

The schematic diagram illustrates the ATSAM21G18A-AU microcontroller board. The central component is the microcontroller (U1), which is connected to various external components. The board includes a push button (SW1) connected to the RESETN pin (40) through a 330 ohm resistor (R1). The board has two power supply rails: +3.3V and GND. Decoupling capacitors are present: C1 (1uF) on the +3.3V rail and C2 (0.1uF) on the GND rail. The board also includes several I/O pins connected to external components: SDA (1) and SCL (2) for I2C; TX/X2 (15) and RX/X3 (16) for Serial; MISO (21) and MOSI (23) for SPI; and I2S_D1/X7 (28) for I2S. The board is labeled 'ATSAM21G18A-AU'.

POWER AND FILTERING

VCC
GND
U2
IN
OUT
GND
AP2114-3.3K
+3.3V
C4
10uF
C5
0.1uF
C6
10uF

USB, SWD PROGRAMMING AND LEDS

VCC
0.5A
F1
D-
D+
ID
GND
P9
shield
USB_Micro
SWDIO
SWCLK
J3
SWD
+3.3V
GND
D1
POWER
+3.3V
D2
LED
D8
GND

SENSOR CAPACITIVE

P1
SPACE
P8
MOUSE_LEFT
P10
A
P11
W
P12
KEY_UP_ARROW
P2
KEY_DOWN_ARROW
P3
KEY_RIGHT_ARROW
P5
KEY_LEFT_ARROW
P6
D
P7
S
Y15
Y14
Y9
Y8
Y5
Y4
Y3
Y2
Y1
Y0

PIN EXTRAS

MOSI
MISO
SCK
SDA
SCL
CS
RX/X3
TX/X2
I2S_D1/X7
I2S_SCK
J1
J2
SWD
VCC
GND

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