

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 C1 (1uF) and C2 (0.1uF) are connected to the VDDCORE and VDDANA pins, respectively. 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 Y8 (47), Y9 (48), Y14 (7), Y15 (8), I2S_SCK (19), and D8 (38) for I2S. The board is labeled 'ATSAM21G18A-AU'.

POWER AND FILTERING

VCC
GND
U2 AP2114-3.3K
OUT 2
IN 3
GND 1
+3.3V
C4 10uF
C5 0.1uF
C6 10uF

USB, SWD PROGRAMMING AND LEDS

VCC
0.5A F1
D- 2
D+ 3
ID 4
GND 5
P9 USB-Micro shield
GND 6
+3.3V SWDIO 1
SWCLK 3
J3 SWD 2 4
GND
+3.3V POWER
D1
LED
D2
D8

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 1
SCK 3
SCL 5
J1
MISO 2
SDA 4
VCC 6
SWD
RX/X3 1
TX/X2 2
I2S_D1/X7 5
CS 3
I2S_SCK 6
J2
GND
SWD

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