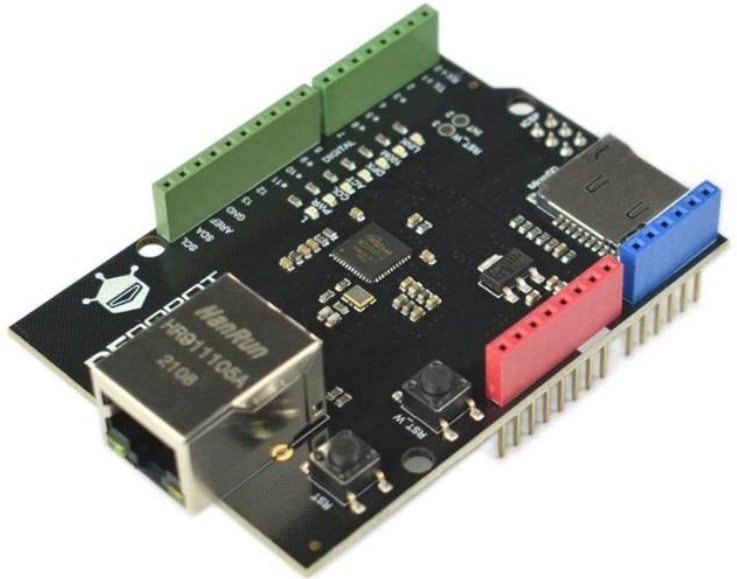
DFRduino Ethernet Shield V3.0 W5100S

Overview

Use this DFRduino Ethernet W5100S Shield to connect your Arduino to the Internet with a RJ45 cable. Plug the shield onto the board, burn the Ethernet sample codes into the controller, then an easy IoT project with stable communication is done. Based on WizNet WS5100S ethernet chip, this board integrates full hardwired TCP/IP protocol stacks and has 4 independent hardware SOCKETs. Your Arduino board can communicate with WS5100S and SD card through the SPI interface(use ICSP pin). The DFRduino Ethernet W5100S expansion board supports both Arduino UNO and Mege series.

Current hardware version V3.0: the chip has been upgraded from W5100 to W5100S, which comes with lower power consumption, lower heat and higher performance.



Order Code

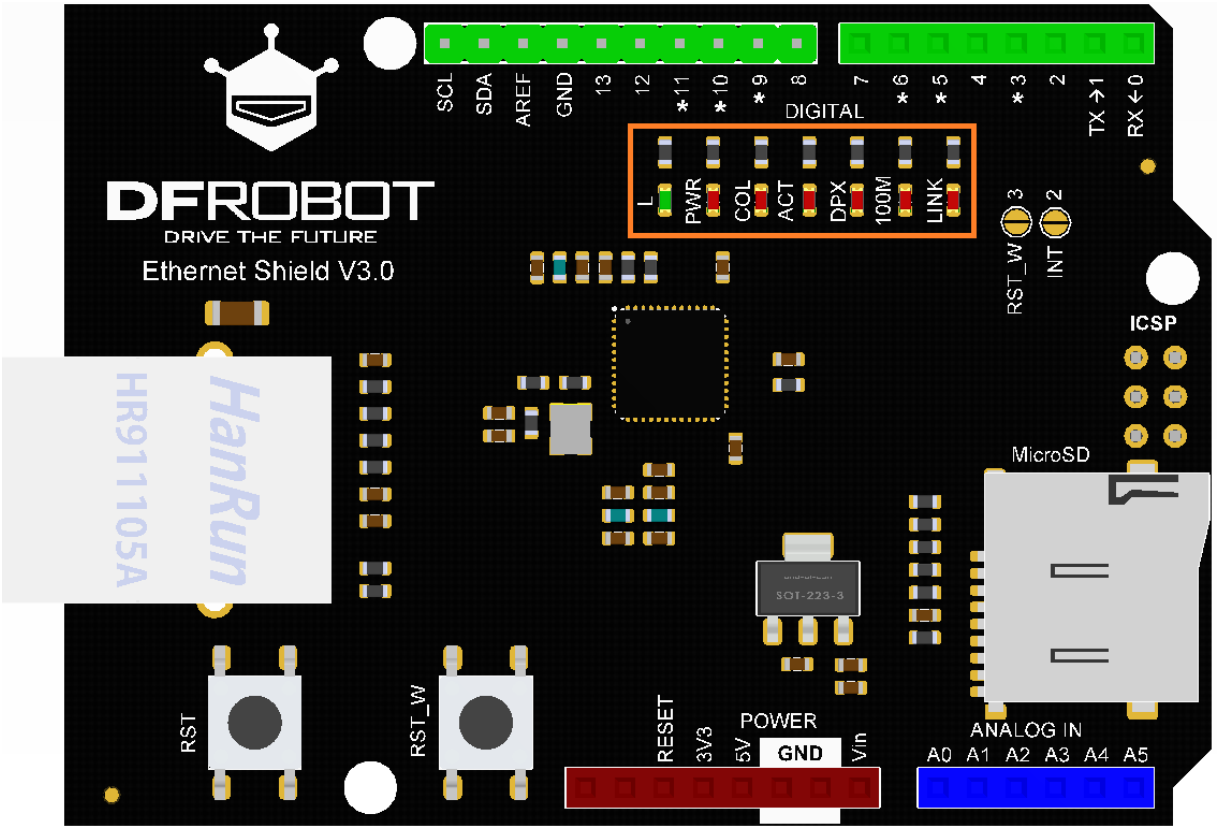
Order Code	Brand	Description
E06007-001	DFRobot	Power Shield Arduino Compatible

Specification

- Operating Voltage: 5V
- 16KB TX/RX Buffers
- 4 Independent hardware sockets
- Full-hardware TCP/IP protocol stacks + MAC +PHY
- Operating Temperature: -40℃ ~ 85℃
- Dimension: 70×55×30mm (2. 76×2. 15×1. 18")

Indicator description

Silkscreen	Description
L	Pin D13 signal indicator
PWR	Power indicator
COL	Connection conflict detection indicator Low level: conflict occurs High level: no conflict
ACT	Activity indicator No flash: connected, but no data is being transmitted or received Blinking: connected, blinking according to data transmission
DPX	Full duplex indicator Low level: full duplex High level: half duplex
100M	Connection speed indicator Low level: 100Mbps High level: 10Mbps
LINK	Connection status indicator Low level: connected High level: disconnected



Tutorial

- Refer to wiki for sample code

Documents

- W5100s datasheet

FAQ

Q&A	Some general Arduino Problems/FAQ/Tips
Q	The browser webpage could not be loaded, what should I do?
A	1. Open the Control Panel -> Network and Internet -> Network and Sharing Center -> Change Adapter Settings 2. Find the network to which you are connected -> right-click -> Properties -> Find "Internet Protocol Version 4 (TCP/IPv4)" in the Network TAB and double-click to access properties settings 3. Change the IP address to make the computer IP address and the controller IP address are in the same LAN
Q	What if getting DHCP fails?
A	Check whether the switch or router supports DHCP, if not, set an IP address by specifying an IP address. Please refer to more Ethernet libraries and tutorials
A	For any questions, advice or cool ideas to share, please visit the **DFRobot Forum**.

Revision History

Date	Revision	Change description
30/10/2025	1.0	Initial release