



Case Study – Fortaps S.L.



M-DUINO open source PLCs from Industrial Shields control the production line, machinery and stock holding of Fortaps S.L.

Follow a pioneer in the exciting world of open source hardware and software. Reliability, flexibility and cost-efficiency were the main reasons for Fortaps to decide on M-DUNIO.

Read the full story...



About Fortaps S.L.

Fortaps is a family owned business established in 1996 and backed up by the experience of two generations of expertise in manufacturing plastic parts.

It focuses on the design, manufacturing and marketing of plastic protectors, ferrules, caps and stoppers. The company works aligned to quality management standards ISO 9001: 2008.

The Fortaps plant has an area of over 7,000 m² which is designed to optimize the process of receiving goods, drive the production, manage the stock holding and the shipment of goods in the best conditions of quality and speed.

The company designs its own molds with calibrated steel and using the latest technology in computerized mechanization.

Fortaps plastic parts are manufactured mainly in LDPE (Low Density Polyethylene). Parts which require higher hardness are manufactured in HDPE (High Density Polyethylene). The company does not use PVC aligned to their environmental friendly philosophy.

Fortaps has been an evangelist in the **open source** world. At very early stages they have adapted and integrated **open source software** in their manufacturing process, and now implemented **open source hardware** in their production lines with the **Arduino based PLCs** from **Industrial Shields**.



About 30,000,000 units are produced at Fortaps annually.

How Industrial Shields open source hardware is used at Fortaps

The **M-DUINO** PLCs from **Industrial Shields** are connected via **Ethernet** to the production LAN. Using this network allows the controller to receive input from the different encoders and sensors to monitor the machine status. It is also connected to other equipment which read the production status, e.g. pieces/hour.

According to the user configuration different outputs like production output, start & stop of machines etc. are also controlled.

All the data is sent to a MySQL database, where it is analyzed to control the performance and efficiency of the production lines. This MySQL database is connected to the enterprise resource planning tool in order to control stocks, orders, etc.



Three questions to Ramon Boncompte, Sales Director at Industrial Shields

Why do you think Fortaps has finally decided to use your products and not a standard PLC from a leading brand?

Industrial Shields open source hardware allows for flexible programming and the customizable signal types offer many benefits. In addition the high performance of the controller and the easy adaptation to the existing installation were important factors.

Programming often remains a hurdle where existing software has limitations. With the Industrial Shields PLCs, Fortaps was able to program their application with an open source software which is far more flexible. They can even upgrade it according to their needs which would never be possible with a standard off the shelf software.

Another convincing argument has been the overall price of the project which was significantly below all the ones from considered alternatives.

There might be doubts from potential customers to use Arduino based hardware in an industrial environment. What would you argue?

Fortaps is located in Tarragona and produces plastic parts so during summer the production lines work at very high temperatures. For over year our devices have been running 24 hours per day without issue.

What do you expect from the partnership with RS?

RS Components will allow us to reach customers around the globe. RS is a reliable partner in the industry for many years and it makes us very proud that they have decided to introduce our products to their offer.





Find out more about Fortaps and their experiences with Industrial Shields open source hardware at

www.fortaps.com/en

A special “Thank You” to César Fortuny González at Fortaps who demonstrated his expertise on open source hardware, more over impressively pointed out the unique benefits that Industrial Shields M-Duino PLCs provide to their manufacturing processes.

