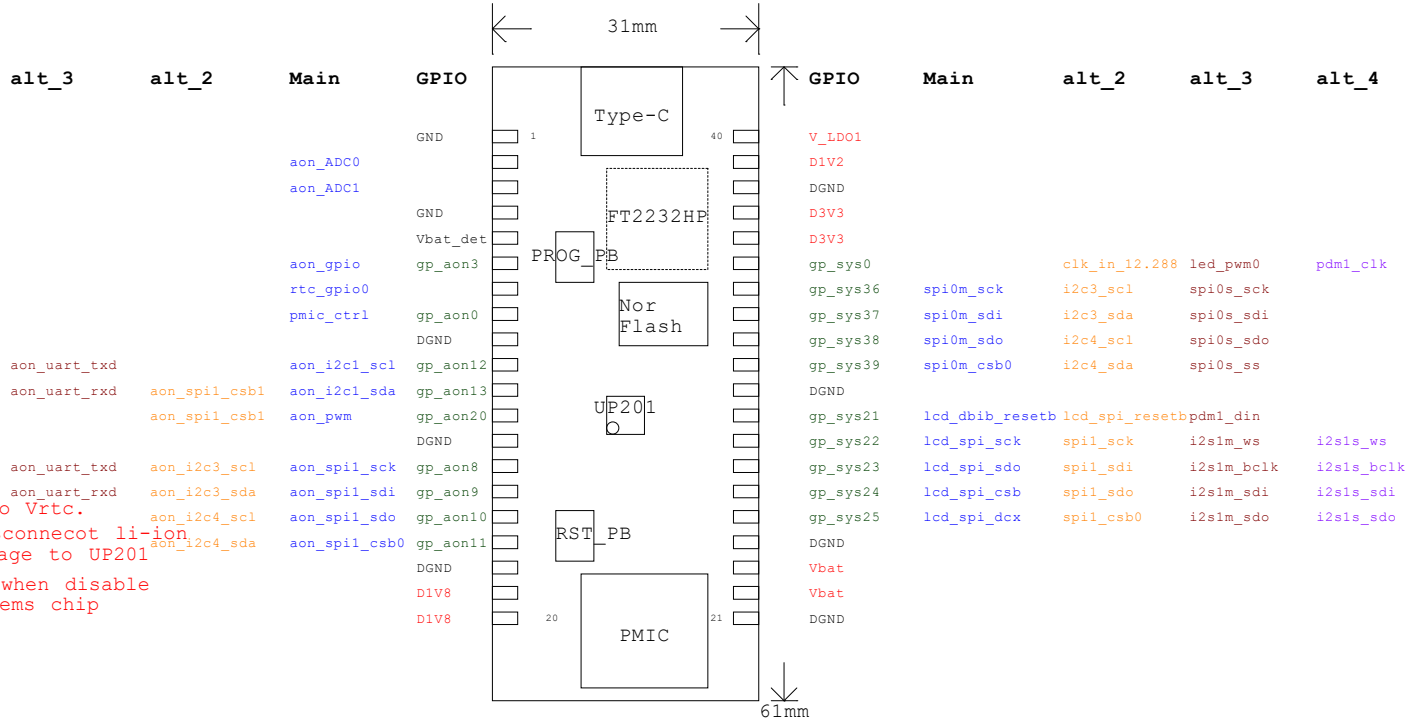
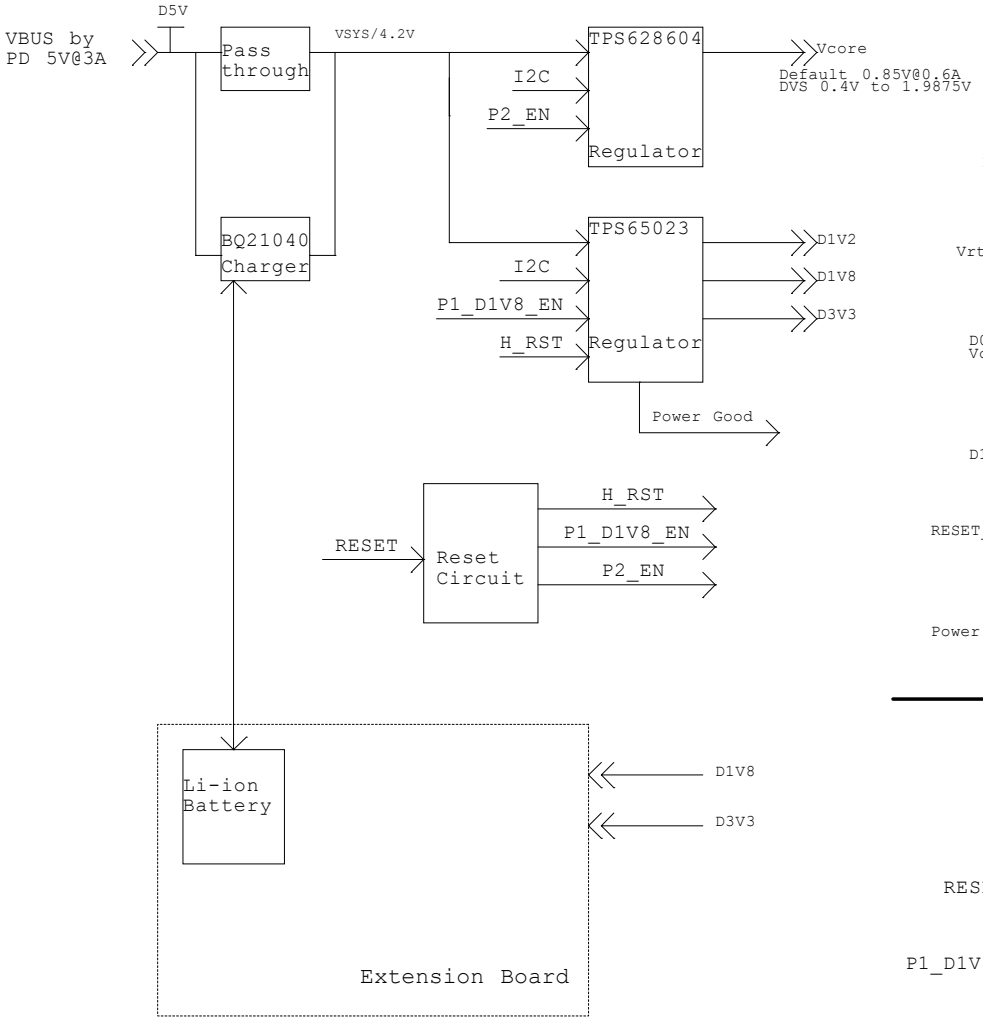
Version	Description
0.1	1. Initial 2. Fixed IO:a.AON_I2C0_PMIC b.JTAG c.UART0_ISP d.OSPI_nor_flash 3. Flex IO & conect to extension board:a.AON_I2C1 b.AON_PWM c.AON_ADC d.AON_SPI1 e.SPI_LCD f.SPI0 g.GPIO for RTC & AON h.PMIC_CTRL 4. Extension board pin count:IO x 21. Gnd x 11. P: 8
0.2	1. Fix typo
0.3	1. CON1 add 40 more pin 2. Change U13 footprint
0.4	1. U11 & U12 Change footprint from TSSOP to UQFN 2. PCB dimension change to 31mm x 51mm.
0.5	1. Change U2 footprint from SOIC-8 to USON8 2. PCB dimension change to 31mm x 61mm.
0.6	1. U7 change to CON1 2. Modify SOT23 footprint 3. CON1 add pin5 & 6 4. Add 90ohm impedance, 4-5.5-4
0.7	1. U7 change to CON2 2. Modify SOT23 footprint
0.8	1. Add pull up R on Flash reset pin 2. Add C55 on RESET#_FT 3. R72 connect to D1V8_IO 4. R34 connect to Vrtc 5. Remove Q1 & Q2, add U14 & U15
0.9	1. Change Y2 ground from GND_USB to DGND 2. Add silkscreen
1.0	Release
1.1	1. D1V8 at U13/pin 5 issue.==> D1V8 change to Vrtc. 2. The voltage at Vbat is over 4.6V when disconnecot li-ion battery ==>add divide R84/R85 to reduce voltage to UP201 3. The 1V8 from TPS65023 can not drop to 0V when disable this power rail ==> only drop to 0.5V and seems chip internally issue. 4. Add CB22. 5. Add power sw IC for nor-flash power rail. 6. Change 32.768K crystal from DIP to SMD.
1.2	1. Change the power for EN_DVS pull up from Vrtc to Vsys 2. Change the power for U16 EN pull up from D1V8 to Vrtc

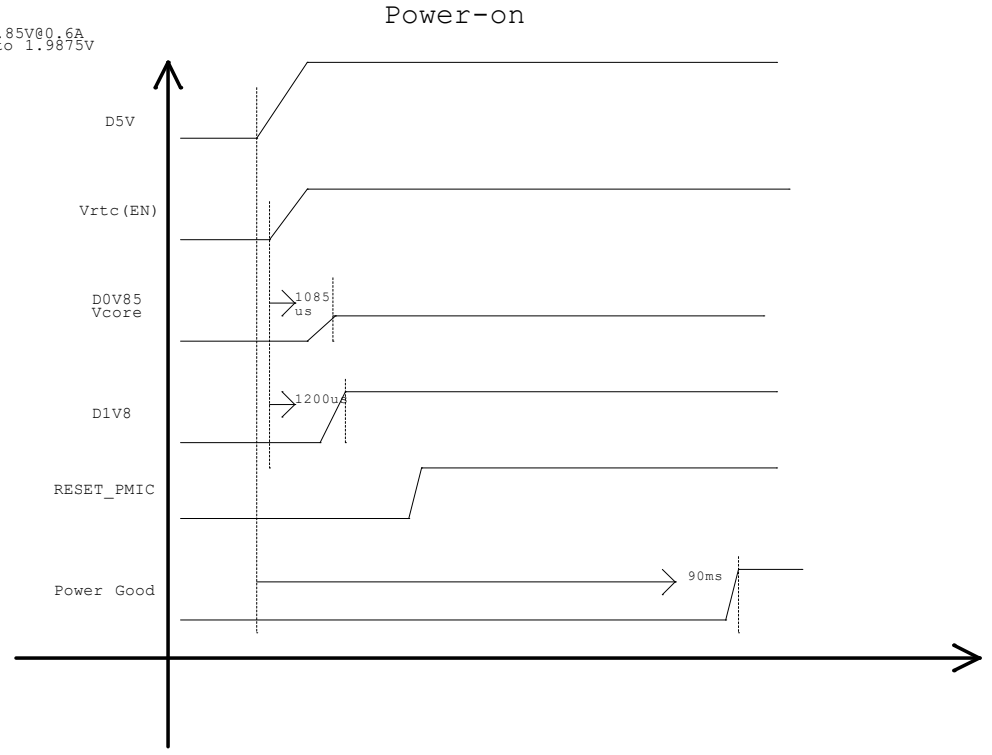


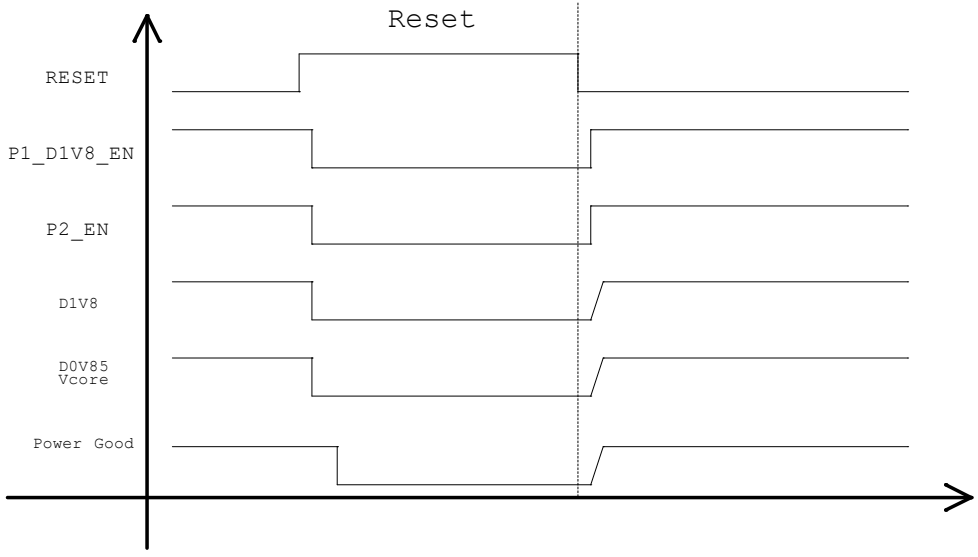
Upbeat Technology Inc.

Title: UP201 MCU Board

Size: Custom	Document Number: Con_Placement	Department: System	Designer: Cliff Yeh	Rev: 1.2
Date: Thursday, March 13, 2025		Sheet: 1 of 6		





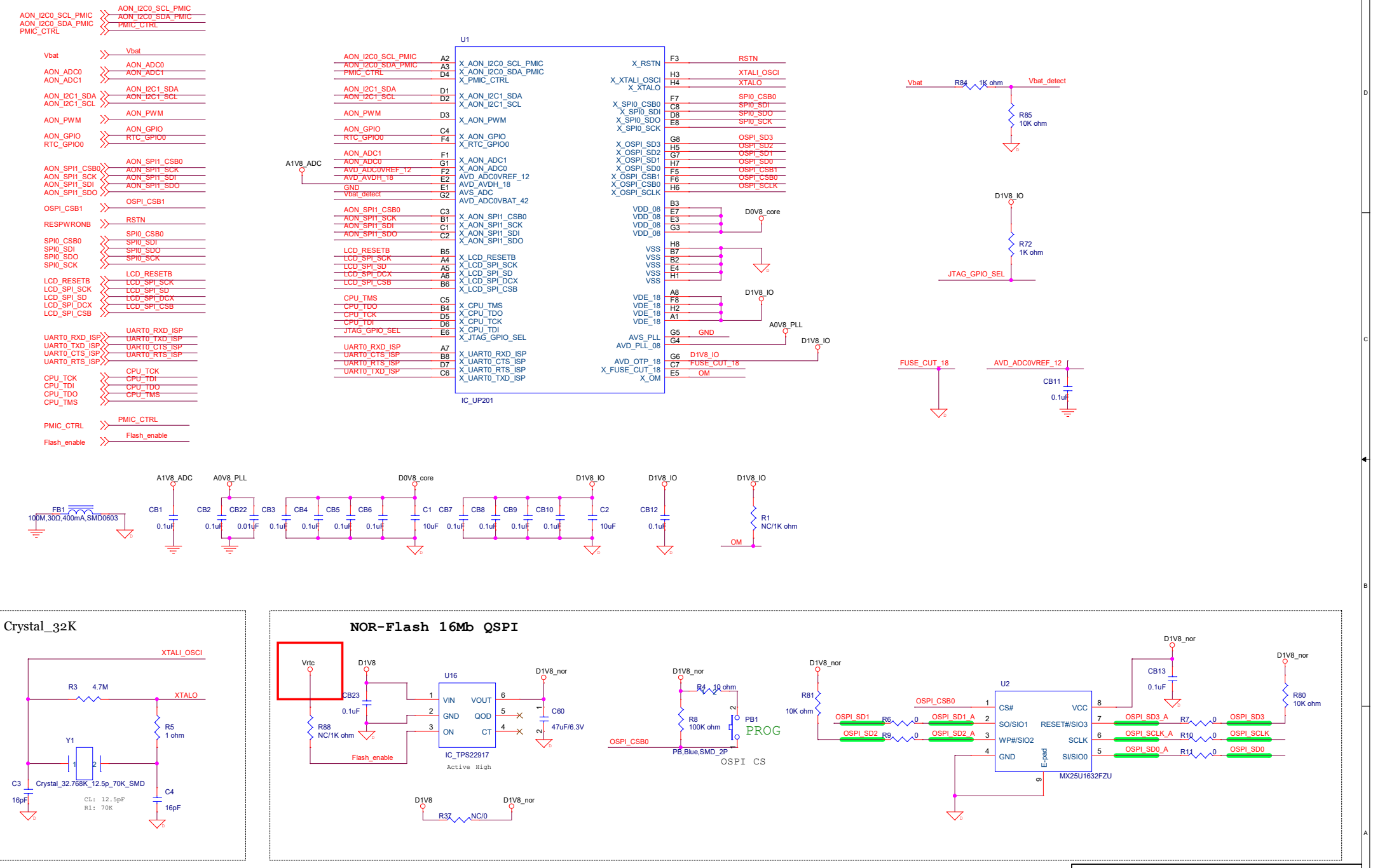


Upbeat Technology Inc.

Title: UP201 MCU Board

Size:	Document Number:	Department:	Designer:	Rev:
Custom	Power tree & Timing	System	Cliff Yeh	1.2

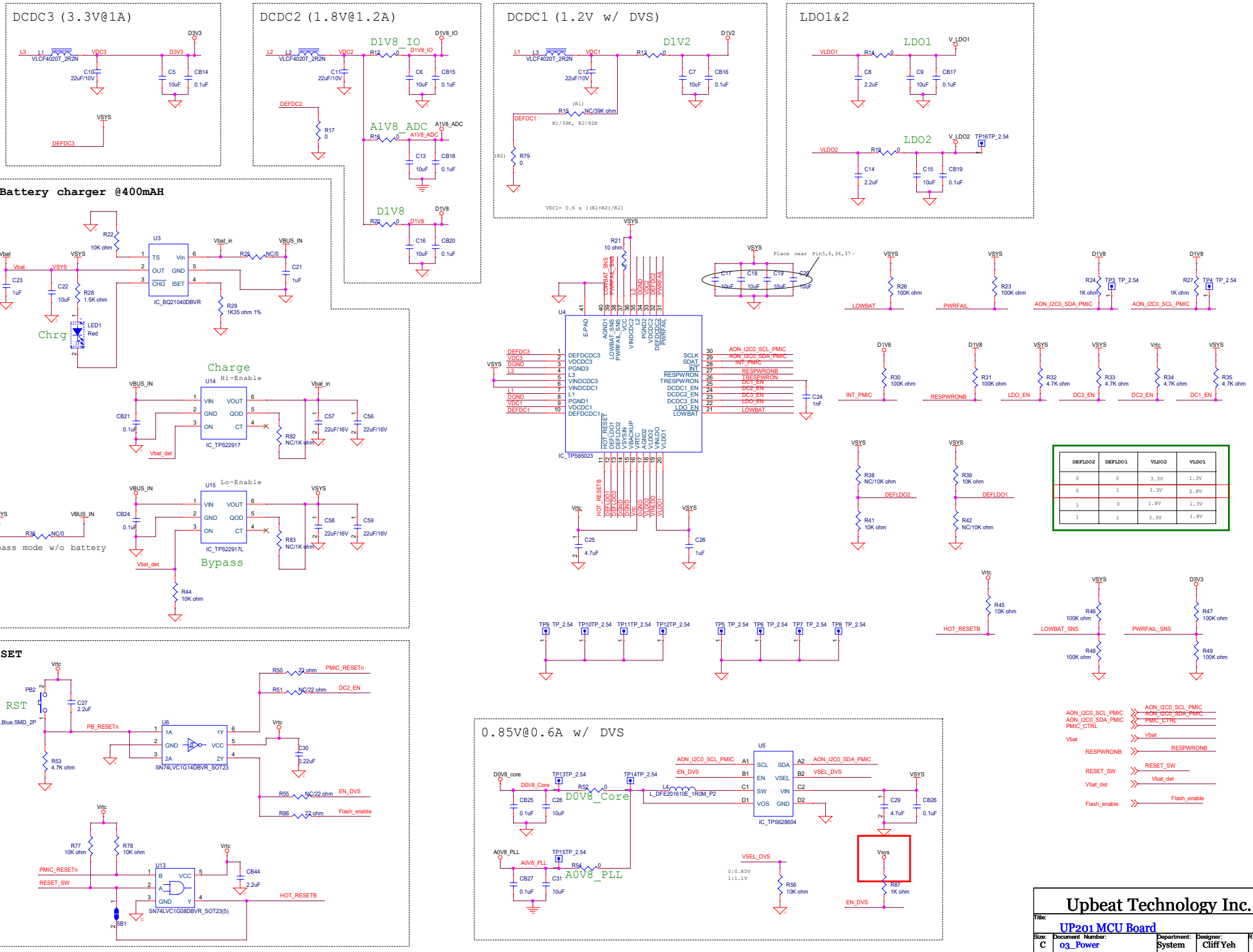
Date: Thursday, March 13, 2025 Sheet: 2 of 6



Upbeat Technology Inc.

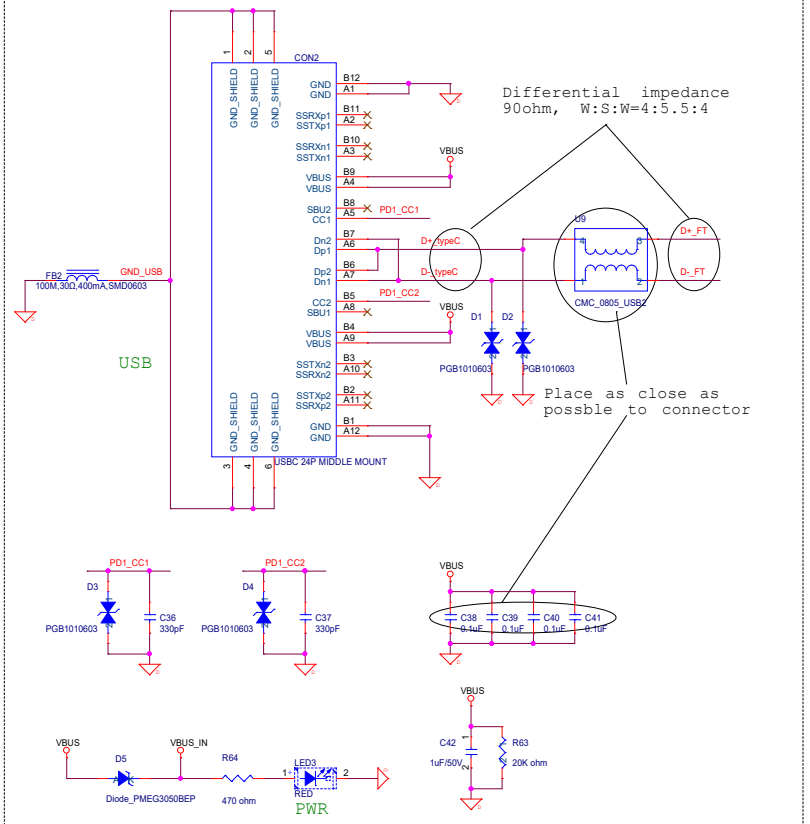
Title: UP201 MCU Board

Size: Custom	Document Number: Rev_UP201	Department: System	Designer: Cliff Yeh	Rev: 1.2
Date: Thursday, March 13, 2025		Sheet: 3 of 6		


DCDC3 (3.3V@1A)
DCDC2 (1.8V@1.2A)
DCDC1 (1.2V w/ DVS)
LDO1&2
Battery charger @400mAH
RESET
0.85V@0.6A w/ DVS
D1V8_IO
D1V2
A1V8_ADC
D1V8
LDO1
LDO2
Charge
Bypass
Chrg
RST
Upbeat Technology Inc.
UP201 MCU Board
03_Power
System
Cliff Yeh
Thursday, March 13, 2025

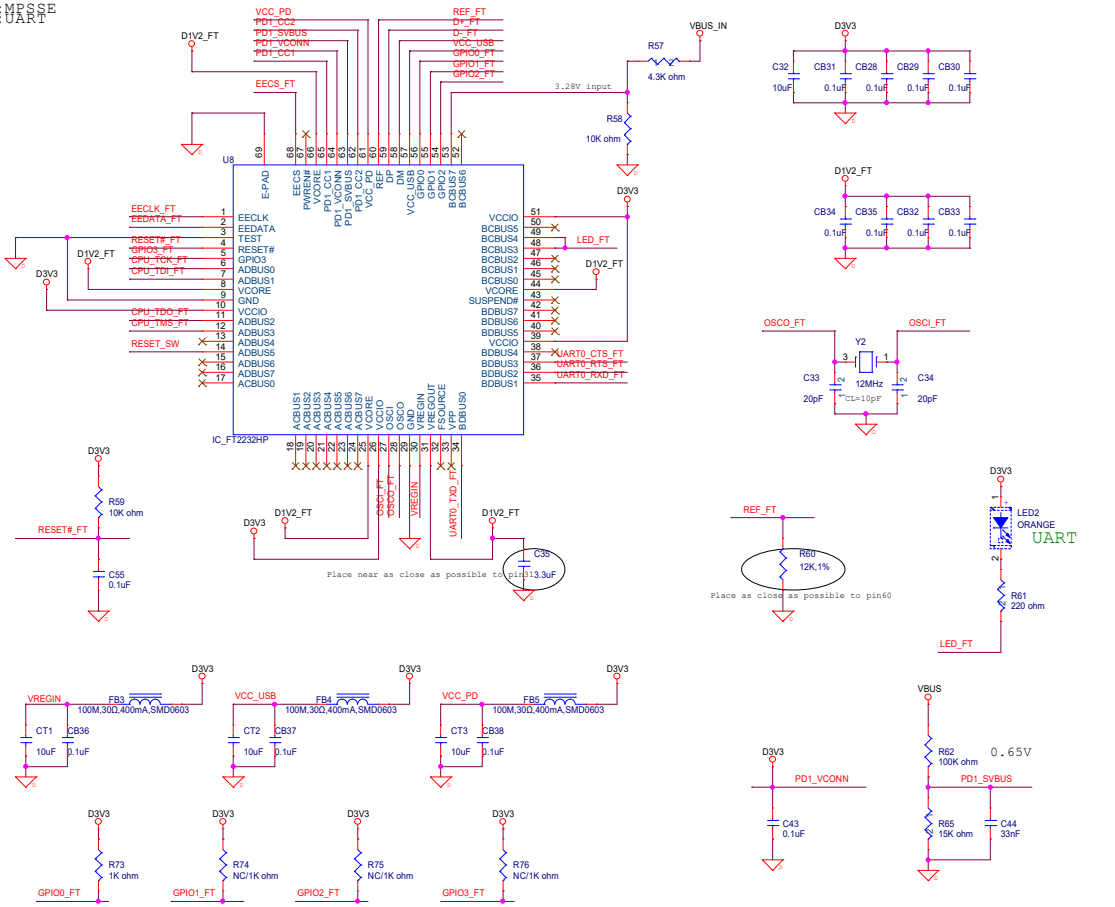
Type-C connector

5V@3A

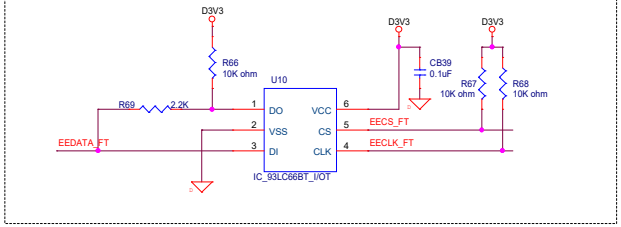


FTDI

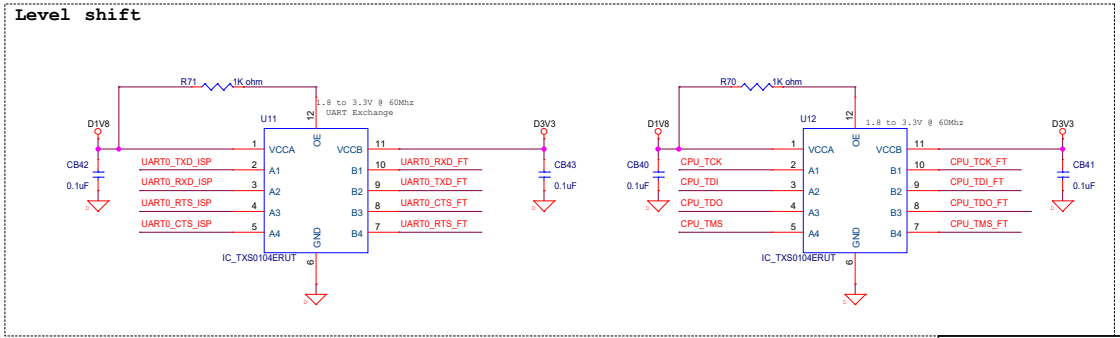
A:MPSSE
B:UART

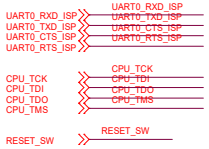


EEPROM for FTDI

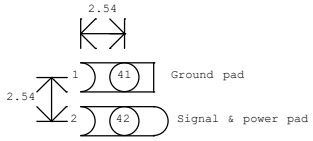


Level shift





Upbeat Technology Inc.				
Title: UP201 MCU Board				
Size: C	Document Number: 04_USB	Department: System	Designer: Cliff Yeh	Rev: 1.2
Date: Thursday, March 13, 2025		Sheet: 5 of 6		



Vbat_det
Vbat
AON_ADC0
AON_ADC1
AON_I2C1_SDA
AON_I2C1_SCL
AON_PWM
AON_GPIO
RTC_GPIO0
AON_SPI1_CSB0
AON_SPI1_SCK
AON_SPI1_SDI
AON_SPI1_SDO
OSPI_CSB1
RESPWRONB
RSTN
SPI0_CSB0
SPI0_SDI
SPI0_SDO
SPI0_SCK
LCD_RESETB
LCD_SPI_SCK
LCD_SPI_SD
LCD_SPI_DCX
LCD_SPI_CSB
PMIC_CTRL

CON1

	GND	1	40	V_LDO1
	GND	41	80	V_LDO1
AON_ADC0		2	39	D1V2
AON_ADC0		42	79	D1V2
AON_ADC1		3	38	DGND
AON_ADC1		43	78	DGND
	GND	4	37	D3V3
	GND	44	77	D3V3
Vbat_det		5	36	D3V3
Vbat_det		45	76	D3V3
AON_GPIO		6	35	OSPI_CSB1
AON_GPIO		46	75	OSPI_CSB1
RTC_GPIO0		7	34	SPI0_SCK
RTC_GPIO0		47	74	SPI0_SCK
PMIC_CTRL		8	33	SPI0_SDI
PMIC_CTRL		48	73	SPI0_SDI
	DGND	9	32	SPI0_SDO
	DGND	49	72	SPI0_SDO
AON_I2C1_SCL		10	31	SPI0_CSB0
AON_I2C1_SCL		50	71	SPI0_CSB0
AON_I2C1_SDA		11	30	DGND
AON_I2C1_SDA		51	70	DGND
AON_PWM		12	29	LCD_RESETB
AON_PWM		52	69	LCD_RESETB
	DGND	13	28	LCD_SPI_SCK
	DGND	53	68	LCD_SPI_SCK
AON_SPI1_SCK		14	27	LCD_SPI_SD
AON_SPI1_SCK		54	67	LCD_SPI_SD
AON_SPI1_SDI		15	26	LCD_SPI_CSB
AON_SPI1_SDI		55	66	LCD_SPI_CSB
AON_SPI1_SDO		16	25	LCD_SPI_DCX
AON_SPI1_SDO		56	65	LCD_SPI_DCX
AON_SPI1_CSB0		17	24	DGND
AON_SPI1_CSB0		57	64	DGND
	DGND	18	23	Vbat
	DGND	58	63	Vbat
D1V8		19	22	Vbat
D1V8		59	62	Vbat
D1V8		20	21	DGND
D1V8		60	61	DGND

1 40 20 21

Connector_MCU_Board

V_LDO1: C45 10uF, C46 0.1uF
D1V2: C47 10uF, C48 0.1uF
D1V8: C49 10uF, C50 0.1uF
D3V3: C51 10uF, C52 0.1uF
Vbat: C53 10uF, C54 0.1uF

Upbeat Technology Inc.

Title: UP201 MCU Board				
Size: B	Document Number: 05_IO Interface	Department: System	Designer: Cliff Yeh	Rev: 1.2
Date: Thursday, March 13, 2025	Sheet: 6 of 6			