

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



Tech Support
forum.wiznet.io



Online shop
eshop.wiznet.io



WIZnet

Chip

IOP (Internet Offload Processor)

W7500P



W7500



W7100A



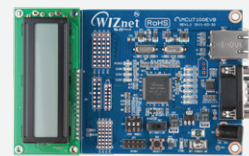
| | | | |
|---------------------|------------------------------------------|-------------------------------------|------------------------------------------------|
| Embedded Core | ARM Cortex-M0, TCP/IP, Ethernet MAC, PHY | ARM Cortex-M0, TCP/IP, Ethernet MAC | Fast 8051, TCP/IP, Ethernet MAC, PHY |
| 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) |

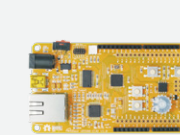
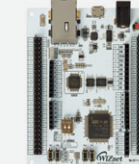
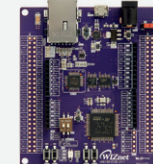
W6100-EVB

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

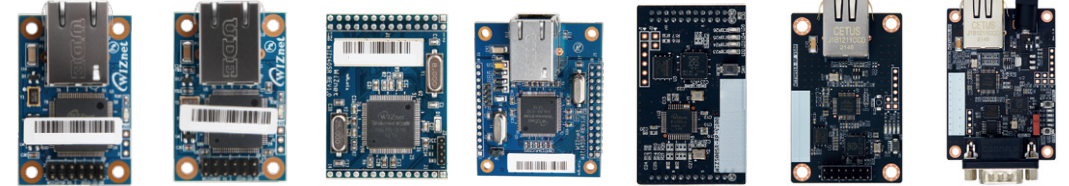
Support Customizing Service

- HW customization
- FW customization

Plenty of Tools

- CLI(Command Line Interface) Tool
- WIZvsp

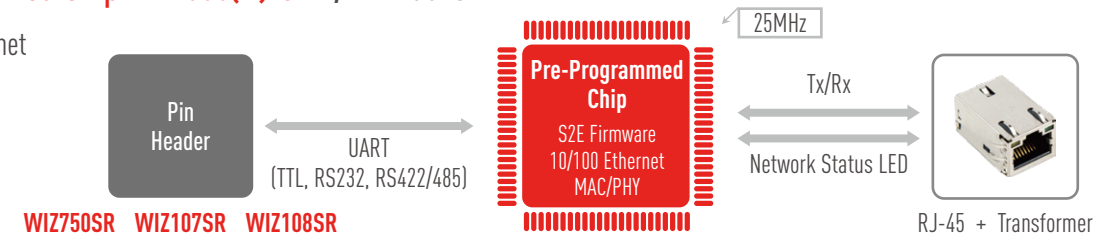
| | WIZ107SR | WIZ108SR | WIZ140SR | WIZ145SR | WIZ500SR-RP | WIZ505SR-RP | WIZ510SR-RP |
|--|----------|----------|----------|----------|-------------|-------------|-------------|
|--|----------|----------|----------|----------|-------------|-------------|-------------|



| | | | | | | | |
|-------------------------|-----------------------|-----------------------|--------------|--------------|------------------------------------|-----------------|----------|
| 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

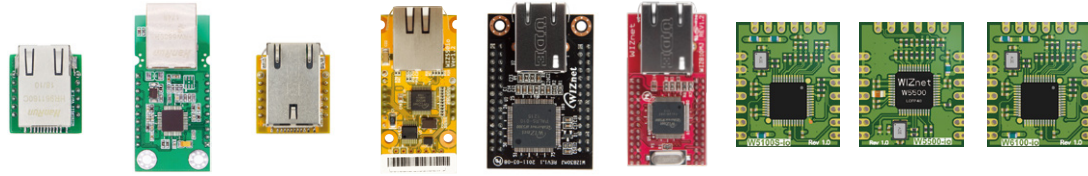


Module

Network Module

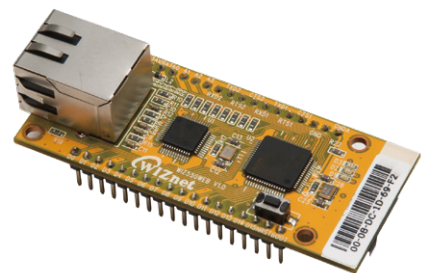
- Plug-in Internet Offload module with iEthernet chip & Mag Jack
- Usable without h/w design for iEthernet chip, transformer and RJ-45

| | WIZ810Sio | WIZ810SMJ | WIZ850io | WIZ550io | WIZ830MJ | WIZ810MJ | W5100S-io | W5500-io | W6100-io |
|--|-----------|-----------|----------|----------|----------|----------|-----------|----------|----------|
|--|-----------|-----------|----------|----------|----------|----------|-----------|----------|----------|



| | | | | | | | | | |
|---------------------|-----------------|------------------------|----------------|----------------|----------------|----------------|---------------|---------------|---------------|
| 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 |
|--|-------------|--------------|-----------|
|--|-------------|--------------|-----------|



| | | | |
|---------------------|------------------------------------------------------------------------------------|--------------------------|----------------------------------------------------|
| 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 |
| Antenna 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.

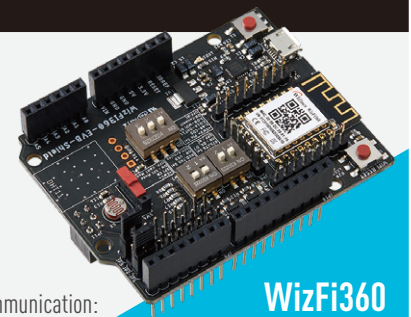
Documentation

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

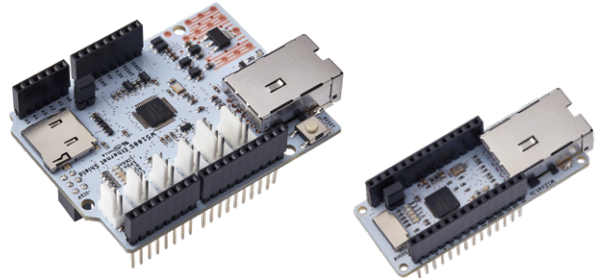


WizFi360 EVB-Shield

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.

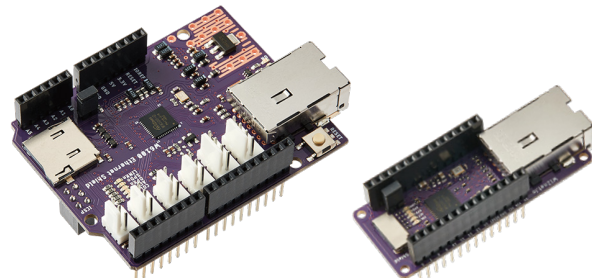


W5100S Ethernet Shield

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

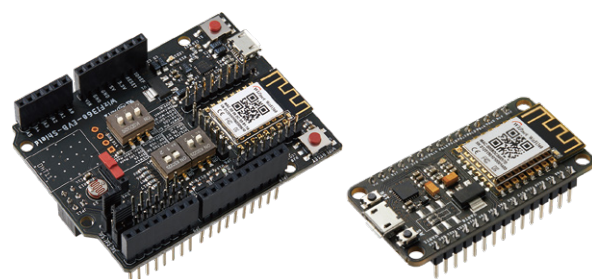
W5500 Ethernet Shield

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

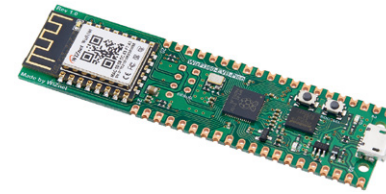
Key Features

- 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

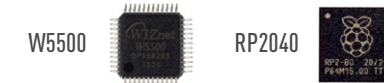
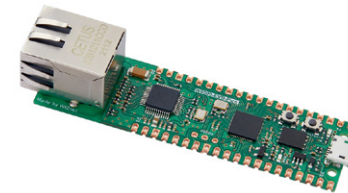
\$6.95



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

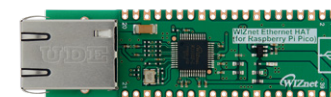
\$9.95



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.



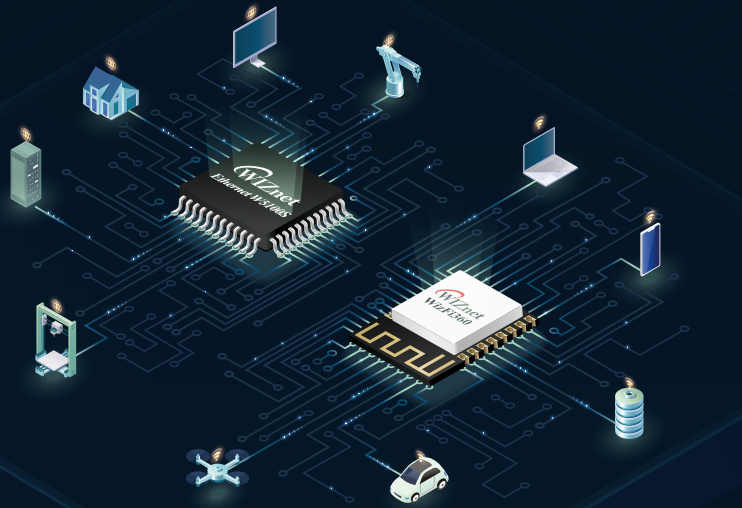
WIZnet Direct

direct.wiznet.io

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



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

WIZnet Makers

maker.wiznet.io

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

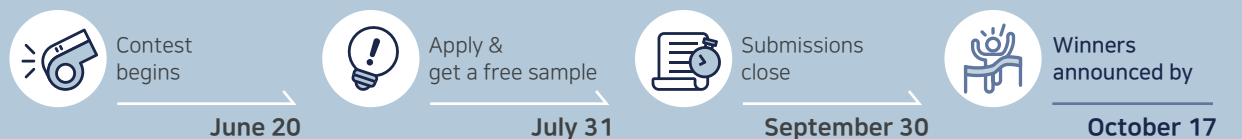
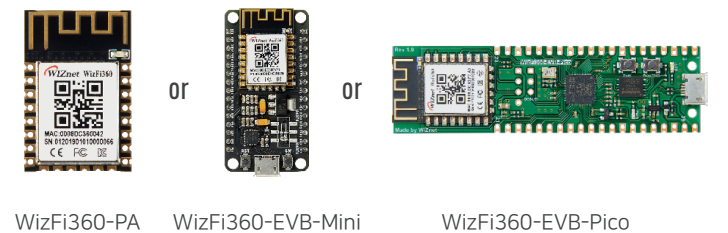
- Exhibiting 3,000+ projects and 500+ reseller products
- Annual design contests for makers with free samples and prizes

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



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