



## Master Thesis Topic: Design of an embedded Time Sensitive Ethernet Network

### Job description

At KAI GmbH, you will perform your thesis project in an industrial research environment, guided and supported by experienced researchers in such diverse areas as hard- and software design, simulation, modeling and semiconductor technology. We work in close cooperation with universities and research facilities supporting your academic education, whereas our industrial partner Infineon offers interesting opportunities for a prospective career path in the semiconductor industry.

During your thesis project, we expect you to become a growing expert for **embedded software** design, with a strong focus on future technologies like **Time-Sensitive Networking**. This means you will need to acquire some special knowledge and perform dedicated tasks:

- **Learn** about the **concepts of the IEEE Standards** in the domain of Time Sensitive Networking (Clock Synchronization, Traffic Shapers etc.) and how to implement them on capable microcontrollers like the Infineon AURIX and XMC Series
- **Improve** your skills in **embedded programming with C/C++** and state-of-the-art toolchains
- **Develop a concept** to implement a time-aware-traffic-shaping algorithm for the outgoing and incoming ethernet messages together with your senior tutor
- **Design, build and evaluate** a working **prototype**
- Document your results by writing and submitting your Master thesis

### Further information

Type of employment: Temporary / Full-time (Flexible working hours from Monday to Friday between 6 a.m. and 7 p.m.)

Start: September 2021

Duration: min. 6 months

**This thesis has to be written in cooperation with an university.**

### Profile

You are a **master student** covering the area of **Informatics, Systems Design or Electronics** with a strong ambition for constrained, embedded real-time systems. With your hands-on mentality you like to bring ideas to life. You are also able to:

- Start right away, because you have completed most of your exams
- Provide knowledge and experience in programming of embedded systems in **C/C++**

### At a glance

Location: **Villach**  
Job ID: **318296**  
Start date: **Sep 01, 2021**  
Entry level: **0-1 year**  
Type: **Full time**  
Contract: **Temporary**

Apply to this position online by following the URL and entering the Job ID in our job search:

Job ID: **318296**  
[www.infineon.com/jobs](http://www.infineon.com/jobs)

### Contact

**Julia Gabriel**  
Student Attraction Manager



- Work and communicate well with our international team in **English and/or German**

This position is subject to the collective agreement for workers and employees in the electrical and electronics industry (full-time), employment group D for master students (<https://www.feei.at/leistungen/informations-service/mindestlohne-und-gehalter-2020>).

**Please attach the following documents (german or english) to your application:**

- Motivation letter
- CV
- Certificate of matriculation at a university
- Transcript of records
- Highest completed educational certificate (Matura certificate for Bachelor students, Bachelor certificate for Master students)
- Reference letter

