



10I/Os Modules with Arduino NANO or ESP32 boards

Open Source based industrial controller
or input output module expansion.



Industrial Shields


10 IOS MODULES

Industrial Protocols
RS485 · RS232 · SPI · Modbus RTU



- 10 IOS Digital Module with ESP32
 - 10 GPIOs
 - RS485 - Ethernet - WiFi
- 10 IOS Relay Module with ESP32
 - 10 GPIOs
 - 10 Relay Output
 - RS485 - Ethernet - WiFi

Original ESP32 included



- 10 IOS Digital Module with Arduino
 - 10 GPIOs
 - RS485 - Ethernet
- 10 IOS Relay Module with Arduino
 - 10 GPIOs
 - 10 Relay Output
 - RS485 - Ethernet

Original Arduino Nano included



Monitoring, control and automation of your machines, alarms, elevator control, product lines, installations among the most typical applications such as fans, pumps, air conditioning, full HVAC solutions, control of AC and DC motors.

The 10IOs Input, Output, and Relay family of modules provides a flexible, cost-effective means to expand the Input/ Output functionality of Industrial controllers.

It is easy to install and configure, and very flexible thanks to the Open Source based hardware.

You can choose the use for this hardware. Use it as an **industrial controller** or as an **input output module**.

REFERENCE LIST - 10IOS

| Reference | Description | Communications | | | | | | | Inputs / Outputs | | | | | | |
|--------------|--|-------------------|-----|-----|-------|-------------------|----------|-------------|------------------|----------------|---------------|------------------|-----------------|----------------|---------------|
| | | Serial TTL (UART) | I2C | SPI | RS232 | RS485 Half / Full | Ethernet | Wi-Fi & BLE | GPRS / GSM | Digital Inputs | Analog Inputs | Interrupt Inputs | Digital Outputs | Analog Outputs | Relay Outputs |
| 013001000100 | 10 I/O's Digital Module - CPU Arduino NANO | - | - | - | - | x1 | x1 | - | - | x10 GPIOs | - | - | - | - | x3 n.7 |
| 013002000100 | 10 I/O's Digital Module - CPU ESP32 | - | - | - | - | x1 | x1 | x1 | - | x10 GPIOs | - | - | - | - | x3 n.7 |
| 013001000200 | 10 I/O's Relay Module - CPU Arduino NANO | - | - | - | - | x1 | x1 | - | - | x10 | - | - | - | x10 | x2 n.15 |
| 013002000200 | 10 I/O's Relay Module - CPU ESP32 | - | - | - | - | x1 | x1 | x1 | - | x10 | - | - | - | x10 | x2 n.15 |

LIBRARIES, COMMUNICATIONS, PROTOCOLS



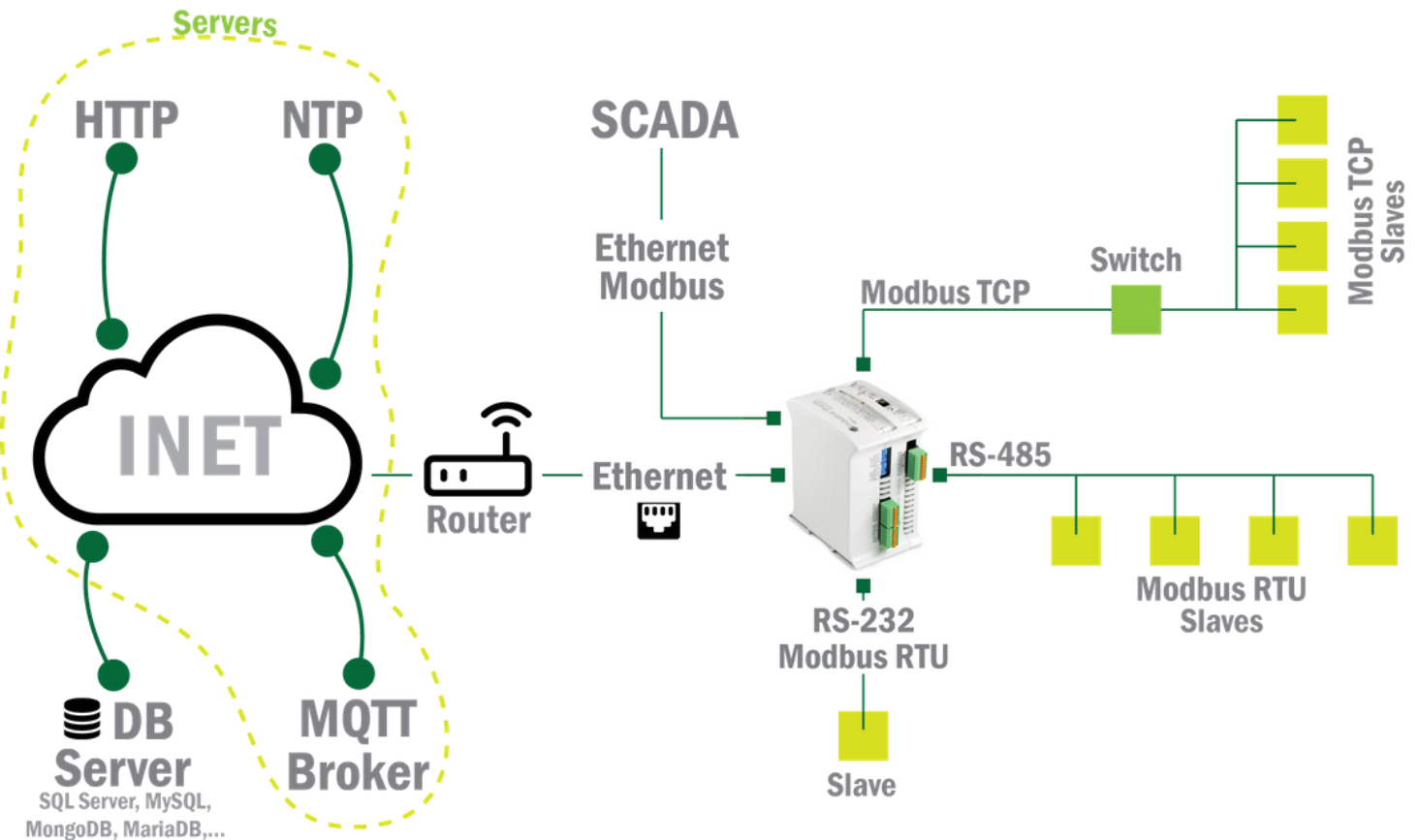
Available Libraries in our Blog and GitHub

| Application Layer | MySQL | SQL Server | SimpleComm | Modbus TCP | MQTT | http | Raw Data | NTD | Raw Data | Modbus RTU | SimpleComm | Raw Data | Modbus RTU | SimpleComm | Sensor Data | Sensor Data | Sensor Data |
|-------------------|-----------------|------------|------------|------------|------|------|----------|-----|-------------|------------|------------|----------|------------|------------|-------------|-------------|-------------|
| | Data Base | | | | | | | | | | | | | | | | |
| 4- Transport | TCP | | | | | | | UDP | | | | | | | | | |
| 3- Network | IP | | | | | | | | | | | | | | | | |
| 2- Data Link | Ethernet / WiFi | | | | | | | | RS-485 | | RS-232 | | TTL/SPI | I2C | One Wire | | |
| 1- Physical | GPRS | | | | | | | | Serial UART | | | | | | | | |

<https://github.com/IndustrialShields>

<https://www.industrialshields.com/blog/industrial-shields-blog-1>

With our PLC's you can communicate using several protocols like: RS-232, RS-485, Modbus TCP, or using ethernet, etc. It's possible to send and receive information from several server types (HTTP, NTP, MQTT) or DB Servers.



Boot & Work Corp. S.L. is a company committed to the promotion, development, manufacture and selling of products based on Open Source technology to liberalize the industrial sector and boost the growth of its customers.

COMPANY

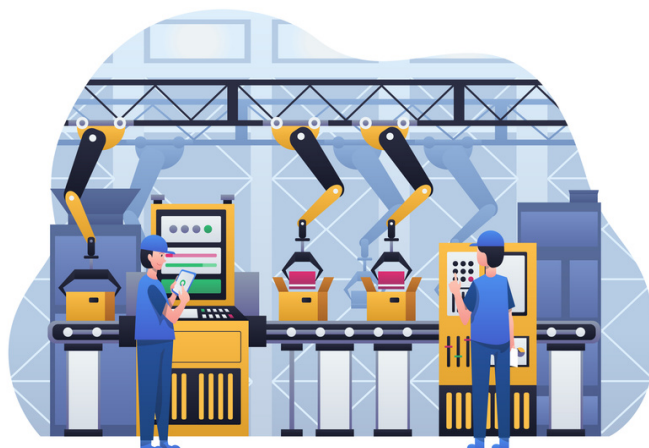
Industrial Shields is the brand that provides **Open Source Hardware** for industrial use, including all design and safety required, combining the best of two worlds.

Our company's goal is to provide you low cost solutions for automation in industrial environments. The **Open Source Hardware** solutions in the industrial sector are a growing market and we are its pioneers.

The balance between quality and cost is very important for the market, using Open Source solutions you can get more specifications at a better price.

Even more, the Open Source solutions are more flexible and accessible than the standard industrial solutions, and furthermore, the software is free of licences.

You can focus on Industry 4.0 and the Internet of Things thanks to Open Source Hardware products.



QUALITY



**RoHS
Compliant**



In compliance with :

EN61010-1 | EN61010-2-201 | EN61131-2:2007 (Clause 8: Zone A/B EMC and clause 11:LVD)
EN61000-6-4:2007 + A1 2011 (Emissions) | EN 61000-6-2:2005 (Immunity) | EMC: FCC Part 15

Working worldwide through distributors, or in direct contact with the customers. We have been working since 2016 with big players of the market that are selling our products in their websites.

Our **commercial, technical and support team** will assist you by phone, email, skype; or using the ticket system or chat directly in our website.



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