



# Electronics

## Smart Tire Sensor

## Green innovation meets performance

### Our Project

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Formula Electric Belgium is a team of engineering students who build a **Formula-Student racecar** to compete in international competitions. We design and build a brand-new car every year and compete with other teams in multiple worldwide competitions during the summer months. Formula Student is by far the biggest **engineering competition** in the world and continues to grow. From next year on, we will be competing in both the **electrical** and **driverless** competition. You can join the project as a volunteer, this allows you to contribute to the next race car whilst keeping a flexible schedule.

### Tasks

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**Electronics** is an important part of the car. Without it you will be able to roll the car but you can't drive it. But there is also a lot of information to be gathered. Aerodynamics is an important part of the **performance** in a race car. In order for them to be able to tell the car how it should behave, they need to have as much **data** about the car as possible.

That's where the Melexis smart tire sensor comes in. It reads temperature, pressure and the nominal forces of the tire and sends those through an **RF-signal**.

Your task is to read these measurements with an RF-module and send them in a formatted way to the ECU with CAN.

He/she gets the freedom to work separately under supervision of an electronics engineer.

### Profile

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- Knowledge and small experience about sensor processing
- Knowledge about general electronics
- Problem solving skills (creativity)
- Team player with a goal to learn

### Returns

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- A unique engineering experience
- Contact with companies at the leading edge of technology
- Applying your engineering skills in the real world
- Developing your hard- and soft-skills in a company-like environment
- Work in a team with young motivated engineers

### Up for the challenge?

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Want to do a similar case within the team? Submit your **resume** and **motivation letter** (one page) to [volunteers@formulaelectric.be](mailto:volunteers@formulaelectric.be)