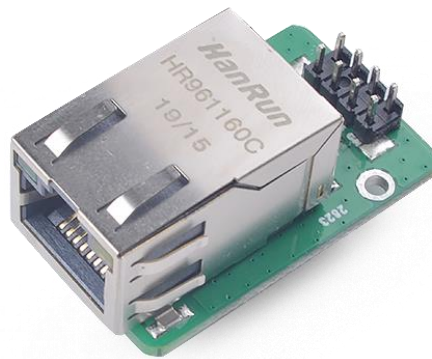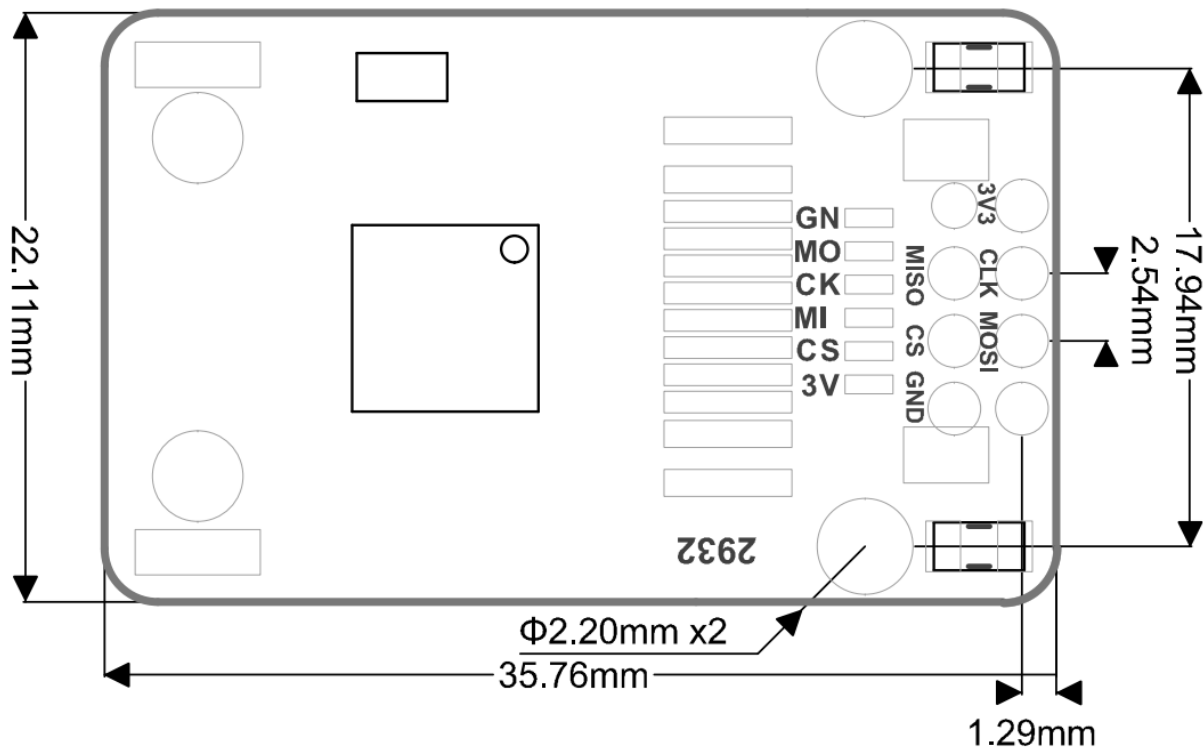# SP-ETHERNET Datasheet

# v1.0



## Features：

- Connect to the board through the SP-MOD SPI interface
- Master chip : The W5500 chip is a Hardwired TCP/IP embedded Ethernet controller
- The theoretical SPI design speed is 80MHz
- 10BaseT/100BaseTX Ethernet PHY embedded,Supports Auto Negotiation (Full and half duplex, 10 and 100-based )Size :35*20mm
- Connection method: SP-MOD (2*4P 2.54mm pin header)

| UPDATE | |
|---|---|
| V1.0 | 2019/4/22；Published original document |
| | |

| INTRODUCTION | |
|---|---|
| Chip：W5500 | Supply voltage of external power supply ： 2.97V~3.63V<br>Supply current of external power supply：<132mA<br>Sleep Status of Current：<15mA<br>TCP/IP protocol，Support<br>TCP,UDP,ICMP,IPv4,ARP,IGMP,PPPoE protocols<br>The theoretical SPI design speed is 80MHz<br>Supports 8 independent sockets simultaneously<br>Internal 32Kbytes Memory for TX/RX Buffers<br>Supports Wake on LAN over UDP<br>10BaseT/100BaseTX Ethernet PHY embedded<br>Support Auto Negotiation (Full and half duplex, 10 and 100-based )<br>Not support auto-MDIX feature |

| HARDWARE FEATURES | |
|---|---|
| Supply voltage of external power supply | 2.6V~3.6V |
| Supply current of external power supply | <132mA |
| Temperature rise | <30K |
| Range of working temperature | -40℃ ~ 85℃ |

| SIZE | |
|---|---|
| Length | 35.76mm |
| Width | 19.74mm |
| Height | 15.56 mm (Excluding the height of pin header: 8.7mm) |

## PIN DESCRIPTION

| | | |
|---|---|---|
| 1 | GND | Ground |
| 2 | CS | Chip Select input pin |
| 3 | SO | Master In Slave Out |
| 4 | | Not connected |
| 5 | 3V3 | Power supply(3.3V) |
| 6 | SCK | SPI clock pin |
| 7 | SI | Master Out Slave In |
| 8 | | Not connected |

| RESOURCES | |
| --- | --- |
| Official Website | www.sipeed.com |
| Github | https://github.com/sipeed |
| BBS | http://bbs.sipeed.com |
| Wiki | maixpy.sipeed.com |
| Sipeed Model Store | https://maixhub.com/ |
| SDK Reference | dl.sipeed.com/MAIX/SDK |
| HDK Reference | dl.sipeed.com/MAIX/HDK |
| E-mail(Technical Support) | support@sipeed.com |
| Telgram Link | https://t.me/sipeed |
| QQ Group | 878189804 |

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