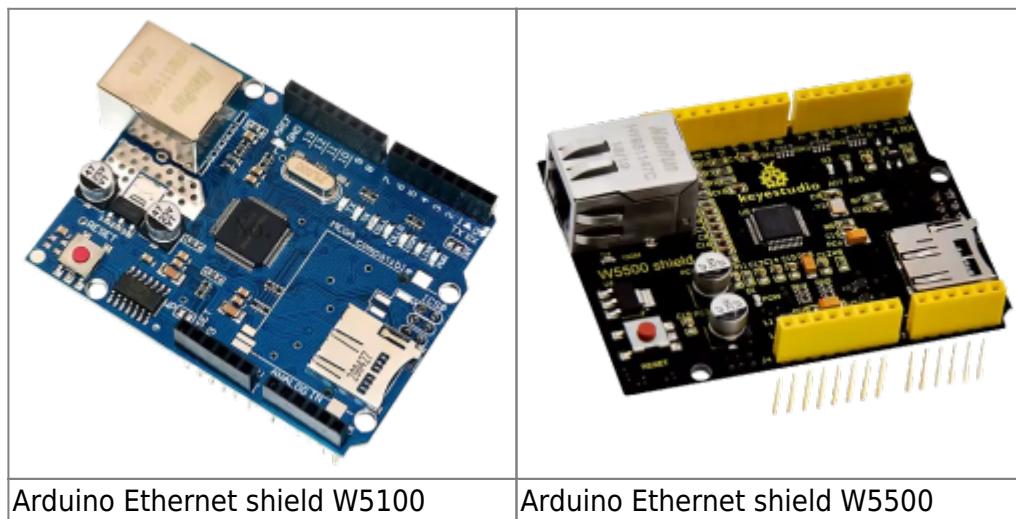


LamaPLC: Arduino shields

Ethernet shield

The Arduino Ethernet Shield enables an Arduino board to connect to the internet using the [Ethernet library](#) and read or write data on an SD card with the [SD library](#).

Difference Between W5500 and W5100

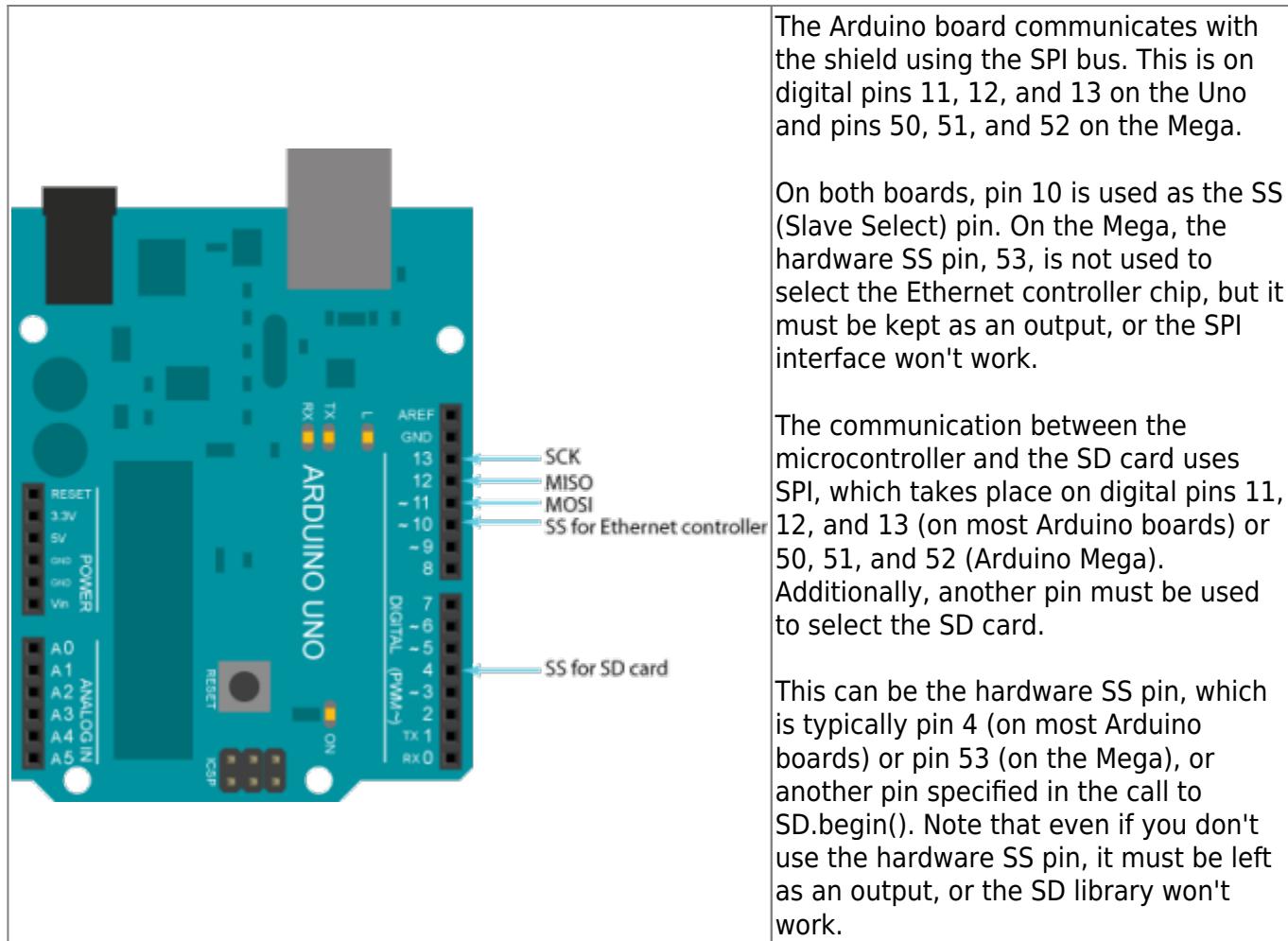


- Number of Sockets: The W5500 supports eight simultaneous open sockets, whereas the W5100 supports only four.
- Power Consumption: The W5500 consumes less power, especially in power-down modes, compared to the W5100.
- Interface: The W5500 features a high-speed SPI mode, which is faster than the older interfaces used by the W5100.
- Features: The W5500 supports Wake on LAN (WoL) over UDP and has a smaller physical footprint.
- Performance: The W5500 generally offers better performance due to its advanced features, although the W5100 can still provide a sufficient Ethernet solution for many applications.

Network Settings

The shield must be assigned a MAC address and a static IP address using the **Ethernet.begin()** function. A MAC address is a globally unique identifier for a specific device. Current Ethernet shields have a sticker showing the MAC address to use.

For older shields without a dedicated MAC address, generating a random one should work, but avoid using the same one on multiple boards. Valid IP addresses depend on your network configuration. You can also use DHCP to dynamically assign an IP address. Additionally, you can specify a network gateway and subnet if needed.



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