

# PRODUCT GUIDE

June 2022



## Chip

IOP (Internet Offload Processor)  
iEthernet (Ethernet Controller)

## Module

Serial to Ethernet Module  
Network Module  
Application Module

## Wireless

WizFi (Embedded Wi-Fi Module)

## Open-Source Hardware Products

Eval Boards based on  
Raspberry Pi RP2040

wiznet.io



Documents  
[docs.wiznet.io](https://docs.wiznet.io)



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# Chip

## IOP (Internet Offload Processor)

W7500P



W7500



W7100A



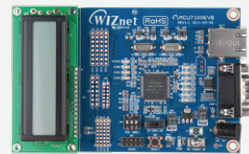
Embedded Core	ARM Cortex-M0, TCP/IP, Ethernet MAC, PHY	ARM Cortex-M0, TCP/IP, Ethernet MAC	Fast 8051, TCP/IP, Ethernet MAC, PHY
Flash	128KB	128KB	64KB
SRAM	16KB	16KB	64KB
Tx/Rx Buffer	32KB (available for SRAM)	32KB (available for SRAM)	32KB
Socket #	8	8	8
Network Performance	Up to 25Mbps	Up to 25Mbps	Up to 20Mbps
Operation Temp (°C)	0 ~ 80	-40 ~ 85	-40 ~ 85
Package	64TQFP : 7x7 (mm)	64TQFP : 7x7 (mm)	100LQFP : 14 x 14 (mm) 64QFN : 10 x 10 (mm)

WIZwiki-W7500P

WIZwiki-W7500

iMCU7100-EVB

Evaluation Board



### Main Features

- Ethernet SoC solution with MCU and Hardwired TCP/IP Core
- Optimized for the embedded application platform requiring 'Internet of Things'
- Industrial standard MCU core integrated
- Market-proven hardwired TCP/IP stack supports TCP, UDP, IPv4, ICMP, ARP, IGMP and PPPoE

## iEthernet (Ethernet Controller)

W6100



W5100S



W5500



W5300



W5100



Embedded Core	TCP, IPv4/IPv6, MAC, PHY	TCP/IPv4, MAC, PHY	TCP/IP, MAC, PHY	TCP/IP, MAC, PHY	TCP/IP, MAC, PHY
Host I/F	Fast SPI, 8bit BUS	Fast SPI, 8bit BUS	Fast SPI	8/16bit BUS	8bit BUS, SPI
Tx/Rx Buffer	32KB	16KB	32KB	128KB	16KB
Socket #	8	4	8	8	4
Process	0.11µm	0.11µm	0.13µm	0.18µm	0.18µm
Network Performance	Up to 25Mbps	Up to 25Mbps	Up to 15Mbps	Up to 80Mbps	Up to 25Mbps
Low Power & WoL	Yes	Yes	Yes	No	No
Auto-MDIX	Yes	Yes	No	Yes	Yes
Operation Temp (°C)	-40 ~ 85	-40 ~ 85	-40 ~ 85	-40 ~ 85	-40 ~ 85
Package	48LQFP, 48QFN	48LQFP, 48QFN	48LQFP : 7x7 (mm)	100LQFP : 14x14 (mm)	80LQFP : 10x10 (mm)

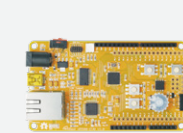
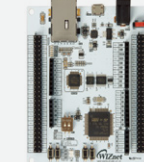
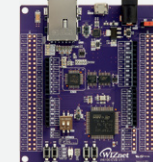
W6100-EVB

W5100S-EVB

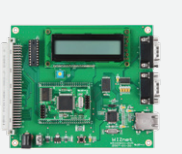
W5500-EVB

W5100E01-AVR

Evaluation Board



N/A



### Main Features

- Unattackable hardware network engine for preventing network attacks such as flooding spoofing, injection
- Supports hardwired TCP/IP protocols : TCP, UDP, ICMP, IPv4, ARP, IGMP, PPPoE
- Easy to use (Easy & simple control like memory)
- Guarantee stable & high network performance & data communication
- 3.3 V operation with 5V I/O signal tolerance

# Module

## Serial to Ethernet Module

	WIZ750SR	WIZ750SR-100	WIZ750SR-105	WIZ750SR-110	WIZ750SR-120	WIZ750SR-125	WIZ550S2E
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MCU	W7500P	W7500	W7500	W7500	W7500	W7500	Cortex-M0
Ethernet IC	W7500P (Internal PHY)	IP101GRI (PHY)	IP101GRI (PHY)	IP101GRI (PHY)	IP101GRI (PHY)	IP101GRI (PHY)	W5500
Serial Interface	UART (3.3V)	UART (3.3V)	UART (3.3V)	RS232C	UART (3.3V)	RS232C	UART (3.3V)
Ethernet Interface	RJ45	Pin Header	RJ45	RJ45	Pin Header	RJ45	RJ45
Serial Interface Number	1	1	1	1	2	2	1
Pin Header	Two 1x6, 2x6, 1x2	Two 1x12	2x6	N/A	Two 1x14	N/A	Two 1x9
Pin Pitch	2.54mm	2mm	2mm	N/A	2mm	N/A	2.54mm
DB-9	No	No	No	Yes	No	Yes	No
Operation Voltage	3.3V	3.3V	3.3V	5V	3.3V	5V	3.3V
Max. Power Consumption	95mA(RS-422/485)	90mA	90mA	95mA	90mA	95mA	179mA
Operation Temp (°C)	0 ~ 70	-40 ~ 85	-40 ~ 85	-40 ~ 85	-40 ~ 85	-40 ~ 85	0 ~ 80
Dimension (mm)	48x30x18	50x30x12	40x62x17	75x50x17	50x30x9	60x89x18	55x30x23.49
Evaluation Board	WIZ750SR-EVB TTL/RS-232 Type RS-422/485 Type	WIZ750SR-100-EVB	WIZ750SR-105-EVB	N/A	WIZ750SR-120-EVB	N/A	WIZ550S2E-EVB

### Main Features

#### Open Source Policy

- Firmware Source
- Hardware Schematic

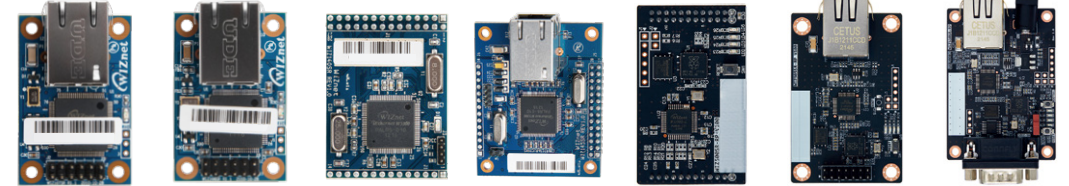
#### Support Customizing Service

- HW customization
- FW customization

#### Plenty of Tools

- CLI(Command Line Interface) Tool
- WIZvsp

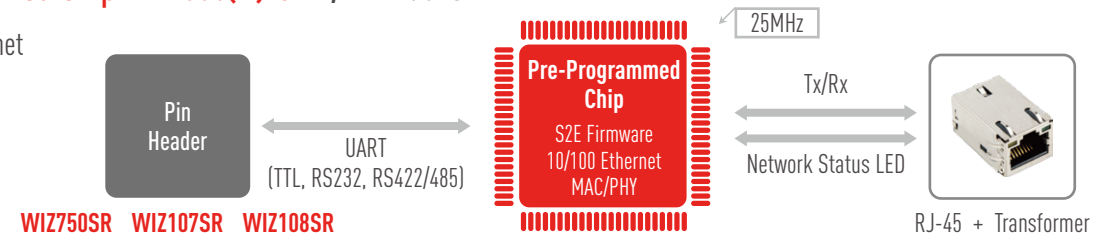
	WIZ107SR	WIZ108SR	WIZ140SR	WIZ145SR	WIZ500SR-RP	WIZ505SR-RP	WIZ510SR-RP
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MCU	W7100A	W7100A	Cortex-M3	Cortex-M3	RP2040	RP2040	RP2040
Ethernet IC	W7100A (Internal PHY)	W7100A (Internal PHY)	W5300	W5300	W5100S	W5100S	W5100S
Serial Interface	UART (3.3V)	RS485/422	UART (3.3V)	UART (3.3V)	UART (3.3V)	UART (3.3V)	RS232C
Ethernet Interface	RJ45	RJ45	Pin Header	RJ45	Pin Header	RJ45	RJ45
Serial Interface Number	1	1	4	4	1	1	1
Pin Header	2x6	2x6	1x14	1x14, 2x14	1x12, 2x12	2x7	N/A
Pin Pitch	2.54mm	2.54mm	2.54mm	2.54mm	2mm	2.54mm	N/A
DB-9	No	No	No	No	No	No	Yes
Operation Voltage	3.3V	3.3V	3.3V	3.3V	3.3V	3.3V	5V
Max. Power Consumption	250mA	250mA	-	-	120mA	125mA	130mA
Operation Temp (°C)	-40 ~ 85	-40 ~ 85	0 ~ 70	0 ~ 70	-20 ~ 85	-20 ~ 85	-20 ~ 85
Dimension (mm)	48x30x18	48x30x18	48x36x16	48x61x25	30x50x12	40x62x18	75x45x18
Evaluation Board	WIZ107SR-EVB	WIZ108SR-EVB	WIZ140SR-EVB	WIZ145SR-EVB	WIZ500SR-RP-EVB WIZ505SR-RP-EVB	WIZ505SR-RP-EVB	N/A

### Pre-Programmed Chip : W7500(P)-S2E / W7100-S2E

Simply Drop WIZnet on your board

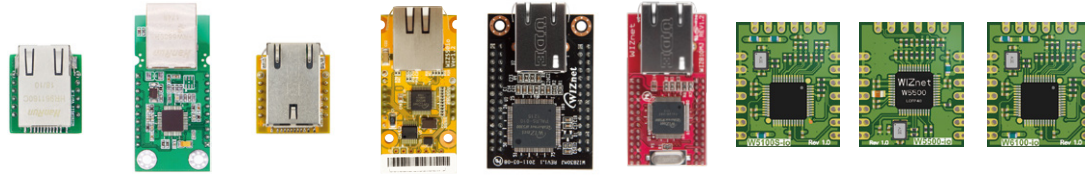


# Module

## Network Module

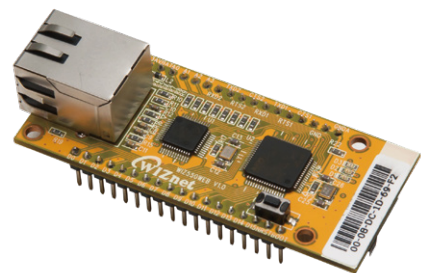
- Plug-in Internet Offload module with iEthernet chip & Mag Jack
- Usable without h/w design for iEthernet chip, transformer and RJ-45

	WIZ810Sio	WIZ810SMJ	WIZ850io	WIZ550io	WIZ830MJ	WIZ810MJ	W5100S-io	W5500-io	W6100-io
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Embedded Block	W5100S, MagJack	W5100S, MagJack	W5500, MagJack	W5300, MagJack	W5100, MagJack	W5100, MagJack	W5100S	W5500	W6100
Host Interface	SPI	8bit Indirect Bus, SPI	SPI	SPI	8/16 bit Bus	8bit Bus, SPI	SPI	SPI	SPI
HW Socket	4	4	8	8	8	4	4	8	8
Auto MDIX	Yes	Yes	No	No	Yes	Yes	Yes	No	Yes
Ethernet Interface	RJ45	RJ45	RJ45	RJ45	RJ45	RJ45	Surface Mount	Surface Mount	Surface Mount
Pin Header	Two 1x6	Two 1x10	Two 1x6	1x8, 1x6	Two 2x14	Two 2x14	N/A	N/A	N/A
Pin Pitch	2.54mm	2.54mm	2.54mm	2.54mm	2.54mm	2.54mm	2.54mm	2.54mm	2.54mm
MAC Address	No	No	No	Yes	No	No	No	No	No
Operation Temp (°C)	-40 ~ 85	-40 ~ 85	-40 ~ 85	-40 ~ 85	-40 ~ 85	-40 ~ 85	-40 ~ 85	-40 ~ 85	-40 ~ 85
Dimension (mm)	23x25x18	55.5x25x23.5	23x25x18	54x26x24	53.3x34x19.5	52x25x21	20x24x3	20x24x3	20x24x3

## Application Module



### WIZ550WEB

#### Main Features

- Web Server built-in module to control digital I/O or analog input on the web browser
- Customizable web page : provides various demo pages for PC & mobile device
- 16 digital I/Os & 4 analog inputs
- Supports 'Serial to Web(Ethernet)' data transmission
- Module configuration : web, AT commands & configuration tool program
- Provides JAVA based configuration tool program
- Supports firmware uploading using TFTP

# Wireless

## WizFi Module (Embedded Wi-Fi Module)

	WizFi360-PA	WizFi360-CON	WizFi630S
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Operation Mode	Station(Client), Soft AP	Station(Client), Soft AP	AP/Client/Router mode
Wireless Standard	802.11b/g/n, 2.4Ghz	802.11b/g/n, 2.4Ghz	802.11b/g/n, 2.4Ghz
Interface	UART, SPI, GPIO, ADC	UART, SPI, GPIO, ADC	2x UART, 3x PHY, 1x eMMC, GPIO, I2C, I2S, USB Host
Package	SMD Type	SMD Type	Mini-PCIe type
Antena Type	PCB Antenna	UFL Antenna connector	UFL Antenna connector
Power Consumption	Receive=100~110mA (11b/g/n), Transmit=230mA(11b), 210mA(11g & 11b), Peak=TBD(230mA)		TBD
Configuration	AT Command	AT Command	Web, SSH, Serial console
Output Power	802.11b : 19dBm, 802.11g : 13.5dBm, 802.11n : 12dBm		TBD
Booting Time	Under 100ms	Under 100ms	30 ~ 50sec
Operation Temp (°C)	-40 ~ 85	-40 ~ 85	-25 ~ 80
Dimension (mm)	24 x 16 x 3	17 x 16 x 3	43 x 33
Certification	KCC, CE, FCC, TELEC	KCC, CE, FCC, TELEC	CE, FCC, KC, RoHS
Evaluation Board	WizFi360-EVB-Shield, WizFi360-EVB-Mini, WizFi360-EVB-Pico		WizFi630S-EVB

### WizFi360, official Wi-Fi Shield on Arm Open-CMSIS-Pack and Keil Studio Cloud

#### Overview

The WizFi360 is a low-cost and low-power consumption industrial-grade WiFi module. It is compatible with IEEE802.11 b/g/n standard and supports SoftAP, Station and SoftAP+Station modes.

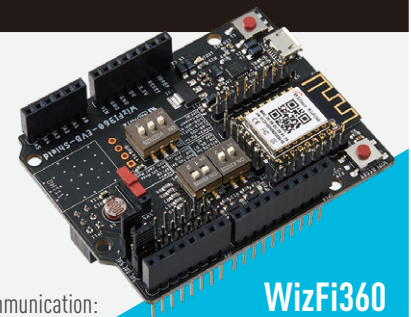
#### Documentation

Data sheet, technical reference, quick start guide: docs.wiznet.io

#### Usage

All IoT example projects require the following switch settings: Connect these jumpers for serial communication:

- SW1: all ON. ▪ SW2: all OFF. ▪ SW3: all OFF. ▪ SW4: OFF. ▪ D0: JP3 and JP2 ▪ D1: JP2 and JP1

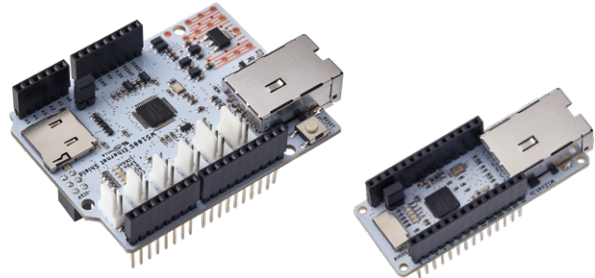


WizFi360 EVB-Shield

# Open-Source Hardware Products

## W5100S Ethernet Shield / W5100S MKR-Ethernet Shield

W5100S Ethernet Shield uses W5100S and supports 3.3V & 5V. This Ethernet shield is compatible with both Arduino and ARM Mbed platforms.

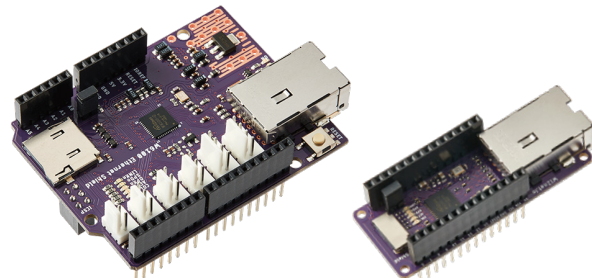


W5100S Ethernet Shield

W5100S MKR-Ethernet Shield

## W6100 Ethernet Shield / W6100 MKR-Ethernet Shield

W6100 Ethernet Shield uses W6100, WIZnet's IPv4/IPv6 dual stack chip, and supports 3.3V & 5V. This Ethernet shield is compatible with both Arduino and ARM Mbed platforms.



W6100 Ethernet Shield

W6100 MKR-Ethernet Shield

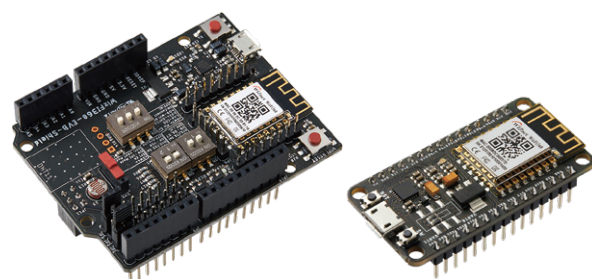
## W5500 Ethernet Shield

W5500 Ethernet Shield uses W5500 and supports 3.3V & 5V. This Ethernet shield is compatible with both Arduino and ARM Mbed platforms.



## WizFi360-EVB-Shield / WizFi360-EVB-Mini

WizFi360-EVB-Shield is a development board for experiment, test and verification of WizFi360. WizFi360-EVB-Shield can also be used as an Arduino shield.



WizFi360-EVB-Shield

WizFi360-EVB-Mini

# External Device Server



## WIZ1000

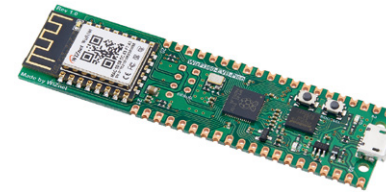
### Key Features

- 1-Port Serial Device Server
  - 10/100 Mbps Ethernet
  - RS-232, RS-422, and RS-485 Serial Interface
- Supports PPPoE Connection
- Telnet Com Port Option (RFC2217) compliant
- Supports serial configuration by using AT command
- Supported Software
  - Software utilities for easy configuration
  - WIZ VSP (Virtual COM port Program)
- CE, FCC, KCC certified

# Eval Boards based on Raspberry Pi RP2040

## WizFi360-EVB-Pico

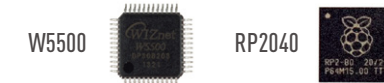
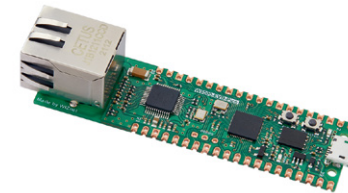
\$6.95



WizFi360-EVB-Pico is WIZnet's latest Raspberry Pi collaboration which utilizes RP2040 and adds Wi-Fi connectivity via WizFi360. This board is pin compatible with Raspberry Pi Pico and recommended for developing IoT solutions.

## W5500-EVB-Pico

\$9.95



W5500-EVB-Pico is WIZnet's latest Raspberry Pi collaboration which utilizes RP2040 and WIZnet's best seller W5500.

## W5100S-EVB-Pico

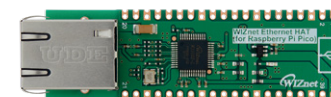
\$9.95



W5100S-EVB-Pico is based on the Raspberry Pi RP2040 and fully hardwired TCP/IP controller W5100S.

## WIZnet Ethernet HAT

\$4.95



WIZnet Ethernet HAT (Hardware Attached on Top) is a Raspberry Pi Pico pin-compatible board that utilizes W5100S and supports both 3.3V & 5V.

## News on Raspberry Pi Pico

1.5 million Picos sold and 20 million RP2040 ready to ship with more on the way.



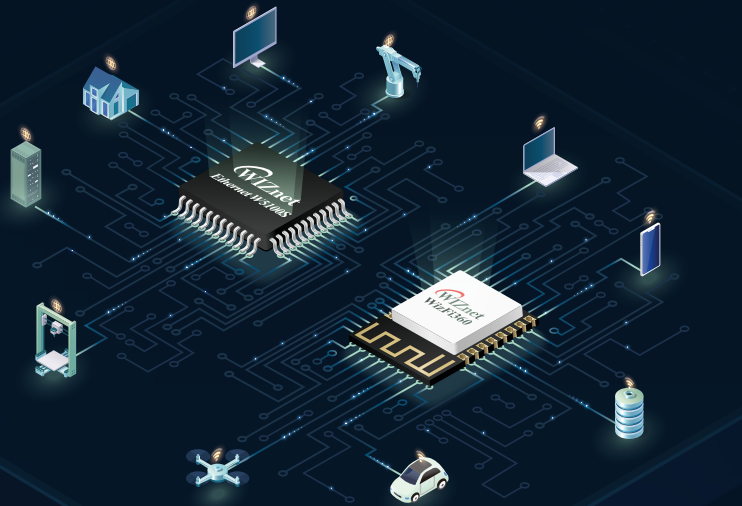
# WIZnet Direct

[direct.wiznet.io](http://direct.wiznet.io)

WIZnet Direct is for D4M (direct for makers), based on approved project details & non-disclosure.

We value the power of collaboration as we have an ecosystem with hundreds of Value Added Resellers in the market.

- 20+ years in the industry with patented technology
- Open-source Github and SDK available
- Project registration and transparent pricing
- Compatible with Arduino and Raspberry Pi Pico



# WizFi360 Design Contest

at [maker.wiznet.io](http://maker.wiznet.io)



Bring your **creativity** and win an **Apple iPad Pro**

# WIZnet Makers

[maker.wiznet.io](http://maker.wiznet.io)

WE BELIEVE OUR CONTRIBUTION TO THE OPEN-SOURCE COMMUNITY IS WHAT GIVES US THE COMPETITIVE EDGE IN THE MARKET

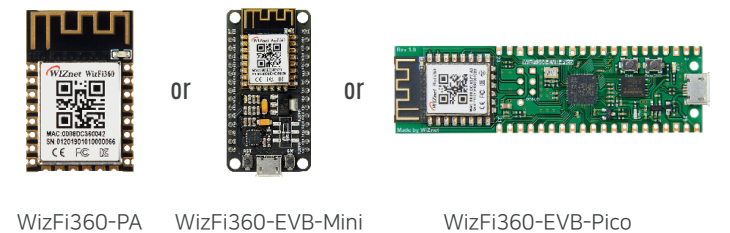
- Exhibiting 3,000+ projects and 500+ reseller products
- Annual design contests for makers with free samples and prizes

## WizFi360

- Official Wi-Fi Shield on ARM Open-CMSIS-Pack and Keil Studio Cloud
- Easy-to-connect Wi-Fi to Pico RP2040
- Azure Certified / Supports AWS SDK Examples

## Free Sample

More details at [maker.wiznet.io](http://maker.wiznet.io)



30 Winners will receive **Apple iPad Pro(\$1,099)** 12.9-inch 128GB Wi-Fi