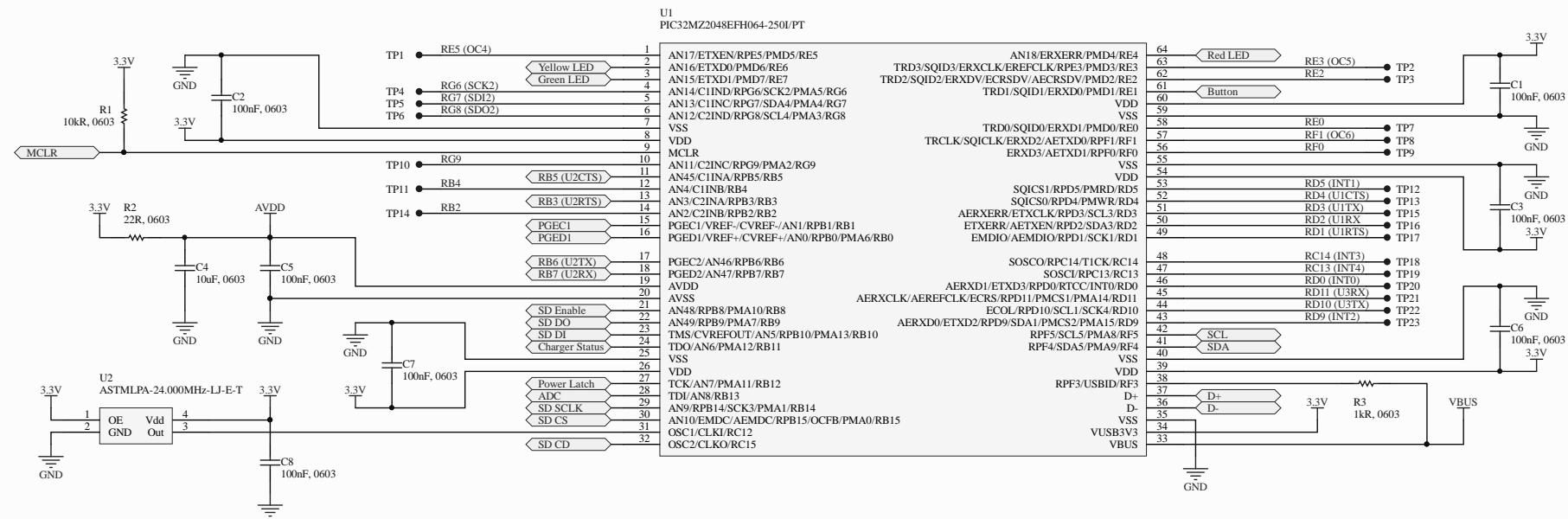


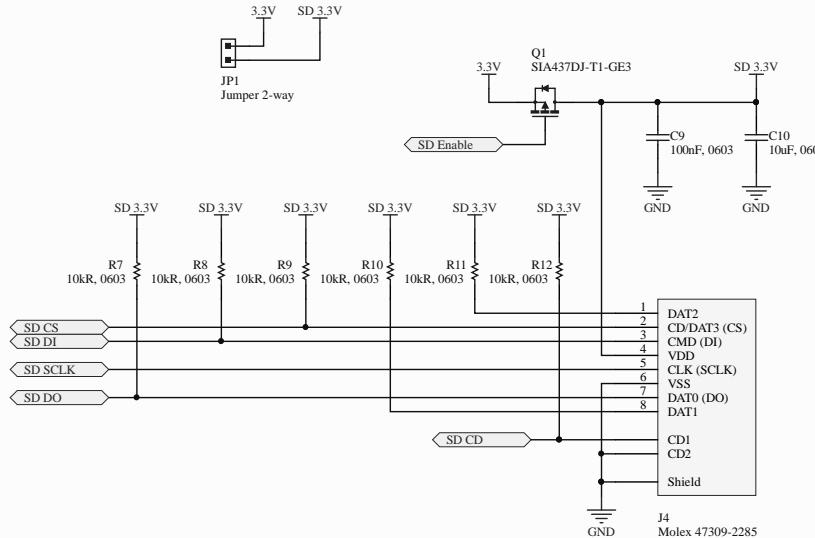
Designator	Quantity	Comment	Footprint
C1, C2, C3, C5, C6, C7, C8, C9, C12, C13	10	100nF, 0603	Capacitor 0603
C4, C10, C18	3	10uF, 0603	Capacitor 0603
C11	1	4.7nF, 0603	Capacitor 0603
C14, C15, C17	3	4.7uF, 0603	Capacitor 0603
C16	1	33uF, 1.69mR, 0805 (C2012X5R1A336M125AC)	Capacitor 0805
D1	1	D3V3X4U10LP	D3V3X4U10LP
D2	1	MBR1020VL	SOD-123
D3	1	Red LED, 0603	LED 0603
D4	1	Yellow LED, 0603	LED 0603
D5	1	Green LED, 0603	LED 0603
J1	1	MOLEX 47346-0001	Molex 47346-0001
J2	1	FTDI Breakout	FTDI Breakout
J3	1	MOLEX-95501-2661	MOLEX-95501-2661
J4	1	Molex 47309-2285	Molex 47309-2285
J5	1	4UCON 20404	4UCON 20404
JP1, JP2, JP3, JP4	4	Jumper 2-way	Jumper 2-way
L1	1	1.5mH, 70mR (LQM2HPN1R5MG0L)	Inductor 1008
Q1, Q2, Q3	3	SIA437DJ-T1-GE3	SIA437DJ-T1-GE3
Q4	1	RN1901FETE85LF	SOT-666
R1, R7, R8, R9, R10, R11, R12, R14, R16	9	10KR, 0603	Resistor 0603
R2	1	22R, 0603	Resistor 0603
R3, R4, R6, R17, R18, R19, R22, R23	8	1kR, 0603	Resistor 0603
R5	1	1MR, 0603	Resistor 0603
R13, R15	2	4.7kR, 0603	Resistor 0603
R20, R21	2	100KR, 0,5%, 0603	Resistor 0603
S1, S2	2	FSM4JAH	FSM4JHX
TP1, TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP9, TP10, TP11, TP12, TP13, TP14, TP15, TP16, TP17, TP18, TP19, TP20, TP21, TP22, TP23, TP24, TP25	25	Test Point	Test Point 1.5mm
U1	1	PIC32MZ2048EFH064-250I/PT	TQFP-64
U2	1	ASTMLPA-24.000MHz-LJ-E-T	ASTMLPA
U3	1	24AA32AT-I/MC	TDFN-8 2x3mm
U4	1	M41T62LC6F	M41T62LC6F
U5	1	MCP73830LT-0AAI/MYY	TDFN-6 2x2mm
U6	1	TPS63001DRC	VSON-10

Microcontroller

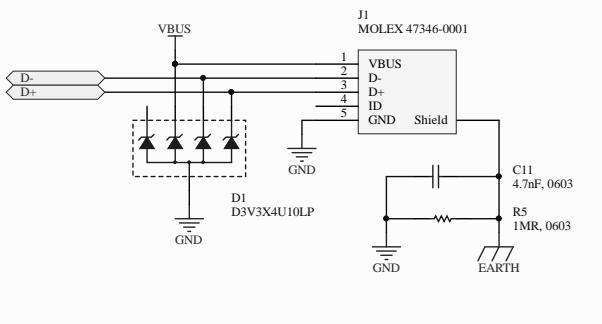


Assumes silicon revision A3 else silicon errata issues may prevent operation
AVDD filter corner frequency = 723Hz
Measured AVDD current = 470uA. Voltage drop of 470uA through 22R = 10mV.

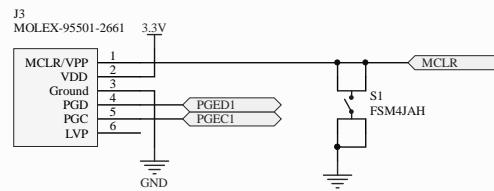
SD Card



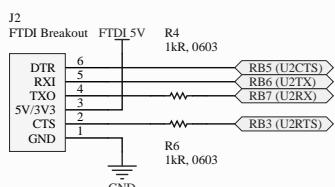
USB



ISCP



FTDI Breakout



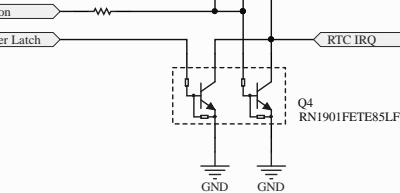
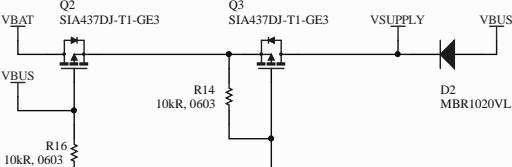
PIC32MZ maximum input clamp current = 5mA
5V clamped to 3.3V through 1kR = 1.7mA

Title

Size	Number	Revision
A3		

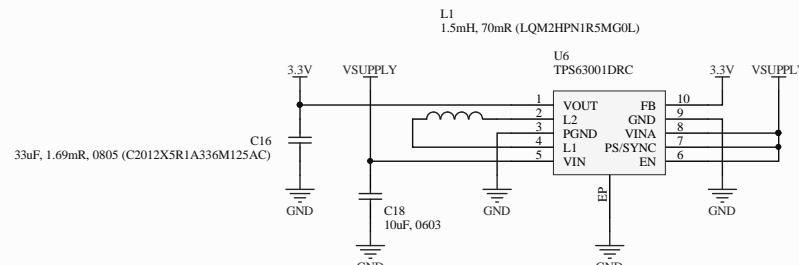
Date: 22/02/2019 Sheet of
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Power Control



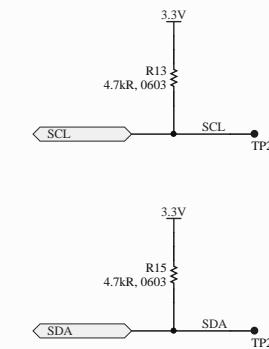
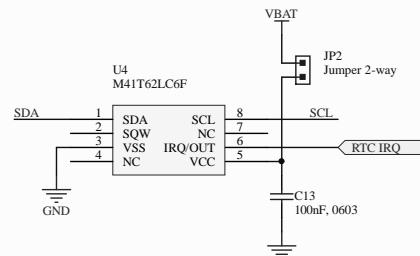
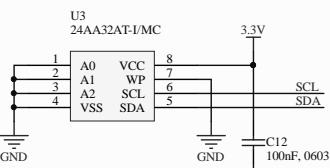
VSUPPLY is enabled when: VBUS is present, the switch is closed. Power Latch is high, or RTC IRQ (open-drain) is asserted
PIC32MZ maximum input clamp current = 5mA. 4.2V clamped to 3.3V through 1kR = 0.9mA.

Voltage Regulator

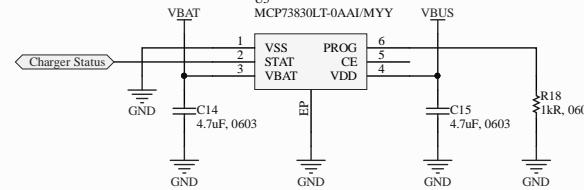
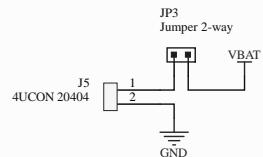


Design as per TI Webench Power Designer for: Vin = 3.0V to 4.2V, Iout = 1A, "Balanced Design"
Line/load regulation = 0.5%

EEPROM and RTC

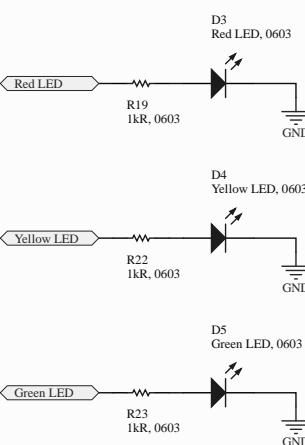


Battery Charger



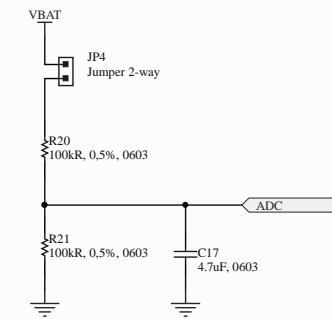
PROG = 1kR for 200mA fast charge current regulation

LEDs



PIC32MZ maximum source current = 15mA

Battery Measurement

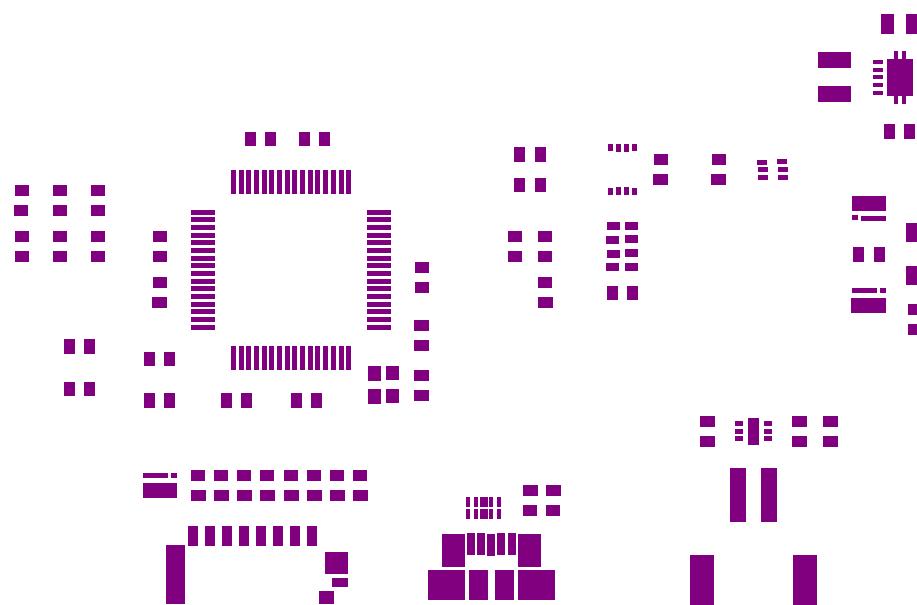


Low-pass filter corner frequency = 0.34Hz

Title

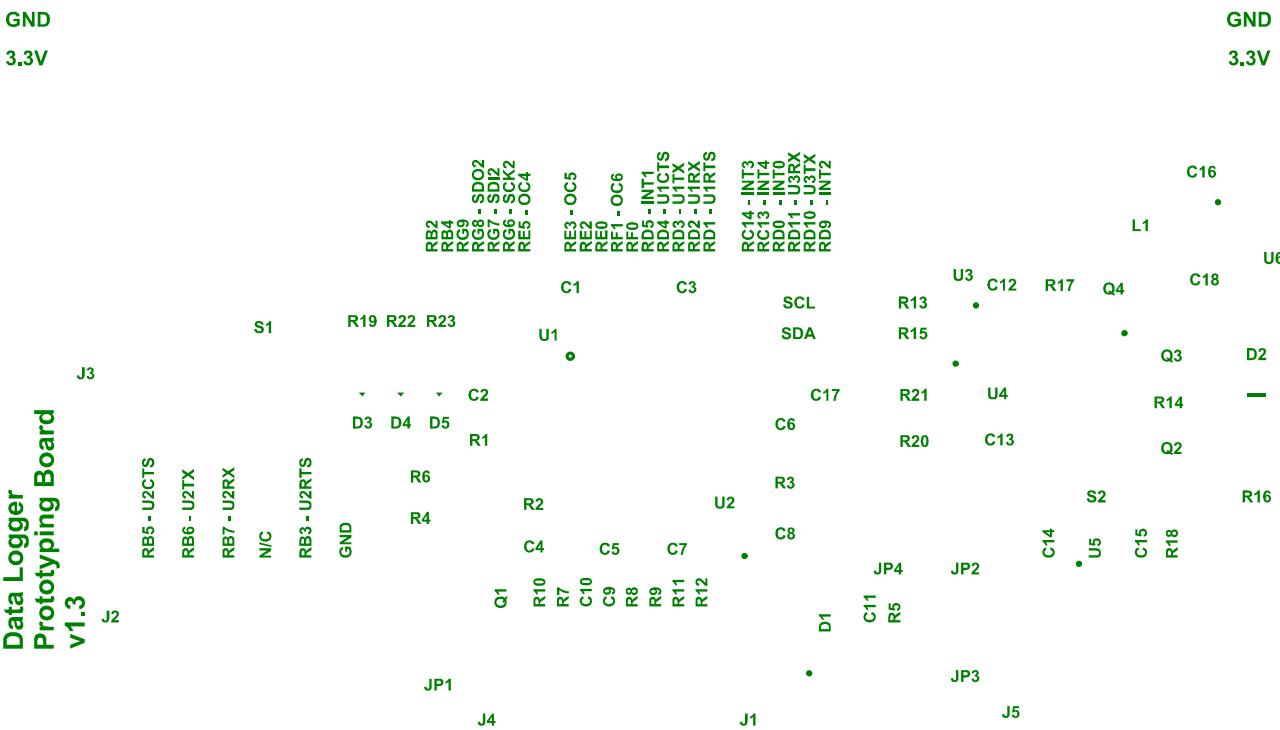
Size	Number	Revision
A3		

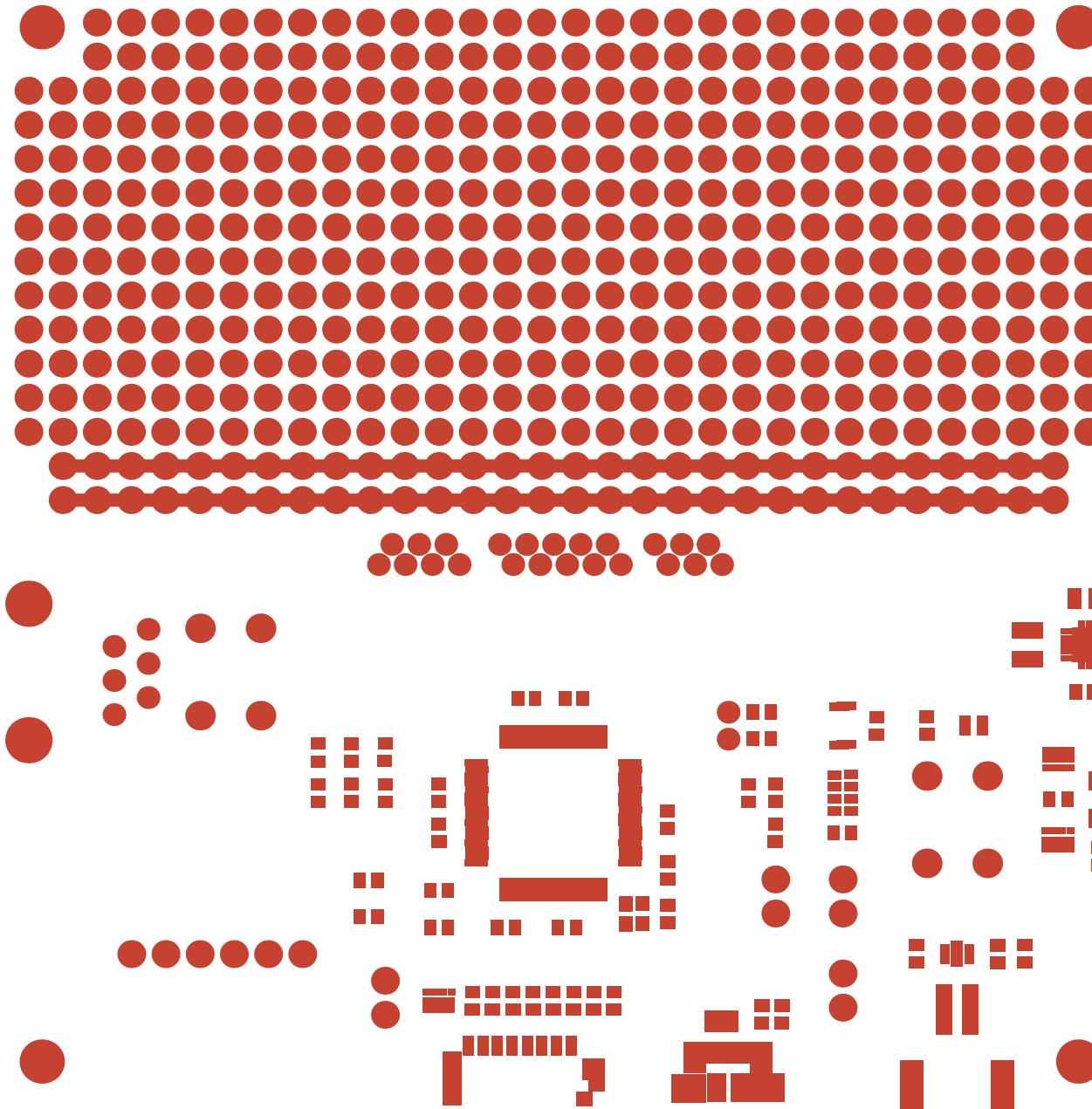
Date: 22/02/2019 Sheet of
File: C:\MyFiles...\Sheet2.SchDoc Drawn By:

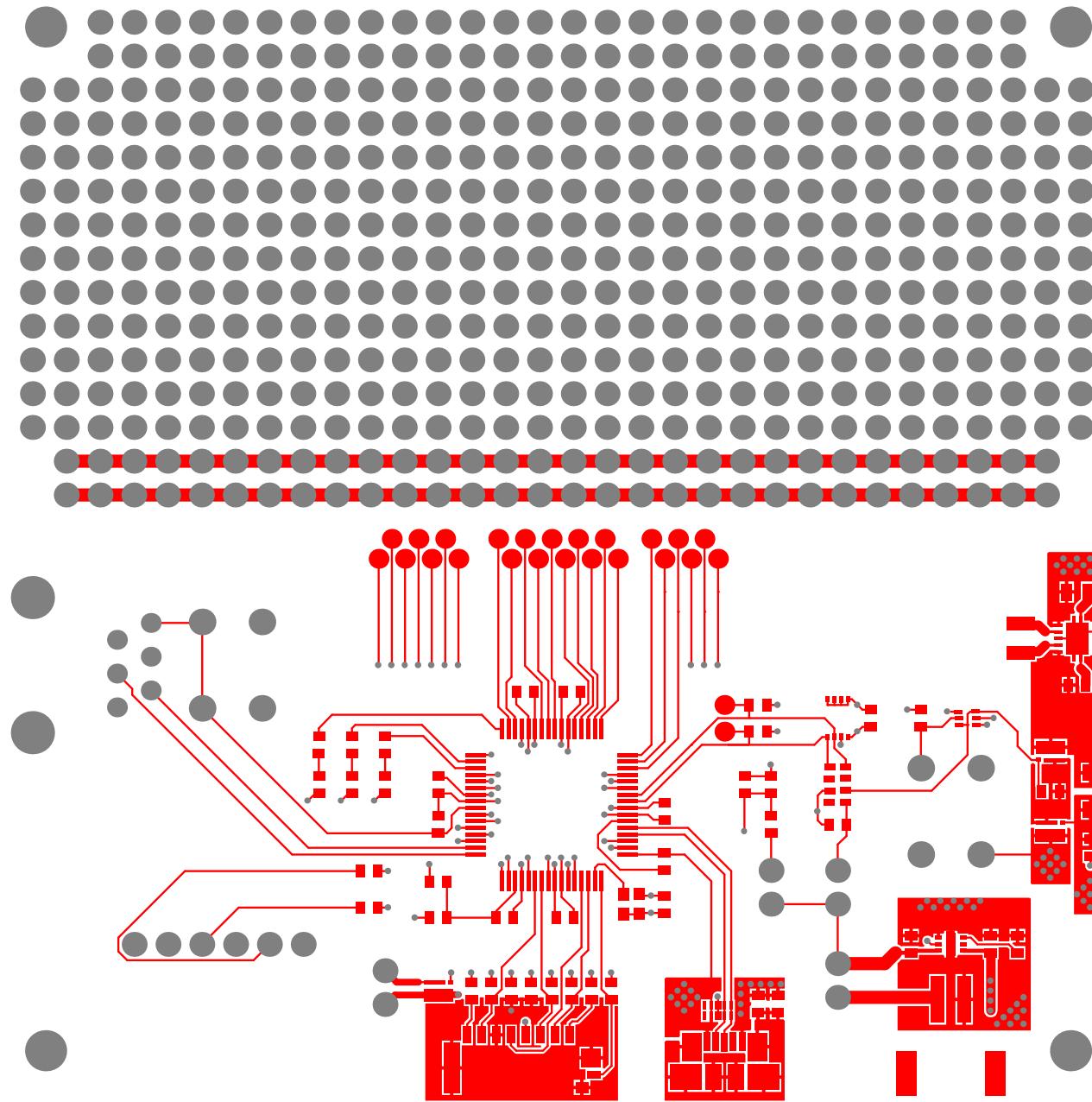


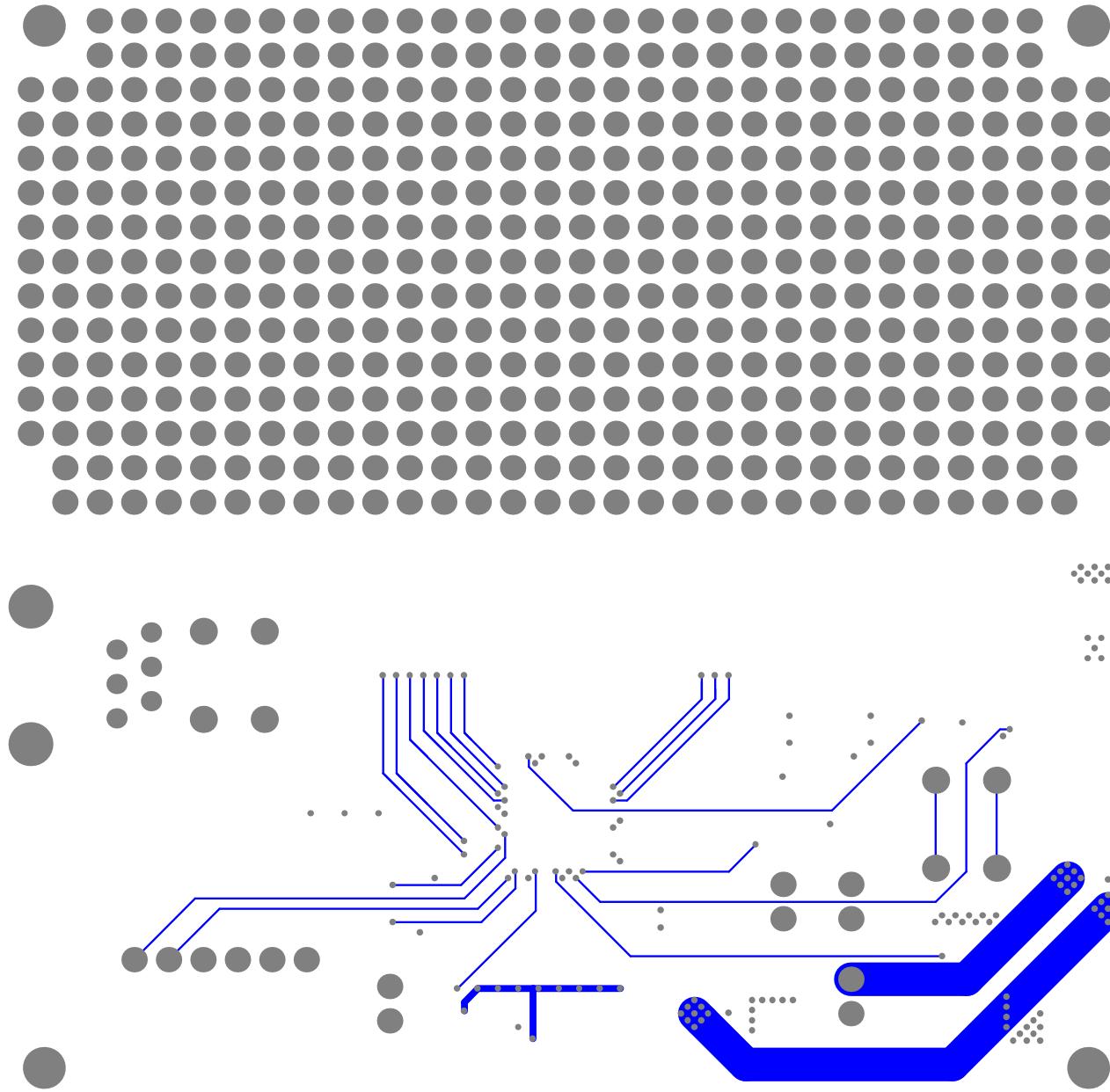
Data Logger
Prototyping Board
v1.3

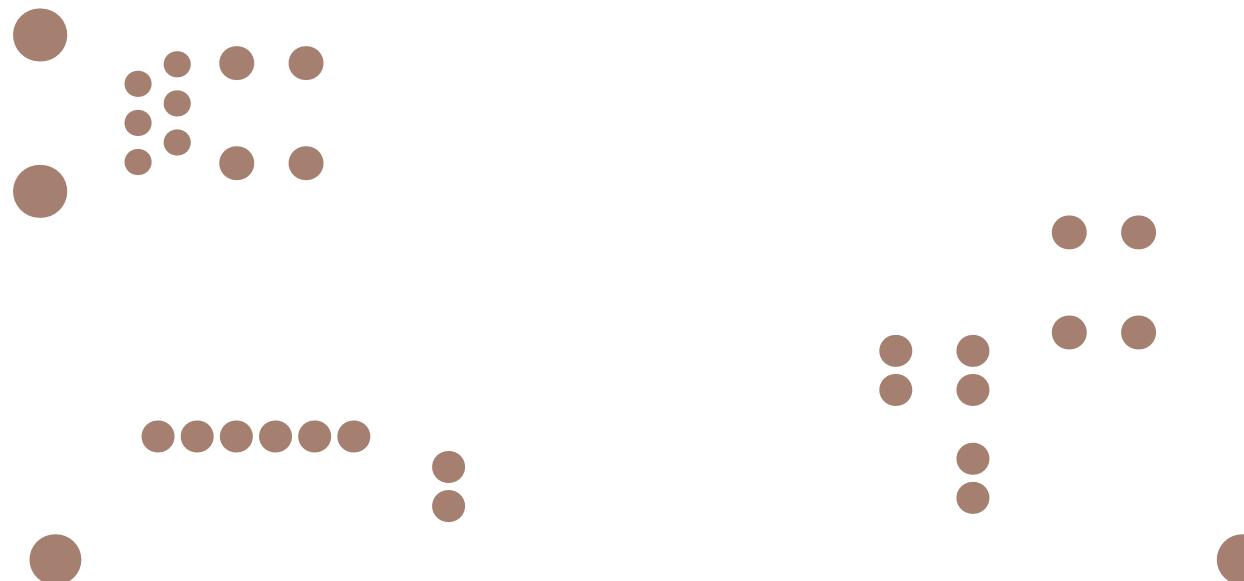
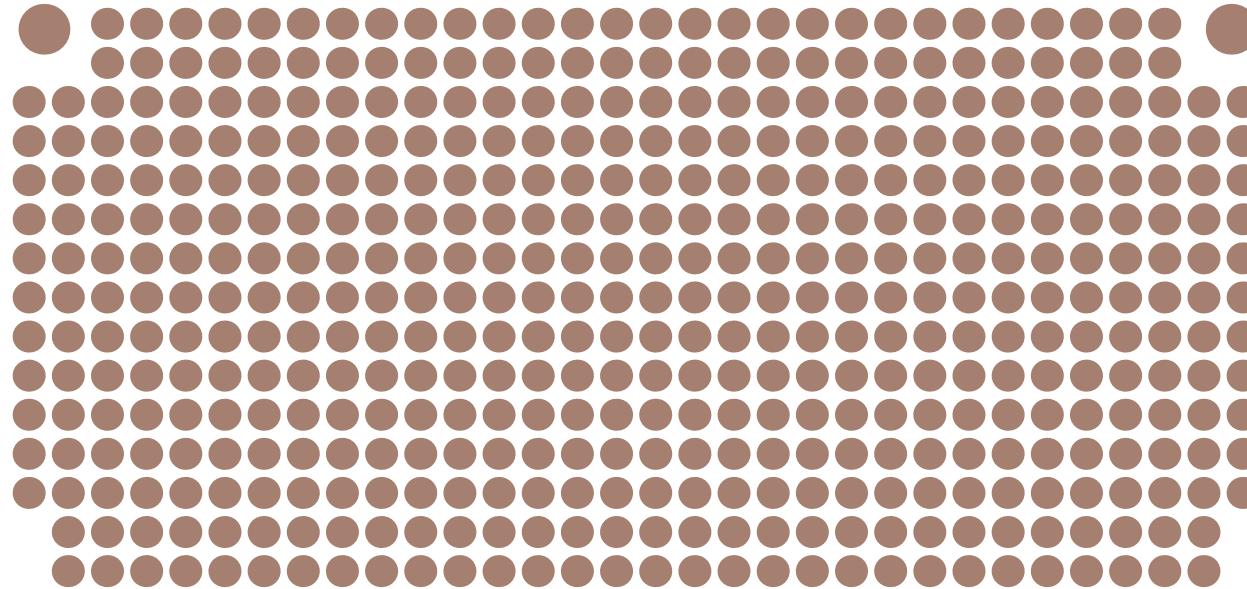
GND
3.3V

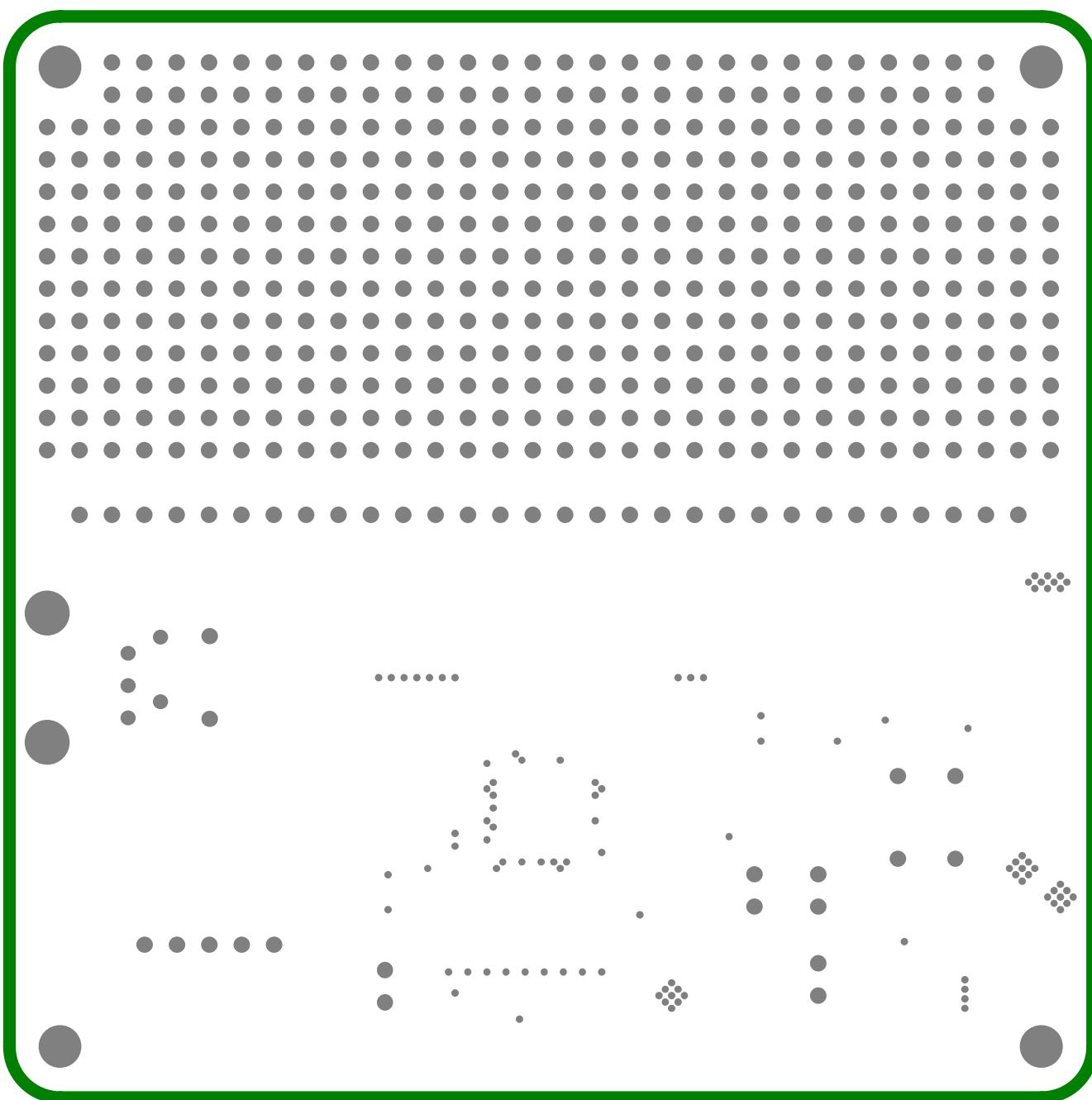


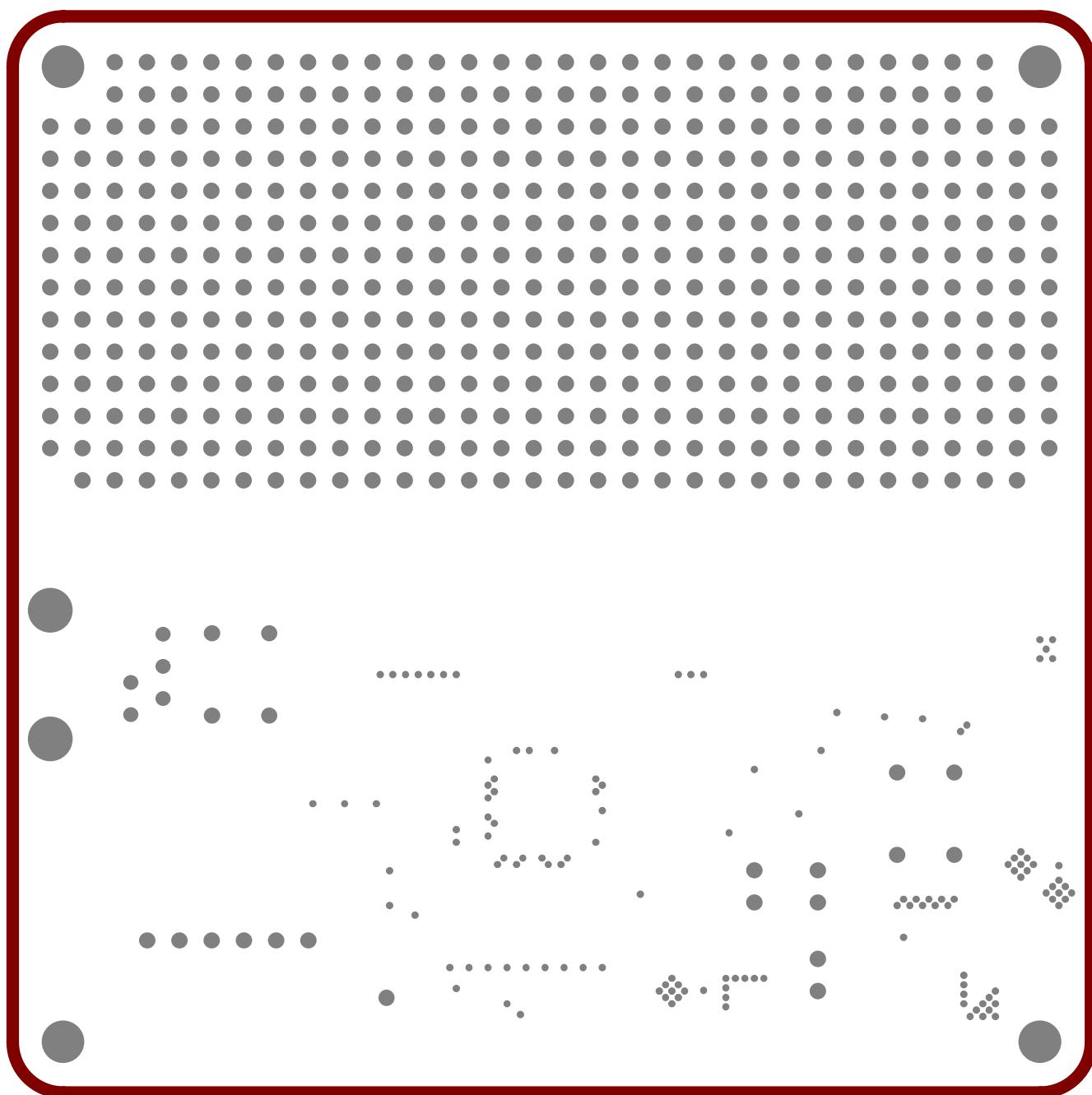


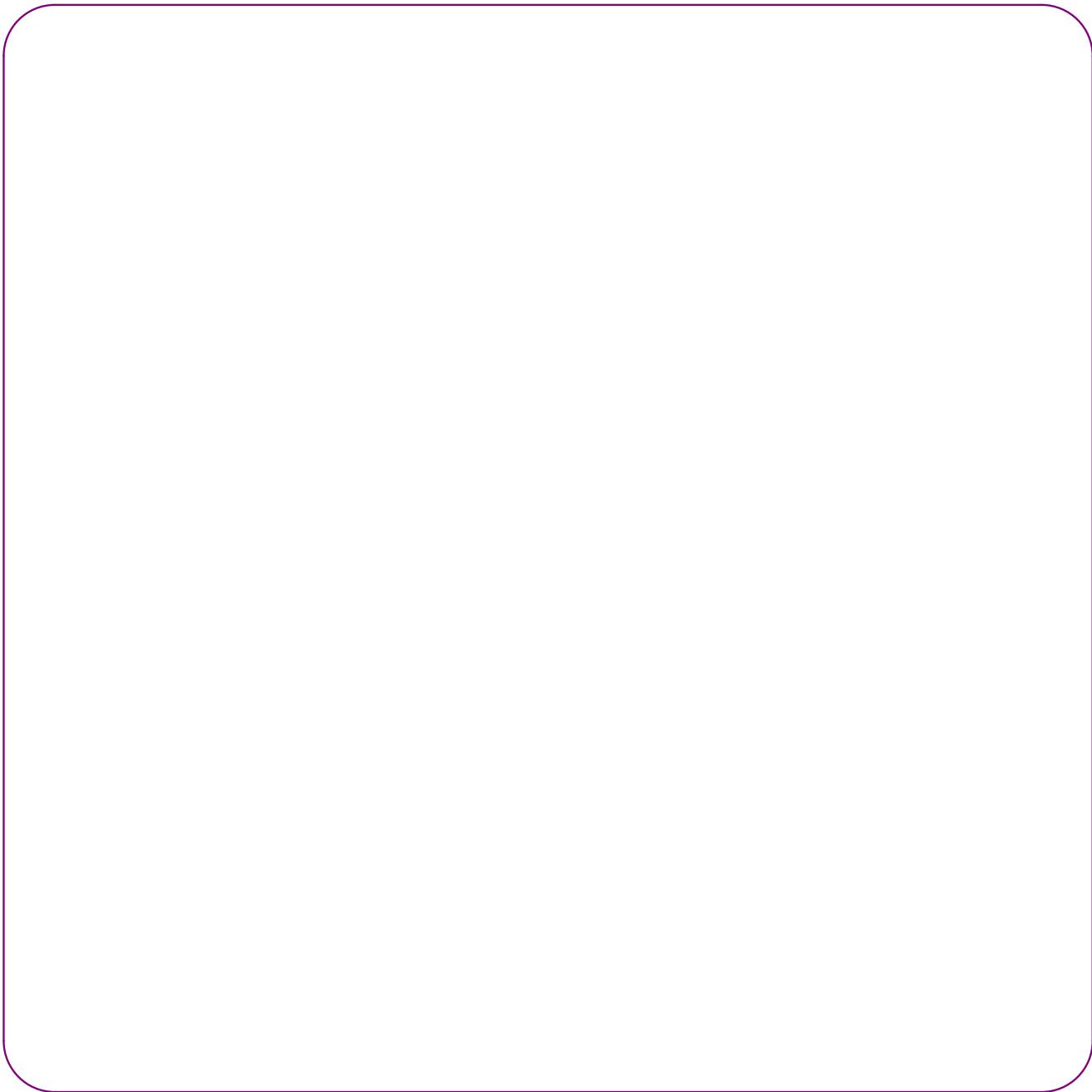




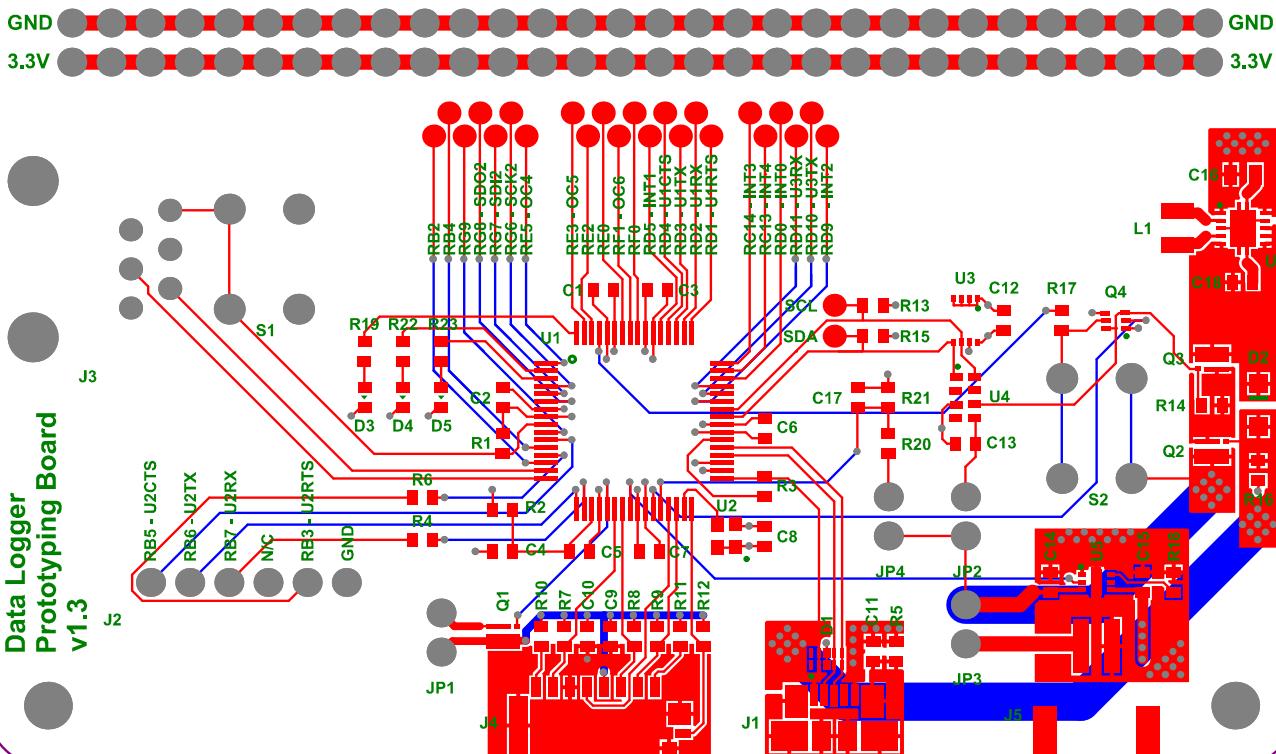




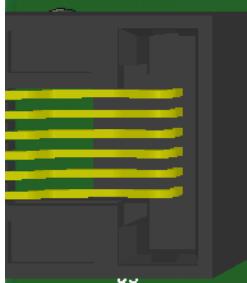




**Data Logger
Prototyping Board
v1.3**



**Data Logger
Prototyping Board
v1.3**



X1

J1

J2

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