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SAMD21 Dev Breakout (DEV-13672)

Arduino Zero compatible

Name	Interrupts	A
Power	Serial	
GND	Serial Com	C/D
Control	Timer	E/F
Arduino	PTC	B
Port	Misc	G/H
DAC	ADC	B

PWM pins maked with ~

TC - Timer Counter
TCC - Timer Counter - Controller
PTC Peripheral Touch Controller
NMI-External Non-Maskable Interupt
Pin can only be A,B,C,D,E,F,G or H at any time
Selecting B disables digital control

LEDs

Power: Red
Charge: Red
D13 (PIN_LED_13): Blue
TX (PIN_LED_TXL): Green
RX (PIN_LED_RXL): Yellow

Programming Header

1. VCC 3.3V
2. SWEDIO/TMS
3. GND
4. SWDCLK/TCK
5. GND
6. SWO/TDO
7. Key
8. NC/TDI
9. GNDDTCT
10. Nreset

RX LED	PIN_LED_RXL	PB03	AIN11	EXTINT3	SER5:1	TC6:1	PTC:Y9
TX LED	PIN_LED_TXL	PA27	EXTINT15				
13 LED	D13 ~	PA17	EXTINT1	SCK	SER1:1/3:1*	TCC2:1/0:7	PTC:X5

SJ1

Disconnects R1 from charger circuit

Charge current= 256mA (1000V/R1) where R1=3900

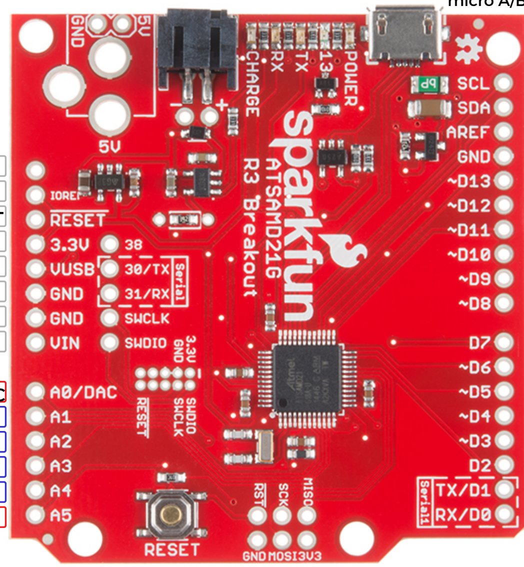
SJ2

remove to disconnect power LED

VIN 5V

JST for single cell Lipo

USB OTG micro A/B



Reset Button

Legacy SPI header

3.3V	IOREF
RESET	/RESET
3.3V	3.3V
5V	VUSB
GND	GND
GND	GND
VIN	VIN

		DAC	PTC:Y0	EXTINT2	AIN0	PA02	A0	A0/DAC
	PTC:Y14	TC4:0	SER4:0	EXTINT8	AIN2	PB08	A1	A1
	PTC:Y15	TC4:1	SER4:1	EXTINT9	AIN3	PB09	A2	A2
PTC:Y2	TCC0:0	SER0:0	EXTINT4	AIN4	PA04	A3	REFB	A3
	PTC:Y3	TCC0:1	SER0:1	EXTIN5	AIN5	PA05	A4	A4
	PTC:Y8	TC6:0	SER5:0	EXTINT2	AIN10	PB02	A5	A5

SCL	D21	PA23	EXTINT7	SCL	SER3:1/5:1*	TC4:1/TCC0:5	USB/SOF 1KhZ		
SDA	D20	PA22	EXTINT6	SDA	SER3:0/5:0*	TC4:0/TCC0:4	PCT:X10		
AREF	REFA	PA03	AIN1	EXTINT3	PTC:Y1				
GND	GND								
D13	D13 ~	PA17	EXTINT1	SCK	SER1:1/3:1*	TCC2:1/0:7	PTC:X5		
D12	D12 ~	PA19	EXTINT3	MISO	SER1:3/3:3	TC3:1/TCC0:3	PTC:X7	I2S/SD[0]	
D11	D11 ~	PA16	EXTINT0	MOSI	SER1:0/3:0*	TCC2:0/0:6	PTC:X4		
D10	D10 ~	PA18	EXTINT2	SS	SER1:2/3:2	TC3:0/TCC0:2			
D9	D9 ~	PA07	AIN7	EXTINT7	SER0:3	TCC1:1	PTC:Y5	I2S/SD[0]	
D8	D8 ~	PA06	AIN6	EXTINT6	SER0:2	TCC1:0	PTC:Y4		
D7	D7	PA21	EXINIT5	SER5:3/3:3	TC7:1/TCC0:7	PTC:X9	I2S/FS[0]		
D6	D6 ~	PA20	EXTINT4	SER5:2/3:2	TC7:0/TCC0:6	PTC:X8	I2S/SCK[0]		
D5	D5 ~	PA15	EXTINT15	SER2:3/4:3	TC3:1/TCC0:5	XOUT			
D4	D4 ~	PA08	AIN16	NMI	SER0:0/2:0*	TCC0:0/1:2	PTC:X0	I2S/SD[1]	
D3	D3 ~	PA09	AIN17	EXTINT9	SER0:1/2:1*	TCC0:1/1:3	PTC:X1	I2S/MCK[0]	
D2	D2	PA14	EXTINT14	SER2:2/4:2*	TC3:0/TCC0:4	XIN			
TX/D1	D1	PA10	AIN18	EXTINT10	TXO	SER0:2/2:2	TCC1:0/0:2	PTC:X2	I2S/SCK[0]
RX/D0	D0	PA11	AIN19	EXTINT11	RXI	SER0:3/2:3	TCC1:1/0:3	PTC:X3	I2S/FS[0]

	TCC2:1/0:7	SER2:1/4:1*	EXTINT13	PA13	38
	TC7:0	SER5:2/3:2	EXTINT6	PB22	30/TX
	TC7:1	SER5:3	EXTINT7	PB23	31/RX
SWCLK	TCC1:0	SER1:2	EXTINT10	PA30	SWCLK
SWDIO	TCC1:1	SER1:3	EXTINT11	PA31	SWDIO

/RST	RESET				
SCK	PB11	EXTINT11	SER4:3	TC5:1/0:5	I2S/SCK[1]
MISO	PA12	EXTINT12	SER2:0/4:0*	TCC2:0/0:6	
GND	GND				
MOSI	PB10	EXTINT10	SER4:2	TC5:0/0:4	I2S/MCK[1]
3.3V	3.3V				

Power

Vin: 5.5V-5.5V for charger - otherwise 3.5V-6.0V

VBATT: 3.7V Lipo

VCC: 600mA @3.3V

Each pin is 3.3V tolerant and can source/sink no more than 7mA/10mA

Each cluster of I/O pins can source 46mA and sink 65mA. Clusters are defined as Yellow, Pink, Green, Blue, Red, and Orange outlines.

SamD21G18

VCC:1.62-3.63V

Arm Cortex-M0 + (32-bit)

Flash Memory: 256KB

SRAM: 32KB

ADC: 12-bit

48MHz

RTC

USB 2.1 with USB host capability

Serial

USB: SerialUSB

Hardware Serial (TX/D1 and RX/D0): Serial1

Hardware Serial (30/TX and 31/RX): Serial

Only Ports with * can be configured to do I2C

USB host: Set PIN_USB_HOST_ENABLE high