



**NXP CUP
EMEA 2018
FINALS**

ARM 

MOUSER



NXP CUP EMEA 2018/19

Innovation in Motion

NXP CUP
EMEA 2018 FINALS





ENABLING SELF-DRIVING ROBOTS ON WHEELS

“The technology, university support, and the incredible partner ecosystem gives students opportunities to learn key collaborative teamwork skills and become familiar with core technologies to build autonomous robots.”

Lars Reger, CTO NXP AUTOMOTIVE





The Challenge

Build the smartest car

Autonomy, Electrification and Connectivity: the hottest industry topics – also driving the NXP CUP

- Programm your personal autonomous smart car
- Sense – Think – Act the environment
- Prepare your car for the track
- Earn points during the *timed race* and with a choice of extra challenges
- Be the winner out of +300 students at the EMEA finals in April 2019



max. 200 points

Figure 8

The Figure 8 is a precision and reliability task.

Participants will have 90 seconds to complete as many laps as possible.

The team with the most laps completed wins.

This challenge is optional.



max. 150 points

Speed limit

When the car sees the beginning of the speed zone, it must reduce its speed significantly.

When the car sees the end of the speed zone, it must resume its original speed.

This challenge is optional.



max. 150 points

Obstacle avoidance

After completing the first round, the jury will place an obstacle on one of the straight track segments.

The race car has to avoid this obstacle.

Neither the tires nor the chassis are allowed to touch the obstacle.

This challenge is optional.



max. 500 points

Timed Race

The Race start order will be determined by a random drawing.

Fastest lap time wins this challenge.

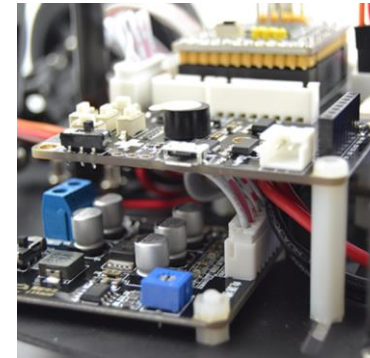
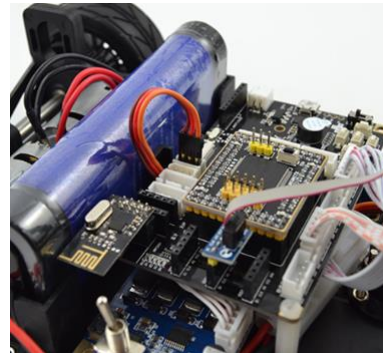
This challenge is mandatory.

The Technology

From hardware to software to propel and steer your car

Entry level kit

- NXP Kinetis 32-bit MCU Controller
- Motor Control board
- CCD/CMOS camera
- 2 brush motors
- MathWorks Matlab/Simulink complementary software and libraries
- MCUXpresso



Your journey from September '18 until April '19

Sign up, design and qualify for the grand finals in Europe



Enroll
October – November



Design
October - March



Qualify
March



Win
April

Enroll your team of up to 3 members

Purchase your personal smart car including latest NXP tech

Start programming your car during lecture, in a project or on your own

Travel to one of the Qualifications in the EMEA region

Win at the great finals and get to know industry leaders



Your benefits

Experience the world of autonomous driving at an early stage

DEVELOP YOUR NETWORK

Get support from top engineers and learn in a real work environment. Make contact with the #1 automotive semiconductor supplier and build the skills to help you in the global automotive marketplace.

GAIN PROFESSIONAL EXPERIENCE

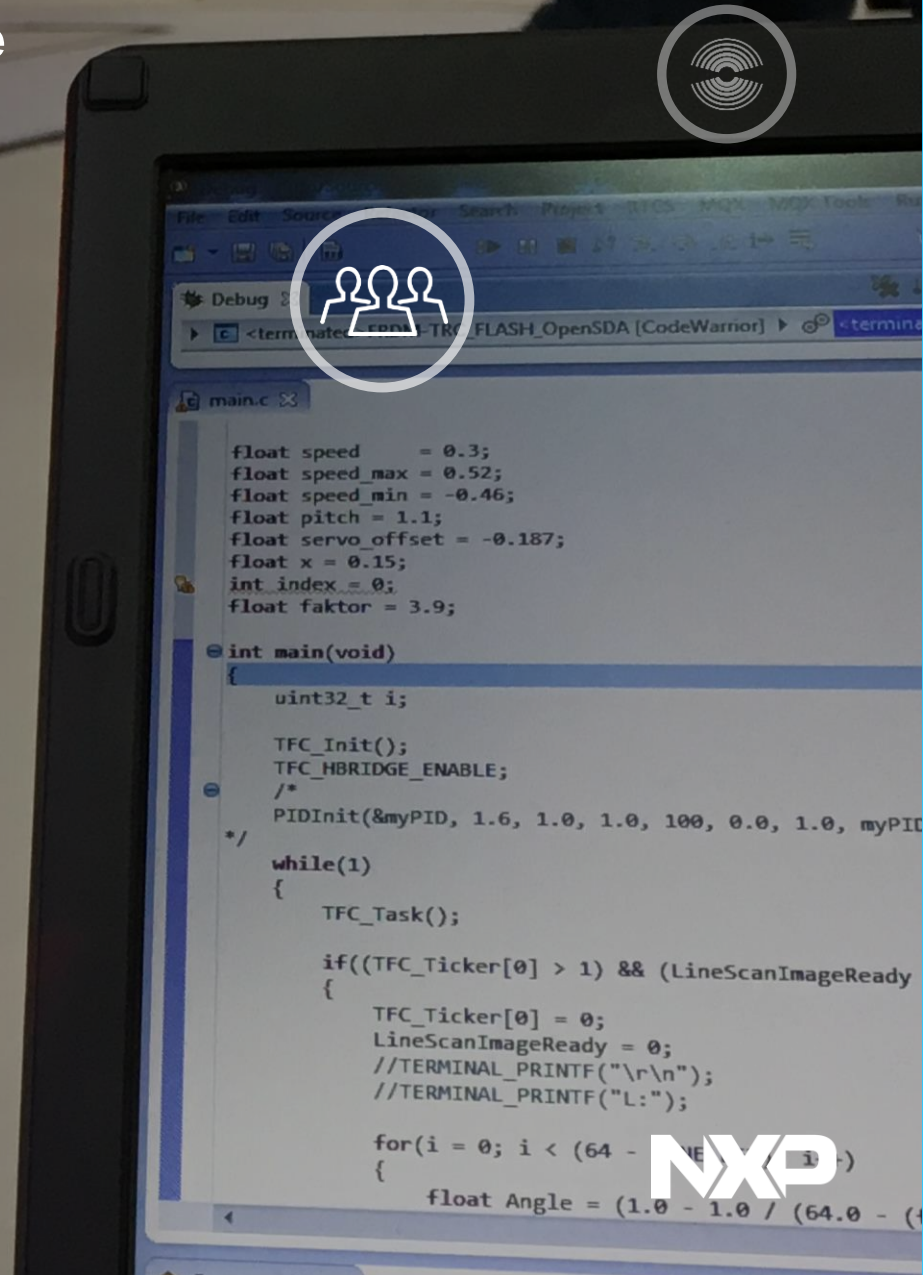
Become an expert in one of the hottest topics in automotive industry. Build your intelligent, autonomous car.

LEARN TEAMWORK

Work together to achieve a common goal. Share your experience with people from all over Europe.

ACQUIRE NEW COMPETENCES

From hardware to software to propel and steer your car. Join our sponsor webinars the learn more about coding



ABOUT NXP SEMICONDUCTORS

- ▲ Enables secure connections for a smarter world
- ▲ Operations in 33 countries, 31,000 employees, more than 100 facilities
- ▲ Headquarters: Eindhoven, NL
- ▲ 60+ years of experience in semiconductors
- ▲ Global #1 automotive supplier
- ▲ World leader in secure connectivity solutions
- ▲ Every car uses at least 100 NXP products

Learn more:

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<https://community.nxp.com/groups/tfc-emea>



<https://www.youtube.com/watch?v=uIR4u7kXjco&t=2054s>



SECURE CONNECTIONS
FOR A SMARTER WORLD