**CONTROLS**

Innovative HMI with side stick steering with two units (specification per unit)

- Max. torque: 30 Nm
- Max. power: 150 W
- Max. control angle: ± 30 °

Units utilise force as driver input, feed back the control angle and are linked electronically.

**ENERGY STORAGE**

Multi voltage boardnet architecture

- Traction battery
  - Energy capacity: 16 kWh
  - Max. discharge power: 160 kW (at 400 A)
  - Nom. voltage: 400 V
- 48 V Boardnet
  - Energy capacity: 1.2 kWh

**DRIVETRAIN**

Two electric machines driving rear wheels (specification per unit)

- Max. power: 100 kW
- Max. torque: 220 Nm
- Max. motor speed: 12000 rpm
- Transmission ratio: 5.5

**CHASSIS**

Innovative suspension system with up to 90° steering angle and wheel individual actuation (specification per unit)

- Max. torque: 450 Nm
- Max. power: 2.3 kW
- Max. steering speed: 48 rpm
- Transmission ratio: 100

**Open Research & Innovation Platform**

Turning E-mobility into E-motion
The SpeedE research platform facilitates collaboration and offers various advantages to its partners:

- building an interdisciplinary network from academia and industry
- benefiting from the innovation potential of leading research institutions
- jointly developing and evaluating technical solutions in public or bilateral projects
- demonstrating new technologies in an advanced and neutral vehicle concept
- intensifying contacts to young talents and scientists
- gaining insight and participating in relevant research of leading university institutes

Sponsored by:

The SpeedE research platform has been constructed and is being used in the new highly fidelity driving simulator of ika.

The SpeedE initiative remains open to additional partners.

Electric drivetrains offer a high potential to improve efficiency, agility and driving performance. The SpeedE vehicle concept focuses on the innovation potential of electrically powered vehicles, which clearly enhances the driving experience beyond today’s state of the art. Hence, the goal of the vehicle is to create a distinct added value to the electric vehicle and to transform E-mobility into E-motion.

On the industry side, numerous opportunities arise – for established OEMs and suppliers as well as for new players coming from other industries. Innovation means to bring an idea from research to market, which requires a vehicle platform to develop, implement, test and promote innovative components, systems and functionalities. You are thus welcome joining and using the SpeedE research and innovation platform.

Research & Innovation Platform

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Update 2017

After presenting the research platform in 2016, we are pleased to show you our continuing progress in developing our vision SpeedE. The vehicle demonstrates an innovative steering concept, using two active sidesticks and a wheel individual steer-by-wire system with steering angles up to 90°. Besides the central seating position of the driver is another element, which supports the unique driving experience. In the past year the existing functionalities of the vehicle have been further refined. Focus was refinement regarding the sidestick hardware, sidestick electronics and the control algorithms.

For 2018 the vehicle shall be equipped with necessary sensors and control algorithms to drive autonomously. In addition to the driving prototype, a mock-up version of SpeedE research platform has been constructed and is being used in the new highly fidelity driving simulator of ika.

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