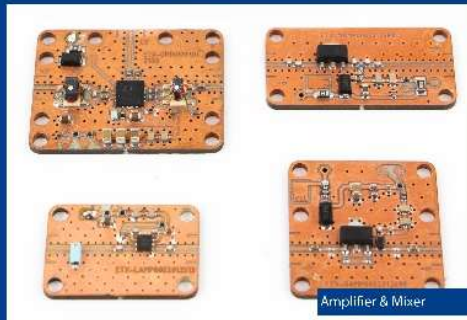
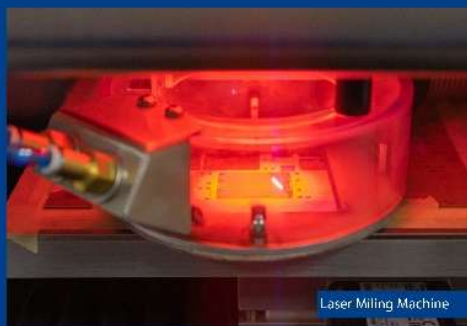




We are hiring!
Jobs and Internship Offers



Internship Offer

Electronic Production Facility- Quality Monitoring

Context

Production of products need quality assessment. Concerning environmental condition, this means:

- Monitoring of the main relevant environmental characteristics such as:
 - Temperature
 - Humidity
 - Particles counts
 - Volatile Organic Compounds
 - UV...
- Logging the corresponding values
- Sending alerts in case some parameters are out of production range
- Triggering actions in some cases to reduce the exposure to unacceptable risks

Key Internship Steps

- Define the need and the corresponding technical requirements
- Define the global architecture of the setup
 - Sensors
 - Actuators
 - Network configuration
 - Databases
- Interface with the existing ERP will be a plus.

Who are we looking for?

Motivated intern candidate with technical skills in IT, electronics and software. Autonomy and will to expand its industrial knowledge will be appreciated.

Interested in this internship offer? Don't hesitate to send us your resume at jobs@emtronix.lu

Internship Offer

RF performance test automation Internship

Context

Production of products need quality assessment. This means:

- Testing the full capabilities of the product to assess its performance
- Producing automated reports and sort between compliant and non-compliant products
- Ensure reproducibility
- Reduce the execution time as much as possible to lower the resources footprint
- Limit the human factor and manipulations
- Optimise for timing constraints
- Logging all data in a long term manner

Key internship steps

- Analyse the products that are to be produced
- Analyse the available test equipment capabilities
- Select components that matches production constraints
- Set a proper architecture or Setup
 - For the tests
 - To manage results in an efficient manner (traceability, storage, statistics, alarms...)
- Propose a list of potential improvements

Who are we looking for?

Motivated intern candidate with technical skills, autonomy and will to expand its industrial knowledge.

Interested in this internship offer? Don't hesitate to send us your resume at jobs@emtronix.lu

Internship Offer

Software – Cybersecurity Principles for a sub-system in space

Context

Products such as Software Defined Radio have to comply with rules in order to deploy cyber security principles and assets in coherence with the overall technical environment.

- Inputs and Outputs are in numbers
- Protocols are in numbers also
 - SpaceWire,
 - Ethernet
 - RS 422...
 - CAN
 - ...
- The final application is not defined (Software Defined means that final application will be determined by a Tier person)
- The interfaces allow:
 - Tele-Measures
 - Tele-Commands
 - Reprogramming
 - ...

Key internship steps

- Analyse the product at stake and the technical environment
- Find state of the art material from organizations (ESA...)
- Analyse the attack surfaces and threats
- Analyse the design of the product with regards to the analysis
- Propose a list of potential improvements
 - In term of architecture or Setup
 - In term on components (SW and/or HW)

Who are we looking for?

Motivated intern candidate with technical skills, autonomy and will to expand its industrial knowledge.

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Internship Offer

Integration of Artificial Intelligence in Electronic Engineering Workflows

Context

As Artificial Intelligence is part of the performance of many companies, EmTroniX is seeking how to include it in its workflows to let engineering teams focus on high added value activities.

Key internship steps

State of the Art & Tool Analysis

- Review existing AI tools and APIs relevant to electronics (e.g. component databases, datasheet parsers, large language models for code generation).
- Identify use cases where AI can provide measurable value (e.g. part equivalence, obsolescence prediction, automatic datasheet summarization).
- Company's IT architecture

AI Model Design and Integration

- Integrate a Large Language Model (LLM) or AI API capable of understanding and querying component data.
- Evaluate AI-assisted C code generation for microcontroller initialization, peripheral drivers, or signal processing routines.
- Develop small prototypes to demonstrate AI integration / testbench to verify and compare AI-generated code with reference implementations.

Evaluation and Documentation

- Define KPIs to assess efficiency gains (time saved, accuracy, reliability).
- Document methodology, results, and improvement recommendations for future integration into the company's design process.

Who are we looking for?

Motivated intern candidate with technical skills, autonomy and will to expand its industrial knowledge.

Interested in this internship offer? Don't hesitate to send us your resume at jobs@emtronix.lu

Internship Offer

Development of a Mobile app for quality monitoring

Context

In Electronic production facilities, quality is often at stake. The use of procedures, methods and trained resources is key to induce good practices.

Quality tools to control the outcomes is the second part for looping back the results and improve in a continuous manner.

This control activity should be done any place in the company, addressing several Key Performance Indicators.

Some examples:

- Defect at a production step, to be recorded (photos, traceability, log, all in the company cloud for further analysis)
- Safety related event or anomaly (all needed information reported with alarm to relevant people in the company with no delay)

Key internship steps

- Requirements analysis and clarification
- Architecture definition taking into account:
 - the IT infrastructure of the company,
 - The equipment
- Develop a mobile app
 - Selection of the app language
 - Code the main functions
- Verify the Minimal Viable Product with the clients
 - Critical design items to be confirmed
- Develop the final application
- Deliver App and documentation

Who are we looking for?

Motivated intern candidate with technical skills, autonomy and will to expand its industrial knowledge.

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Internship Offer

Development of Techno bricks for Virtual Reality Environment

Context

New tools are now used for various occasions. Virtual Reality make it possible to immerse people:

- In a non-existing environment (not existing yet, distant in space, in time...)
- In a dangerous or fragile environment (costly, ESD sensitive, One Time

Some examples:

- Analysing the mounting procedure of a product to verify the feasibility, the risks, and the overall performance (when relevant)
- Train people for tasks or risk management in the company
- Demonstrate products in a safe and memorable way

Key internship steps

- Requirements analysis and clarification
- Define the techno-bricks:
 - individually
 - Their potential interaction
 - **Focus will be put on interacting with reality physically and remotely**
- Develop the bricks
 - Select the right order to maximize the final value of the developed products.
 - Confirm the usability of each individual brick.
- Optional: Develop an application with the developed products
- Deliver corresponding documentation for usage and maintenance

Who are we looking for?

Motivated intern candidate with technical skills, autonomy and will to expand its industrial knowledge.

Interested in this internship offer? Don't hesitate to send us your resume at jobs@emtronix.lu