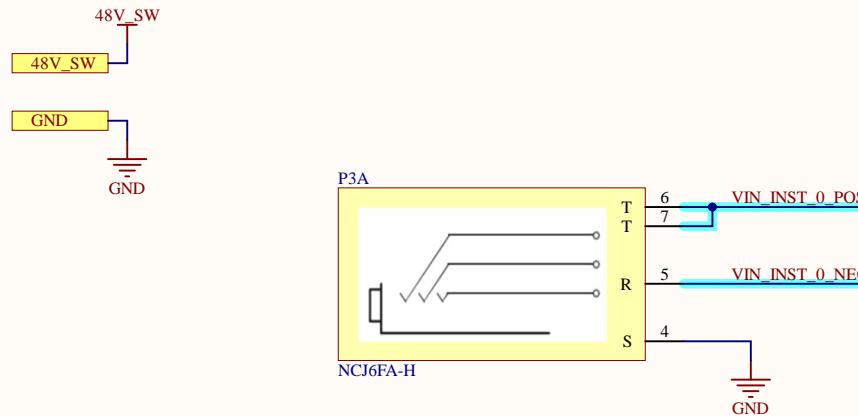
## Buttons/Interface Board



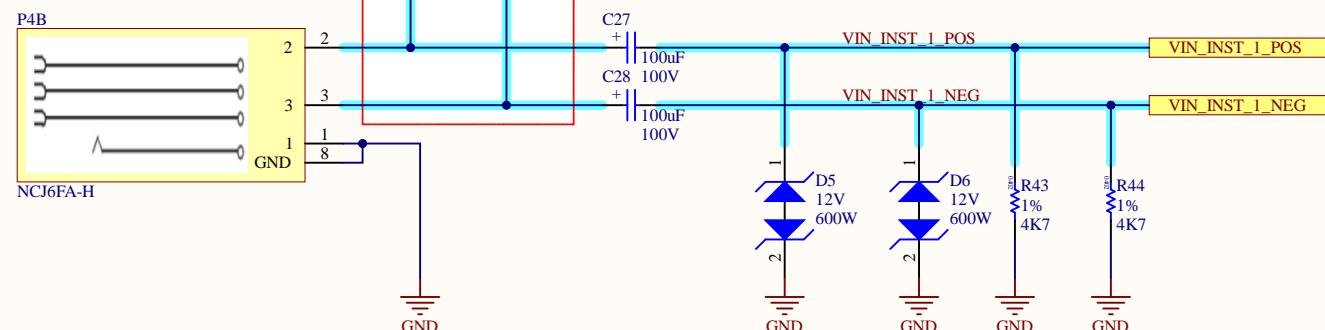
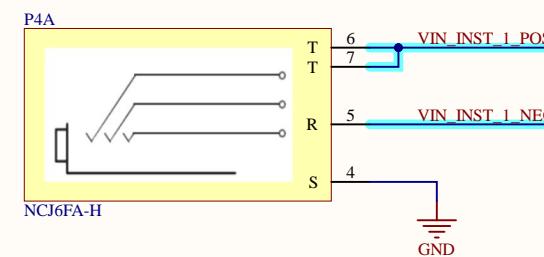
PROJECT	MIXR Input and Processing.PjPcb
DOCUMENT	Processing & Power Board Connector
PART NUMBER	VARIANT [No Variations]
DRAWN BY	Taiping Li
LAST MODIFIED	2020-02-03
REVISION	1.0
SHEET	2 OF 14

**MIXR**

## Instrument 0 Input



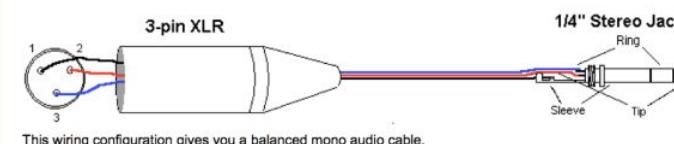
## Instrument 1/Microphone Input



### XLR to 1/4" Stereo Jack (wired for balanced mono)

The usual way to connect a 3-pin XLR to a 1/4" stereo jack is to use the following pin allocation:

- XLR pin 1 to jack sleeve
- XLR pin 2 to jack tip
- XLR pin 3 to jack ring

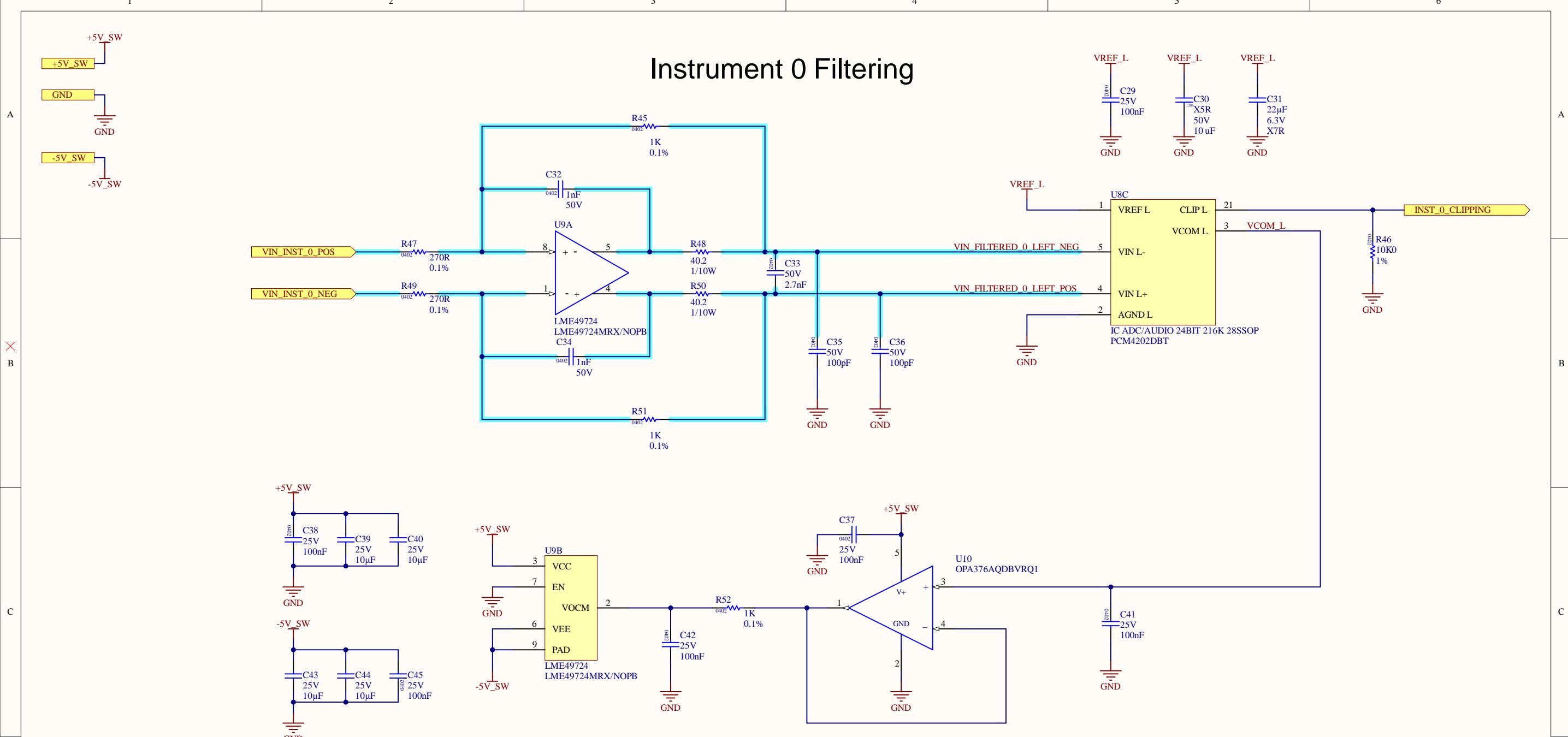


This wiring configuration gives you a balanced mono audio cable.

PROJECT	MIXR Input and Processing.PnjPcb
DOCUMENT	Instrument Inputs
PART NUMBER	VARIANT [No Variations]
DRAWN BY	Taiping Li
LAST MODIFIED	2020-02-03
SHEET	3 OF 14

**MIXR**

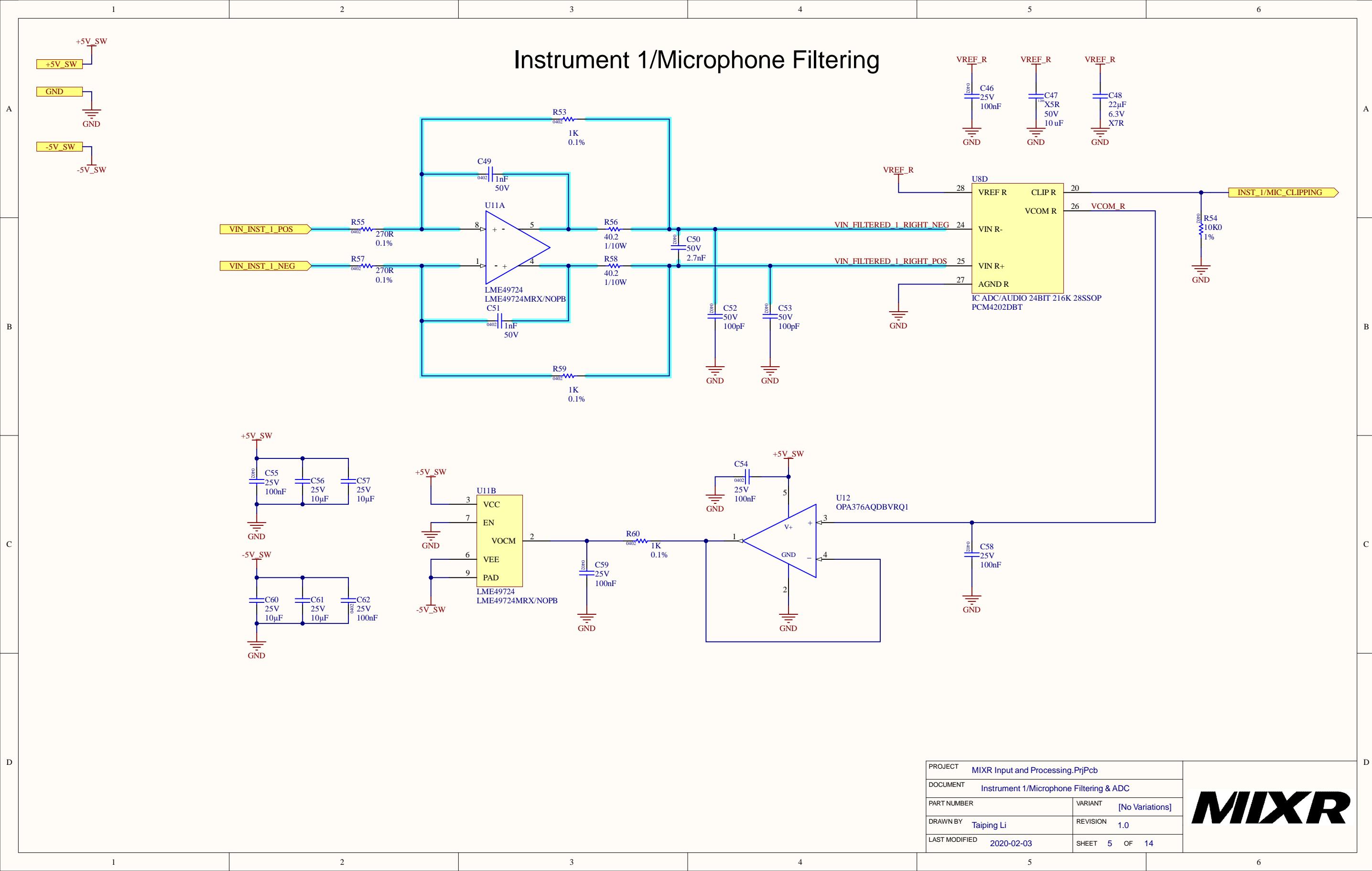
# Instrument 0 Filtering

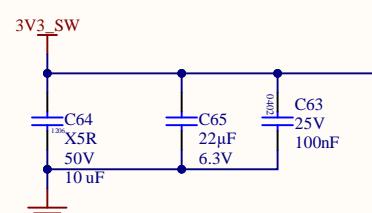
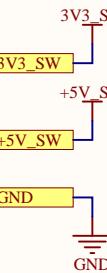


PROJECT	MIXR Input and Processing.PjPcb
DOCUMENT	Instrument 0 Filtering & ADC
PART NUMBER	VARIANT [No Variations]
DRAWN BY	Taiping Li
REVISION	1.0
LAST MODIFIED	2020-02-03
SHEET	4 OF 14

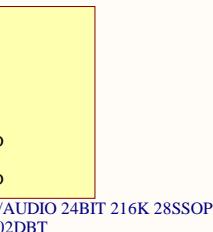
**MIXR**

# Instrument 1/Microphone Filtering

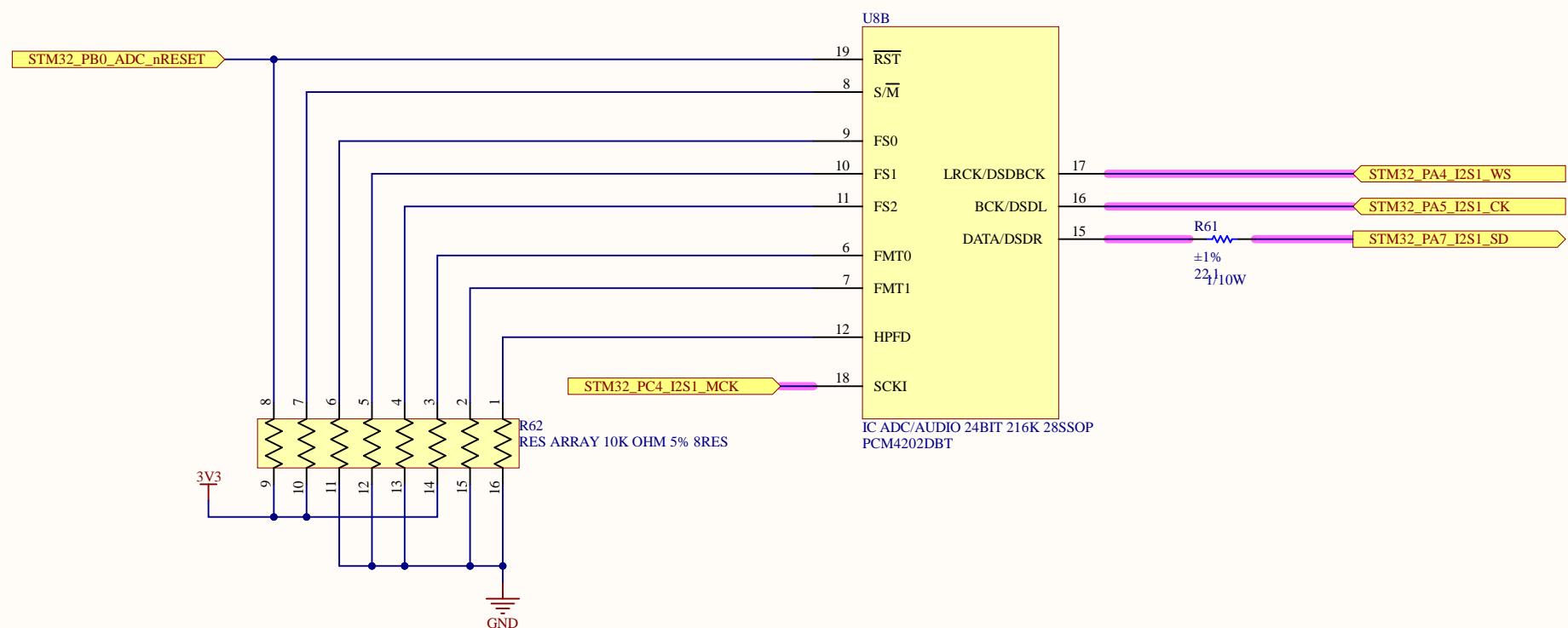




## ADC Power



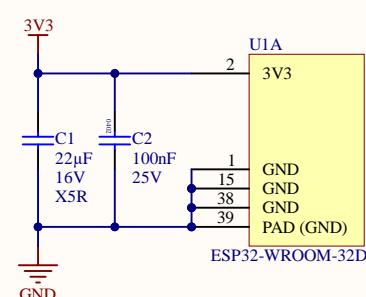
## ADC Communications



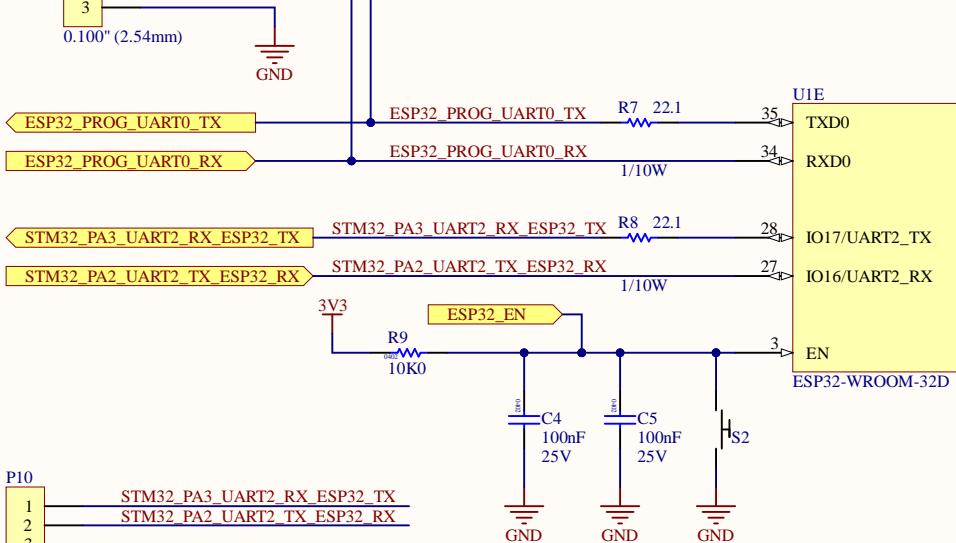
PROJECT	MIXR Input and Processing.PjPcb	
DOCUMENT	ADC Power & I2S Communication	
PART NUMBER	VARIANT	[No Variations]
DRAWN BY	Taiping Li	REVISION
LAST MODIFIED	2020-02-03	SHEET 6 OF 14

**MIXR**

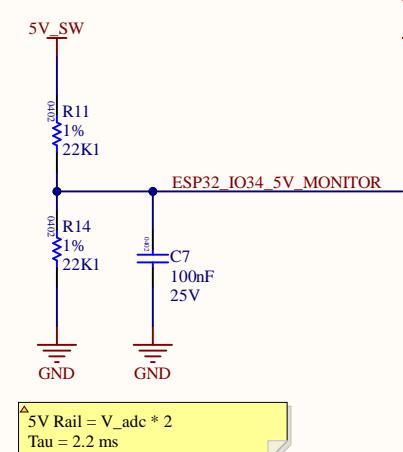
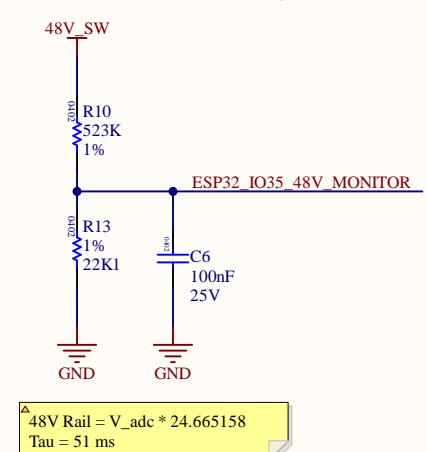
## ESP32 - Power



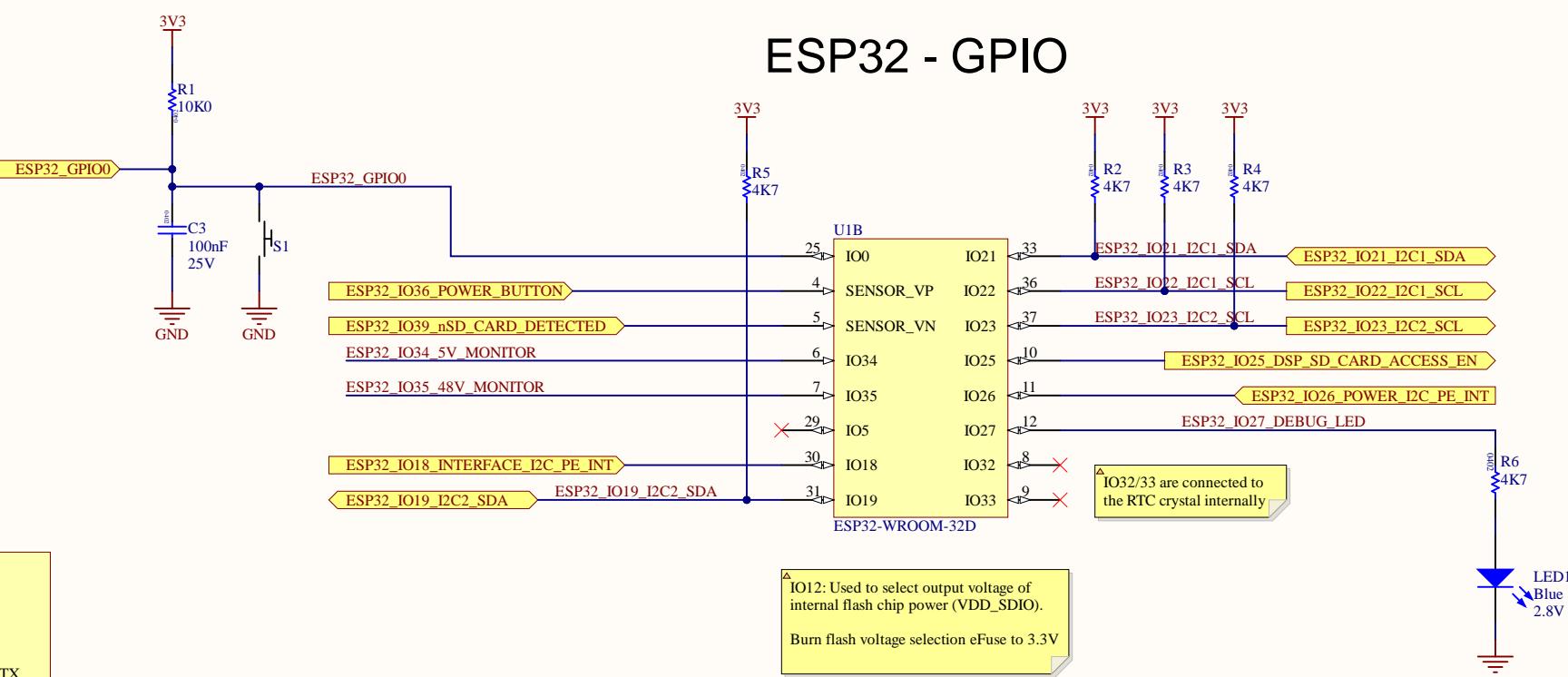
## ESP32 - UART



## Voltage Monitors

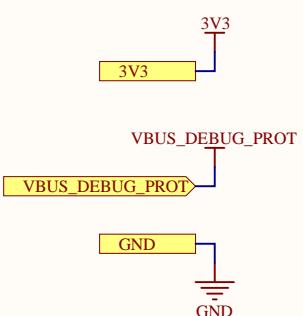
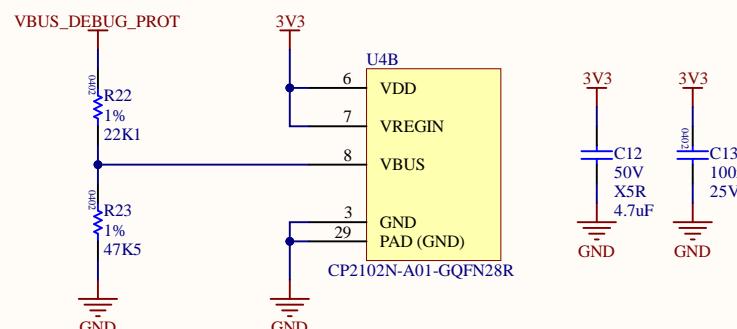
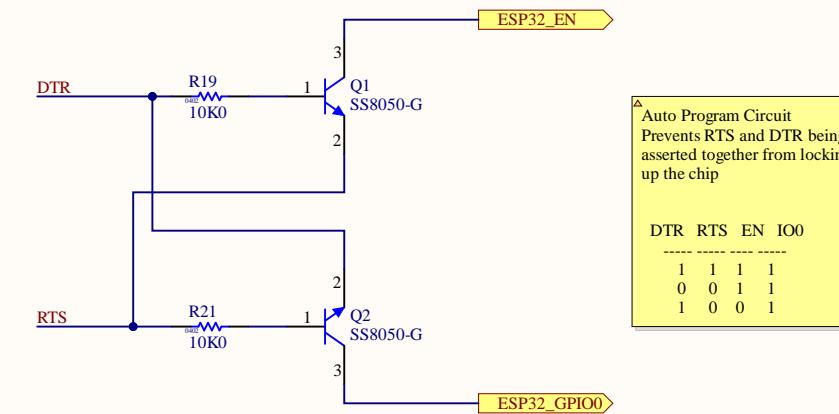
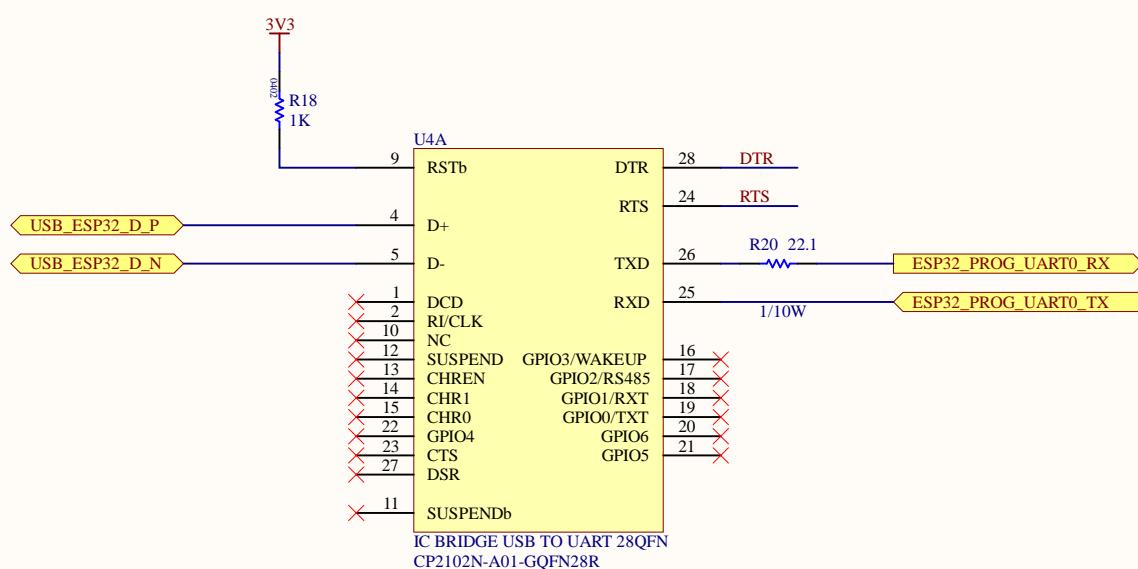


## ESP32 - GPIO



# ESP32 - USB to Serial Converter

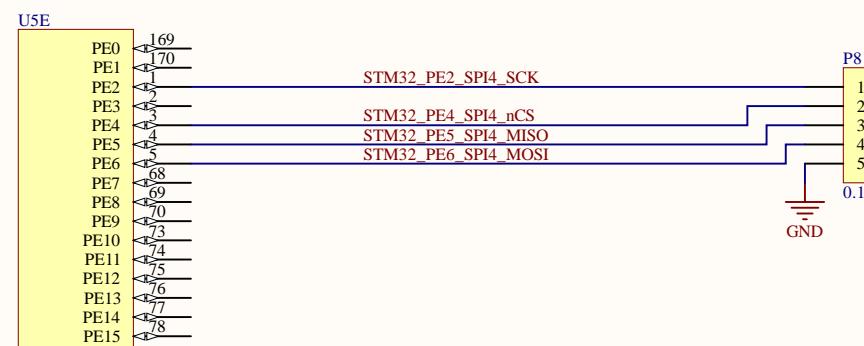
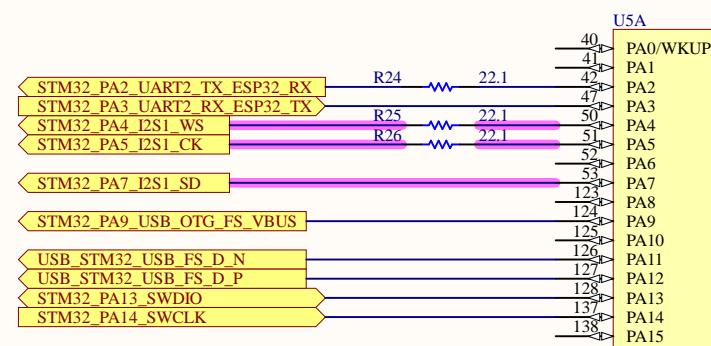
# MCP23008 - I2C Port Expander



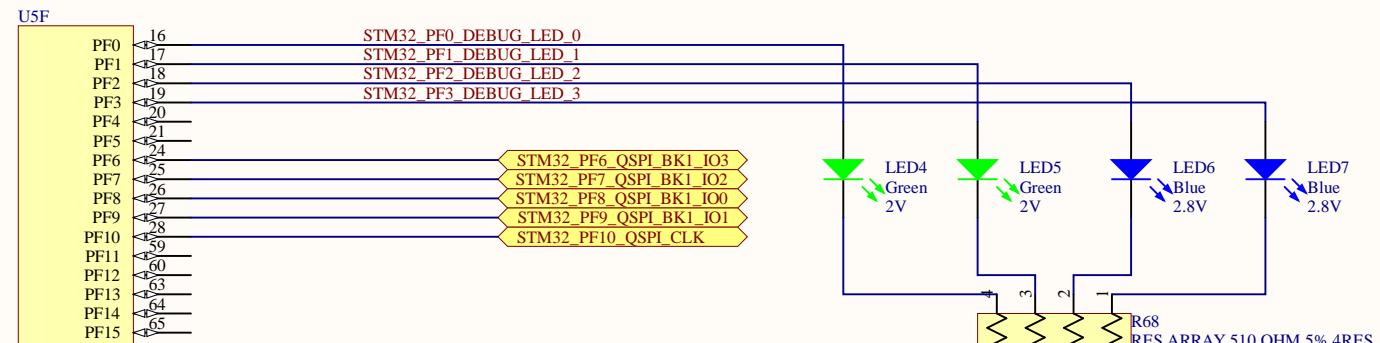
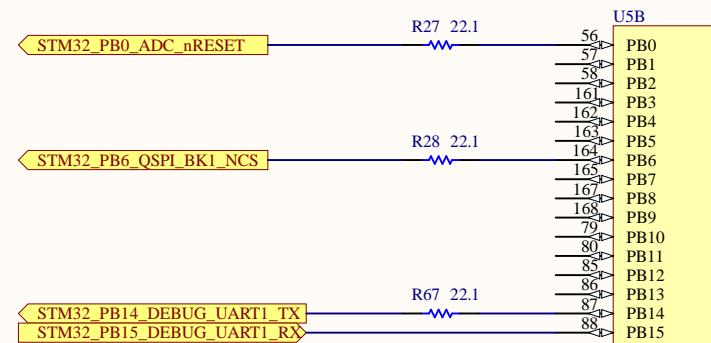
PROJECT	MIXR Input and Processing.PjPcb	
DOCUMENT	ESP32 USB-UART & Auto-Reset	
PART NUMBER	VARIANT	[No Variations]
DRAWN BY	Taiping Li	REVISION
LAST MODIFIED	2020-02-03	SHEET 8 OF 14

**MIXR**

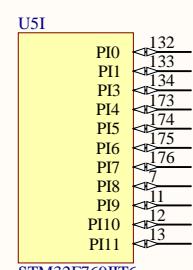
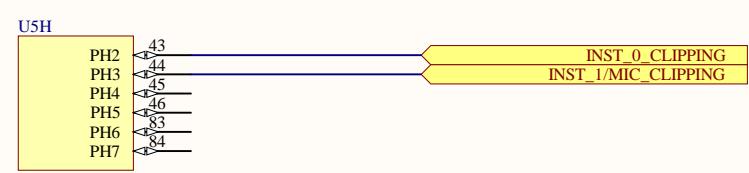
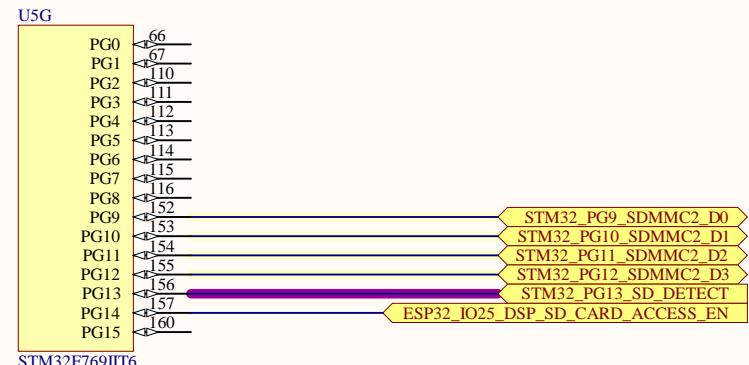
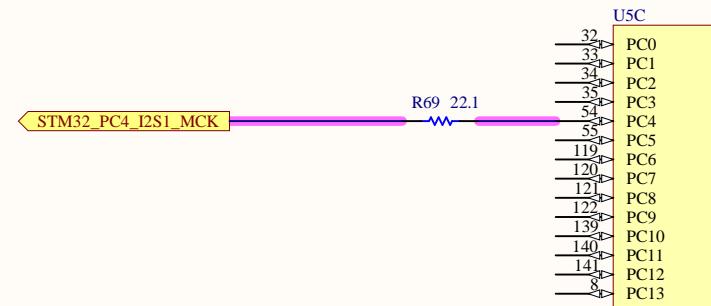
A



B

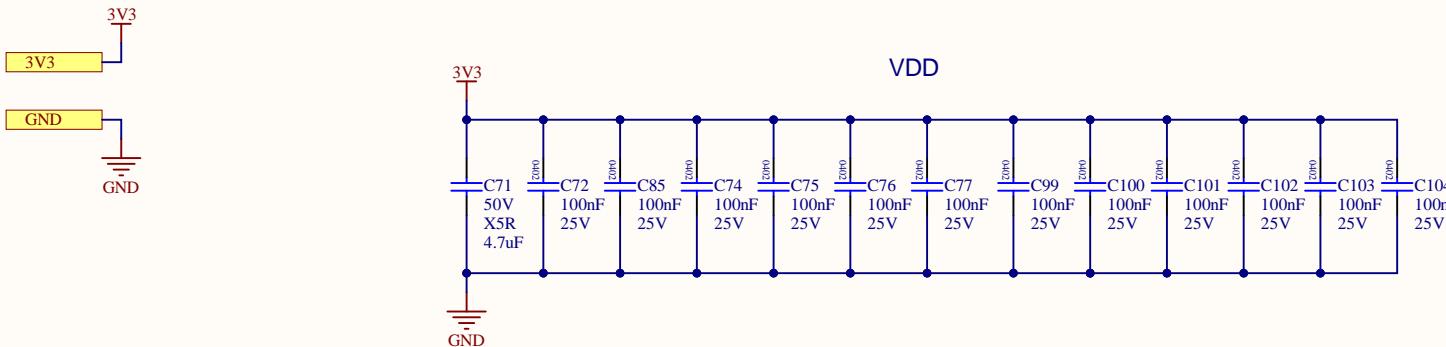
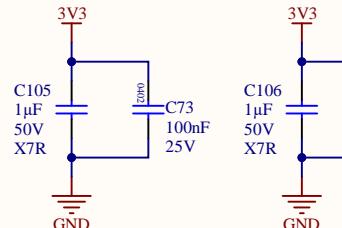
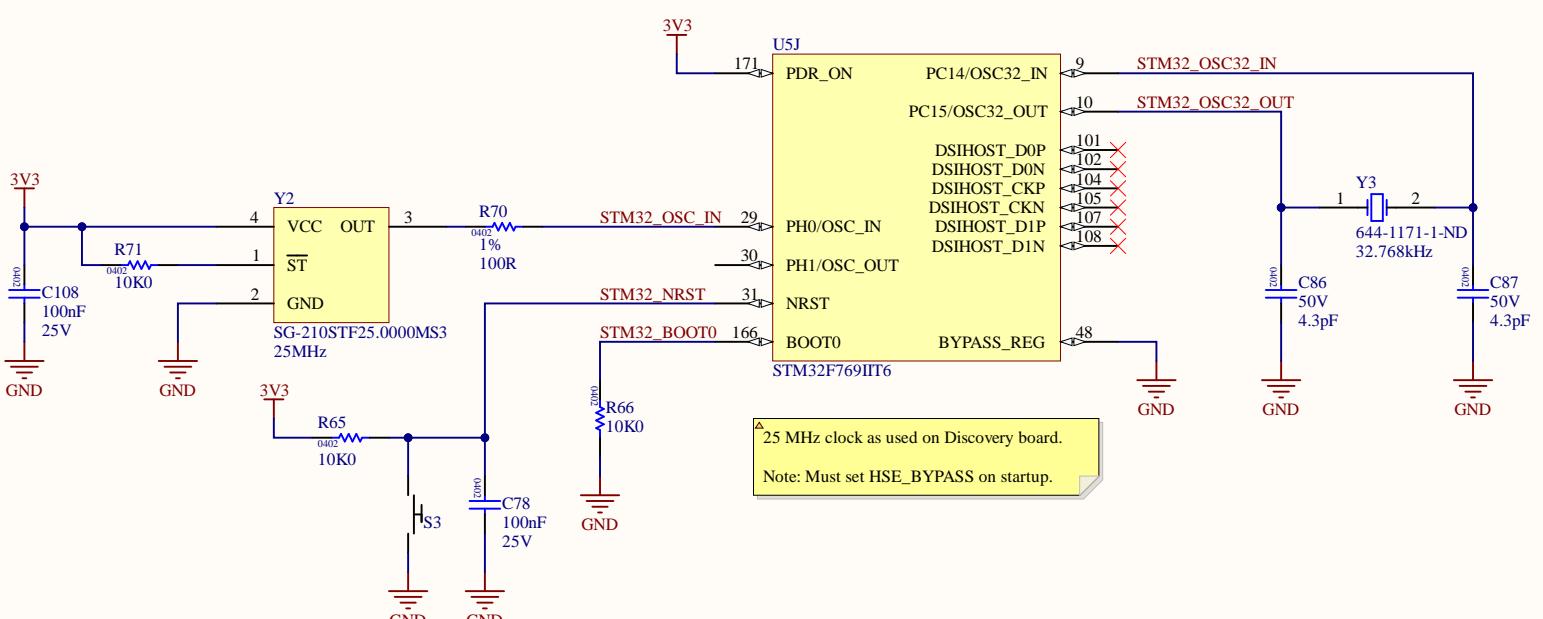
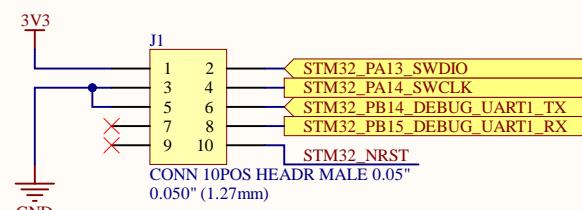
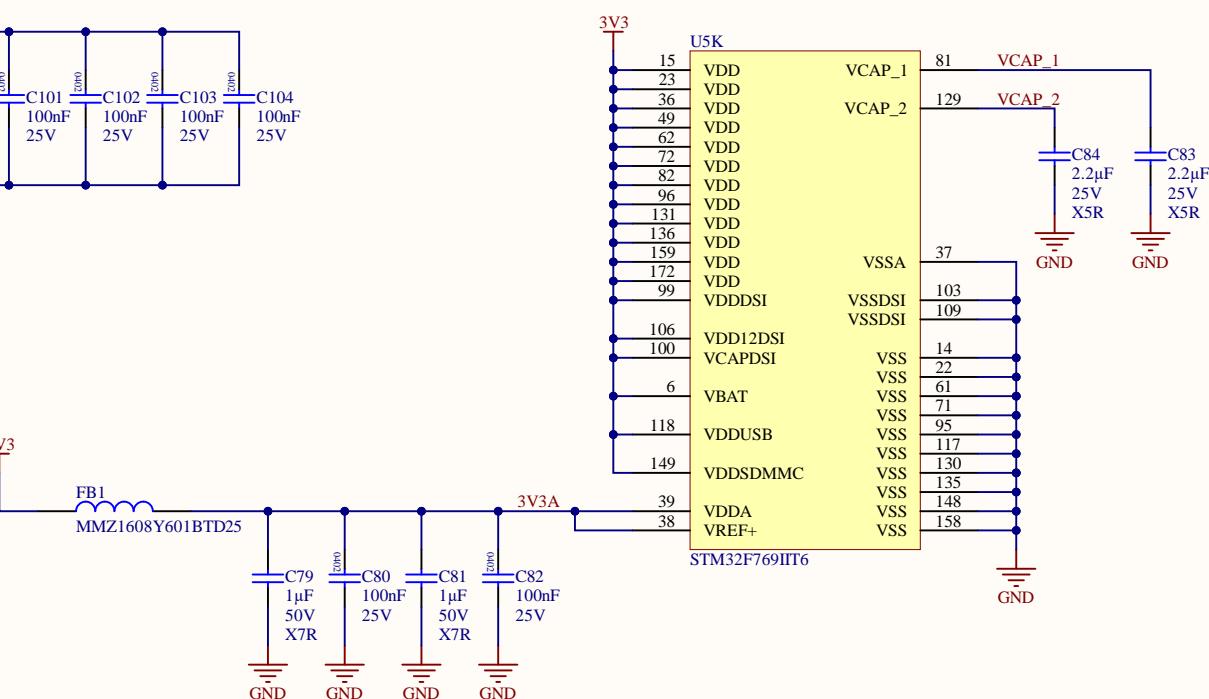
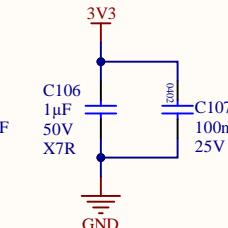


C



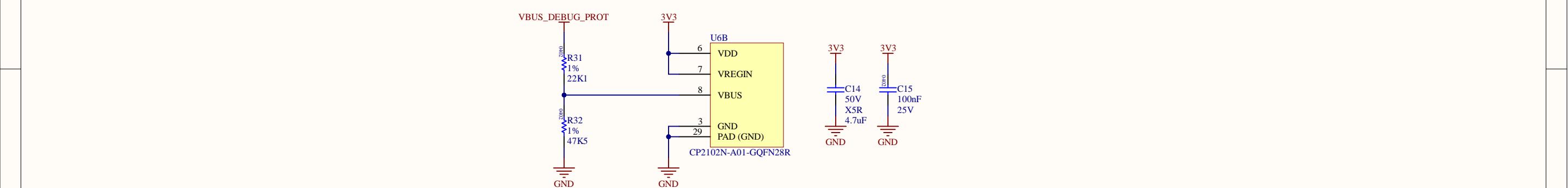
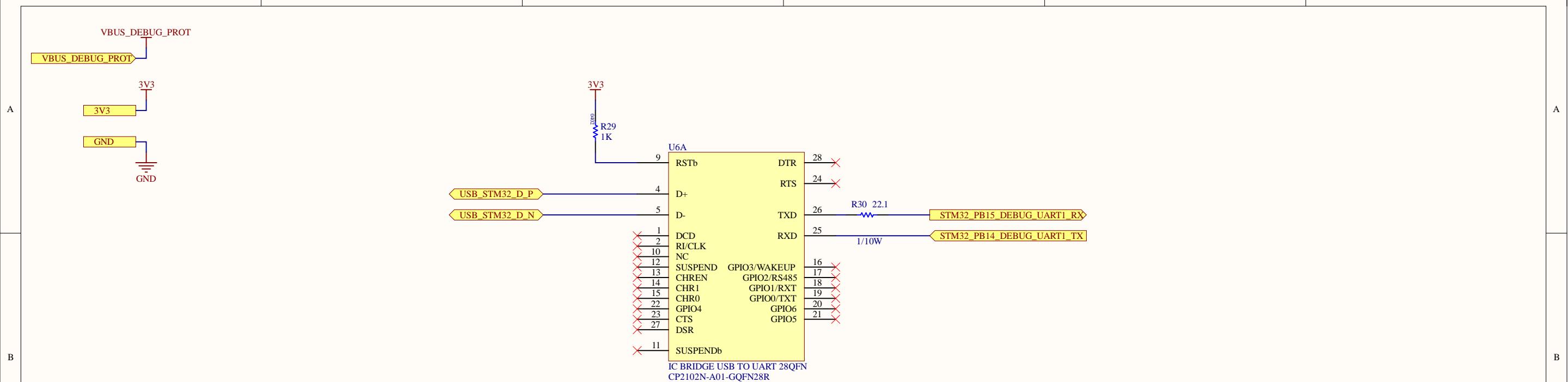
PROJECT	MIXR Input and Processing.PjPcb
DOCUMENT	STM32F767 DSP Microcontroller - GPIOs
PART NUMBER	VARIANT [No Variations]
DRAWN BY	Taiping Li
LAST MODIFIED	2020-02-03
SHEET	9 OF 14

**MIXR**

**VDD\_SDMMC****VDD\_USB**

PROJECT	MIXR Input and Processing.PjPcb
DOCUMENT	STM32F767 DSP Microcontroller - Clock & Power
PART NUMBER	VARIANT [No Variations]
DRAWN BY	Taiping Li
LAST MODIFIED	2020-02-03
SHEET	10 OF 14

**MIXR**

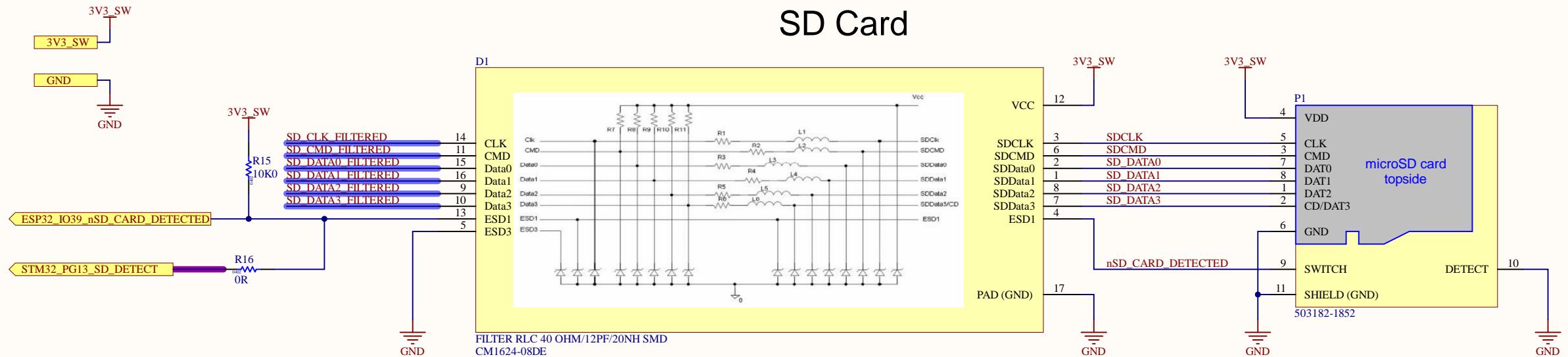


PROJECT	MIXR Input and Processing.PjPcb
DOCUMENT	STM32F767 DSP Microcontroller - USB - UART
PART NUMBER	VARIANT [No Variations]
DRAWN BY	Revision 1.0
LAST MODIFIED	Sheet 11 OF 14
	2020-02-03

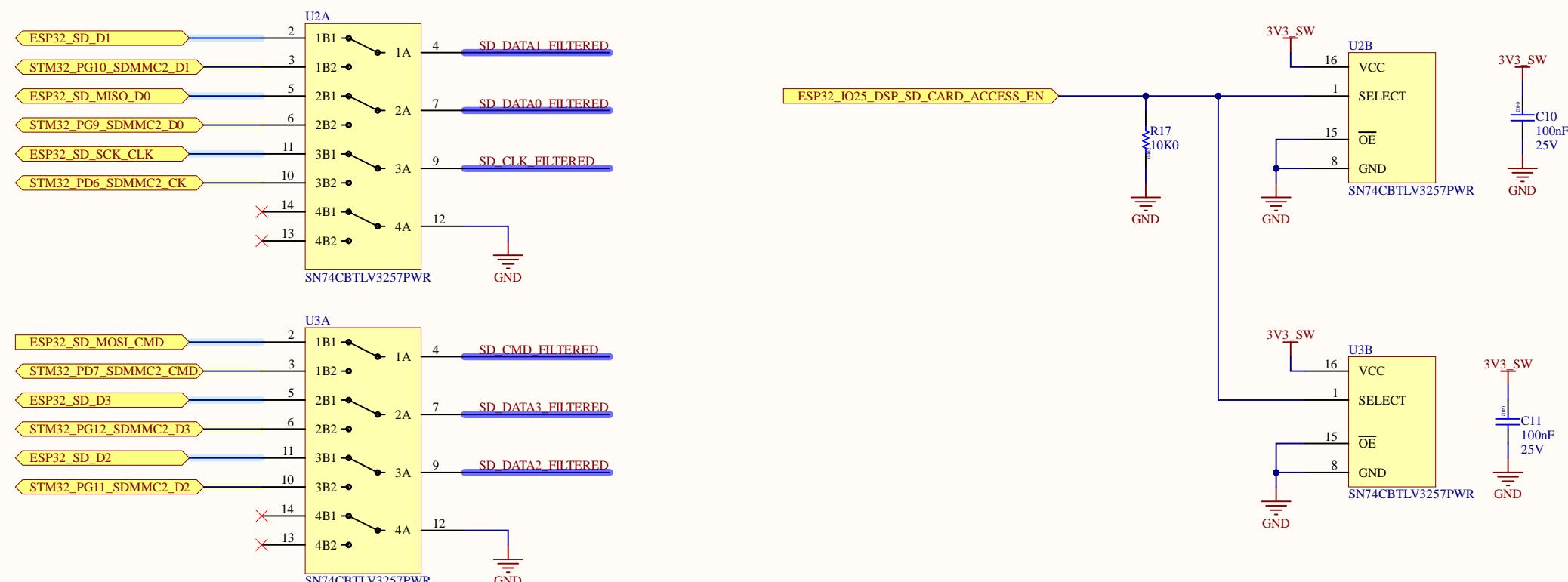
**MIXR**

# SD Card

A



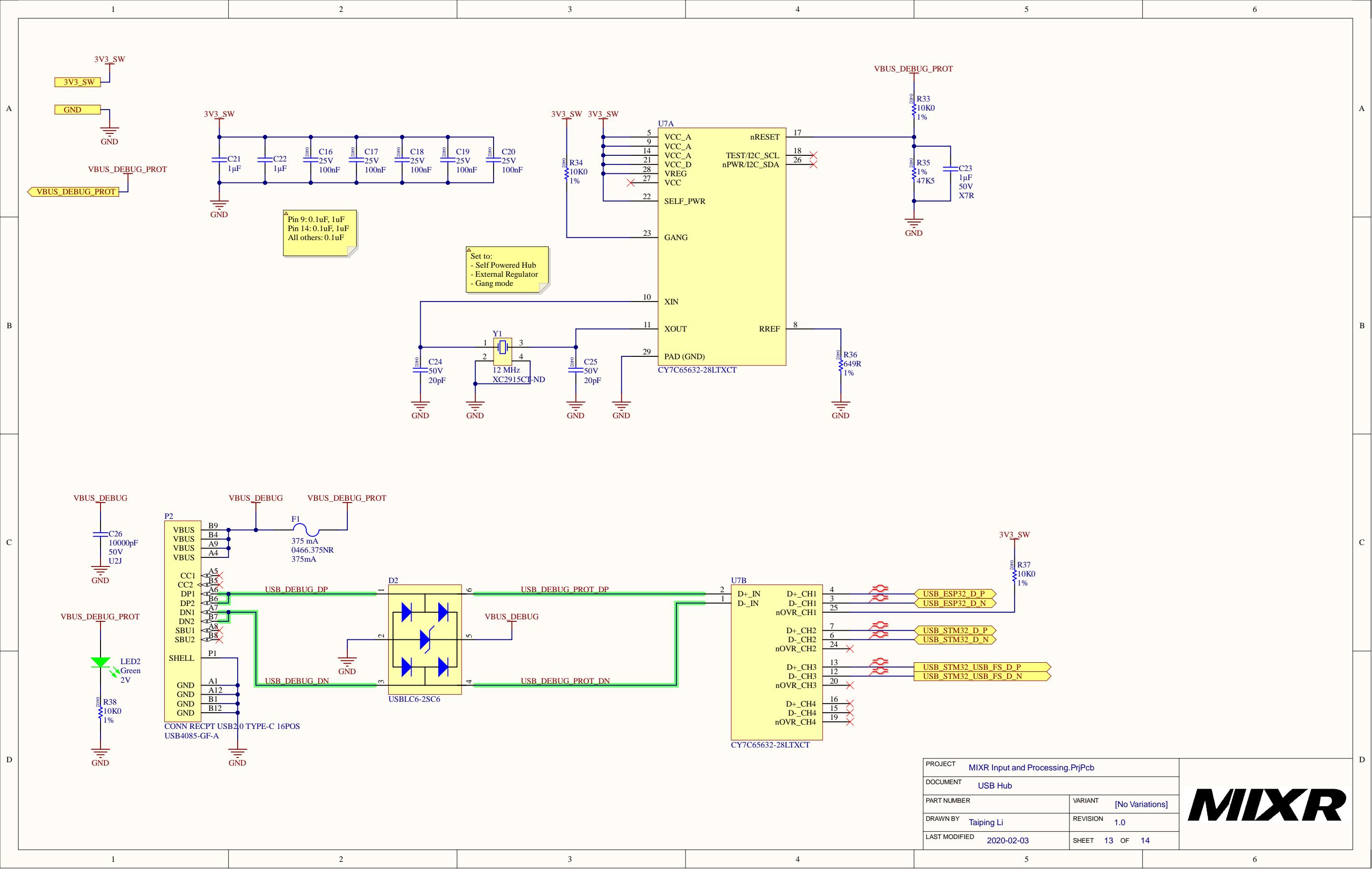
A



B

PROJECT	MIXR Input and Processing.PrbPcb
DOCUMENT	Micro SD Card & Mux
PART NUMBER	VARIANT [No Variations]
DRAWN BY	Taiping Li
LAST MODIFIED	2020-02-03
REVISION	1.0
SHEET	12 OF 14

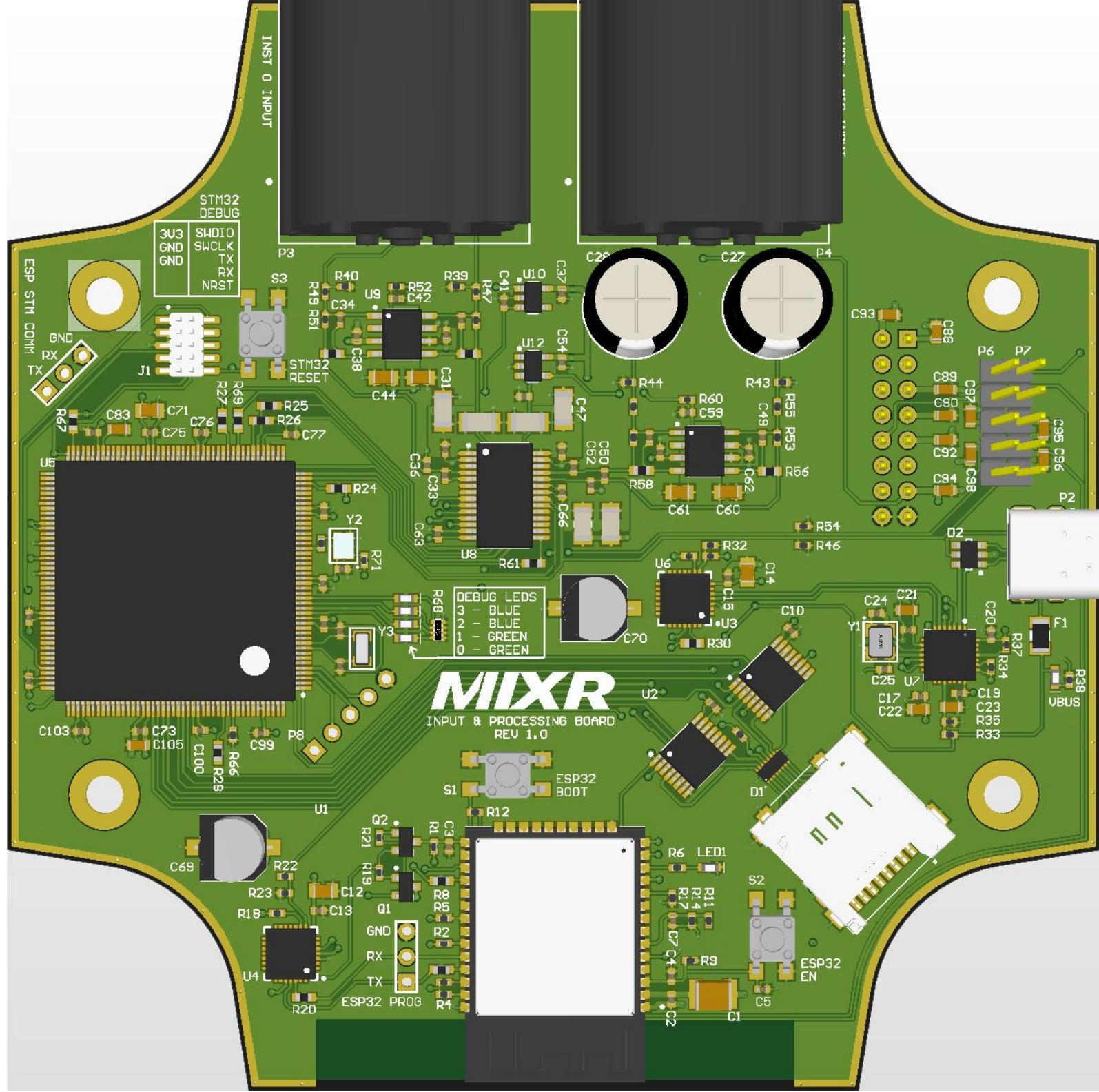
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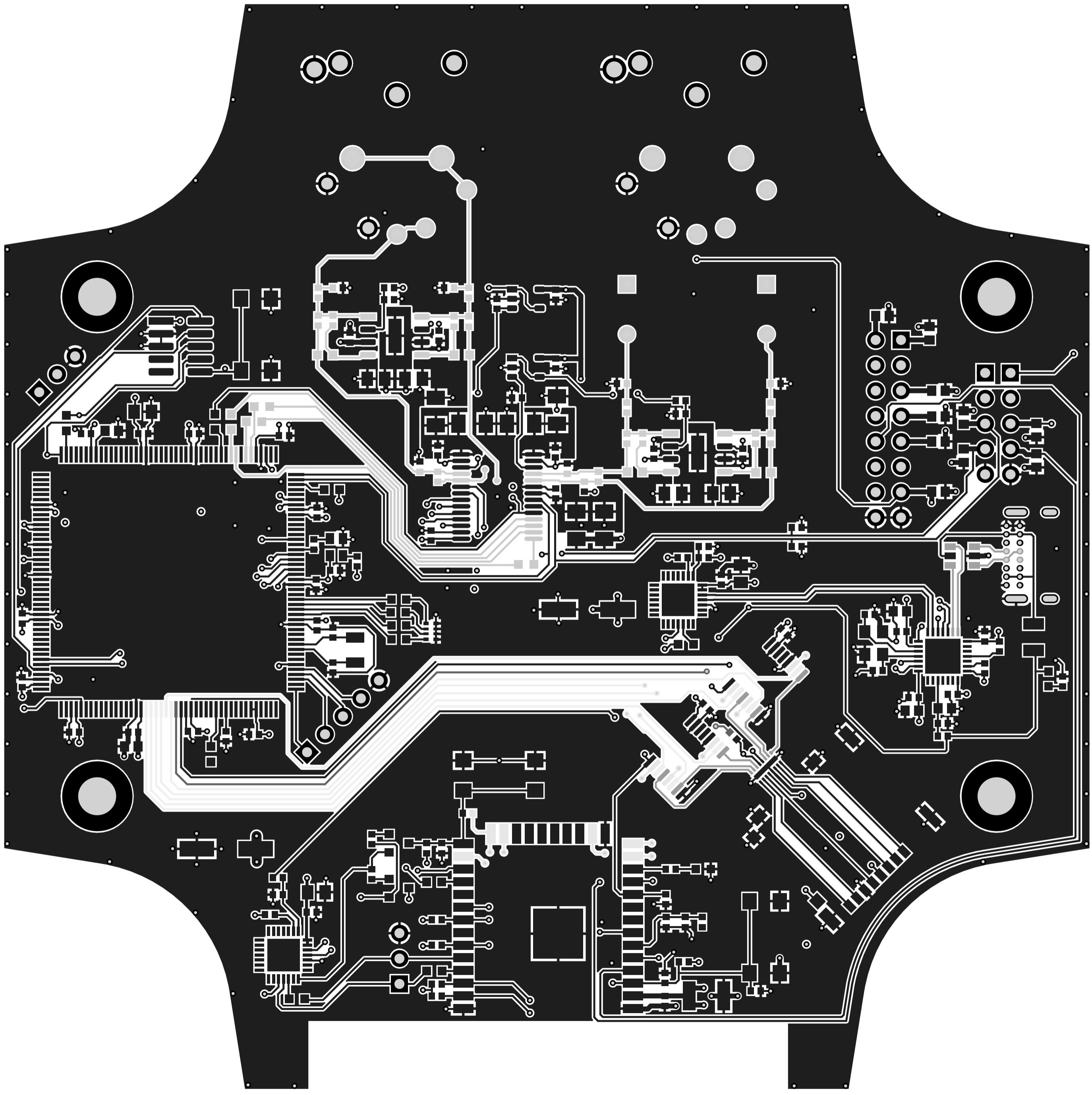


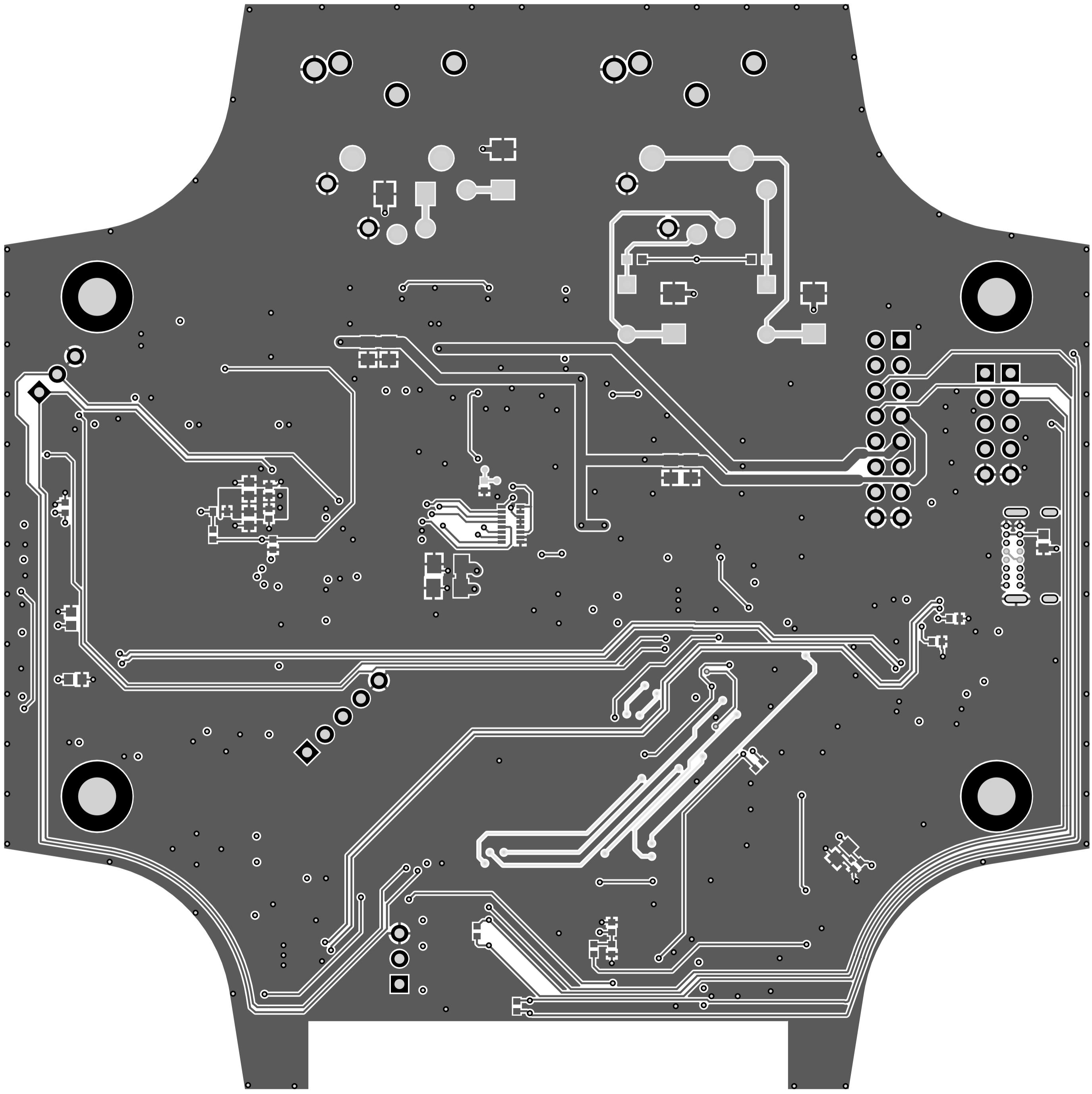
# Bill of Materials

Project:	MIXR Input and Processing.PnjPcb
Revision:	1.0
Project Lead:	Taiping Li
Generated On:	2020-02-03 8:38 PM
Production Quantity:	1
Currency	CAD
Total Parts Count:	220

LibRef	Designator	Manufacturer 1	Manufacturer Part Number 1	Supplier 1	Supplier Part Number 1	Supplier Unit Price 1	Quantity	Supplier Subtotal 1
CAP CER 22UF 16V ±20% X5R 1210	C1	Murata	GRM32ER61C226ME20L	Digi-Key	490-1881-1-ND	2.58	1	\$ 2.58
CAP CER 0.1UF 16V X7R 0402	C45, C46, C54, C55, C58, C59, C62, C63, C66	Murata	GRM155R71E104KE14D	Digi-Key	490-10698-1-ND	0.05029	48	\$ 2.41
CAP CER 10uF 25V 10% X5R 0805	C8, C39, C40, C43, C44, C56, C57, C60, C61	Murata	GRM21BR61E106KA73L	Digi-Key	490-5523-1-ND	0.60878	9	\$ 5.48
CAP CER 4.7uF 50V 10% X5R 0805	C12, C14, C71	Murata	GRT21BR61H475ME13L	Digi-Key	490-12395-1-ND	0.58231	3	\$ 1.75
CAP CER 1uF 50V 10% X7R 0603	C21, C22, C23, C79, C81, C105, C106	Taiyo Yuden	UMK107AB7105KA-T	Digi-Key	587-3247-1-ND	0.33086	7	\$ 2.32
CAP CER 20PF 50V COG/NPO 0402	C24, C25	Samsung	CL05C200JB5NNNC	Digi-Key	1276-1661-1-ND	0.13234	2	\$ 0.26
CAP CER 10nF 50V 5% X7R 0603	C88, C89, C90, C92, C93, C94, C95, C96, C97	KEMET	C0603C103J5JACTU	Digi-Key	399-13384-1-ND	0.29645	11	\$ 3.26
CAP ALUM 100uF 20% 100V RADIAL	C27, C28	Nichicon	UFW2A101MPD1TD	Digi-Key	493-11050-1-ND	0.95287	2	\$ 1.91
CAP CER 10uF 50V 20% X5R 1206	C30, C47, C64, C67	Murata	GRT31CR61H106ME01L	Digi-Key	490-12457-1-ND	0.66172	4	\$ 2.65
CAP CER 22uF 6.3V ±10% X7R 1206	C31, C48, C65, C68	Murata	GRM31CR70J226KE19L	Digi-Key	490-6515-1-ND	1.56	4	\$ 6.25
CAP CER 1nF 50V COG 0402	C32, C34, C49, C51	Murata	GRM1555C1H102JA01D	Digi-Key	490-3244-1-ND	0.15881	4	\$ 0.64
CAP CER 2700PF 50V X7R 0402	C33, C50	Yageo	CC0402KRX7R9BB272	Digi-Key	311-1033-1-ND	0.13234	2	\$ 0.26
CAP CER 100PF 50V COG/NPO 0402	C35, C36, C52, C53	Murata	GCM1555C1H101JA16D	Digi-Key	490-10669-1-ND	0.13234	4	\$ 0.53
CAP ALUM 47uF 20% 35V SMD	C69, C70	Panasonic	EEE-1VA470WP	Digi-Key	PCE3961CT-ND	0.54261	2	\$ 1.09
CAP CER 2.2uF 25V 10% X5R 0603	C83, C84	Murata	GRM188R61E225KA12D	Digi-Key	490-10731-1-ND	0.25145	2	\$ 0.50
CAP CER 4.3PF 50V COG/NPO 0402	C86, C87	Murata	GJM1555C1H4R3BB01D	Digi-Key	490-8582-1-ND	0.25145	2	\$ 0.50
FILTER RLC 40 OHM/12PF/20N SMD	D1	ON Semiconductor	CM1624-08DE	Digi-Key	CM1624-08DEOSCT-ND	0.68818	1	\$ 0.69
DIODE TVS 5.25V 17V SOT23-6	D2	STMicroelectronics	USBL6C-2SC6	Digi-Key	497-5235-1-ND	0.62201	1	\$ 0.62
DIODE TVS 12VWM 19.6V DO-214AA (SMB)	D3, D4, D5, D6	Vishay Semiconductors	SMBJ12CD-M3/H	Digi-Key	SMBJ12CD-M3/HGICT-ND	0.63525	4	\$ 2.54
FUSE 375mA 125VDC 1206	F1	Littelfuse	0466.375NR	Digi-Key	F1453CT-ND	1.11	1	\$ 1.11
FB 600 OHM 1LN 0603	FB1	TDK	MMZ1608Y601BTB25	Digi-Key	445-172850-1-ND	0.13234	1	\$ 0.13
CONN 10POS HEADR MALE 0.05"	J1	Amphenol FCI	20021121-00010C4LF	Digi-Key	609-3695-1-ND	1.15	1	\$ 1.15
LED BLUE CLEAR 2.8V 0603	LED1, LED6, LED7	Vishay Lite-On	LTST-C193TBKT-5A	Digi-Key	160-1827-1-ND	0.59554	3	\$ 1.79
LED GREEN CLEAR 2V 0603	LED2, LED4, LED5	Wurth Electronics	150060VST5000	Digi-Key	732-4980-1-ND	0.18528	3	\$ 0.56
CONN MICRO-SD ULTRA-LOW 8CKT	P1	Molex	503182-1852	Digi-Key	WM12834CT-ND	3.24	1	\$ 3.24
CONN RECEPT USB2.0 TYPE-C 16POS	P2	Global Connector Technology	USB4085-GF-A	Digi-Key	073-USB4085-GF-ACT-ND	1		
CONN XLR-TRS COMBO 3 POLE	P3, P4	Neutrik	NCJ6FA-H	Mouser	568-NCJ6FA-H	2.94	2	\$ 5.88
CONN 16POS HEADER 0.1" 0.73" MALE	P5	Samtec	TSW-108-15-T-D	Digi-Key	SAM12336-ND	1.35	1	\$ 1.35
CONN 5POS 0.1" 1" MALE HEADER	P6, P7	Samtec	TSW-105-20-T-S	Digi-Key	SAM9000-ND	0.39554	2	\$ 1.19
CONN 3POS HEADR MALE 0.1"	P9, P10	Wurth Electronics	61300311121	Digi-Key	732-5316-ND	0.17205	2	\$ 0.34
BJT NPN 40V 1.5A SOT-23	Q1, Q2	Comchip	SS8050-G	Digi-Key	641-1790-1-ND	0.29115	2	\$ 0.58
RES 10K OHM 1% 1/16W 0402	R17, R19, R21, R33, R34, R37, R38, R46, R54,	Yageo	RC0402FR-0710KL	Digi-Key	311-10.0KLRCT-ND	0.02117	15	\$ 0.32
RES 4.7K OHM 1% 1/10W 0402	R2, R3, R4, R5, R6, R39, R40, R43, R44	Yageo	RC0402FR-074K7L	Digi-Key	311-4.7KLRCT-ND	0.13234	9	\$ 1.19
RES 22.1 OHM 1% 1/10W 0603	R20, R24, R25, R26, R27, R28, R30, R61, R6	Yageo	RC0603FR-0722R1L	Digi-Key	311-22.1KLRCT-ND	0.03044	12	\$ 0.37
RES 523K OHM 1% 1/16W 0402	R10	Yageo	RC0402FR-07523KL	Digi-Key	YAG3177CT-ND	0.13234	1	\$ 0.13
RES 22.1K OHM 1% 1/16W 0402	R11, R13, R14, R22, R31	Stackpole Electronics	RMCF0402FT22K1	Digi-Key	RMCF0402FT22K1CT-ND	0.13234	5	\$ 0.66
RES 0.0 OHM 1% 1/16W 0402	R12, R16	Yageo	RC0402JR-070RL	Digi-Key	311-0.0URCT-ND	0.13234	2	\$ 0.26
RES 1K OHM 0.1% 1/16W 0402	R18, R29, R45, R51, R52, R53, R59, R60	Yageo	RT0402BRE071KL	Digi-Key	YAG2306CT-ND	0.51614	8	\$ 4.13
RES 47.5K OHM 1% 1/16W 0402	R23, R32, R35	Yageo	RC0402FR-0747K5L	Digi-Key	311-47.5KLRCT-ND	0.13234	3	\$ 0.40
RES 649 OHM 1% 1/16W 0402	R36	Stackpole Electronics	RMCF0402FT649R	Digi-Key	RMCF0402FT649RCT-ND	0.13234	1	\$ 0.13
RES 6.81K OHM 0.1% 1/10W 0603	R41, R42	Panasonic	ERJ-PB3B6811V	Digi-Key	P20068CT-ND	0.33086	2	\$ 0.66
RES 270 OHM 0.1% 1/16W 0402	R47, R49, R55, R57	Yageo	RT0402BRD07270RL	Digi-Key	YAG1396CT-ND	0.54261	4	\$ 2.17
RES 40.2 OHM 0.5% 1/10W 0603	R48, R50, R56, R58	Yageo	RT0603DRE0740R2L	Digi-Key	311-2576-1-ND	0.15881	4	\$ 0.64
RES ARRAY 10K OHM 5% 8RES EXB-2HV103JV	R62	Panasonic	EXB-2HV103JV	Digi-Key	Y1103CT-ND	0.38379	1	\$ 0.38
RES ARRAY 510 OHM 5% 4RES EXB-N8V511JX	R68	Panasonic	EXB-N8V511JX	Digi-Key	Y10511CT-ND	0.14558	1	\$ 0.15
RES 100 OHM 1% 1/16W 0402	R70	Yageo	RC0402FR-07100RL	Digi-Key	311-100LRCT-ND	0.13234	1	\$ 0.13
SW SPST-NO 0.05A 12V	S1, S2, S3	E-Switch	TL3305AF260QG	Digi-Key	EG5353CT-ND	0.26469	3	\$ 0.79
IC WiFi MODULE 32MBITS SPI FLASH	U1	Espressif Systems	ESP32-WROOM-32D	Digi-Key	1904-1023-1-ND	5.03	1	\$ 5.03
IC MUX/DEMUX 4-BIT 1-OF-2 16-TSSOP	U2, U3	Texas Instruments	SNT4CBTLY3257PWR	Digi-Key	296-9138-1-ND	0.93964	2	\$ 1.88
IC BRIDGE USB TO UART 280FN	U4, U6	Silicon Labs	CP2102N-A01-GQFN28R	Digi-Key	336-4738-1-ND	1.85	2	\$ 3.71
IC MCU STM32F769I 176-LQFP	U5	STMicroelectronics	STM32F769I1T6	Digi-Key	497-16649-ND	16.79	1	\$ 16.79
IC USB 2.0 HUB CONTROLLER 28QFN	U7	Cypress	CY7C65632-28LTXCT	Digi-Key	428-3156-1-ND	4.41	1	\$ 4.41
IC ADC 24 BIT AUDIO 216KHZ SSOP-28	U8	Texas Instruments	PCM4202DBT	Digi-Key	296-17438-1-ND	13.04	1	\$ 13.04
IC OP AMP AUDIO LME49724 8-SOIC	U9, U11	TI National Semiconductor	LME49724MRXVNOPB	Digi-Key	296-37390-1-ND	3.53	2	\$ 7.07
COP AMP GEN PURPOSE RR 5.5MHz SOT-23-	U10, U12	Texas Instruments	OPA376AQDBVRQ1	Digi-Key	296-36701-1-ND	2.83	2	\$ 5.66
CRYSTAL 12 MHz 12PF SMD	Y1	ECS International	ECS-120-12-33-AEN-TR	Digi-Key	XC2915CT-ND	0.74112	1	\$ 0.74
CRYSTAL 25 MHz OSC XO CMOS SMD	Y2	Epson	SG-210STF25.0000MS3	Digi-Key	SER3804CT-ND	1.6	1	\$ 1.60
CRYSTAL 32.7680 KHz 6PF 2-SMD	Y3	NDK	X3215SA-32.768K-STD-MUA-1	Digi-Key	644-1171-1-ND	0.89993	1	\$ 0.90
					Total:			\$ 126.92







## Design Rules Verification Report

Filename : C:\Users\Taiping\Documents\FYDP\mixr-hardware\MIXR Input and Processing g\MIXR Input and Processing.PcbDoc

Warnings 0  
Rule Violations 69  
Waived Violations 10

Warnings	
Total	0

Rule Violations	
Clearance Constraint (Gap=0.152mm) (All), (All)	0
Short-Circuit Constraint (Allowed=No) (All), (All)	0
Un-Routed Net Constraint ( All )	0
Modified Polygon (Allow modified: No), (Allow shelved: No)	0
Width Constraint (Min=0.154mm) (Max =2.54mm) (Preferred=0.2mm) (All)	0
Power Plane Connect Rule(Relief Connect )(Expansion=0.508mm) (Conductor Width=0.254mm) (Air Gap=0.254mm)	0
Power Plane Connect Rule(Relief Connect )(Expansion=0.5mm) (Conductor Width=0.2mm) (Air Gap=0.2mm)	0
Hole Size Constraint (Min=0.3mm) (Max =6.3mm) (All)	0
Hole To Hole Clearance (Gap=0.254mm) (All), (All)	0
Silk To Solder Mask (Clearance=0.178mm) (IsPad), (All)	45
Silk to Silk (Clearance=0.254mm) (All), (All)	16
Net Antennae (Tolerance=0mm) (All)	2
Board Clearance Constraint (Gap=0mm) (All)	6
Height Constraint (Min=0mm) (Max =30mm) (Preferred=12.7mm) (All)	0
Total	69

Waived Violations	
Silk To Solder Mask (Clearance=0.178mm) (IsPad), (All)	10
Total	10

Silk To Solder Mask (Clearance=0.178mm) (IsPad),(All)
Silk To Solder Mask Clearance Constraint: (0.101mm < 0.178mm) Between Pad LED4-1(29.439mm,15.7mm) on Top Layer And Text "Y3"
Silk To Solder Mask Clearance Constraint: (0.1mm < 0.178mm) Between Pad LED5-1(29.439mm,17.1mm) on Top Layer And Text "Y3" (27.534mm,16mm)
Silk To Solder Mask Clearance Constraint: (0.082mm < 0.178mm) Between Pad P10-1(-5.796mm,40.454mm) on Multi-Layer And Track
Silk To Solder Mask Clearance Constraint: (0.144mm < 0.178mm) Between Pad P10-1(-5.796mm,40.454mm) on Multi-Layer And Track
Silk To Solder Mask Clearance Constraint: (Collision < 0.178mm) Between Pad P10-1(-5.796mm,40.454mm) on Multi-Layer And Track
Silk To Solder Mask Clearance Constraint: (0.157mm < 0.178mm) Between Pad P10-2(-4mm,42.25mm) on Multi-Layer And Track
Silk To Solder Mask Clearance Constraint: (0.158mm < 0.178mm) Between Pad P10-2(-4mm,42.25mm) on Multi-Layer And Track
Silk To Solder Mask Clearance Constraint: (0.057mm < 0.178mm) Between Pad P10-3(-2.204mm,44.046mm) on Multi-Layer And Track
Silk To Solder Mask Clearance Constraint: (0.157mm < 0.178mm) Between Pad P10-3(-2.204mm,44.046mm) on Multi-Layer And Track
Silk To Solder Mask Clearance Constraint: (0.158mm < 0.178mm) Between Pad P10-3(-2.204mm,44.046mm) on Multi-Layer And Track
Silk To Solder Mask Clearance Constraint: (0.144mm < 0.178mm) Between Pad P9-1(30.25mm,-18.79mm) on Multi-Layer And Track
Silk To Solder Mask Clearance Constraint: (Collision < 0.178mm) Between Pad P9-1(30.25mm,-18.79mm) on Multi-Layer And Track
Silk To Solder Mask Clearance Constraint: (0.082mm < 0.178mm) Between Pad P9-1(30.25mm,-18.79mm) on Multi-Layer And Track
Silk To Solder Mask Clearance Constraint: (0.15mm < 0.178mm) Between Pad P9-2(30.25mm,-16.25mm) on Multi-Layer And Track
Silk To Solder Mask Clearance Constraint: (0.157mm < 0.178mm) Between Pad P9-2(30.25mm,-16.25mm) on Multi-Layer And Track
Silk To Solder Mask Clearance Constraint: (0.169mm < 0.178mm) Between Pad P9-3(30.25mm,-13.71mm) on Multi-Layer And Track
Silk To Solder Mask Clearance Constraint: (0.15mm < 0.178mm) Between Pad P9-3(30.25mm,-13.71mm) on Multi-Layer And Track
Silk To Solder Mask Clearance Constraint: (0.157mm < 0.178mm) Between Pad P9-3(30.25mm,-13.71mm) on Multi-Layer And Track
Silk To Solder Mask Clearance Constraint: (0.058mm < 0.178mm) Between Pad Q1-1(29.2mm,-8.3mm) on Top Layer And Track
Silk To Solder Mask Clearance Constraint: (0.058mm < 0.178mm) Between Pad Q1-2(29.2mm,-10.1mm) on Top Layer And Track
Silk To Solder Mask Clearance Constraint: (0.058mm < 0.178mm) Between Pad Q2-1(29.2mm,-3.8mm) on Top Layer And Track
Silk To Solder Mask Clearance Constraint: (0.058mm < 0.178mm) Between Pad Q2-2(29.2mm,-5.6mm) on Top Layer And Track
Silk To Solder Mask Clearance Constraint: (0.175mm < 0.178mm) Between Pad R4-1(33.5mm,-20mm) on Top Layer And Text "R4" (33.334mm,-21.4mm)
Silk To Solder Mask Clearance Constraint: (0.175mm < 0.178mm) Between Pad R4-2(34.5mm,-20mm) on Top Layer And Text "R4" (33.334mm,-21.4mm)
Silk To Solder Mask Clearance Constraint: (0.176mm < 0.178mm) Between Pad R50-2(22.05mm,44.195mm) on Top Layer And Text "STM32"

RESET" (18.5mm,41.25mm) on Top Overlay [Top Overlay] to [Top Solder] clearance [0.176mm]

Silk To Solder Mask (Clearance=0.178mm) (IsPad),(All)
Silk To Solder Mask Clearance Constraint: (0.027mm < 0.178mm) Between Pad R68-1(32.9mm,17.3mm) on Top Layer And Track
Silk To Solder Mask Clearance Constraint: (0.028mm < 0.178mm) Between Pad R68-4(32.9mm,15.7mm) on Top Layer And Track
Silk To Solder Mask Clearance Constraint: (0.027mm < 0.178mm) Between Pad R68-5(33.9mm,15.7mm) on Top Layer And Track
Silk To Solder Mask Clearance Constraint: (0.028mm < 0.178mm) Between Pad R68-8(33.9mm,17.3mm) on Top Layer And Track
Silk To Solder Mask Clearance Constraint: (0.1mm < 0.178mm) Between Pad S3-1(14.4mm,49.8mm) on Top Layer And Track
Silk To Solder Mask Clearance Constraint: (0.1mm < 0.178mm) Between Pad S3-1(14.4mm,49.8mm) on Top Layer And Track
Silk To Solder Mask Clearance Constraint: (0.15mm < 0.178mm) Between Pad Y1-1(76.82mm,16.48mm) on Top Layer And Track
Silk To Solder Mask Clearance Constraint: (0.1mm < 0.178mm) Between Pad Y1-1(76.82mm,16.48mm) on Top Layer And Track
Silk To Solder Mask Clearance Constraint: (0.15mm < 0.178mm) Between Pad Y1-2(76.82mm,14.18mm) on Top Layer And Track
Silk To Solder Mask Clearance Constraint: (0.1mm < 0.178mm) Between Pad Y1-2(76.82mm,14.18mm) on Top Layer And Track
Silk To Solder Mask Clearance Constraint: (0.1mm < 0.178mm) Between Pad Y1-3(78.62mm,14.18mm) on Top Layer And Track
Silk To Solder Mask Clearance Constraint: (0.1mm < 0.178mm) Between Pad Y1-3(78.62mm,14.18mm) on Top Layer And Track
Silk To Solder Mask Clearance Constraint: (0.15mm < 0.178mm) Between Pad Y1-3(78.62mm,14.18mm) on Top Layer And Track
Silk To Solder Mask Clearance Constraint: (0.1mm < 0.178mm) Between Pad Y1-4(78.62mm,16.48mm) on Top Layer And Track
Silk To Solder Mask Clearance Constraint: (0.15mm < 0.178mm) Between Pad Y1-4(78.62mm,16.48mm) on Top Layer And Track
Silk To Solder Mask Clearance Constraint: (0.173mm < 0.178mm) Between Pad Y3-1(25.8mm,15.9mm) on Top Layer And Track
Silk To Solder Mask Clearance Constraint: (0.173mm < 0.178mm) Between Pad Y3-1(25.8mm,15.9mm) on Top Layer And Track
Silk To Solder Mask Clearance Constraint: (0.173mm < 0.178mm) Between Pad Y3-1(25.8mm,15.9mm) on Top Layer And Track
Silk To Solder Mask Clearance Constraint: (0.173mm < 0.178mm) Between Pad Y3-2(25.8mm,13.4mm) on Top Layer And Track
Silk To Solder Mask Clearance Constraint: (0.173mm < 0.178mm) Between Pad Y3-2(25.8mm,13.4mm) on Top Layer And Track
Silk To Solder Mask Clearance Constraint: (0.173mm < 0.178mm) Between Pad Y3-2(25.8mm,13.4mm) on Top Layer And Track

Silk to Silk (Clearance=0.254mm) (All),(All)
Silk To Silk Clearance Constraint: (0.158mm < 0.254mm) Between Arc (41.525mm,44.73mm) on Top Overlay And Text "U12" (41.9mm,44.9mm) on Top
Silk To Silk Clearance Constraint: (0.166mm < 0.254mm) Between Arc (53.015mm,48.75mm) on Top Overlay And Text "+" (52.5mm,54.8mm) on Top
Silk To Silk Clearance Constraint: (0.205mm < 0.254mm) Between Arc (53.015mm,48.75mm) on Top Overlay And Text "C28" (48.434mm,53.5mm) on Top
Silk To Silk Clearance Constraint: (0.159mm < 0.254mm) Between Arc (61.45mm,17.155mm) on Top Overlay And Text "U3" (61.934mm,16.8mm) on Top
Silk To Silk Clearance Constraint: (0.15mm < 0.254mm) Between Text "C42" (30.434mm,49.4mm) on Top Overlay And Text "R52" (30.534mm,50.5mm) on Top
Silk To Silk Clearance Constraint: (Collision < 0.254mm) Between Text "C56" (58.212mm,35.144mm) on Bottom Overlay And Text "C57"
Silk To Silk Clearance Constraint: (0.129mm < 0.254mm) Between Text "C70" (52.134mm,15.275mm) on Top Overlay And Track
Silk To Silk Clearance Constraint: (0.233mm < 0.254mm) Between Text "DEBUG LEDS

3 - BLUE

2 - BLUE

1 - GREEN

0 - GREEN" (35.25mm,14mm) on Top Overlay And Track (35.025mm,20.75mm)(35.025mm,20.389mm) on Top Overlay Silk Text to Silk

Silk to Silk (Clearance=0.254mm) (All),(All)
Silk To Silk Clearance Constraint: (0.201mm < 0.254mm) Between Text "DEBUG LEDS

3 - BLUE

2 - BLUE

1 - GREEN

0 - GREEN" (35.25mm,14mm) on Top Overlay And Track (35mm,13.759mm)(35.025mm,20.389mm) on Top Overlay Silk Text to Silk

Silk to Silk (Clearance=0.254mm) (All),(All)
Silk To Silk Clearance Constraint: (0.225mm < 0.254mm) Between Text "DEBUG LEDS

3 - BLUE

2 - BLUE

1 - GREEN

0 - GREEN" (35.25mm,14mm) on Top Overlay And Track (35mm,13.75mm)(44mm,13.75mm) on Top Overlay Silk Text to Silk

Silk to Silk (Clearance=0.254mm) (All),(All)
Silk To Silk Clearance Constraint: (0.209mm < 0.254mm) Between Text "RX" (-6.1mm,43.65mm) on Top Overlay And Track
Silk To Silk Clearance Constraint: (0.225mm < 0.254mm) Between Text "STM32

DEBUG" (9.5mm,57.75mm) on Top Overlay And Track (5mm,57.5mm)(13.5mm,57.5mm) on Top Overlay Silk Text to Silk Cle

Silk to Silk (Clearance=0.254mm) (All),(All)

Silk To Silk Clearance Constraint: (0.209mm < 0.254mm) Between Text "TX" (-7.6mm,42.15mm) on Top Overlay And Track

Silk To Silk Clearance Constraint: (0.245mm < 0.254mm) Between Text "U12" (41.9mm,44.9mm) on Top Overlay And Track

Silk To Silk Clearance Constraint: (0.245mm < 0.254mm) Between Text "U12" (41.9mm,44.9mm) on Top Overlay And Track

Silk To Silk Clearance Constraint: (0.212mm < 0.254mm) Between Text "Y1" (74.567mm,16.5mm) on Top Overlay And Track

Net Antennae (Tolerance=0mm) (All)

Net Antennae: Via (16.5mm,22.8mm) from Top Layer to Bottom Layer

Net Antennae: Via (16mm,22mm) from Top Layer to Bottom Layer

Board Clearance Constraint (Gap=0mm) (All)

Board Outline Clearance(Outline Edge): (Collision < 0.406mm) Between Board Edge And Track (17.5mm,55.25mm)(17.5mm,79.75mm) on Top Overlay

Board Outline Clearance(Outline Edge): (Collision < 0.406mm) Between Board Edge And Track (17.5mm,79.75mm)(42.5mm,79.75mm) on Top Overlay

Board Outline Clearance(Outline Edge): (Collision < 0.406mm) Between Board Edge And Track (42.5mm,55.25mm)(42.5mm,79.75mm) on Top Overlay

Board Outline Clearance(Outline Edge): (Collision < 0.406mm) Between Board Edge And Track (47.5mm,55.25mm)(47.5mm,79.75mm) on Top Overlay

Board Outline Clearance(Outline Edge): (Collision < 0.406mm) Between Board Edge And Track (47.5mm,79.75mm)(72.5mm,79.75mm) on Top Overlay

Board Outline Clearance(Outline Edge): (Collision < 0.406mm) Between Board Edge And Track (72.5mm,55.25mm)(72.5mm,79.75mm) on Top Overlay

Silk To Solder Mask (Clearance=0.178mm) (IsPad),(All)

Silk To Solder Mask Clearance Constraint: (0.172mm < 0.178mm) Between Pad P2-A1(90.975mm,21.125mm) on Multi-Layer And Track

Silk To Solder Mask Clearance Constraint: (0.172mm < 0.178mm) Between Pad P2-A12(90.975mm,27.075mm) on Multi-Layer And Track

Silk To Solder Mask Clearance Constraint: (0.172mm < 0.178mm) Between Pad P2-A4(90.975mm,21.975mm) on Multi-Layer And Track

Silk To Solder Mask Clearance Constraint: (0.172mm < 0.178mm) Between Pad P2-A5(90.975mm,22.825mm) on Multi-Layer And Track

Silk To Solder Mask Clearance Constraint: (0.172mm < 0.178mm) Between Pad P2-A6(90.975mm,23.675mm) on Multi-Layer And Track

Silk To Solder Mask Clearance Constraint: (0.172mm < 0.178mm) Between Pad P2-A7(90.975mm,24.525mm) on Multi-Layer And Track

Silk To Solder Mask Clearance Constraint: (0.172mm < 0.178mm) Between Pad P2-A8(90.975mm,25.375mm) on Multi-Layer And Track

Silk To Solder Mask Clearance Constraint: (0.172mm < 0.178mm) Between Pad P2-A9(90.975mm,26.225mm) on Multi-Layer And Track

Silk To Solder Mask Clearance Constraint: (0.164mm < 0.178mm) Between Pad P3-3(30mm,56.255mm) on Multi-Layer And Track

Silk To Solder Mask Clearance Constraint: (0.164mm < 0.178mm) Between Pad P4-3(60mm,56.255mm) on Multi-Layer And Track

