

## Press Release

Vienna, April 30, 2019

### PCIM 2019: Power Electronics as Key Technology

#### Smart Solutions for Grids and e-Cars

Power electronics has become in recent years a key technology for renewable energy and e-mobility. Intelligent grids and e-vehicles rely on these electronic components for power controls and conversion. The AIT Austrian Institute of Technology presents converter concepts, demonstrators and development methods for smart grids and e-mobility at the world's leading trade fair for power electronics, intelligent drive technology and renewable energy, from May 7-9 in Nuremberg.

#### **AIT as the innovation partner**

AIT is continually growing as an innovation partner for the power electronics industry, offering expertise in smart grids and electronic drive technologies: from concept, to “Hardware-in-the-loop” design, and further to laboratory testing. This approach saves valuable time-to-market for industrial companies investing in the development of novel renewable energies and e-mobility products, and thus contributes to their competitive advantage in future markets.

#### **Smart Interfaces**

With the growing share of renewable energy sources energy systems are getting increasingly complex. Therefore, the precise co-ordination becomes essential to ensure a stable energy supply where AIT provides a test bed for converters up to the MW range. In addition, real-time simulation converter models (digital twin) greatly benefit the developers of smart grid algorithms before the roll-out of the solution in the field. With the ASGC (AIT Smart Grid Converter), an intelligent grid-forming converter supplying the smart and microgrid, is presented as a battery energy storage system. To enable grid integration of e-Mobility a test and validation system for charging infrastructure (up to 300kW) and electric vehicles will be shown. In addition, wide-band-gap demonstrator solutions (GaN: DC/DC, AC/DC) are presented.

#### **The highly efficient “Controls for Electric Vehicles”**

Power electronics function as link between the accumulator and the electric motor in the vehicle, by controlling the drivetrain and transforming the voltage delivered by the accumulator into the voltage needed to drive the motor according to the driver's wish. The novel power electronics devices presented by AIT at the PCIM set new standards in terms of efficiency and power density.

**For more information:**

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