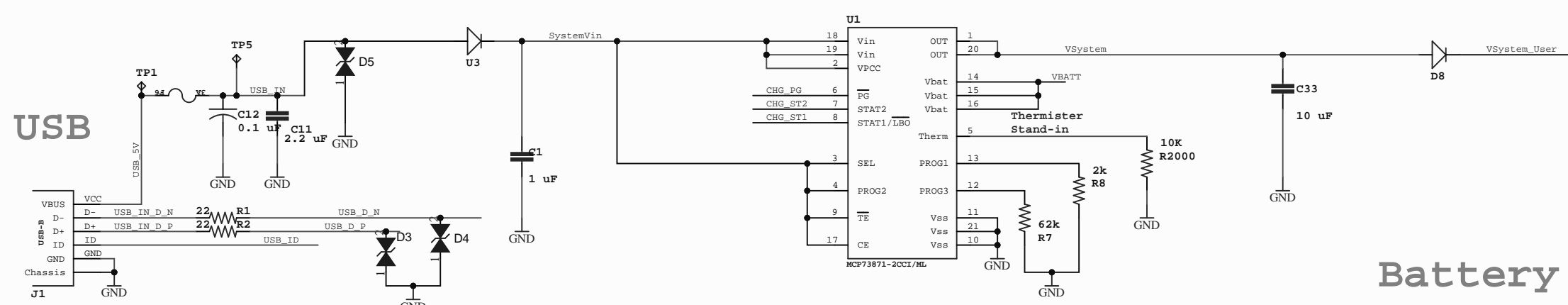
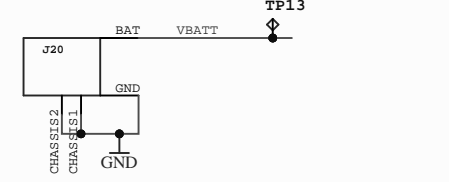


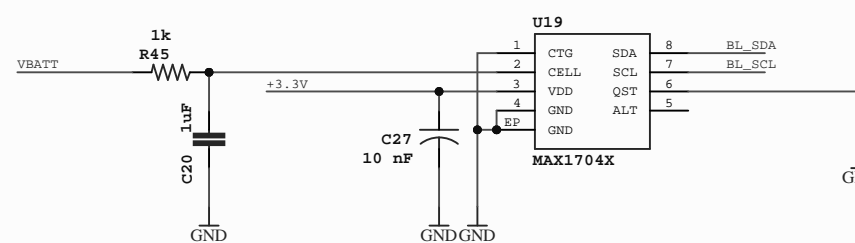
Battery Charger/System Voltage



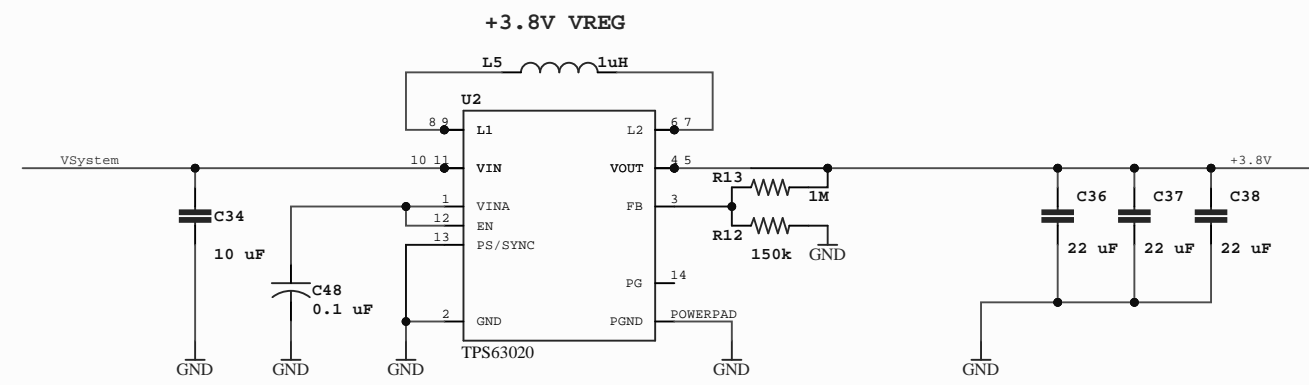
Battery Connector



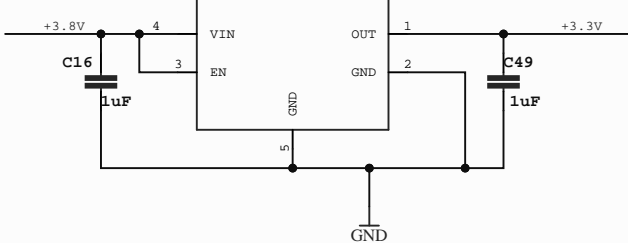
Battery Monitor



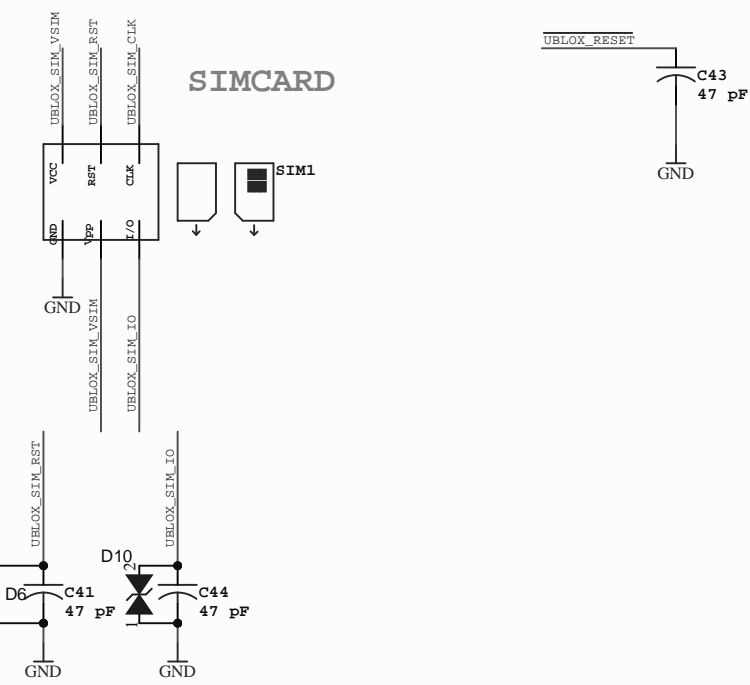
+3.8V VREG



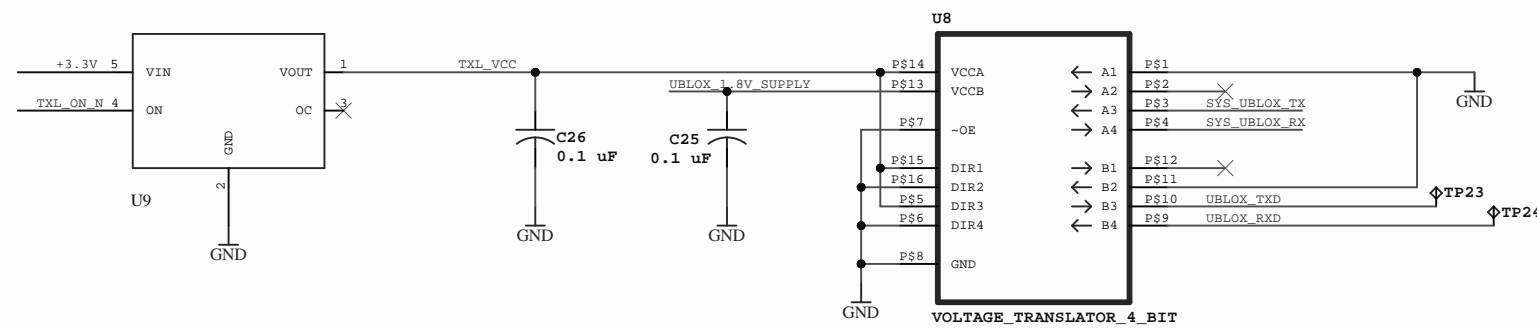
+3.3V VREG



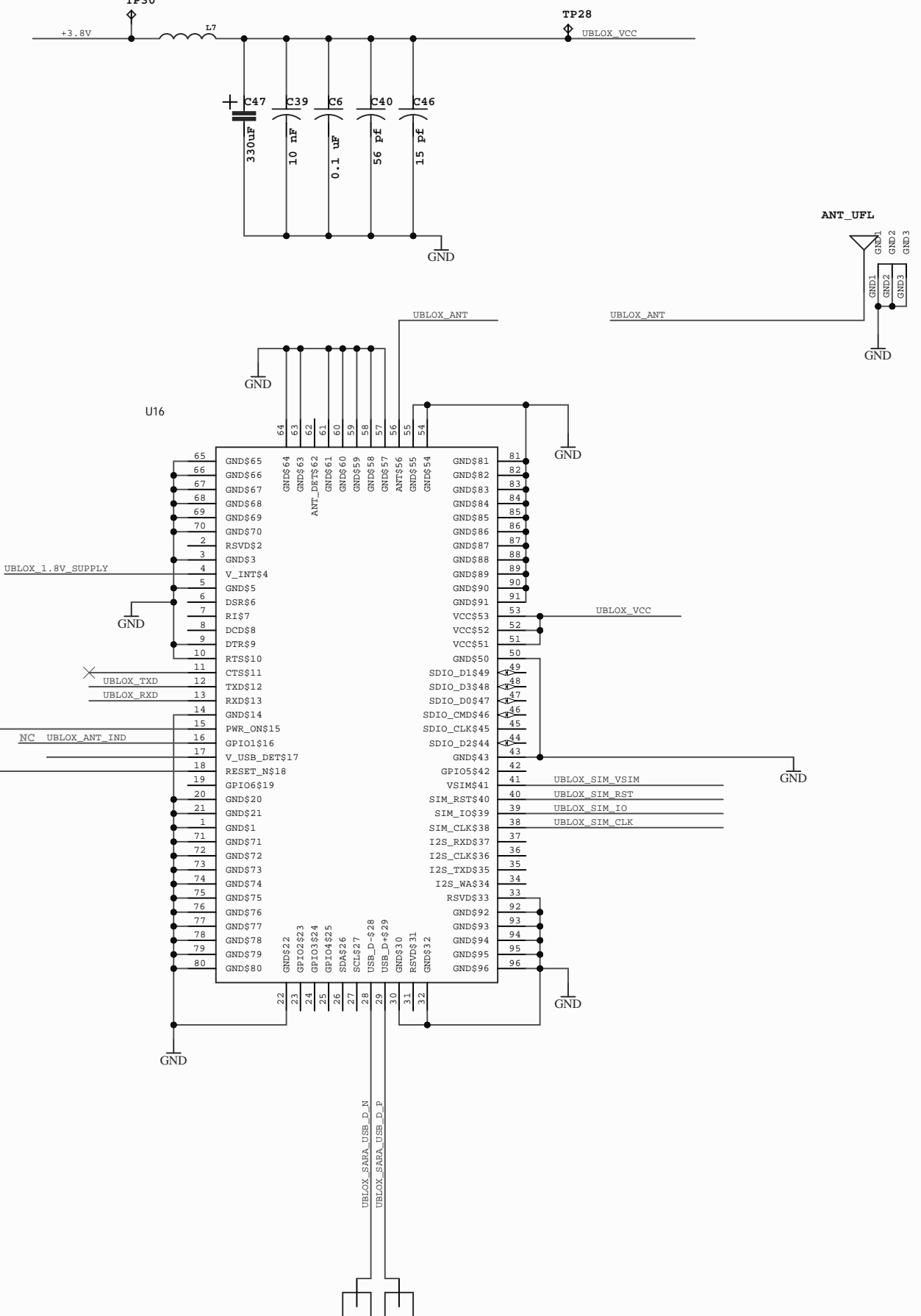
SIMCARD



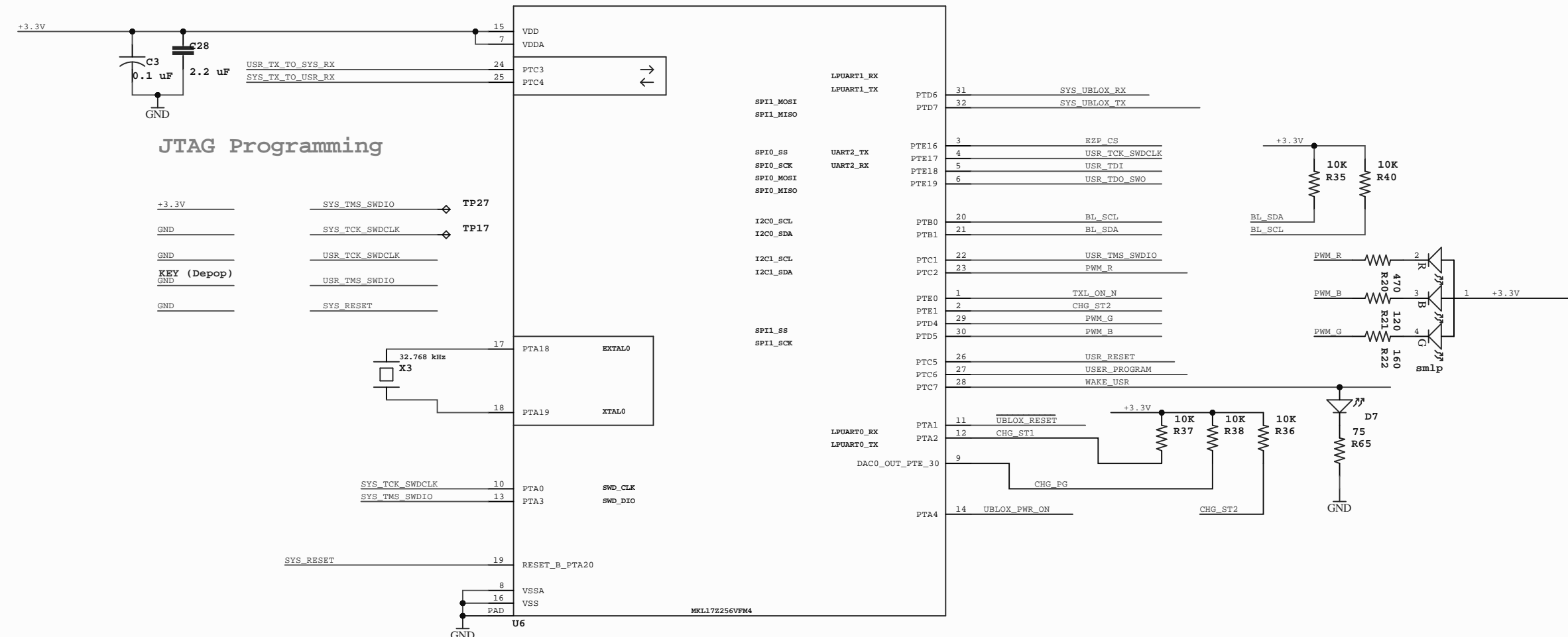
VOLTAGE TRANSLATOR

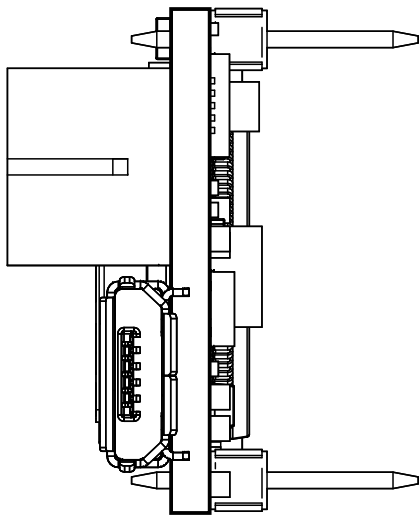
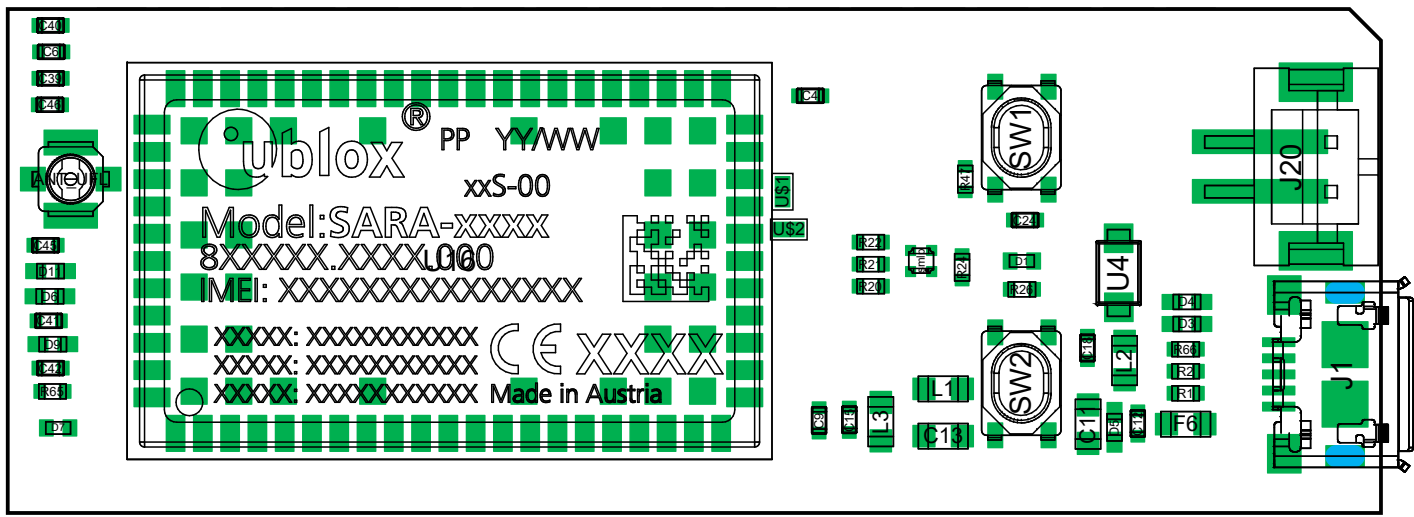
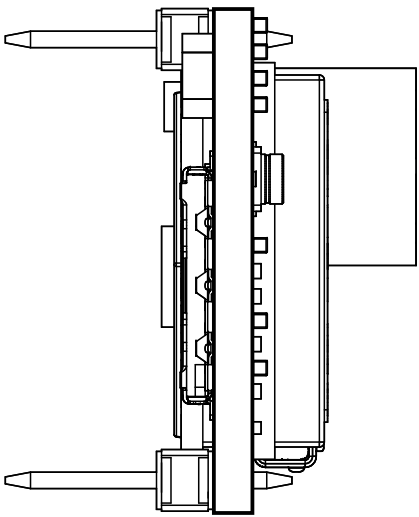


SYS_TMS_SWDCIO
USR_TMS_SWDCLK
USR_TMS_SWDCIO
USR_RESET
USER008
USER006
USER001
USER002
USER003
USER007
USER15
USER17
USER14
USER13
USER005
USER004
GND
SystemVIn
VSystem_User
GND
USER19
USER16
USER18
USER12
USER10
USER09
USER11
SYS_RESET
USER_PROGRAM
+3.3V
USER23
USER24
USER26
USER28
USER27
SYS_TCK_SWDCLK
VBAT1



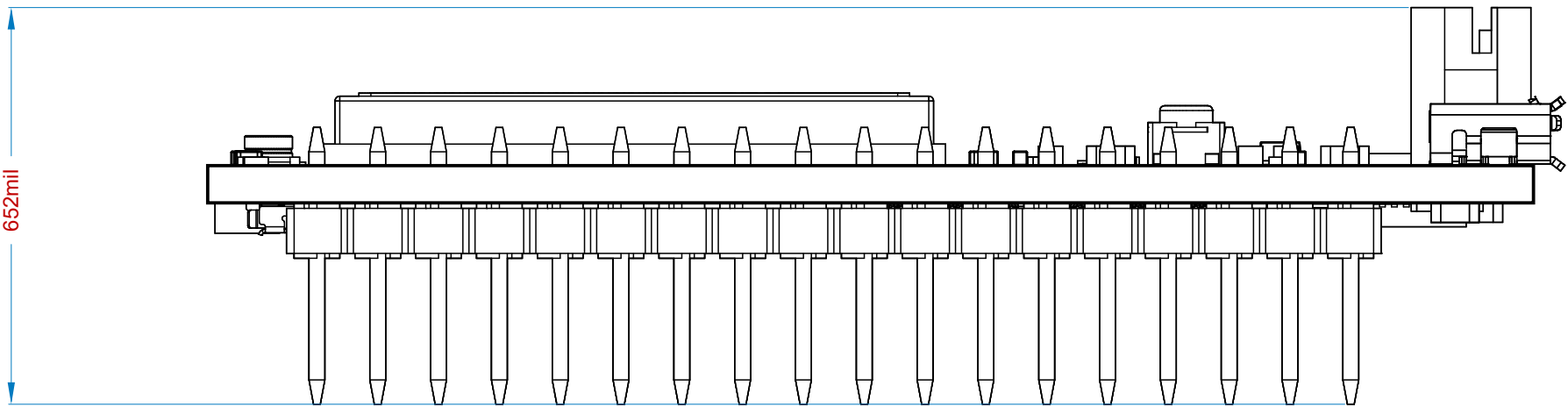
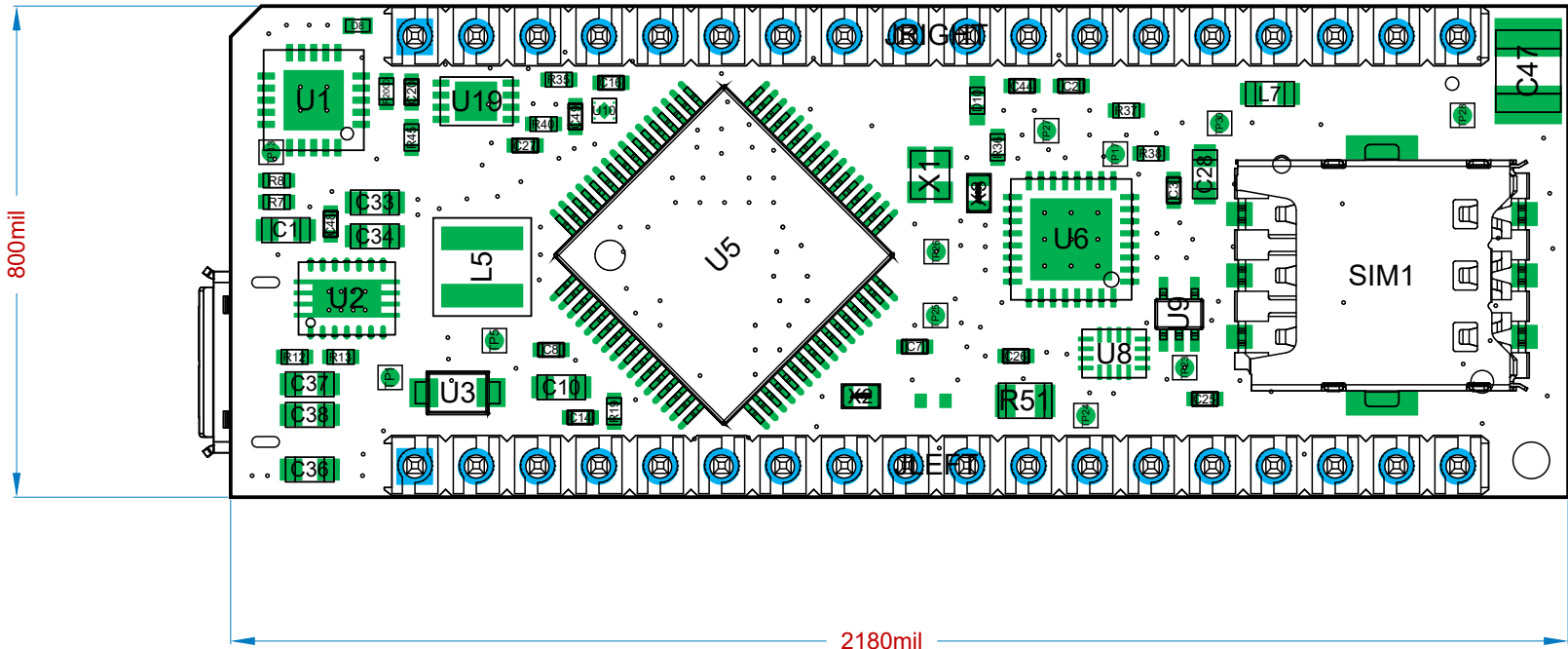
System





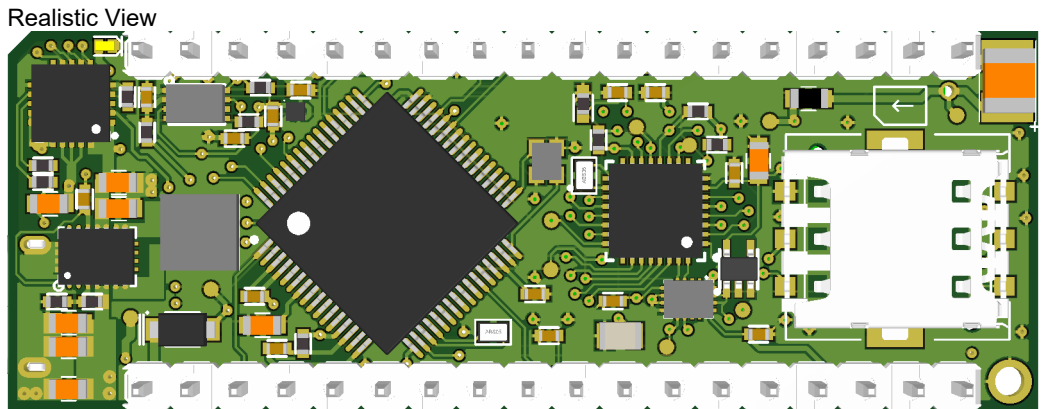
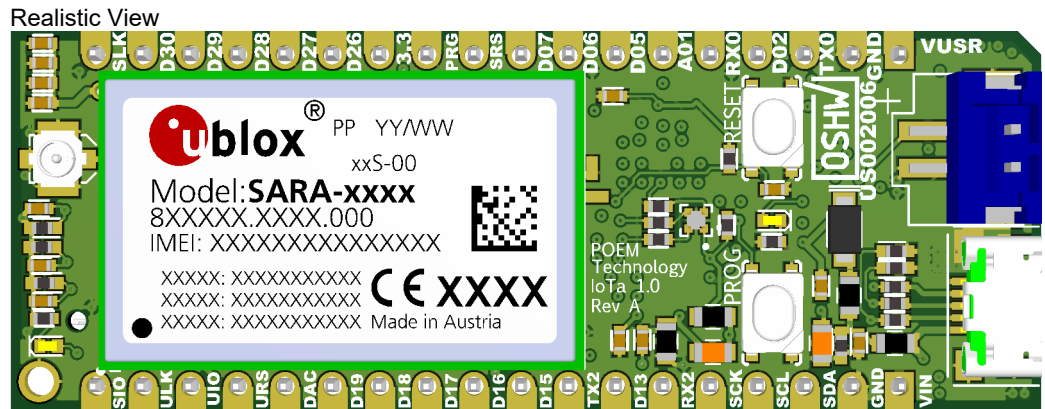
Drill Table				
Symbol	Count	Hole Size	Plated	Hole Tolerance
◇	9	0mm	Plated	None
⊠	166	0mm	Plated	None
□	2	0mm	Plated	None
☆	1	1mm	Plated	None
○	1	1mm	Non-Plated	None
◇	1	1mm	Non-Plated	None
⊕	36	1mm	Plated	None
☆	1	2mm	Plated	None
217 Total				

- 1 Text element with square border.
- 2 Text element with no border
- 3 Text element with circle border



Layer Stack Legend

Material	Layer	Thickness	Dielectric Material	Type	Gerber
Surface Material	Top Overlay			Legend	GTO
Copper	Top Solder	0mm	Solder Resist	Solder Mask	GTS
Prepreg	Top Layer	0mm	FR-4	Signal	GTL
Copper	Signal Layer 1	0mm		Signal	G1
Core		0mm	FR-4	Dielectric	
Copper	Signal Layer 2	0mm		Signal	G2
Prepreg		0mm		Dielectric	
Copper	Internal Plane 1	0mm		Internal Plane	GP1
Core		0mm		Dielectric	
Copper	Internal Plane 2	0mm		Internal Plane	GP2
Prepreg		0mm		Dielectric	
Copper	Signal Layer 3	0mm		Signal	G3
Core		0mm		Dielectric	
Copper	Signal Layer 4	0mm		Signal	G4
Prepreg		0mm		Dielectric	
Copper	Bottom Layer	0mm		Signal	GBL
Surface Material	Bottom Solder	0mm	Solder Resist	Solder Mask	GBS
	Bottom Overlay			Legend	GBO
Total thickness: 2mm					



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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	POEM Technology	
		DIMENSIONS ARE IN INCHES	DRAWN		2/21/2023	TITLE	
		TOLERANCES:	CHECKED			IoT-R4	
		FRACTIONAL ±	ENG APPR.				
		ANGULAR: MACH ± BEND ±	MFG APPR.				
		TWO PLACE DECIMAL ±	Q.A.				
		THREE PLACE DECIMAL ±	COMMENTS:			SIZE	DWG. NO.
		INTERPRET GEOMETRIC TOLERANCING PER:				SCALE: 1:1	WEIGHT:
		MATERIAL					SHEET 1 OF 2
		FINISH					
NEXT ASSY	USED ON	DO NOT SCALE DRAWING					
APPLICATION							

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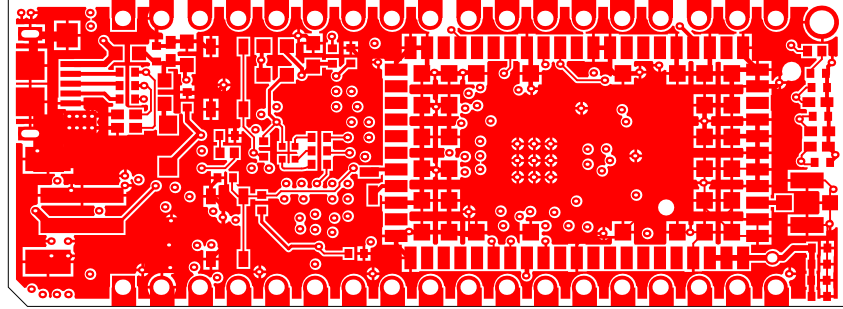
C

D

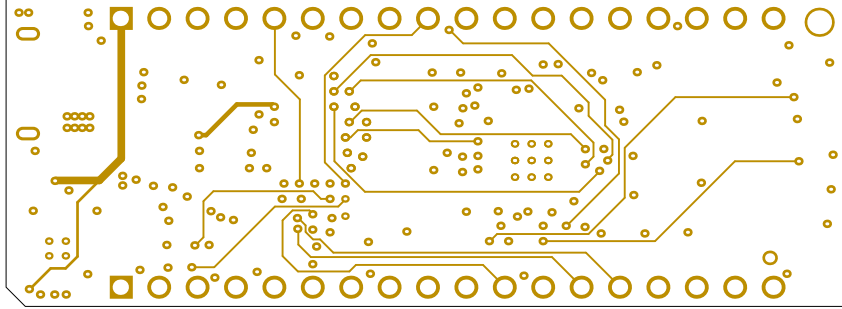
E

F

Top Layer (Scale 2)



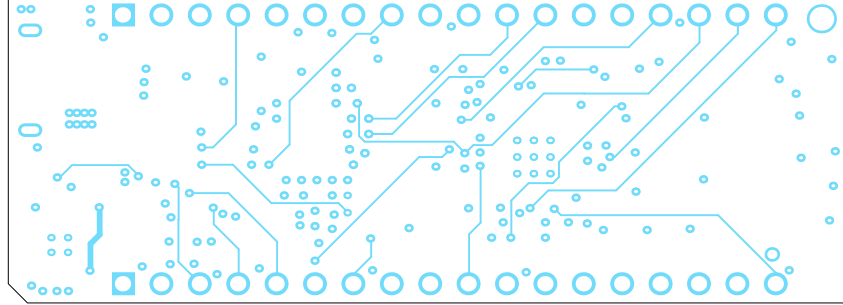
Signal Layer 1 (Scale 2)



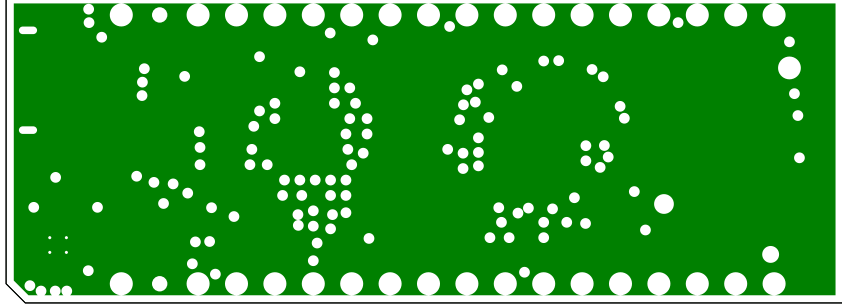
Bill Of Materials

Line #	Designator	Comment	Quantity
1	ANT_UFL	ANT-A-1JB	1
2	C1	1 uF	1
3	C2, C3, C4, C6, C7, C8, C9, C12, C14, C15, C18, C24, C25, C26, C48	0.1 uF	15
4	C10, C11, C13, C28	2.2 uF	4
5	C16, C20, C49	1uF	3
6	C27, C39	10 nF	2
7	C33, C34	10 uF	2
8	C36, C37, C38	22 uF	3
9	C40	56 pf	1
10	C41, C42, C44, C45	47 pF	4
11	C46	15 pf	1
12	C47	330uF	1
13	D1, D7	LED_0402_VLMW	2
14	D3, D4, D5, D6, D9, D10, D11		7
15	D8	CDBQR0230L	1
16	F6	3A	1
17	J1	Micro USB B FCI 10118193	1
18	J20	BAT_TERM_TOP_ENTRY	1
19	JLEFT, JRIGHT	22-28-4180	2
20	L1, L2, L3, L7	FerriteBead_220ohm	4
21	L5	1uH	1
22	R1, R2	22	2
23	R7	62k	1
24	R8	2k	1
25	R12	150k	1
26	R13	1M	1
27	R19, R20	470	2
28	R21	120	1
29	R22	160	1
30	R24, R35, R36, R37, R38, R40, R47, R2000	10K	8
31	R26, R65	75	2
32	R45	1k	1
33	R51	0	1
34	R66	0	1
35	SIM1	SIM_CARD_NANO	1
36	sm1p	LED_RGB_1mm_sq	1
37	SW1, SW2	SWITCH_PTS810	2
38	U1	MICROCHIP_73871	1
39	U2	TPS63020	1
40	U3, U4	CDBQR0230L	2
41	U5	MK22FN1M0VLH12	1
42	U6	FREESCALE_MKL17Z256VF M4	1
43	U8	VOLTAGE_TRANSLATOR_4_BIT	1
44	U9		1
45	U10		1
46	U16	SARA-R410	1
47	U19	MAX1704X	1
48	X1	CRYSTAL_16MHz	1
49	X2, X3	32.768 kHz	2

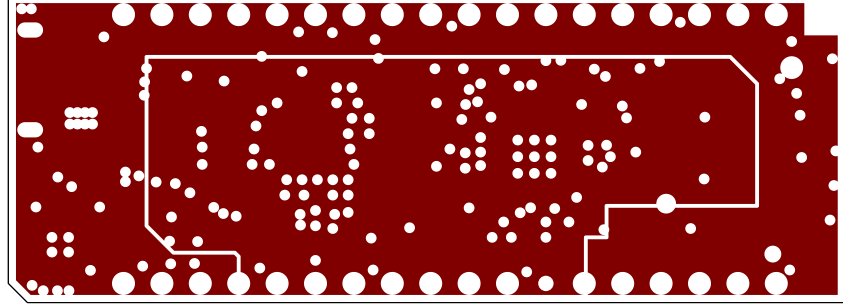
Signal Layer 2 (Scale 2)



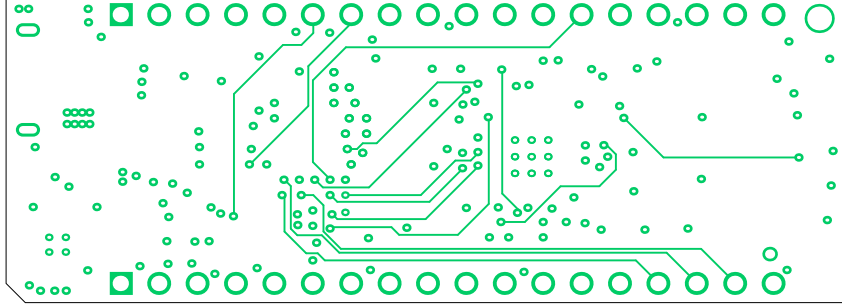
Internal Plane 1 (Scale 2)



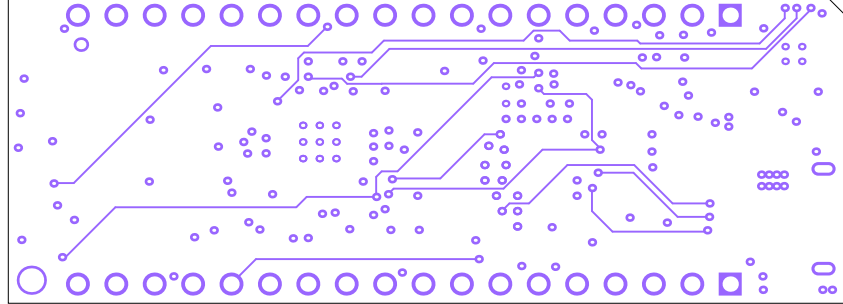
Internal Plane 2 (Scale 2)



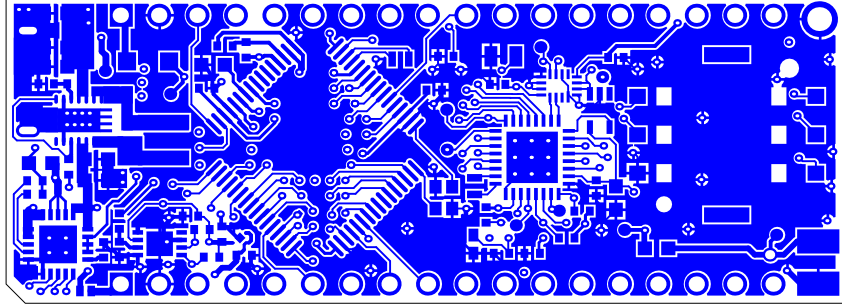
Signal Layer 3 (Scale 2)



Signal Layer 4 (Scale 2)



Bottom Layer (Scale 2)



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		DIMENSIONS ARE IN INCHES	DRAWN		2/21/2023	TITLE IoTa-R4		
		TOLERANCES: FRACTIONAL ± ANGULAR: MACH ± BEND ± TWO PLACE DECIMAL ± THREE PLACE DECIMAL ±	CHECKED					
		INTERPRET GEOMETRIC TOLERANCING PER: MATERIAL	ENG APPR.					
		FINISH	MFG APPR.			SIZE DWG. NO.		
		DO NOT SCALE DRAWING	Q.A.			SCALE: 1:1 WEIGHT: SHEET 2 OF 2		
NEXT ASSY	USED ON		COMMENTS:					
APPLICATION								

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