Designator	Quantity	Comment	Footprint
C1, C2, C3, C4, C5, C7, C10	7	100nF, 0603	Capacitor 0603
C6, C8	2	22pF, 0603	Capacitor 0603
C9	1	4.7nF, 0603	Capacitor 0603
C11, C12, C13	3	10uF, 0603	Capacitor 0603
D1	1	D3V3X4U10LP	D3V3X4U10LP
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-47309-2851	MOLEX-47309-2851
JP1	1	Jumper 2-way	Jumper 2-way
JP2	1	Jumper 3-way	Jumper 3-way
Q1	1	SIA437DJ-T1-GE3	SIA437DJ-T1-GE3
R1, R7, R8, R9, R10, R11, R12	7	10kR, 0603	Resistor 0603
R2, R4	2	22R, 0603	Resistor 0603
R3, R5	2	470R, 0603	Resistor 0603
R6	1	1MR, 0603	Resistor 0603
S1	1	FSM4JHX	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, TP26, TP27, TP28, TP29, TP30, TP31, TP32, TP33	33	Test Point	Test Point 1.5mm
U1	1	PIC32MZ2048EFH064-250I/PT	TQFP-64
U2	1	ADP3338AKCZ-3.3-RL	SOT-223
Y1	1	ASTMTXK-32.768kHz-LG-T	ASTMTXK
Y2	1	ABM8-24.000MHZ-B2-T	ABM8

Microcontroller

U1
PIC32MZ2048EFH064-250I/PT

3.3V
R1 10kR, 0603
C2 100nF, 0603
GND
3.3V
MCLR

TP1 RE5
TP3 RE6
TP5 RE7
TP7 RG6
TP9 RG7
TP10 RG8

TP14 RG9
TP15 RB4
RB5 (U2CTS)
TP18 RB2
RB3 (U2RTS)
PGEC1
PGED1

RB6 (U2TX)
RB7 (U2RX)

TP25 RB8
SD DO
SD DI
SD Disable

TP30 RB12
TP32 RB13
SD SCLK
SD CS

3.3V
C4 100nF, 0603
GND

C6 22pF, 0603
GND
C8 22pF, 0603
GND
Y2 ABM8-24.000MHZ-B2-T
GND

3.3V
C7 100nF, 0603
GND
3.3V

Pin	Signal
1	AN17/ETXEN/RPE5/PMD5/RE5
2	AN16/ETXD0/PMD6/RE6
3	AN15/ETXD1/PMD7/RE7
4	AN14/C1IND/RPG6/SCK2/PMA5/RG6
5	AN13/C1INC/RPG7/SDA4/PMA4/RG7
6	AN12/C2IND/RPG8/SCL4/PMA3/RG8
7	VSS
8	VDD
9	MCLR
10	AN11/C2INC/RPG9/PMA2/RG9
11	AN45/C1INA/RPB5/RB5
12	AN4/C1INB/RB4
13	AN3/C2INA/RPB3/RB3
14	AN2/C2INB/RPB2/RB2
15	PGEC1/VREF-/CVREF-/AN1/RPB1/RB1
16	PGED1/VREF+/CVREF+/AN0/RPB0/PMA6/RB0
17	PGEC2/AN46/RPB6/RB6
18	PGED2/AN47/RPB7/RB7
19	AVDD
20	AVSS
21	AN48/RPB8/PMA10/RB8
22	AN49/RPB9/PMA7/RB9
23	TMS/CVREFOUT/AN5/RPB10/PMA13/RB10
24	TDO/AN6/PMA12/RB11
25	VSS
26	VDD
27	TCK/AN7/PMA11/RB12
28	TDI/AN8/RB13
29	AN9/RPB14/SCK3/PMA1/RB14
30	AN10/EMDC/AEMDC/RPB15/OCFB/PMA0/RB15
31	OSC1/CLKI/RC12
32	OSC2/CLKO/RC15

Signal	Pin
AN18/ERXERR/PMD4/RE4	64
TRD3/SQID3/ERXCLK/EREFCLK/RPE3/PMD3/RE3	63
TRD2/SQID2/ERXDV/ECRSDV/AECRSDV/PMD2/RE2	62
TRD1/SQID1/ERXD0/PMD1/RE1	61
VDD	60
VSS	59
TRD0/SQID0/ERXD1/PMD0/RE0	58
TRCLK/SQICLK/ERXD2/AETXD0/RPF1/RF1	57
ERXD3/AETXD1/RPF0/RF0	56
VSS	55
VDD	54
SQICS1/RPD5/PMRD/RD5	53
SQICS0/RPD4/PMWR/RD4	52
AERXERR/ETXCLK/RPD3/SCL3/RD3	51
ETXERR/AETXEN/RPD2/SDA3/RD2	50
EMDIO/AEMDIO/RPD1/SCK1/RD1	49
SOSCO/RPC14/T1CK/RC14	48
SOSCI/RPC13/RC13	47
AERXD1/ETXD3/RPD0/RTCC/INT0/RD0	46
AERXCLK/AEREFCLK/ECRS/RPD11/PMCS1/PMA14/RD11	45
ECOL/RPD10/SCL1/SCK4/RD10	44
AERXD0/ETXD2/RPD9/SDA1/PMCS2/PMA15/RD9	43
RPF5/SCL5/PMA8/RF5	42
RPF4/SDA5/PMA9/RF4	41
VSS	40
VDD	39
RPF3/USBID/RF3	38
D+	37
D-	36
VSS	35
VUSB3V3	34
VBUS	33

3.3V
C1 100nF, 0603
GND

RE4 TP2
RE3 TP4
RE2 TP6
RE1 TP8
GND
RE0 TP11
RF1 TP12
RF0 TP13
GND
C3 100nF, 0603
3.3V

RD5 TP16
RD4 TP17
RD3 TP19
RD2 TP20
RD1 TP21
3.3V

3.3V
Y1 ASTMTXK-32.768kHz-LG-T
CLK Out GND
Vdd GND
GND

SOSCO
RC13
RD0 TP23
RD11 TP24
RD10 TP26
RD9 TP27
RF5 TP28
RF4 TP29
TP22
GND
C5 100nF, 0603
3.3V

RF3 TP31
3.3V VBUS
D+
D-
GND

Assumes silicon revision A3 else silicon errata issues may prevent operation

SD card

3.3V
Q1 SIA437DJ-T1-GE3
SD Disable
SD 3.3V
C10 100nF, 0603
C11 10uF, 0603
GND GND

R7 10kR, 0603
R8 10kR, 0603
R9 10kR, 0603
R10 10kR, 0603
R11 10kR, 0603
R12 10kR, 0603
GND

Pin	Signal
1	DAT2
2	CD/DAT3 (CS)
3	CMD (DI)
4	VDD
5	CLK (SCLK)
6	VSS
7	DAT0 (DO)
8	DAT1
	CD1
	CD2
	Shield

SD CS
SD DI
SD SCLK
SD DO
TP33 SD CD
GND
J4 MOLEX-47309-2851

FTDI Breakout

J2 FTDI Breakout FTDI 5V
R3 470R, 0603

Pin	Signal
6	DTR
5	RXI
4	TXO
3	5V/3V3
2	CTS
1	GND

RB5 (U2CTS)
RB6 (U2TX)
RB7 (U2RX)
RB3 (U2RTS)
R5 470R, 0603
GND
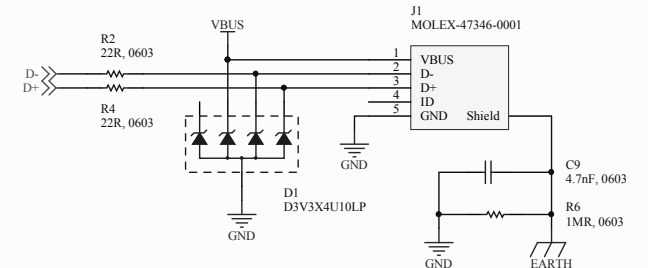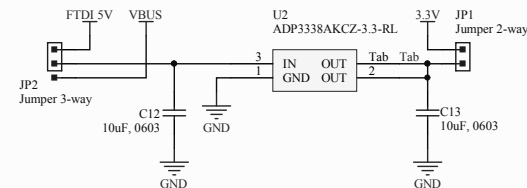
PIC32MZ max input clamp current = 5mA
5V clamped to 3.3V through 470R = 3.6mA

USB

VBUS
R2 22R, 0603
D-
D+
R4 22R, 0603
GND
D1 D3V3X4U10LP
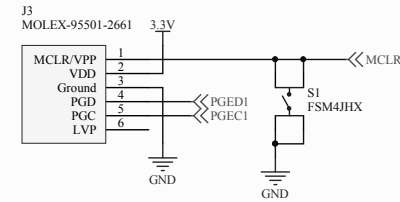
J1 MOLEX-47346-0001

Pin	Signal
1	VBUS
2	D-
3	D+
4	ID
5	GND Shield

C9 4.7nF, 0603
GND
R6 1MR, 0603
EARTH

Voltage regulator

FTDI 5V VBUS
U2 ADP3338AKCZ-3.3-RL
3.3V
JP1 Jumper 2-way

IN	OUT
GND	OUT
	Tab Tab

JP2 Jumper 3-way
C12 10uF, 0603
GND
C13 10uF, 0603
GND

ISCP

J3 MOLEX-95501-2661
3.3V

Pin	Signal
1	MCLR/VPP
2	VDD
3	Ground
4	PGD
5	PGC
6	LVP

MCLR
PGED1
PGEC1
S1 FSM4JHX
GND
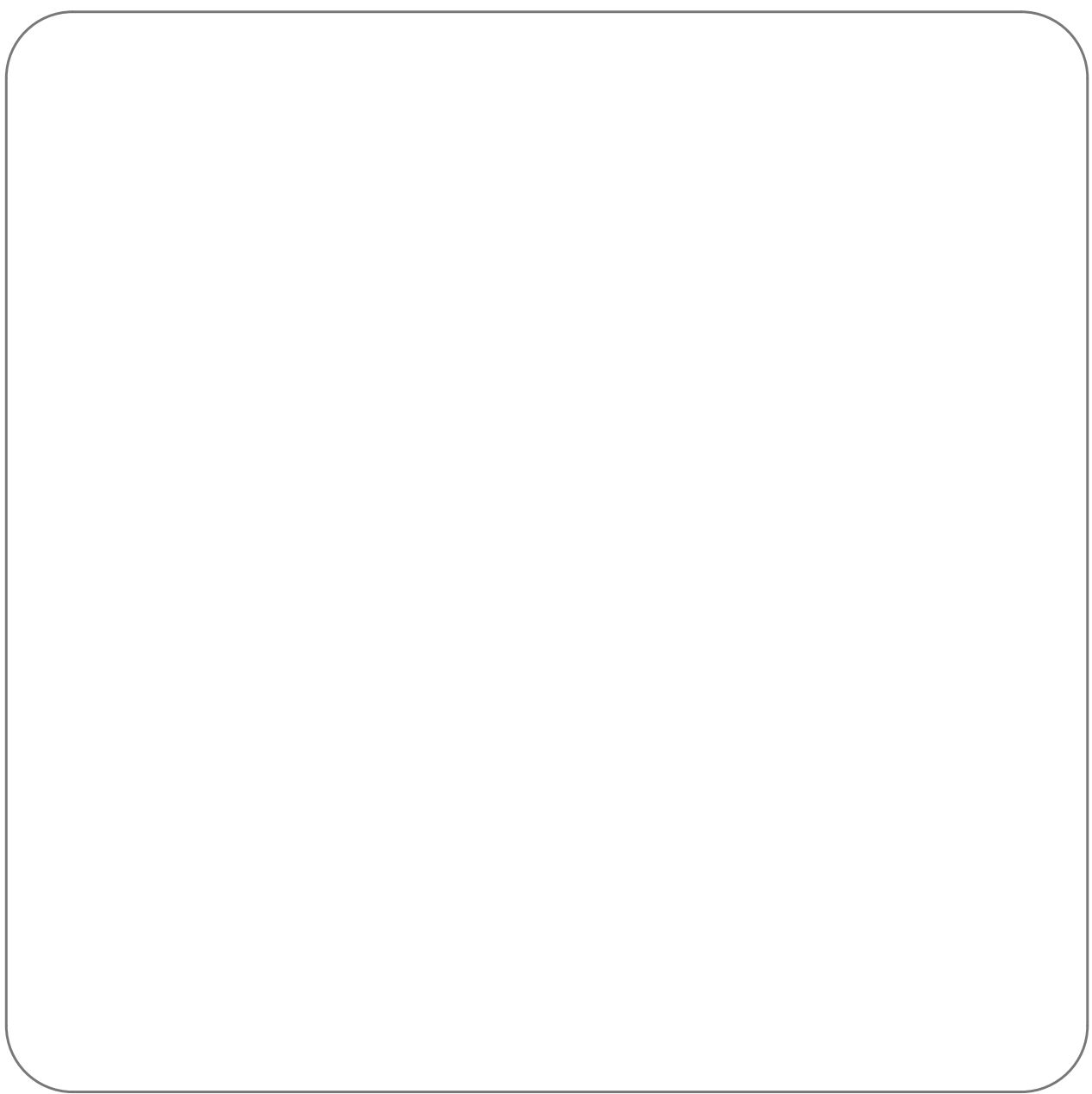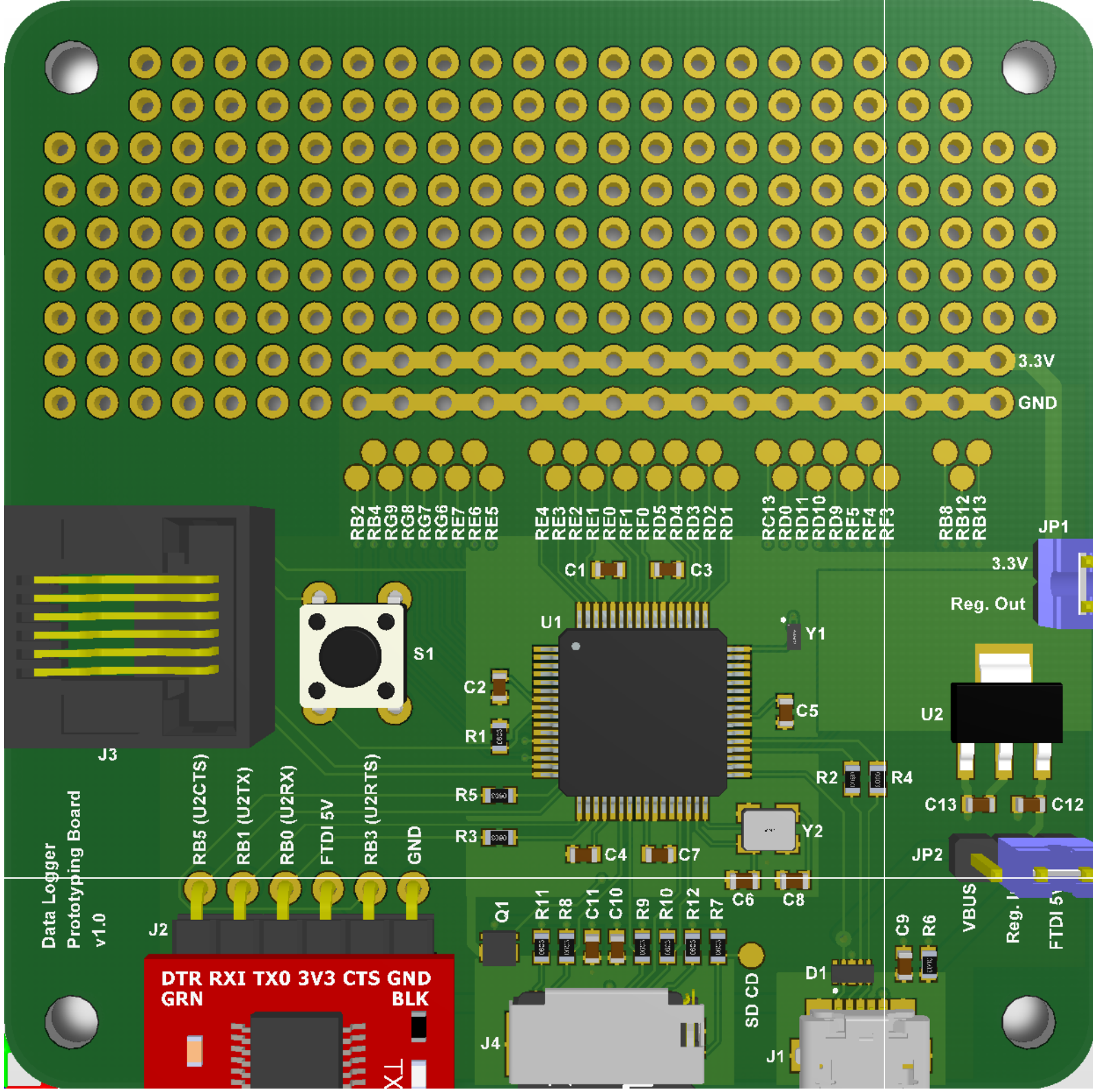GND
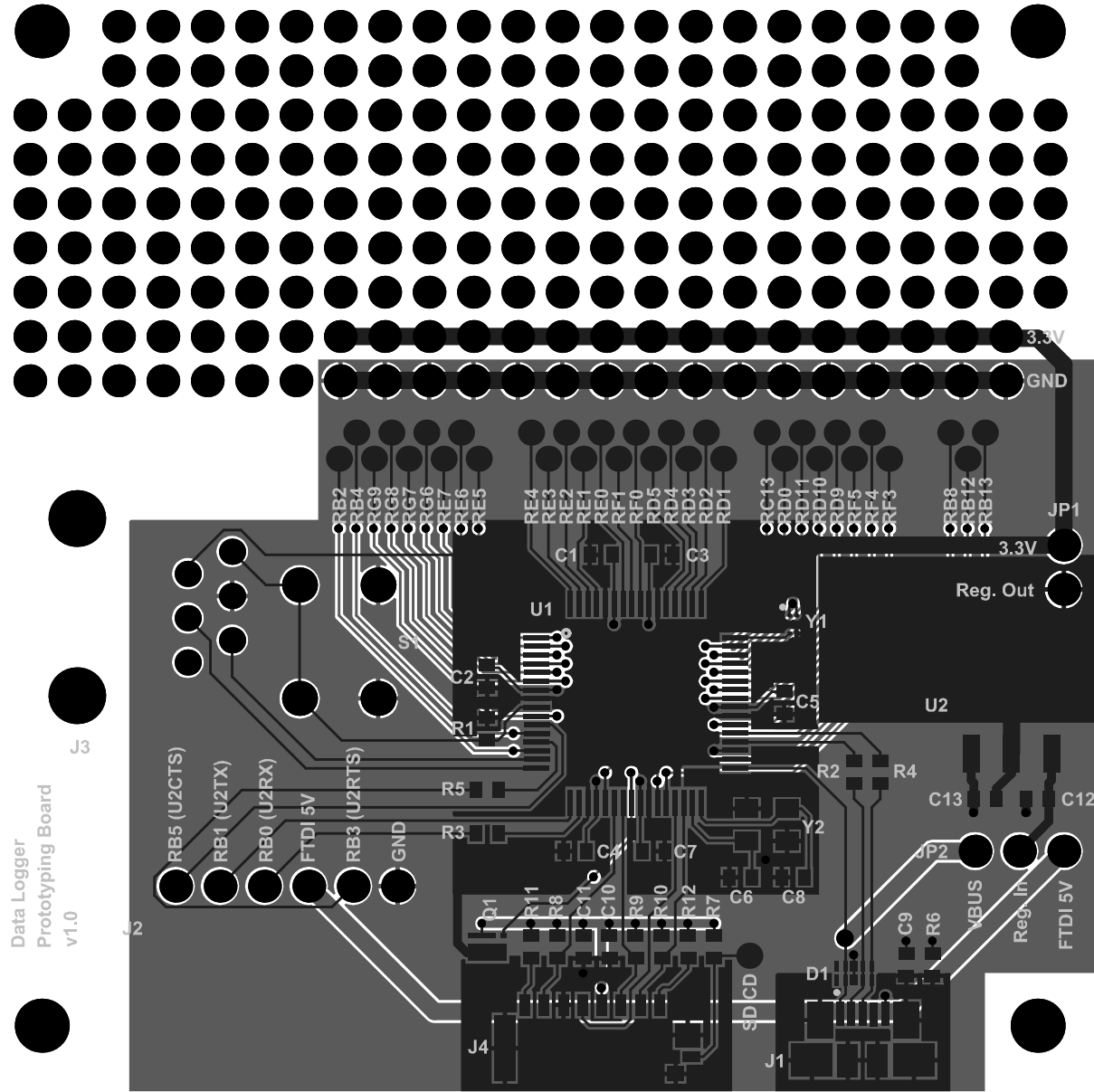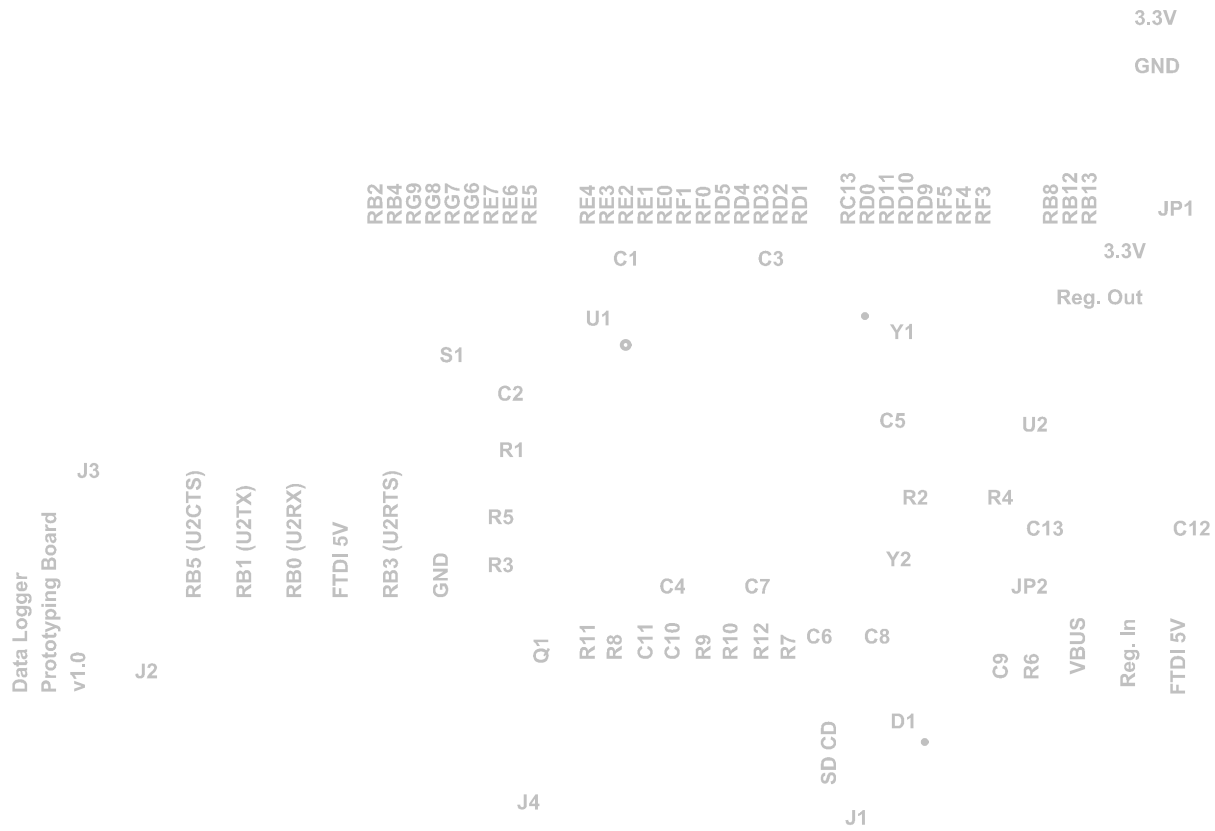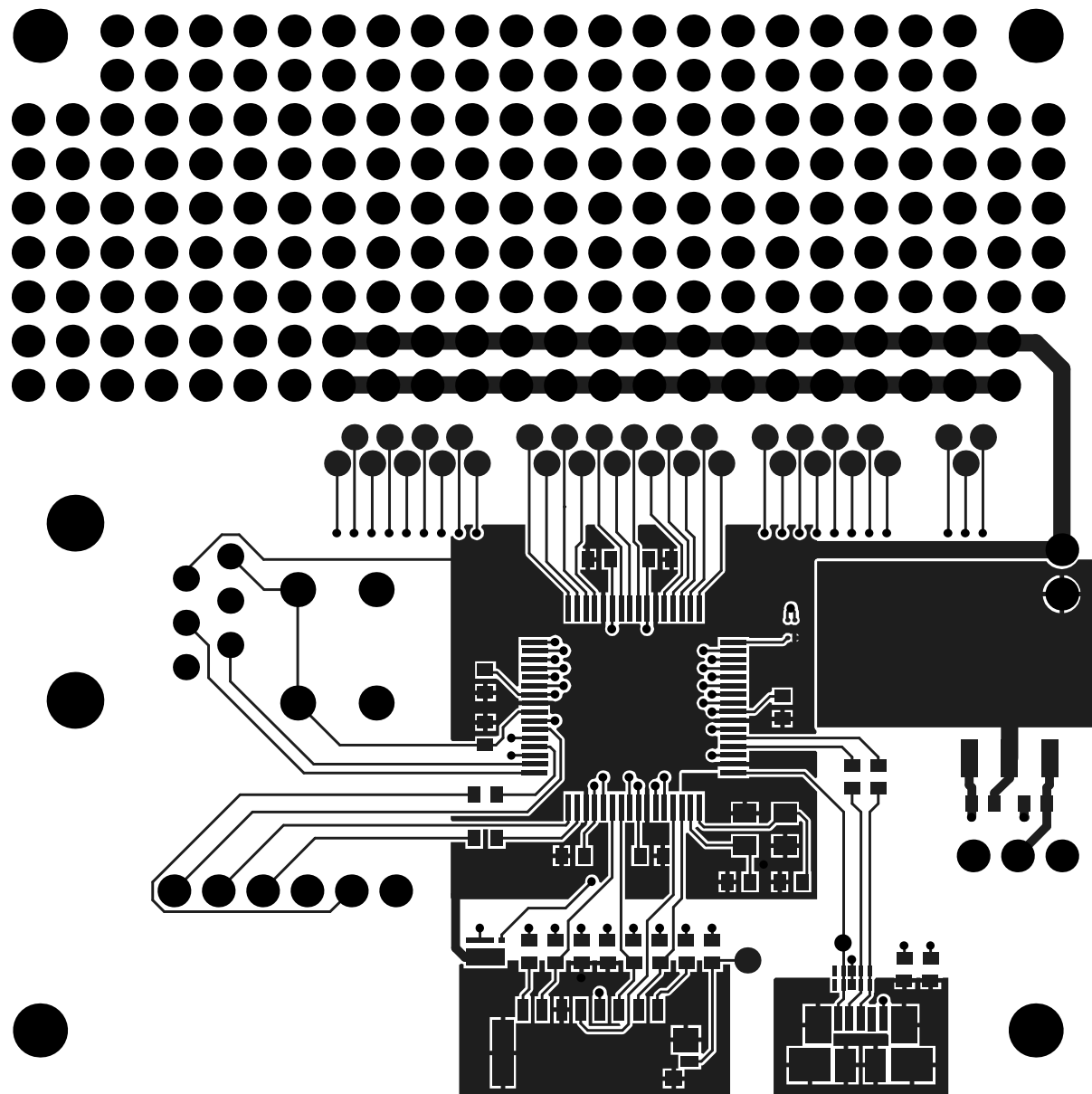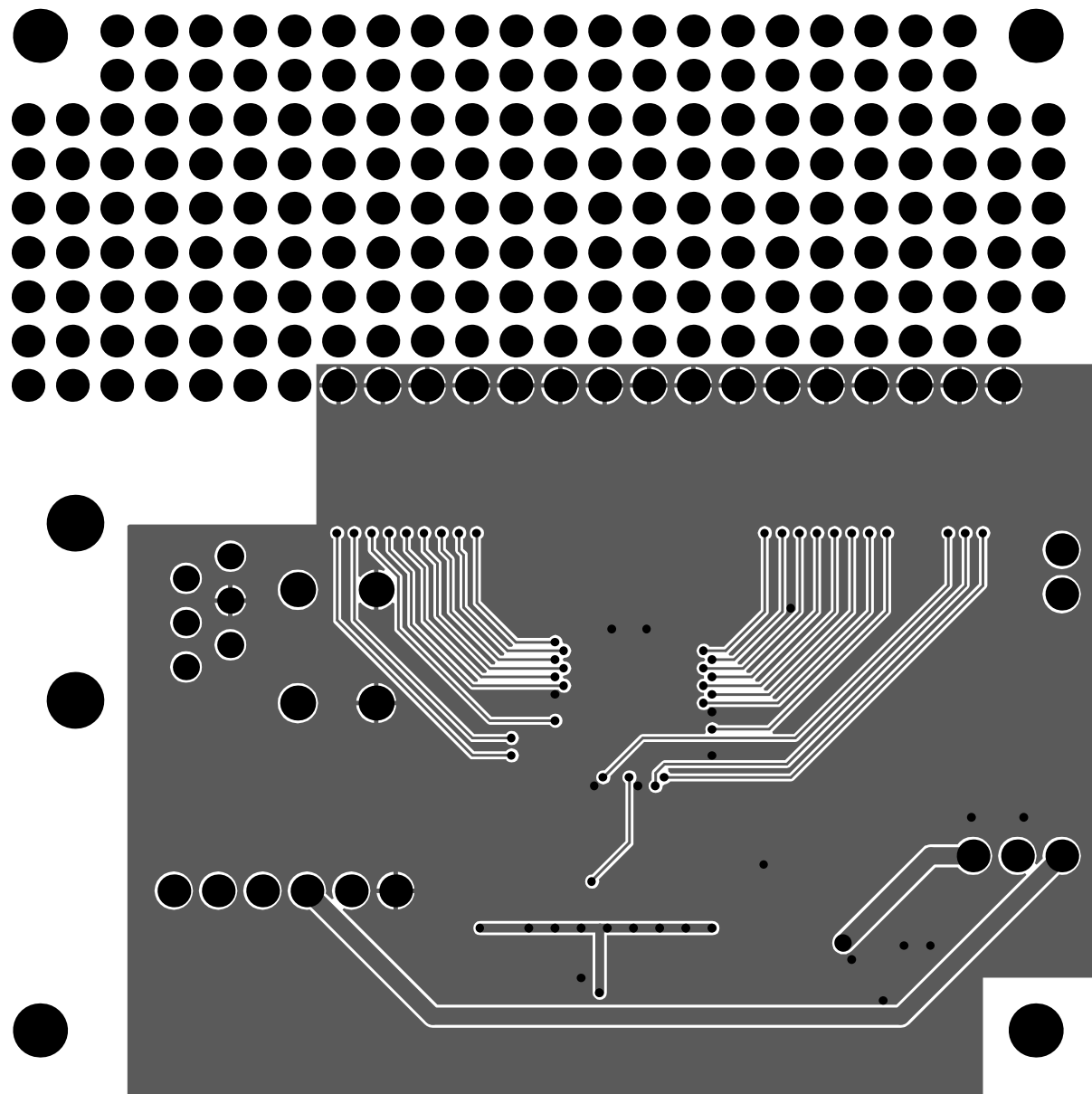
Data Logger
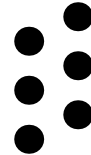Prototyping Board
v1.0

J3
J2

RB5 (U2CTS)
RB1 (U2TX)
RB0 (U2RX)
FTDI 5V
RB3 (U2RTS)
GND

RB2
RB4
RG9
RG8
RG7
RG6
RE7
RE6
RE5

RE4
RE3
RE2
RE1
RF0
RF1
RD5
RD4
RD3
RD2
RD1

RC13
RD0
RD11
RD10
RD9
RF5
RF4
RF3

RB8
RB12
RB13
JP1

3.3V
GND

3.3V
Reg. Out

C1
C3

U1
Y1

S1
C2
U2
C5

R1
R2
R4
C13
C12

R5
Y2

R3
C4
C7
JP2

Q1
R11
R8
C11
C10
R9
R10
R12
R7
C6
C8
C9
R6
VBUS
Reg. In
FTDI 5V

SD CD
D1

J4
J1

3.3V

GND

RB2
RB4
RG9
RG8
RG7
RG6
RE7
RE6
RE5

RE4
RE3
RE2
RE1
RE0
RF1
RF0
RD5
RD4
RD3
RD2
RD1

RC13
RD0
RD11
RD10
RD9
RF5
RF4
RF3

RB8
RB12
RB13

JP1

3.3V

Reg. Out

C1   C3

U1

Y1

C2

R1

C5

U2

R2   R4

C13   C12

R5

R3

Y2

JP2

C4   C7

C6   C8

VBUS

Reg. I

FTDI 5

Data Logger
Prototyping Board
v1.0

RB5 (U2CTS)
RB1 (U2TX)
RB0 (U2RX)
FTDI 5V
RB3 (U2RTS)
GND

S1

Q1
R11
R8
C11
C10
R9
R10
R12
R7

C9   R6

J3

J2

DTR RXI TX0 3V3 CTS GND
GRN   BLK

SD CD

D1

TX

J4

J1

3.3V

GND

RB2
RB4
RG9
RG8
RG7
RG6
RE7
RE6
RE5

RE4
RE3
RE2
RE1
RE0
RF1
RF0
RD5
RD4
RD3
RD2
RD1

RC13
RD0
RD11
RD10
RD9
RF5
RF4
RF3

RB8
RB12
RB13

JP1

3.3V

Reg. Out

C1   C3

U1   Y1

C2   C5

R1

U2

R5   R2   R4

R3   C13   C12

Y2

C4   C7   JP2   VBUS
                        Reg. In
C6   C8   FTDI 5V

J3

S1

Data Logger
Prototyping Board
v1.0

RB5 (U2CTS)
RB1 (U2TX)
RB0 (U2RX)
FTDI 5V
RB3 (U2RTS)
GND

J2

Q1
R11
R8
C11
C10
R9
R10
R12
R7

C9
R6

D1

SD CD

J4

J1