

Arduino Shield List

Pin usage details for 317 shields from 125 makers, and counting!

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Arduino Ethernet Shield v5.0

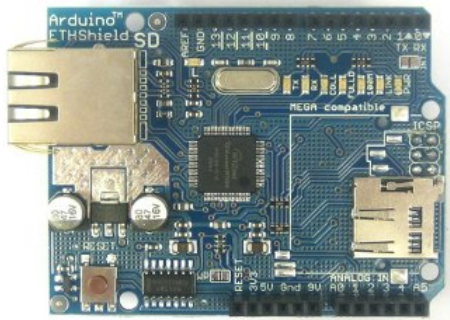


Photo: Arduino Team

Shield URL: [Ethernet Shield v5.0](#)
Tags: *ethernet, network, lan*
Maker: [Arduino](#)

The Arduino Ethernet Shield allows an Arduino board to connect to the internet. It is based on the Wiznet W5100 ethernet chip.

The Wiznet W5100 provides a network (IP) stack capable of both TCP and UDP. It supports up to four simultaneous socket connections. Use the Ethernet library to write sketches which connect to the internet using the shield. The ethernet shield connects to an Arduino board using long wire-wrap headers which extend through the shield. This keeps the pin layout intact and allows another shield to be stacked on top.

Version 5.0 includes a microSD slot in place of the SD slot used in previous versions.

Open Source: Yes, [OSHW-compliant](#)
License: [CC BY-SA 3.0](#)
Source: [www.arduino.cc/en/Main/ArduinoEtherne...](#)

- RESET ☐

3.3V ☐

5V ☐

GND ☐

GND ☐

VIN ☐

A0 ☐

A1 ☐

A2 ☐

A3 ☐

A4 ☐

A5 ☐
- ☐ AREF

☐ GND

☒ **D13 / SCK**

☒ **D12 / MISO**

☒ **D11 / MOSI ~**

☒ **D10 / SS ~**

☐ D9 ~

☐ D8

☐ D7

☐ D6 ~

☐ D5 ~

☒ **D4**

☐ D3 ~

☐ D2

☐ D1 / TX

☐ D0 / RX

Note:
Arduino communicates with both the W5100 and SD card using the SPI bus (through the ICSP header). This is on D11, D12, and D13 on "classic" format Arduino models such as the Duemilanove, and pins D50, D51, and D52 on the Arduino Mega.

D10 is used to select the W5100 and cannot be used for general I/O.

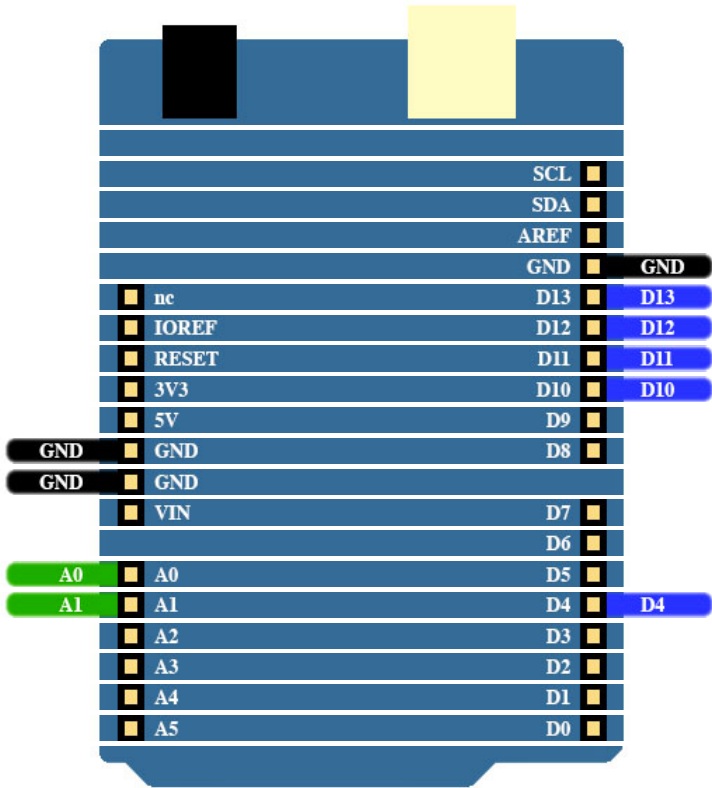
D4 is used for the SD card and can only be used for general I/O if the SD slot is not occupied.

D2 is used if a solder bridge is placed across the "INT" pads to connect it to the W5100's INT pin.

On the Mega, the hardware SS pin, D53, is not used to select either the W5100 or the SD card, but it must be kept as an output or the SPI interface won't work.

Although not used by most SD card libraries, A0 is connected to the SD slot's write protect (WP) pin and A1 is connected to the card detect switch. Both are pulled high by 10k resistors on the Ethernet shield. These pins therefore cannot be used for analog input with the shield unless they are bent back or clipped off before

inserting the shield into the arduino.
Additionally, if a user's circuit uses these pins for digital IO, the pullups may cause problems for existing circuitry.



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