

# SEEED-102991535

## Squama Ethernet - Arduino W5500 Ethernet Board



## PRODUCT DETAILS

### Features

- Powerful CPU: ARM Cortex-M0+ MCU running at up to 48MHz (ATSAMD21G18)
- Various Hardwired TCP/IP Protocols support: TCP, UDP, ICMP, IPv4, ARP, IGMP, PPPoE
- Powerful Ethernet control chip W5500
- Flexible compatibility: Compatible with Arduino IDE
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### Description

Squama is a series of products. This series of products have a standard appearance, with a general size of 62x30cm. The series integrates an MCU and peripherals with a communication function, which is suitable for IoT-related applications.

Squama Ethernet is the first product in the Squama series. Squama Ethernet integrates a high-performance microcontroller based on **Cortex M0+** and an Ethernet control chip **W5500**, which can be used by users to develop Ethernet applications.

**WS2812 LED** and user buttons are also integrated on the board, which can facilitate some interaction. More importantly, Squama Ethernet supports **PoE** (Power Over Ethernet), which makes the wiring more concise. Only one network cable is needed to complete signal transmission and power supply.

Squama Ethernet uses the **Arduino Zero like bootloader**, you can use Arduino IDE to develop your application easily.

**Note!!!**

**This version doesn't include the PoE Cape.**

## **Specifications**

- MCU: ARM Cortex-M0+ CPU running at up to 48MHz
- Clock speed: 48MHz
- Flash memory: 256KB
- RAM: 32KB
- Input voltage: 5V via USB and 48~57V via PoE
- Output Current @ 5V: 2A
- Size: 62x30 mm
- Weight: 15g (without PoE), 20g (with PoE)
- 8 independent sockets simultaneously
- High-Speed Serial Peripheral Interface(SPI MODE 0, 3)
- Internal 32Kbytes Memory for TX/RX Buffers
- 10BaseT/100BaseTX Ethernet PHY embedded
- Supports Auto-Negotiation (Full and half-duplex, 10 and 100\* based )
- Not supports IP Fragmentation
- WS2812B Led
- Reset Button and User Button
- Grove connector for I2C and UART
- Arduino Zero bootloader
- Supports Power-down mode
- Supports Wake on LAN over UDP

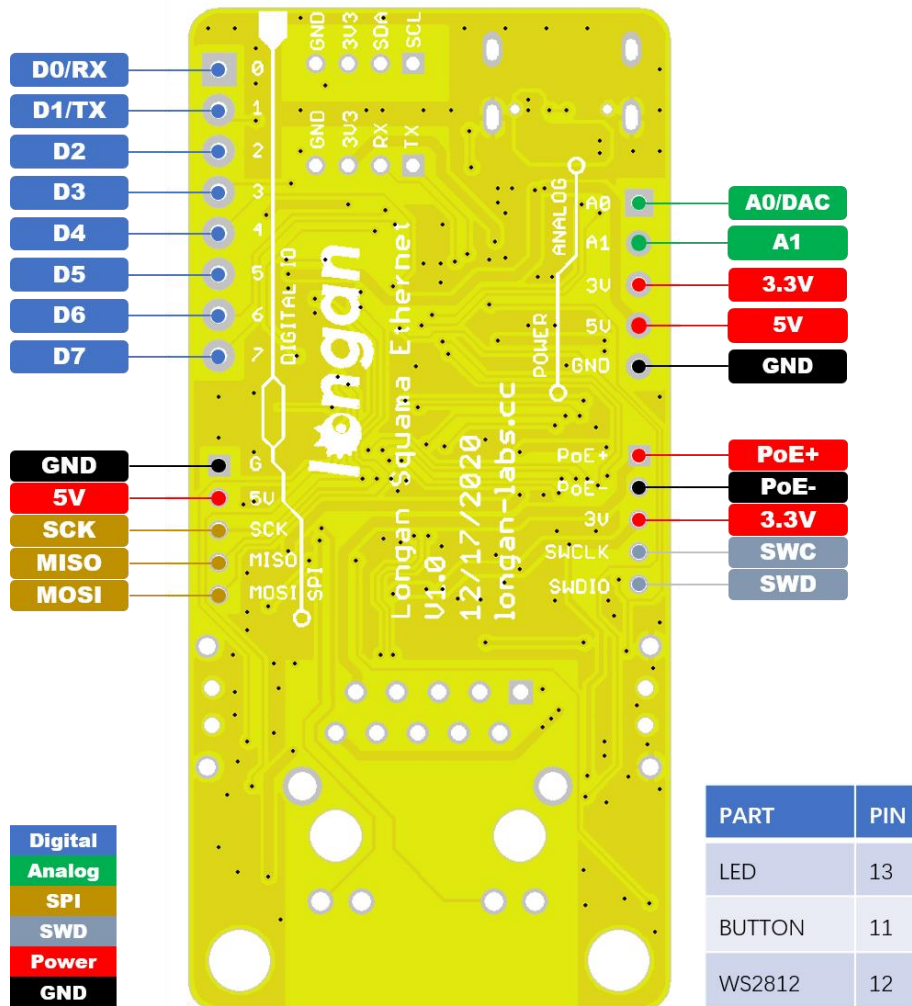
## **Hardware Overview**

### **1. LED indicators:**

- S:
- P: Power
- L: D13

2. RJ45 Connector, 10/100M
  3. WS2812B LED, connected to D12
  4. User button, connected to D11
  6. Pinout1
  7. I2C
  8. UART (Use Serial2 in the code)
  9. TypeC connector for programming
- A. Pinout2\*
- B. Reset Button
- C. ATSAM21G18 chip

## Pin output



## Part List

Squama Ethernet Dev Board x 1

## ECCN/HTS

HSCODE	8517629900
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USHSCODE	8471490000
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UPC	
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