Industrial PLC based on Raspberry Pi

The Liberalisation of the Industry with Open Source Technology

Industrial Shields®

Powered by Raspberry Pi

PLC RASPBERRY PI

Original **Raspberry Pi** included

The industrial controller solution with original Raspberry Pi board.

UPS - UNITERRUPTED POWER SUPPLY
Secure your operating system, your current processes and your data with an uninterrupted power supply that guarantees a clean shutdown in case of a power failure.

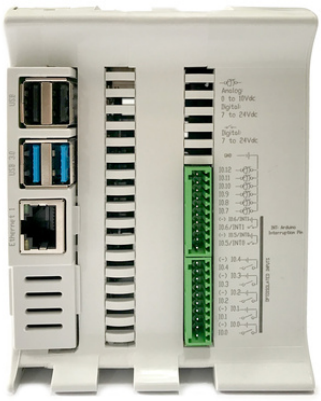
MULTIPLE CONNECTIVITY, MULTIPLE OPTIONS
Thanks to the dual Ethernet ports, the dual RS-485, WiFi, Bluetooth, CAN bus and other options, you can connect to a large number of devices and use multiple protocols and communication ports.

HIGH PROCESSING SPEED
The Raspberry Pi allows high speed processing compared to most common PLCs.

MULTI-PROCESS
IWork with real-time applications and allowing multi-process.

RTC - REAL TIME CLOCK
A large number of applications require working with RTC. The PLC Raspberry Pi allows you to use this feature with the internal clock that guarantees the current time and date to keep track of the right time.

LINUX or RASPBERRY PI OS (previously called Raspbian)
All the power, flexibility and features of the Linux Operating System. Use Linux or Raspberry Pi OS (previously called Raspbian), the Debian-based solution from Raspberry Pi.



Industrial Standard Communications

Full Range also with GPRS

By using Raspberry Pi PLCs along with the right sensors and control elements, you can quickly implement dedicated industrial automation systems capable of meeting the requirements for a wide range of operations in industrial environments.

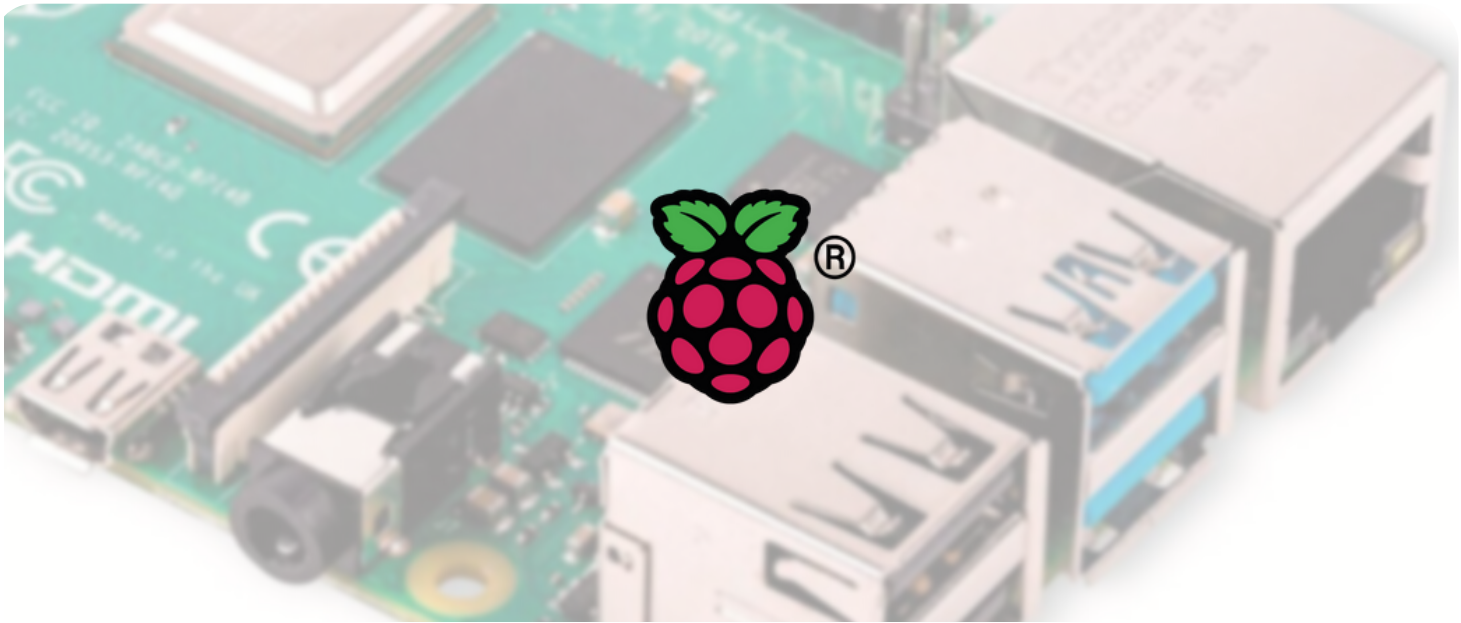
REFERENCE LIST – RASPBERRY PI PLC

		Communications								Inputs / Outputs						
Reference	Description	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	In / Out 5Vdc
01200X000000	Raspberry PLC CPU	x1 n.13	x1 n.12	x1	-	x1	x2	x1	-	-	-	-	-	-	-	x1
01200X000200	Raspberry PLC 21	x1 n.13	x1 n.12	x1	-	x1	x2	x1	-	x7	x6 n.4	x2	x5	x3	-	x1
01200X000400	Raspberry PLC 42	x1 n.13	x1 n.12	x1	-	x1	x2	x1	-	x14	x12 n.4	x4	x10	x6	-	x1
01200X000600	Raspberry PLC 58	x1 n.13	x1 n.12	x1	-	x1	x2	x1	-	x21	x16 n.4	x6	x14	x8	-	x1
01200X000100	Raspberry PLC 19R	x1 n.13	x1 n.12	x1	-	x1	x2	x1	-	x2	x4 n.4	x2	x0	x3	x8	x1
01200X000300	Raspberry PLC 38R	x1 n.13	x1 n.12	x1	-	x1	x2	x1	-	x4	x8 n.4	x4	x0	x6	x16	x1
01200X000500	Raspberry PLC 57R	x1 n.13	x2 n.12	x1	-	x1	x2	x1	-	x6	x12 n.4	x6	x0	x8	x24	x1
01200X000700	Raspberry PLC 38AR	x1 n.13	x2 n.12	x1	-	x1	x2	x1	-	x9	x10 n.4	x4	x5	x6	x8	x1
01200X000800	Raspberry PLC 57AAR	x1 n.13	x2 n.12	x1	-	x1	x2	x1	-	x16	x16 n.4	x6	x10	x8	x8	x1
01200X000900	Raspberry PLC 50RRA	x1 n.13	x2 n.12	x1	-	x1	x2	x1	-	x11	x12 n.4	x6	x4	x8	x16	x1
01200X001000	Raspberry PLC 53ARR	x1 n.13	x2 n.12	x1	-	x1	x2	x1	-	x11	x14 n.4	x6	x5	x8	x16	x1
01200X001100	Raspberry PLC 54ARA	x1 n.13	x1 n.1	x1	x1	x1 n.3	x2	x1	-	x16	x14 n.4	x6	x9	x8	x8	x1

n.1: 1 Input & 1 Digitial Out are lost | n.2: 2 Inputs & 2 Relay are lost | n.3: 2 Inputs & 2 Digital Outputs & 2 Analog Outputs are lost | n.4: From the (Xx) Digital, (Yx) can be configured as Analog (Xx = Total Digital In, Yx = Number of Analog In) | n.5 : From the (Xx) Digital, (Zx) can be configured as Interrupt (Xx = Total Digital In, Zx = Number of Interrupt pins) | n.6: If using RS-232 or RS-485 (x2) Analog Output are lost | n.7 : If using pin 2 and pin 3, (x2) In are lost | n.8: 1 Inputs & 1 Relay are lost | n.9: 2 Inputs & 2 Relay are lost | n.10: 2 Inputs & 2 Relay are lost | n.11: USB Only meant for uploading or debugging, not always connected as serial in a project! | n.12: 2 Inputs are lost |

XXXXX2XXXXXX	Raspberry Pi 4B 2GB RAM Included
XXXXX3XXXXXX	Raspberry Pi 4B 4GB RAM Included
XXXXX4XXXXXX	Raspberry Pi 4B 8GB RAM Included
XXXXXXXXXXXXF*	Additional FAN

Powered by **Raspberry Pi**



REFERENCE LIST – RASPBERRY PI & GPRS PLC

		Communications								Inputs / Outputs						
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01600X000200	Raspberry PLC & GPRS 21	x1 n.13	x1 n.12	x1	-	x1	x2	x1	x1	x7	x6 n.4	x2	x5	x3	-	-
01600X000400	Raspberry PLC & GPRS 42	x1 n.13	x1 n.12	x1	-	x1	x2	x1	x1	x14	x12 n.4	x4	x10	x6	-	-
01600X000600	Raspberry PLC & GPRS 58	x1 n.13	x1 n.12	x1	-	x1	x2	x1	x1	x20	x16 n.4	x5	x14	x9	-	-
01600X000100	Raspberry PLC & GPRS 19R	x1 n.13	x1 n.12	x1	-	x1	x2	x1	x1	x2	x4 n.4	x2	x0	x3	x8	-
01600X000300	Raspberry PLC & GPRS 38R	x1 n.13	x1 n.12	x1	-	x1	x2	x1	x1	x4	x8 n.4	x4	x0	x6	x16	-
01600X000500	Raspberry PLC & GPRS 57R	x1 n.13	x1 n.12	x1	-	x1	x2	x1	x1	x5	x12 n.4	x5	x0	x9	x24	-
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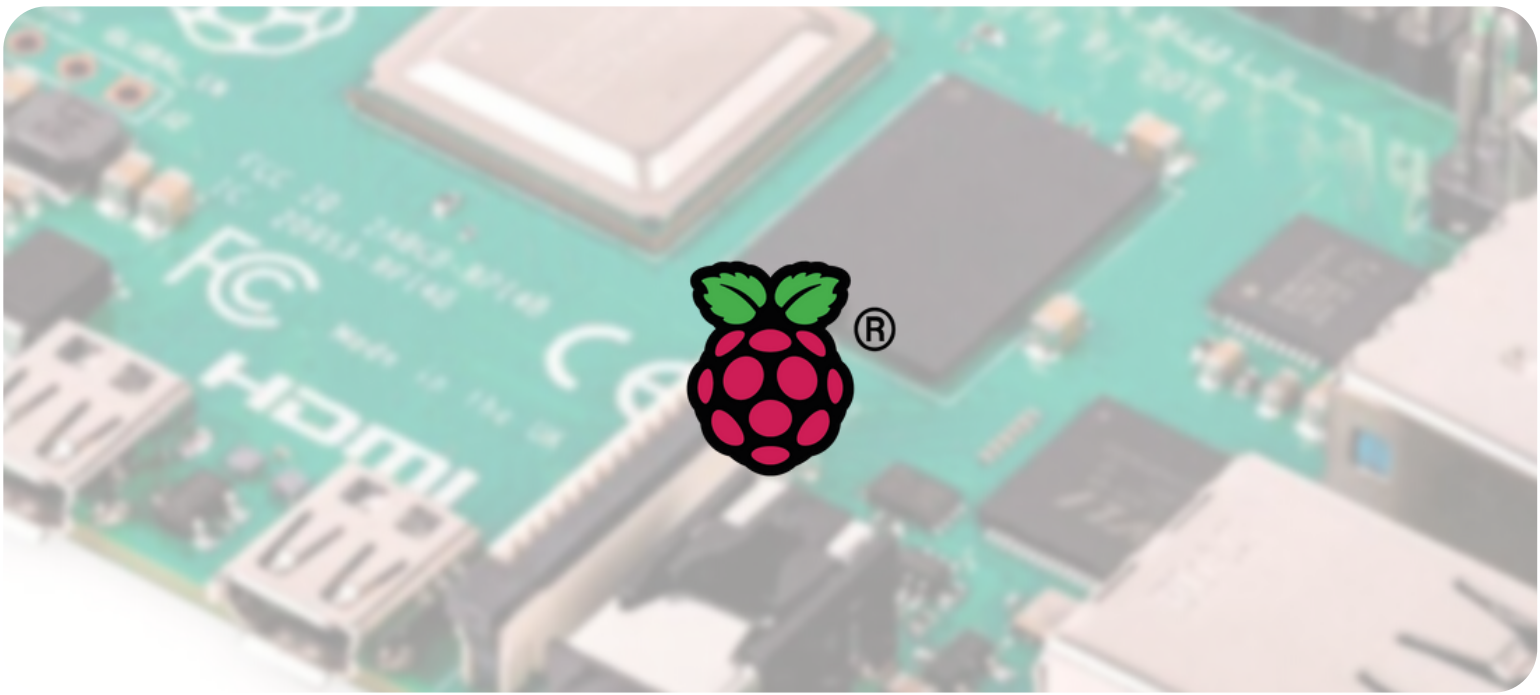
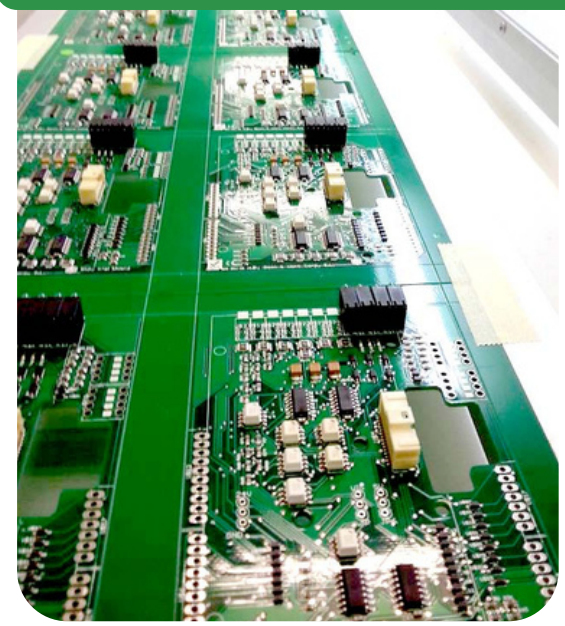


COMPANY

Industrial Shields was born in October 2012 by an engineer who, searching a more flexible PLC equipment at a better price, decided to develop his own solution using **Open Source Hardware.**

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

Industrial Shields designs, produces and markets the range of products based on **Open Source Hardware**.



Bigdata
Cloud Computing
Flexible Hardware
Industrial Internet of Things

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

Our company's goal is to provide low-cost solutions for automation in industrial environments.

Open Source Hardware solutions are not yet widely introduced in the industrial sector, it is a growing market and we are its pioneers.

The balance between **quality and cost is very important** to us and therefore to the market, so by using Open Source solutions we can provide more specifications at a better price.

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

Industrial Shields is convinced of a perspective focused on **Industry 4.0 and the Internet of Things**.

QUALITY

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 (Inmunity) | EMC: FCC Part 15

EVOLVING

2007-2010

Through the IEEE-UNEDsb we meet Arduino and use it to manufacture machinery as a prototype. We created the first Shields for industrial use for machinery in the labeling sector and automatic production lines.

2012

Boot & Work Corp. is created with the aim of standardising a product based on Open Source technology for use in industrial environments.

2013

Boot & Work Corp wins the award for the best Innovative company in Barberá del Valles. First prototype units. The Ardbox is coming.

2014

We create the Industrial Shields brand from where we start to market a first basic family of products.
The first unit is sold online to Libya.

2015

Industrial Shields has commercialised equipment based on Open Source technology to more than 20 countries.

2016

5 distributors in different countries (UK, Germany, USA, Mexico and Italy) and more than 500 clients in all types of industrial sectors.

2017

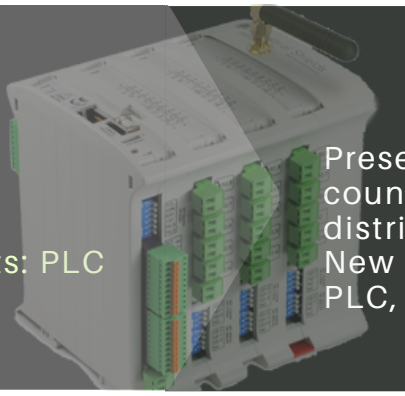
We have over 17 distributors in 15 countries from all continents and we have reached more than 75 countries.

2018

International trade shows in Barcelona, Paris and Bangalore. Investment in improving facilities, quality processes, industrial certifications.

2019

Presence in more than 90 countries, more than 20 distributors worldwide.
New products developments: PLC with WiFi and GPRS/GSM.



2020

Presence in more than 100 countries, more than 40 distributors worldwide.
New developments: Raspberry PLC, Dali PLC, LoRa PLC.

Presence in more than **100 countries**

CONTACT US

Industrial Shields has been working worldwide through distributors, or in direct contact with customers.

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

Get in touch with us. We are here, glad to help and assist you.

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