Industrial PLC based on Raspberry Pi

The Liberalization of the Industry with Open Source Technology

Industrial Shields

PLC RASPBERRY PI

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 to use multiple protocols and communication ports.

HIGH PROCESSING SPEED
The Raspberry Pi allow to process at high speed compared to most common PLCs.

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

RTC - REAL TIME CLOCK
A great number of applications require working with RTC. The PLC Raspberry Pi allows you the use of 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.
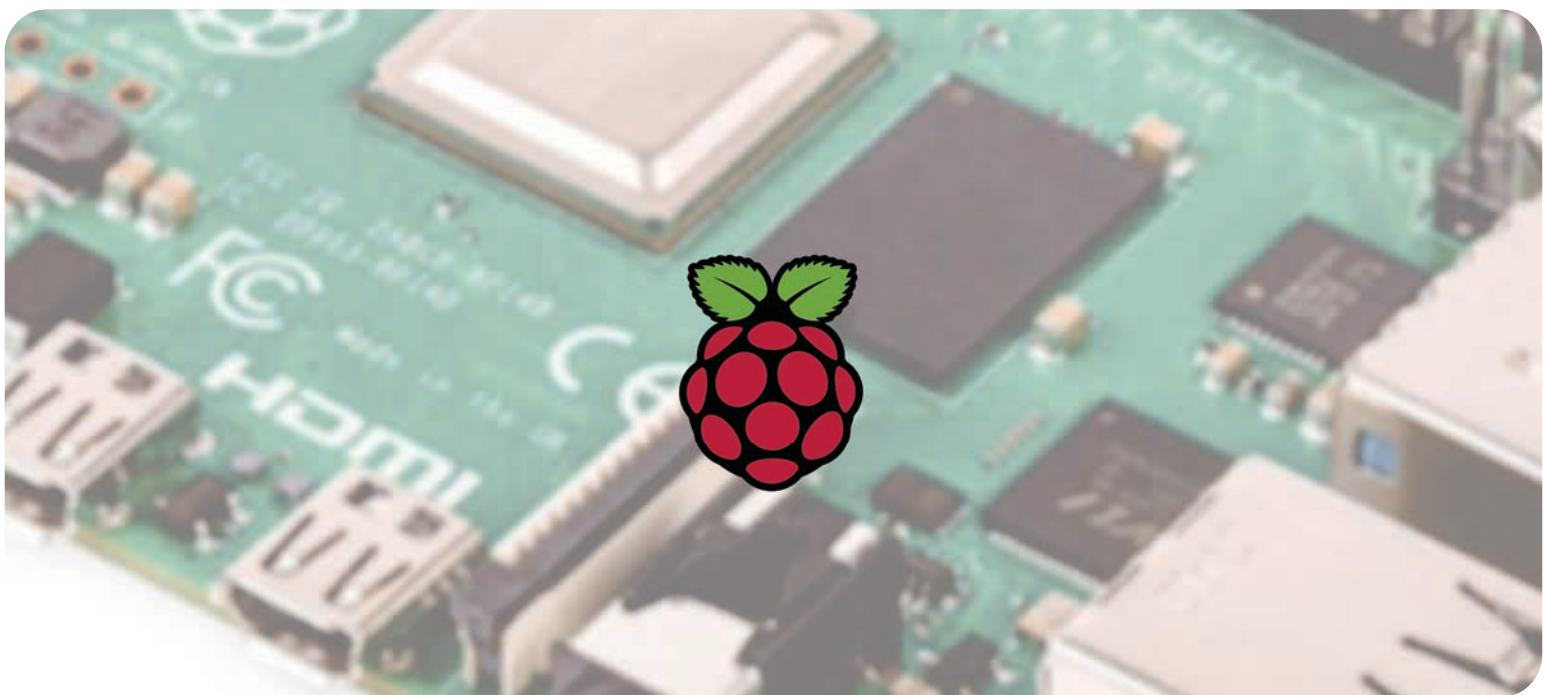
Industrial Standard Communications

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.

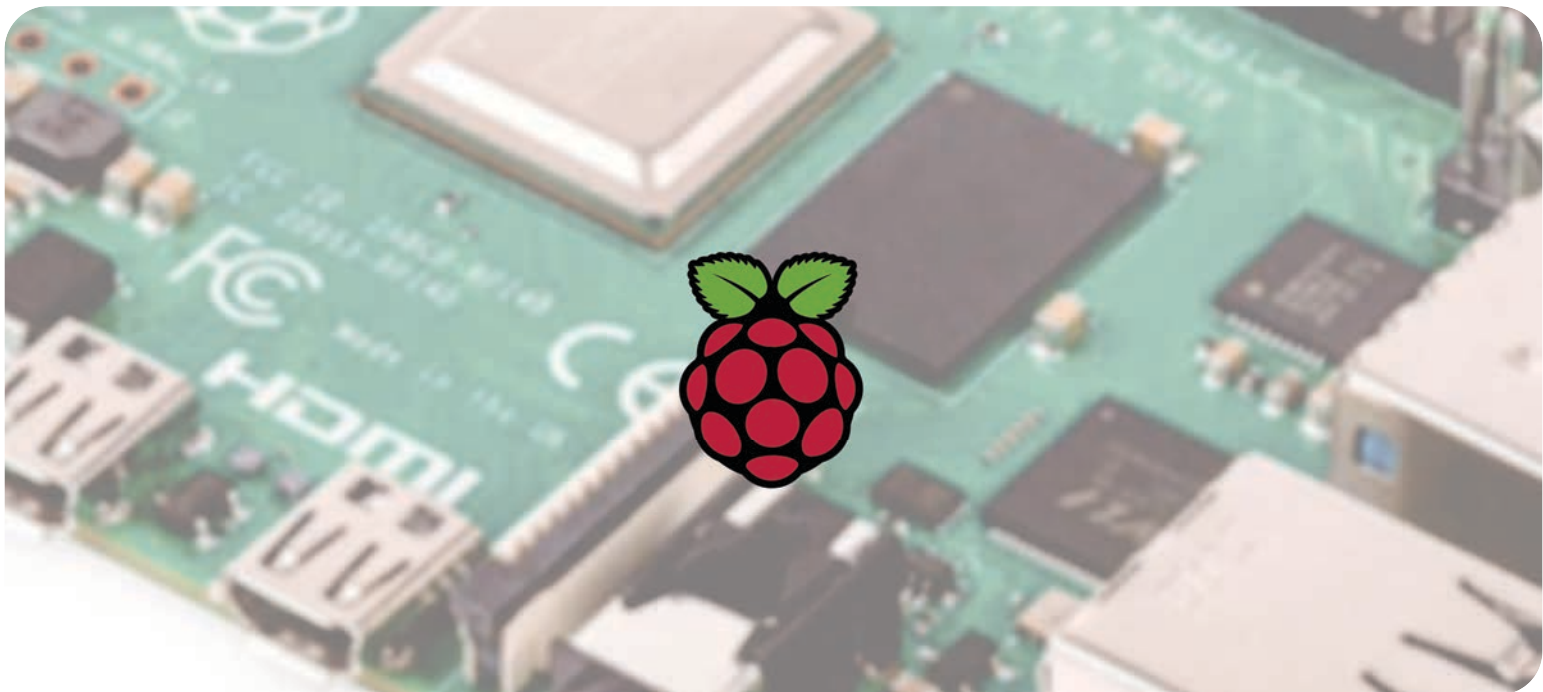|		Communications								Inputs / Outputs						
Reference	Description	Serial TTL (UART)	I2C	SPI	CAN Bus	RS485 Half / Full	Ethernet	Wi-Fi & BLE	GPRS / GSM	Digital Inputs	Analog Inputs	Interrupt Inputs	Digital Outputs	Analog Outputs	Relay Outputs	In / Out 3.3Vdc
012001000000	Raspberry PLC Ethernet CPU	x1 n.13	x1 n.12	x1	x1	x1	x2	x1	-	-	-	-	-	-	-	x1
012001000200	Raspberry PLC Ethernet 21 I/Os Analog/Digital PLUS	x1 n.13	x1 n.12	x1	x1	x1	x2	x1	-	x13	x6 n.4	x2 n.5	x8	x3	-	x1
012001000400	Raspberry PLC Ethernet 42 I/Os Analog/Digital PLUS	x1 n.13	x1 n.12	x1	x1	x1	x2	x1	-	x26	x12 n.4	x4 n.5	x16	x6	-	x1
012001000600	Raspberry PLC Ethernet 58 I/Os Analog/Digital PLUS	x1 n.13	x1 n.12	x1	x1	x1	x2	x1	-	x36	x16 n.4	x6 n.5	x22	x8		x1
012001000100	Raspberry PLC Ethernet 19R I/Os Analog/Digital PLUS	x1 n.13	x1 n.12	x1	x1	x1	x2	x1	-	x6	x4 n.4	x2 n.5	x3	x3	x8	x1
012001000300	Raspberry PLC Ethernet 38R I/Os Analog/Digital PLUS	x1 n.13	x1 n.12	x1	x1	x1	x2	x1	-	x12	x8 n.4	x4 n.5	x6	x6	x16	x1
012001000500	Raspberry PLC Ethernet 57R I/Os Analog/Digital PLUS	x1 n.13	x2 n.12	x1	x1	x1	x2	x1	-	x18	x12 n.4	x6 n.5	x8	x8	x23	x1
012001000700	Raspberry PLC Ethernet 38AR I/Os Analog/Digital PLUS	x1 n.13	x2 n.12	x1	x1	x1	x2	x1	-	x19	x10 n.4	x4 n.5	x11	x6	x8	x1
012001000800	Raspberry PLC Ethernet 53ARR I/Os Analog/Digital PLUS	x1 n.13	x2 n.12	x1	x1	x1	x2	x1	-	x25	x14 n.4	x6 n.5	x13	x8	x15	x1
012001000900	Raspberry PLC Ethernet 57AAR I/Os Analog/Digital PLUS	x1 n.13	x2 n.12	x1	x1	x1	x2	x1	-	x32	x16 n.4	x6 n.5	x18	x8	x7	x1
012001001000	Raspberry PLC Ethernet 54ARA I/Os Analog/Digital PLUS	x1 n.13	x2 n.12	x1	x1	x1	x2	x1	-	x29	x14 n.4	x6 n.5	x17	x8	x8	x1
012001001100	Raspberry PLC Ethernet 50RRA I/Os Analog/Digital PLUS	x1 n.13	x1 n.1	x1	x1	x1 n.3	x2	x1	-	x22	x12 n.4	x6 n.5	x20	x8	x16	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 |

REFERENCE LIST – RASPBERRY PI & GPRS PLC

Reference	Description	Communications								Inputs / Outputs						
		Serial TTL (UART)	I2C	SPI	CAN Bus	RS485 Half / Full	Ethernet	Wi-Fi & BLE	GPRS / GSM	Digital Inputs	Analog Inputs	Interrupt Inputs	Digital Outputs	Analog Outputs	Relay Outputs	In / Out 3.3Vdc
016002000200	Raspberry PLC & GPRS 21 I/Os Analog/Digital PLUS	x1 n.13	x1 n.12	x1	x1	x1	x2	x1	x1	x12	x6 n.4	x1 n.5	x8	x3	-	x1
016002000400	Raspberry PLC & GPRS 42 I/Os Analog/Digital PLUS	x1 n.13	x1 n.12	x1	x1	x1	x2	x1	x1	x25	x12 n.4	x3n.5	x16	x6	-	x1
016002000600	Raspberry PLC & GPRS 58 I/Os Analog/Digital PLUS	x1 n.13	x1 n.12	x1	x1	x1	x2	x1	x1	x35	x16 n.4	x5 n.5	x22	x8	-	x1
016002000100	Raspberry PLC & GPRS 19R I/Os Analog/Digital PLUS	x1 n.13	x1 n.12	x1	x1	x1	x2	x1	x1	x5	x4 n.4	x1 n.5	x3	x3	x8	x1
016002000300	Raspberry PLC & GPRS 38R I/Os Analog/Digital PLUS	x1 n.13	x1 n.12	x1	x1	x1	x2	x1	x1	x11	x8 n.4	x3n.5	x6	x6	x16	x1
016002000500	Raspberry PLC & GPRS 57R I/Os Analog/Digital PLUS	x1 n.13	x1 n.12	x1	x1	x1	x2	x1	x1	x17	x12 n.4	x5 n.5	x8	x8	x23	x1
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016002001000	Raspberry PLC & GPRS 54ARA I/Os Analog/Digital PLUS	x1 n.13	x2 n.12	x1	x1	x1	x2	x1	x1	x28	x14 n.4	x5 n.5	x17	x8	x8	x1
016002001100	Raspberry PLC & GPRS 50RRA I/Os Analog/Digital PLUS	x1 n.13	x2 n.12	x1	x1	x1	x2	x1	x1	x21	x12 n.4	x5 n.5	x20	x8	x16	x1

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Industrial Shields was born in October 2012 from the hand of an engineer, who, searching for a more flexible PLC equipment and a better price, decided to develop its 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 two worlds.

Industrial Shields, designs, produces and markets the range of products based on **Open Source Hardware**.
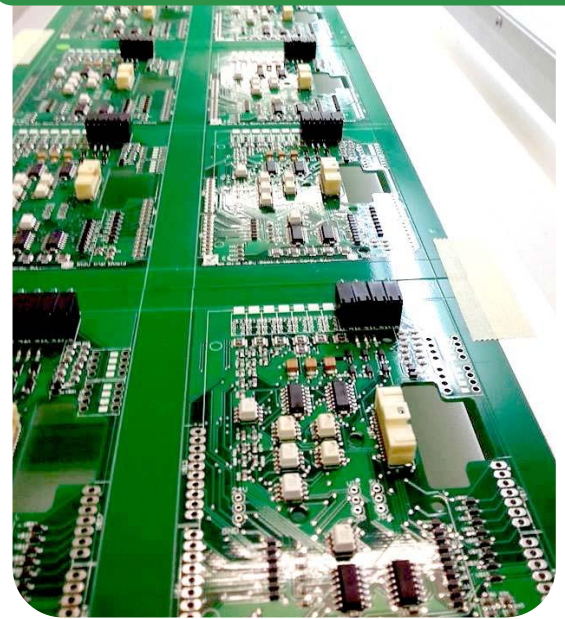
Bigdata
Cloud Computing
Flexible Hardware
Industrial Internet of Things

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

The **Open Source Hardware** solutions are still not 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** for us and so for the market, using Open Source solutions we can provide 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**.

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

QUALITY

Incompliance 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

2007

Through the IEEE-UNEDsb we started to know Arduino and we used it to manufacture machinery as a prototype.

2010

We created the first Shields for industrial use for machinery of the labeling sector and automatic production lines.

2012

Boot & Work Corp. is created with the objective of standardizing 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 created the Industrial Shields brand from where we started to market a first basic family of products. First unit sold online to Lybia.

2015

Industrial Shields has commercialized 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 industrial sectors of all kinds.

2017

We have more than 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 process, industrial certifications.
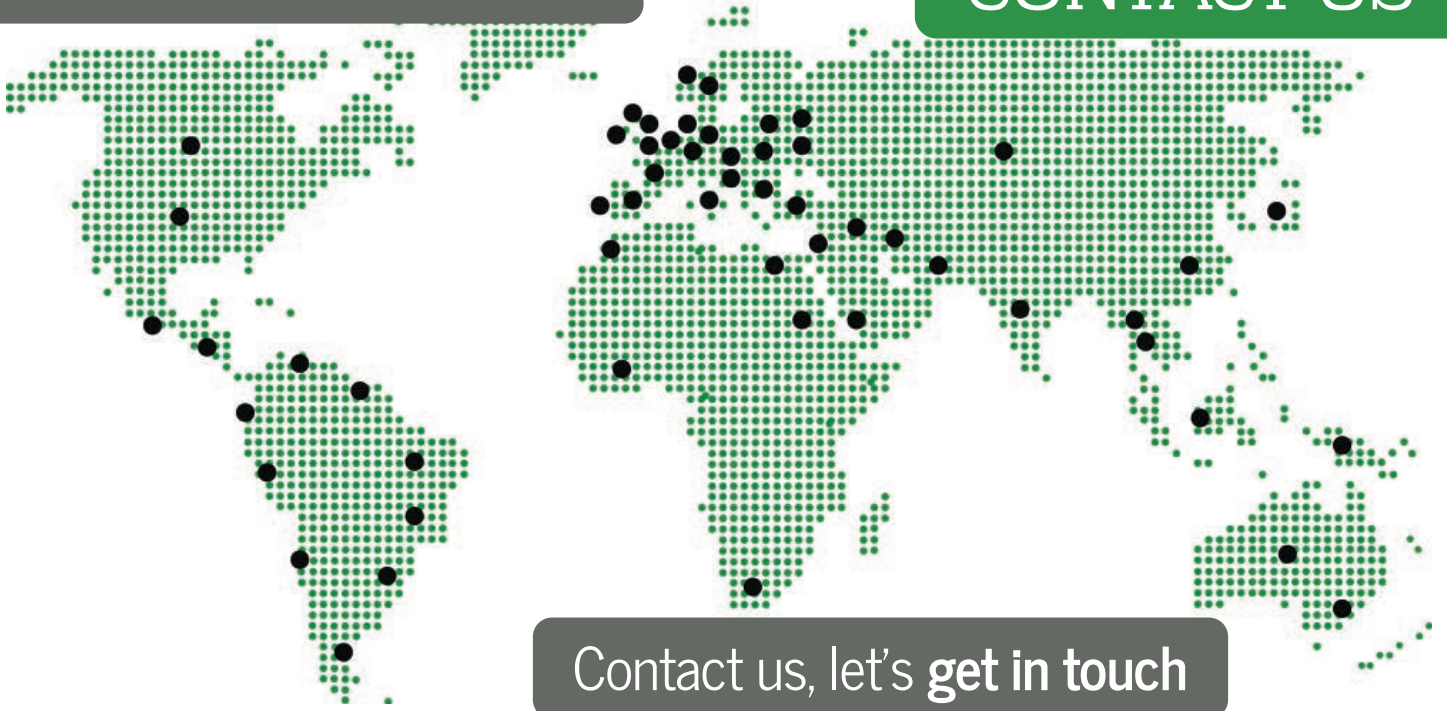
2019

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

Contact us, let's **get in touch**

Industrial Shields has been 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.

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

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