



Arduino PLC Starter Kit

Business opportunities about **PRO hardware**, first approach to **PLCs**, their programming and use in a simulated industrial environment.

Pierluigi Vona

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EDUCATION

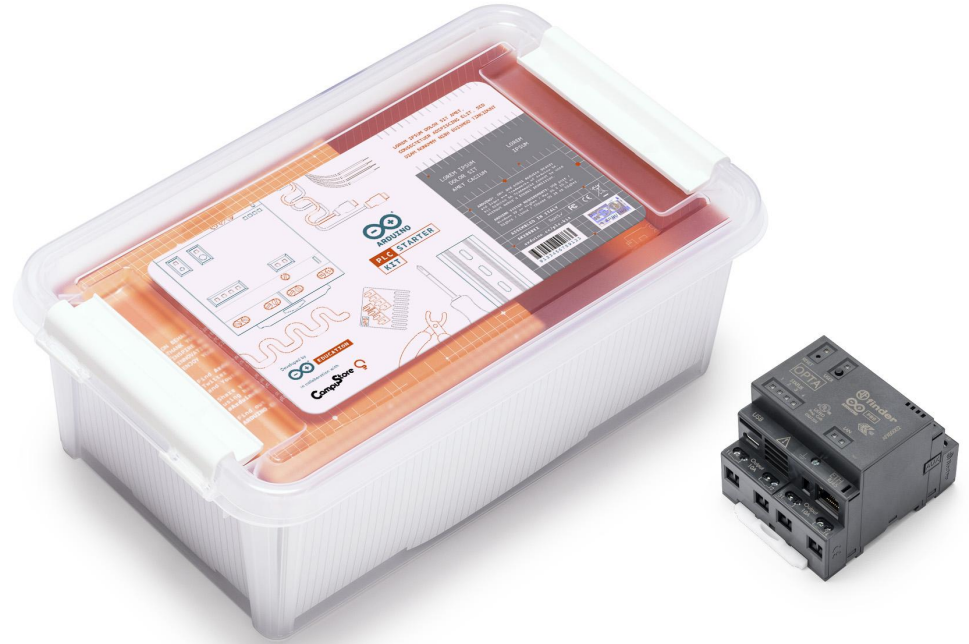
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PLC Starter Kit

Plug into the Future of
Industrial Automation



Where is our focus?

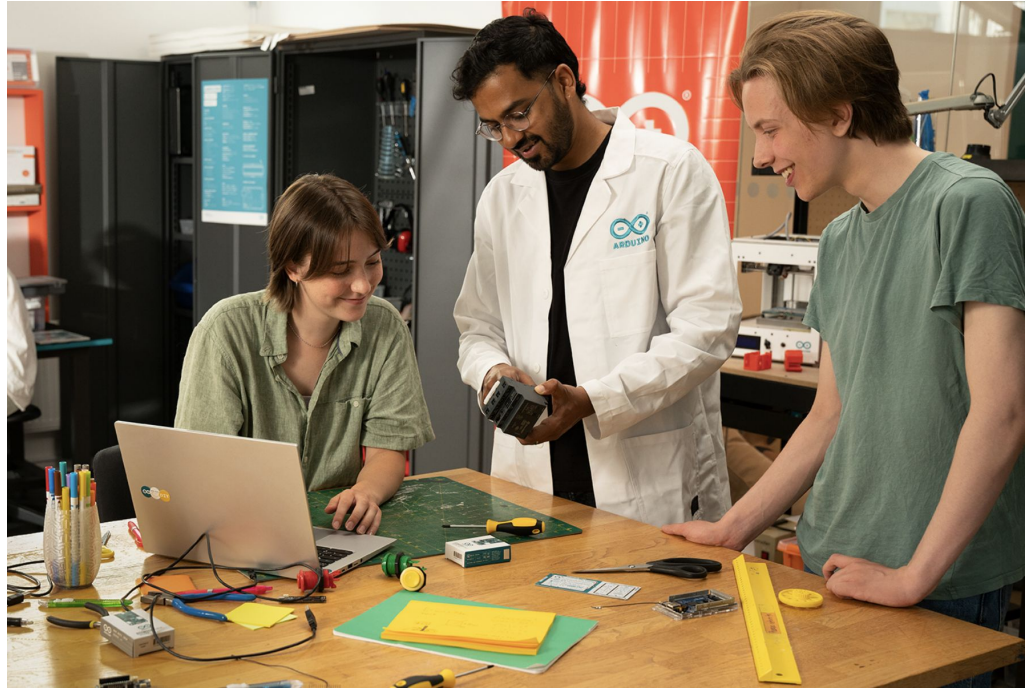
This product will boost our CTE - Career & Technical Education segment, our products line capable of leveraging and strengthening **hard skills** for students who are directly looking for their **future job**.



Target Audience

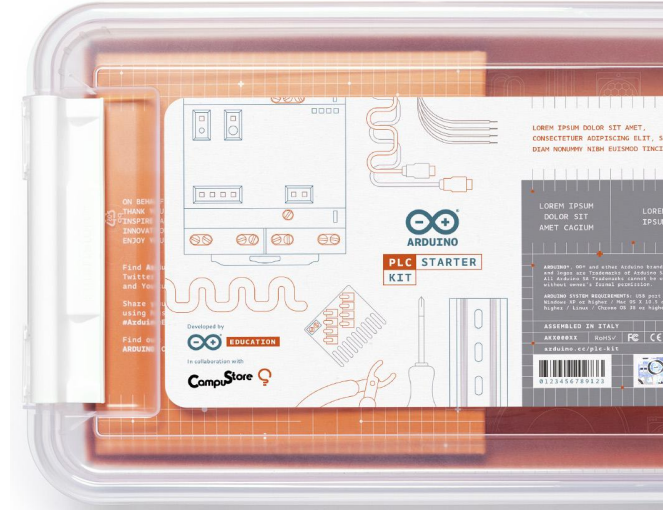
Vocational Schools and **technical institutes** with **professional training offer**

Academies related to **strategic technological areas** such as Energy efficiency, Sustainable mobility, Information and Communication Technologies.

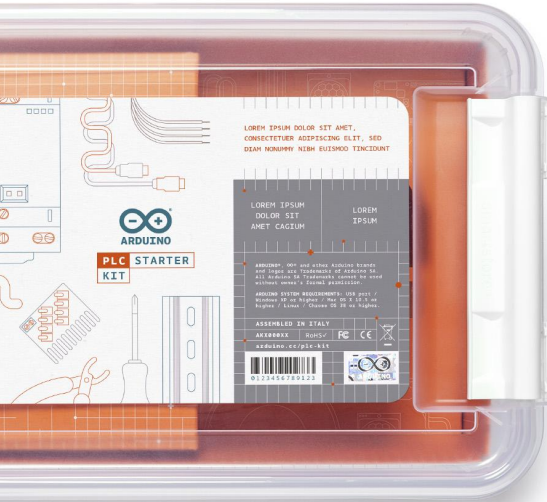


Key Features

- General Knowledge about **PLCs**
- Specific knowledge about **Arduino Opta WiFi**
- First approach to the **Arduino PLC IDE**
- Intro to **IEC 61131-3** standard programming languages
- Lectures about **Modbus RS485** communications
- Integration-ready with industrial simulated systems



AKX00051 Product Specifics



- **Age range 17+ year old** students
- **Students per product** Up to **3 per kit** in a classroom setup
- **Hardware content** Arduino Opta wifi PLC, custom simulation boards, cables and tools
- **Educational Curriculum content** Full access to digital lessons, teaching material up to **20 hours**
- **MSRP \$ 385,00**

Kit Hardware specifics

- Arduino Opta WiFi

easy-to-use micro PLC with Industrial IoT capabilities, 24v operating voltage.

- [Product page](#)

PRO INDUSTRIAL AUTOMATION

A powerful and reliable processor.

EASY PLC PROGRAMMING

Pairing with the Arduino PLC IDE.

FASTER TURNAROUND

Get to work quickly, with Arduino's ease-of-use, flexibility and extensive software libraries.



Kit Hardware specifics

- Arduino DIN Simul8

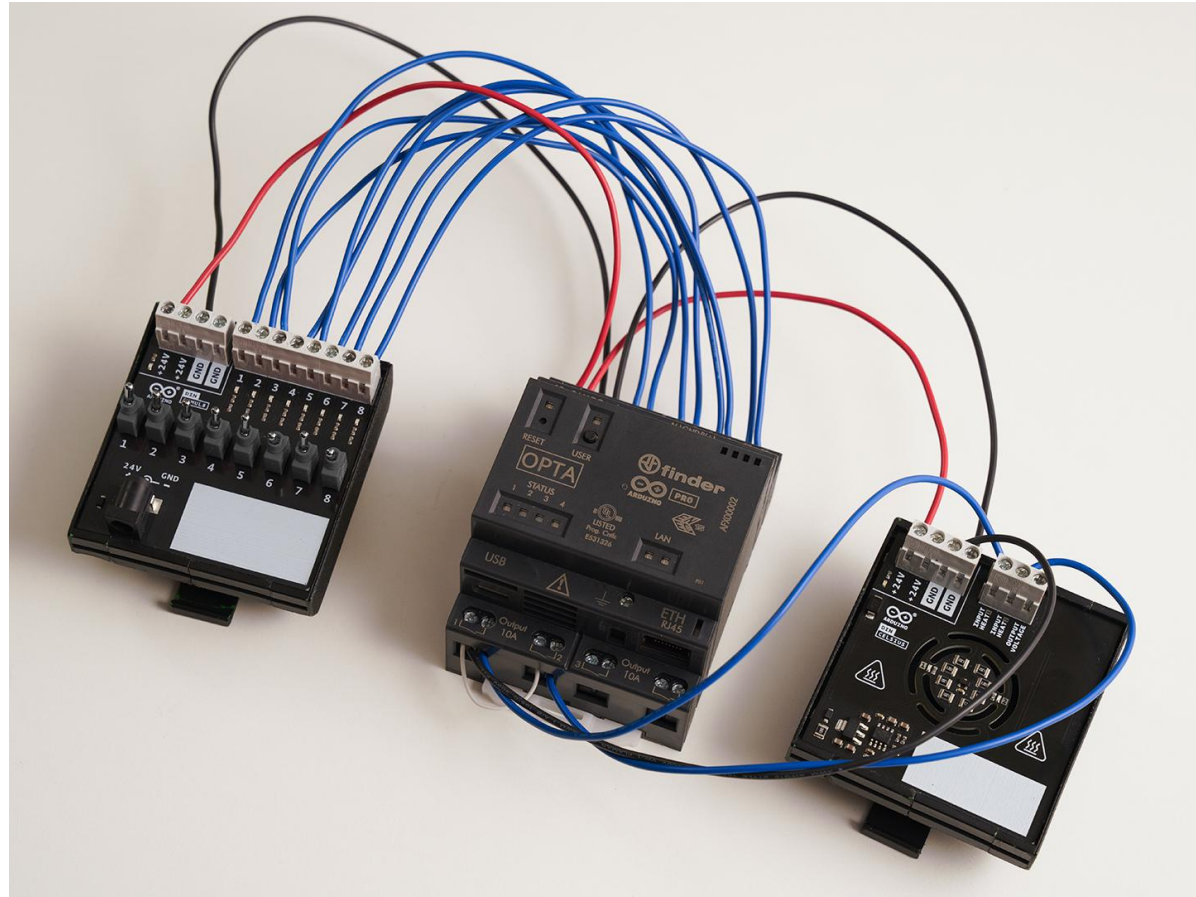
Digital-Input-Simulator custom designed board with 8 switches and power control.

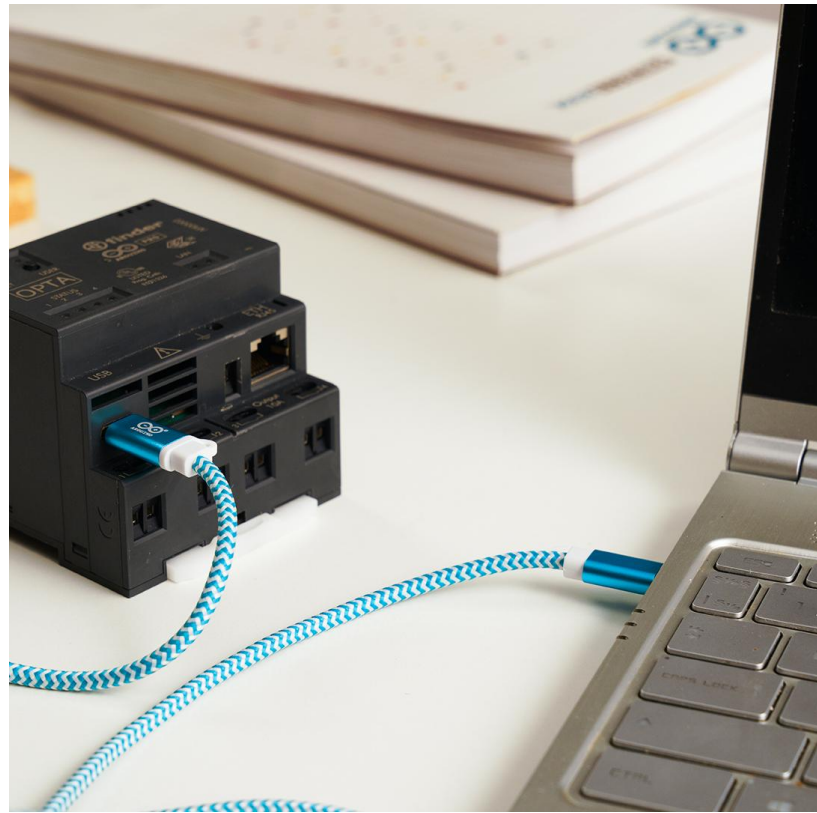
- Arduino DIN Celsius

Output-Simulator custom designed board with resistor array and temperature sensor.

- Wiring

1m custom USB-C cable // DC24V 1A PSU
25+ jumper cables.







Kit Software specifics

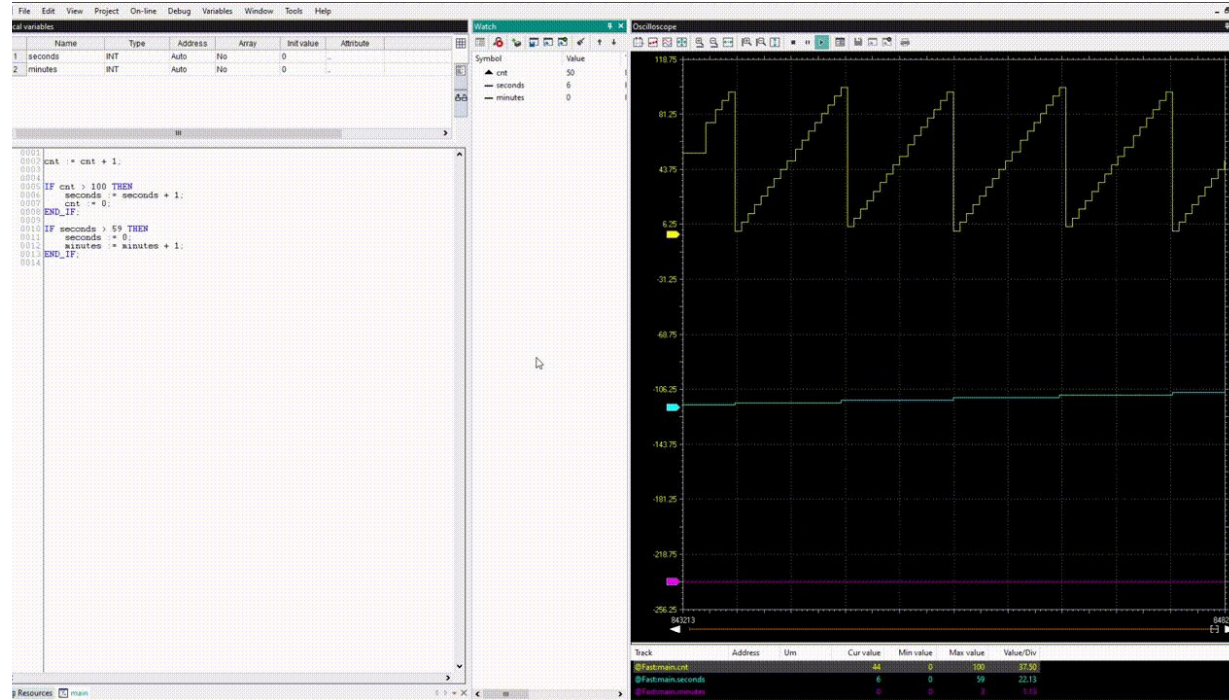
- Arduino PLC IDE

Leverage easy PLC programming with your Arduino-based solution.

- [Documentation page](#)

Our IDE allows to program using the **five programming languages** defined by the IEC 61131-3 standard:

- Ladder Diagram
- Functional Block Diagram
- Structured Text
- Sequential Function Chart
- Instruction List



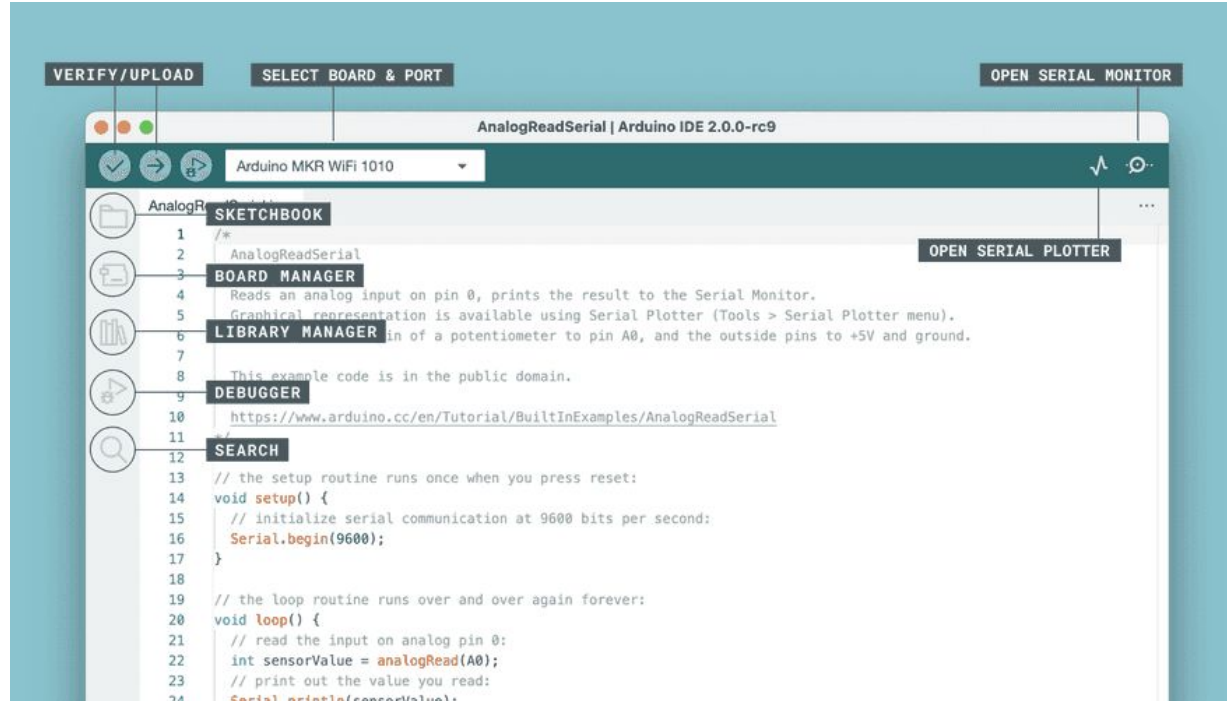
Kit Software specifics

- Arduino IDE 2

The simplicity of Arduino development tools that has made them the most popular in the world.

- [Documentation page](#)

The Arduino IDE 2 is an huge improvement of our classic IDE, with **increased performance**, **improved user interface** and many new features, such as **autocompletion**, a **built-in debugger** and **syncing sketches** with Cloud.



Kit Software specifics

- Arduino Cloud

All hardware provided with the kit is fully compatible with the Arduino cloud services. Our simplest and low-code way to get started with connected projects.

- Arduino Docs

All hardware provided with the kit is fully documented in our Arduino Docs page, where hundreds of tutorials, datasheets, guides and technical documentation are published.





Online Platform

Together with the Hardware supply and the Software proposal, we offer an **online content platform**, in the form of **ten lessons** created with teachers expert in the sector.

The proposal is linked to the **vocational schools** industrial automation curriculum.

Curriculum Proposal

First Steps	Digital Input Simulator Projects	Projects with Two Opta
<p>Chapter 1 - Introduction to Software 1 hour - Difficulty level: basic</p> <p>Chapter 2 - History and Present of the PLC 2 hours - Difficulty level: basic</p> <p>Chapter 3 - Modbus TCP/IP 1 hour - Difficulty level: basic</p>	<p>Chapter 4 - Turning on LED Output 2 hours - Difficulty level: basic</p> <p>Chapter 5 - Motor start and stop with coils (Set/Reset) 3 hours - Difficulty level: medium</p> <p>Chapter 6 - Reversing Motor Running 2 hours - Difficulty level: advance</p> <p>Chapter 7- Temporary Block on Forward/Backward Restart 1 hour - Difficulty level: medium</p>	<p>Chapter 8 - Modbus TCP/IP Network with Two Opta 1 hour - Difficulty level: medium</p> <p>Chapter 9 - Manual Master-Slave Counting with Reset 2 hours - Difficulty level: advance</p> <p>Chapter 10 - Automatic Slowed Counting 2 hours - Difficulty level: medium</p>

PLC Kits Market

Kit-related data

	Arduino PLC Starter Kit	<u>Christiani Industry Starter Kit</u>	<u>Siemens Logo starter kit</u>	<u>Eaton easyE4 starter kit</u>	<u>Crouzet PLC Kit</u>	<u>Omron PLC starter kit</u>
Price per Unit	353,00 €	542,00 €	250,00-395,00 €	167,00 €	472,00 €	EOL
Educational Curriculum	10 Lessons/Projects, direct support & open source documentation	DVD wh 32 tasks and solutions in German	PLC manual only	PLC manual only	PLC manual only	PLC manual only
Custom designed Input simulator	✓	✓	✗	✗	✗	✗
Power supply	✓	✓	✗	✗	✓	✓
Input/output Simulator board	✓	✓	✗	✗	✗	✗

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Included PLC	Arduino OPTA WIFI	No cpu included	Siemens LOGO! V8.3	Eaton easyE4	Millennium 3 XD26	Omron CP2E PLC
PLC HMI display	✗	✗	✓	✓	✗	✓
PLC #of Inputs	8	✗	8	8	16	18
PLC #of Outputs	4	✗	4	4	10	12
Modbus rs485 compatible	✓	✗	✓	✗	✗	✓

Bundle option possibilities

Fischertechnik Conveyor Belt - 24V



Essential Arduino Educational Kit resources

Project Hub

Join millions of amazing Arduino community members worldwide.

Help Center

FAQ and troubleshooting articles, created by the Support team.

Forum

Find out topics and tips or connect with users from the Arduino Forum.

Discord



Check out the Arduino community on Discord.



That's a wrap **Thank you!**

Arduino PLC Starter Kit
proposal

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09.2023

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