Battery
Charger LED

Power

Li-Po 3.7 V

+
−

GND		
PA08	SDA	
PA09	SCL	
PA21	WK	
+5V		

LED_BUILTIN

AREF/AIN[1]	PA03	AREF	
DAC0/AIN[0]	PA02	A0	D15
AIN[10]	PB02	A1	D16
AIN[11]	PB03	A2	D17
AIN[4]	PA04	A3	D18~
AIN[5]	PA05	A4	D19~
AIN[6]	PA06	A5	D20
AIN[7]	PA07	A6	D21
	PA22	D0~	
	PA23	D1~	
	PA10	D2~	
	PA11	D3~	
	PB10	D4~	
	PB11	D5~	

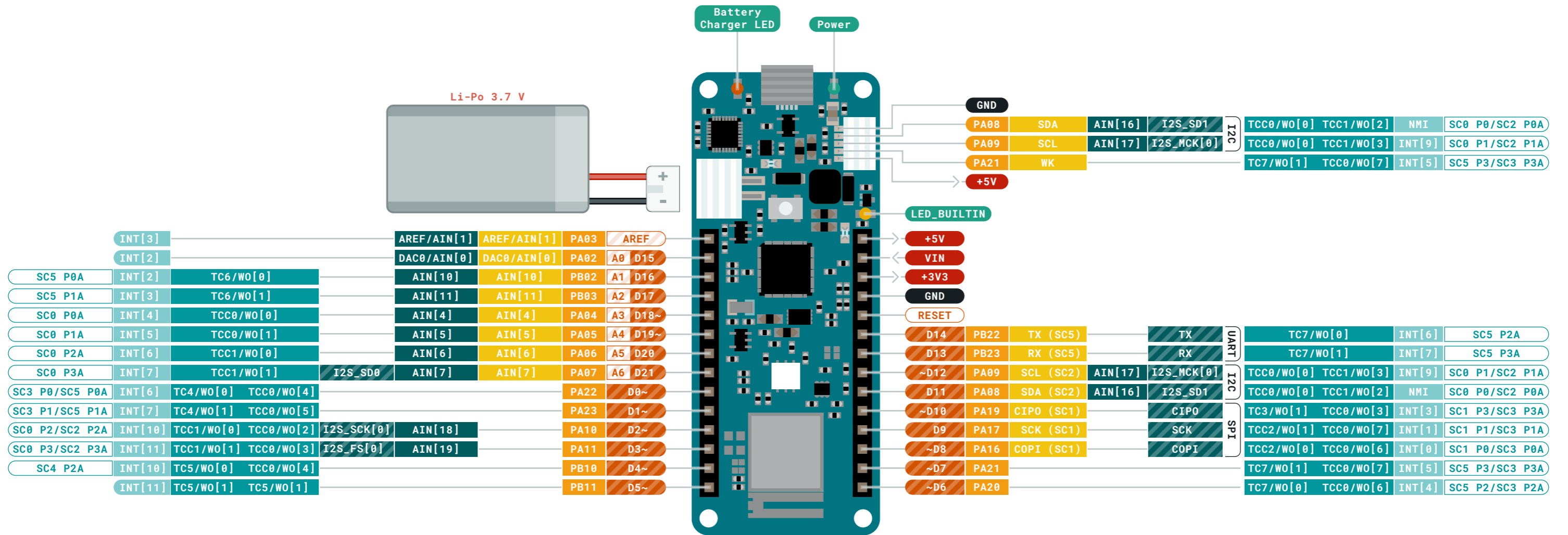|			
+5V			
VIN			
+3V3			
GND			
RESET			
D14	PB22	TX (SC5)	
D13	PB23	RX (SC5)	
~D12	PA09	SCL (SC2)	
D11	PA08	SDA (SC2)	
~D10	PA19	CIPO (SC1)	
D9	PA17	SCK (SC1)	
~D8	PA16	COPI (SC1)	
~D7	PA21		
~D6	PA20		

Legend

- ⬛ Ground
- 🟥 Power
- 🟩 LED
- ⬜ Internal Pin
- SWD Pin
- 🟧 Digital Pin
- ▫️ Analog Pin
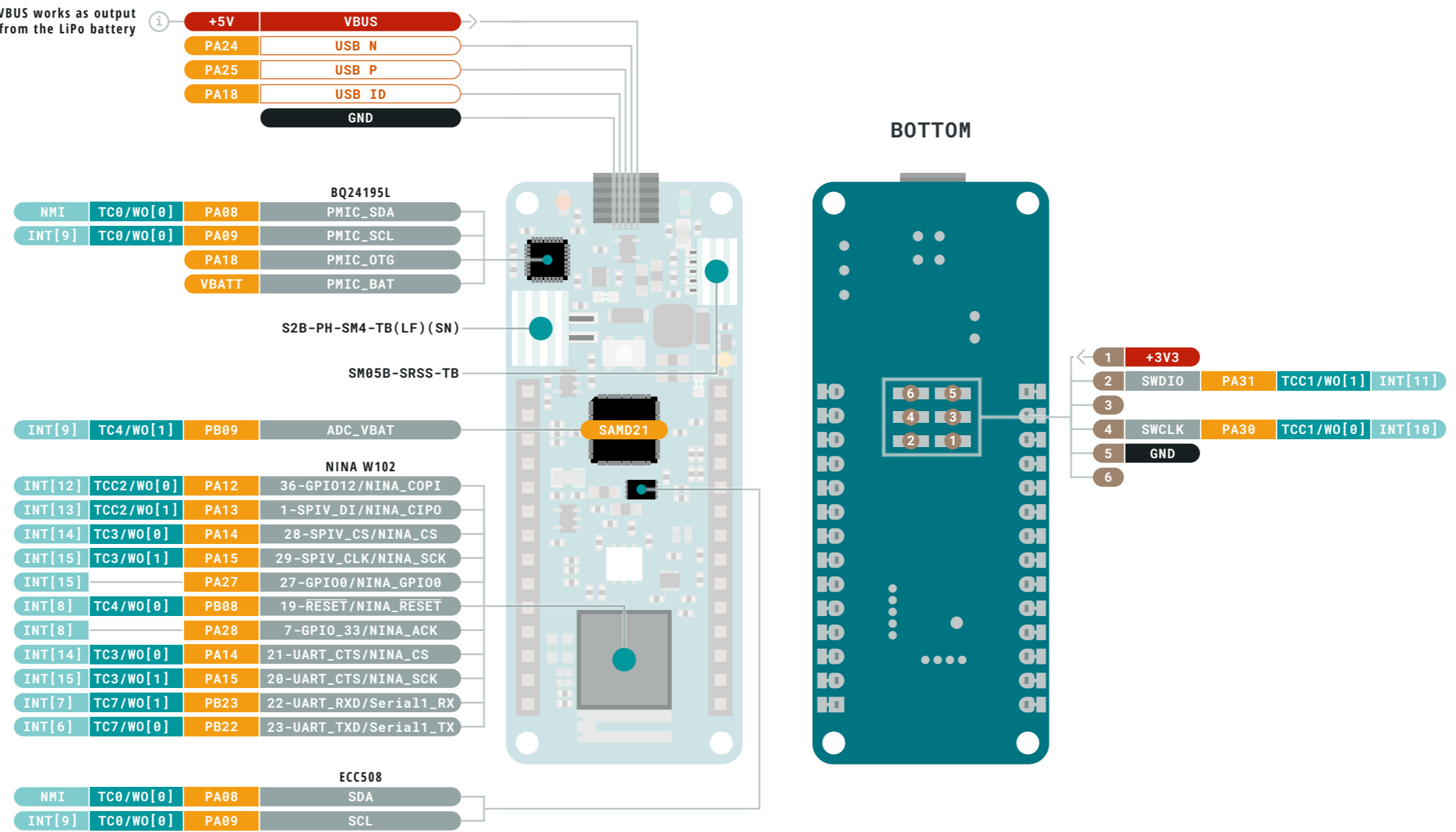- ⬜ Other Pin
- 🟧 Microcontroller's Port
- 🟨 Default

⚠ **MAXIMUM** current per pin is 7mA

⚠ **MAXIMUM** source current is 46mA

⚠ **MAXIMUM** sink current is 65mA per pin group

VIN Input voltage to the board.

NOTE: CIPO/COPI have previously been referred to as MISO/MOSI

ARDUINO

Battery Charger LED

Power

Li-Po 3.7 V

GND				
PA08	SDA	AIN[16]	I2S_SD1	I2C
PA09	SCL	AIN[17]	I2S_MCK[0]	
PA21	WK			
+5V				

TCC0/WO[0]	TCC1/WO[2]	NMI	SC0 P0/SC2 P0A
TCC0/WO[0]	TCC1/WO[3]	INT[9]	SC0 P1/SC2 P1A
TC7/WO[1]	TCC0/WO[7]	INT[5]	SC5 P3/SC3 P3A

LED_BUILTIN

+5V	
VIN	
+3V3	
GND	
RESET	

INT[3]			AREF/AIN[1]	AREF/AIN[1]	PA03	AREF
INT[2]			DAC0/AIN[0]	DAC0/AIN[0]	PA02	A0 D15
SC5 P0A	INT[2]	TC6/WO[0]	AIN[10]	AIN[10]	PB02	A1 D16
SC5 P1A	INT[3]	TC6/WO[1]	AIN[11]	AIN[11]	PB03	A2 D17
SC0 P0A	INT[4]	TCC0/WO[0]	AIN[4]	AIN[4]	PA04	A3 D18~
SC0 P1A	INT[5]	TCC0/WO[1]	AIN[5]	AIN[5]	PA05	A4 D19~
SC0 P2A	INT[6]	TCC1/WO[0]	AIN[6]	AIN[6]	PA06	A5 D20
SC0 P3A	INT[7]	TCC1/WO[1]	I2S_SD0	AIN[7]	AIN[7]	PA07	A6 D21
SC3 P0/SC5 P0A	INT[6]	TC4/WO[0]	TCC0/WO[4]		PA22	D0~
SC3 P1/SC5 P1A	INT[7]	TC4/WO[1]	TCC0/WO[5]		PA23	D1~
SC0 P2/SC2 P2A	INT[10]	TCC1/WO[0]	TCC0/WO[2]	I2S_SCK[0]	AIN[18]	PA10	D2~
SC0 P3/SC2 P3A	INT[11]	TCC1/WO[1]	TCC0/WO[3]	I2S_FS[0]	AIN[19]	PA11	D3~
SC4 P2A	INT[10]	TC5/WO[0]	TCC0/WO[4]		PB10	D4~
	INT[11]	TC5/WO[1]	TC5/WO[1]		PB11	D5~

D14	PB22	TX (SC5)		TX	UART	TC7/WO[0]		INT[6]	SC5 P2A
D13	PB23	RX (SC5)		RX		TC7/WO[1]		INT[7]	SC5 P3A
~D12	PA09	SCL (SC2)	AIN[17]	I2S_MCK[0]	I2C	TCC0/WO[0]	TCC1/WO[3]	INT[9]	SC0 P1/SC2 P1A
D11	PA08	SDA (SC2)	AIN[16]	I2S_SD1		TCC0/WO[0]	TCC1/WO[2]	NMI	SC0 P0/SC2 P0A
~D10	PA19	CIPO (SC1)		CIPO	SPI	TC3/WO[1]	TCC0/WO[3]	INT[3]	SC1 P3/SC3 P3A
D9	PA17	SCK (SC1)		SCK		TCC2/WO[1]	TCC0/WO[7]	INT[1]	SC1 P1/SC3 P1A
~D8	PA16	COPI (SC1)		COPI		TCC2/WO[0]	TCC0/WO[6]	INT[0]	SC1 P0/SC3 P0A
~D7	PA21					TC7/WO[1]	TCC0/WO[7]	INT[5]	SC5 P3/SC3 P3A
~D6	PA20					TC7/WO[0]	TCC0/WO[6]	INT[4]	SC5 P2/SC3 P2A

Legend

- ■ Ground
- ■ Power
- ■ LED
- ■ Internal Pin
- ■ SWD Pin
- ▨ Digital Pin
- ▢ Analog Pin
- ▢ Other Pin
- ■ Microcontroller's Port
- ■ Default
- ■ Analog
- ▨ Communication
- ■ Timer
- ■ Interrupt
- ▢ Sercom

⚠ **MAXIMUM** current per pin is 7mA

⚠ **MAXIMUM** source current is 46mA

⚠ **MAXIMUM** sink current is 65mA per pin group

VIN Input voltage to the board.

NOTE: CIPO/COPI have previously been referred to as MISO/MOSI

When in USB OTG mode, VBUS works as output
and 5V is generated from the LiPo battery

+5V	VBUS
PA24	USB N
PA25	USB P
PA18	USB ID
	GND

BQ24195L

NMI	TC0/WO[0]	PA08	PMIC_SDA
INT[9]	TC0/WO[0]	PA09	PMIC_SCL
		PA18	PMIC_OTG
		VBATT	PMIC_BAT

S2B-PH-SM4-TB(LF)(SN)

SM05B-SRSS-TB

INT[9]	TC4/WO[1]	PB09	ADC_VBAT

NINA W102

INT[12]	TCC2/WO[0]	PA12	36-GPIO12/NINA_COPI
INT[13]	TCC2/WO[1]	PA13	1-SPIV_DI/NINA_CIPO
INT[14]	TC3/WO[0]	PA14	28-SPIV_CS/NINA_CS
INT[15]	TC3/WO[1]	PA15	29-SPIV_CLK/NINA_SCK
INT[15]		PA27	27-GPIO0/NINA_GPIO0
INT[8]	TC4/WO[0]	PB08	19-RESET/NINA_RESET
INT[8]		PA28	7-GPIO_33/NINA_ACK
INT[14]	TC3/WO[0]	PA14	21-UART_CTS/NINA_CS
INT[15]	TC3/WO[1]	PA15	20-UART_CTS/NINA_SCK
INT[7]	TC7/WO[1]	PB23	22-UART_RXD/Serial1_RX
INT[6]	TC7/WO[0]	PB22	23-UART_TXD/Serial1_TX

ECC508

NMI	TC0/WO[0]	PA08	SDA
INT[9]	TC0/WO[0]	PA09	SCL

SAMD21

BOTTOM

1	+3V3		
2	SWDIO	PA31	TCC1/WO[1]	INT[11]
3			
4	SWCLK	PA30	TCC1/WO[0]	INT[10]
5	GND		
6			

6	5
4	3
2	1