SAM L10/L21 MCU
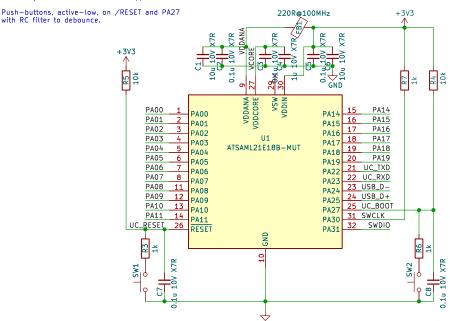
Depending on device variant, a SAML10 or SAML21 MCU is installed.

PA27 used for boot-loader, pull low during reset to enter boot-loader mode for flashing firmware via UART or USB. Boot-loader will always run when first word of application is 0xFFFFFFFF
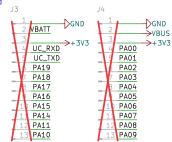
Push-buttons, active-low, on /RESET and PA27 with RC filter to debounce.

U1 ATSAML21E18B-MUT

3.3V Power Supply

TPS63000 buck-boost converter powered by either VBUS (USB supply) or VBATT (battery supply). VBATT is protected from reverse-polarity and charging by D2 (ultra-low Vf diode)

U2 TPS63000

NSR05T30XV2 D2

1S Li or 2-3S Alkaline

USB-C Port
ESD/TVS Protection

J1 USB_C_Receptacle_USB2.0

PRTR5V0U2X

Outboard Ports

2.54mm (10mil) pitch, 1x13 pins

GPIO pins directly connected to MCU

Included in pack but not placed

J3   J4

Inboard Ports

2.54mm (10mil) pitch, 1x3 pins

GPIO pins with extra components added
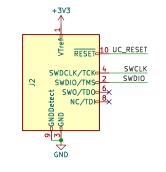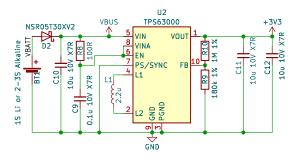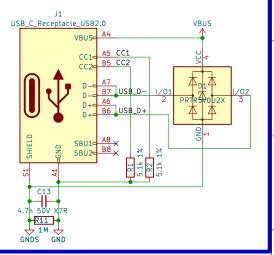
Included in pack but not placed

J6

J5

ARM SWD Port

1.27mm (5mil) pitch 2x5 pins

ARM SWDIO/SWCLK pins

J2

Joel Michael

Sheet: /
File: jackson.kicad_sch

Title: SAM-L Jackson

Size: A4   Date: 2023-06-20   Rev: 0.1

KiCad E.D.A. kicad 7.0.2   Id: 1/1