Experience the passion with an innovative leader.

NXP Semiconductors enables secure connections and infrastructure for a smarter world, advancing solutions that make lives easier, better and safer. As the world leader in secure connectivity solutions for embedded applications, we are driving innovation in the secure connected vehicle, end-to-end security & privacy and smart connected solutions markets.

To further strengthen our team in **Gratkorn/Graz** we have the following position vacant:

Master Thesis: HF/UHF Dual Band RFID Transponders (m/f)

HF/UHF dual band RFID transponders (tags) combine a near field communication interface with the long-range capabilities of a UHF RFID tag and therefore enable new use cases, for instance, in the retail sector concerning the consumer interaction and the handling of goods. The proposed master thesis addresses performance impairments due to the mutual coupling of the HF and UHF antennas and design techniques to enable compact high-performance HF/UHF dual band RFID transponders.

Your Tasks:
- Familiarization with design methods for RFID transponder antennas and design tools
- Literature research on HF/UHF dual band transponder antennas
- Design of dual band transponder antennas based on existing stand-alone antenna designs
- Analysis of the impact of combined HF/UHF antennas on the transponder performance by circuit/antenna co-simulations and measurements
- Investigation of design measures to minimize performance impairments of HF/UHF dual band RFID transponders

Your Profile:
- Master student in electrical engineering or similar studies
- Basic knowledge of electromagnetic field and antenna theory
- Good communication skills in English
- Experience with antenna design, corresponding design tools (e.g., CST Microwave Studio), or IC simulation tools (e.g., Cadence Virtuoso) is an advantage

For the successful completion of the Master Thesis you will receive a remuneration of a one-time payment of EUR 5.000, - gross. Additionally, you will get a bonus of EUR 2.000, - gross if you receive an excellent grade "Sehr gut" for your Thesis.

Please apply online: www.nxp.com/careers or send your CV to: **sabine.laemmerer@nxp.com,** NXP Semiconductors Austria GmbH. Information also available from the academic advisors Thomas Bauernfeind (t.bauernfeind@tugraz.at) or Paul Baumgartner (paul.baumgartner@tugraz.at), Institute of Fundamentals and Theory in Electrical Engineering.