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STMicroelectronics Holds Inaugural Industrial Summit in Shenzhen

- Themed “ST Innovates for a Smarter Industrial World,” Industrial Summit 2019 focuses on Motor Control, Power and Energy, and Automation
- More than 100 ST and partner demos on display with about 40 in-depth technical sessions

Shenzhen, China, May 28, 2019 – STMicroelectronics (NYSE: STM), a global semiconductor leader serving customers across the spectrum of electronics applications, will host its first Industrial Summit at the Grand Hyatt Luohu Shenzhen, China, on May 29.

A high-profile event and technology showcase, ST’s Industrial Summit 2019 will bring together key industry leaders, medium and small enterprises, partners, and industry associations from the wide-ranging and highly fragmented industrial market to explore and push the frontiers of smart innovation in **Motor Control, Power and Energy, and Automation**.

Motor Control

Motors play an important role in industrial equipment including robotics, industrial and power tools, smart home appliances, drones, and many other applications.

ST will show a position-control demo powered by two advanced STSPIN32F0 BLDC motors with an embedded STM32 microcontroller (MCU) and an STD140N6F7 Power MOSFET. The two motors can synchronize precisely with each other to ensure accurate motion control, while allowing movement at different speeds and accelerations without crashing.

Smart-home appliance demos include a turnkey solution for a refrigerator with inverter, integrating an AC-DC converter, low-dropout regulator, microcontroller, and IGBT with a driver, completed with software services.

Other smart motor-control solutions on display include a stepper driver, power tools with highly integrated STSPIN32F0 motor-controller series, a low-voltage and high-power BLDC motor controller for e-rickshaws, an STSPIN32F0- and STM32-driven vacuum cleaner, a 3D printer powered by the latest STSPIN820 motor-control IC, a smart-lighting switch, and an STM32MP1 microprocessor-based motor-control solution for advanced human-computer interface.

Power and Energy

The Industrial Summit will also address the impact of motors on Power and Energy. Today, 300 million industrial electric motors are installed worldwide and the number is increasing by around 10% every year. These motors use nearly 30% of all electrical energy, so the need to reduce their power consumption is becoming ever more important.

At the upcoming Industrial Summit, ST will introduce its second-generation silicon carbide (SiC) 650V/1200V industrial MOSFET. This product, with embedded body diodes, delivers extremely low switching and power losses at high temperatures, contributing to lower power consumption, as well as reduced size and weight of industrial equipment.

ST will also display its smart hybrid LED streetlight solution. In constant current mode, it uses an interleaved boost converter as a primary power converter. In the absence of a battery or in low-charge condition, a solar-battery charger powered by an STM32F3 MCU automatically switches to a constant-current AC-DC LED driver, ensuring uninterrupted lighting in any condition.

Other “green” and efficient power and energy solutions on display include a WPC Qi-qualified wireless fast-charging solution, a USB Type-C powered 15W 3-Coil wireless battery-charger transmitter, a 4G IoT module for elevators, a 3-phase Totem Pole PFC and Power Breaker, a main board for the tower-crane integrator, and a Smart-Lighting demo with 6LoWPAN mesh networking.

Automation

In Smart Industry environments, machines are becoming more connected inside the factory and to the cloud. This enables optimal planning and flexibility in manufacturing and maintenance. ST’s portfolio for industrial connectivity spans a range of technologies, including IO-Link, a standard communication protocol enabling connectivity between sensors and Power Line Communication (PLC) devices. At the Industrial Summit, ST will demonstrate the IO-Link stack for its dedicated STM32 Nucleo pack. This solution can serve a small industrial plant with three levels using IO-Link devices to connect sensors to upper levels of monitoring and control.

For Industrial IoT (IIoT) that runs industrial equipment in a more intelligent manner, sensing technologies that constantly monitor the equipment’s condition are essential. ST offers a full spectrum of high-accuracy and robust sensors for the stringent industrial working environment. The ST Summit will highlight various MEMS sensors for industrial applications, ranging from temperature and humidity sensors to pressure and motion-sensing devices.

Predictive Maintenance is a good example of how IoT enables new service models in Smart Factories. ST’s Predictive Maintenance demo uses MEMS sensors and industrial

IO-Link and cloud connectivity. Inertial and environmental sensors connected via IO-Link detect the status of the motor and an STM32F4 MCU performs local real-time frequency and time-domain analysis for condition monitoring and early motor-failure detection. In addition, the data collected at the equipment can be sent to the cloud through a Linux gateway.

Connected, intelligent industrial solutions and technologies on display also include a Wireless Machine Condition Supervisor from ST customer Moons, a Non-Destructive Testing demo for Industrial Imaging Inspection, the latest-generation SensorTile Wireless Industrial Node, NFC in motor control, Power-over-Ethernet (PoE), and RF smart plug.

Other Demo Highlights

Cobots and Robotic Solutions: Cobot is a good replacement of human workforce to execute repeated and unsafe tasks in smart factories, enhancing productivity and reducing production costs. The ST Industrial Summit will host two cobots and four robotic arms, showing how each can optimize factory operations and improve working conditions. The two cobots from Standard Robots demonstrate a versatile and collaborative platform that can complete multiple tasks addressing most of the industrial needs. Four robotic arms from other local ST customers offer high speed, high precision, and ease of use for industrial applications including charging and discharging, assembly, sorting, handling, and auto programmatic drawing.

Smart Factory v2.0: A cool interactive table will help event visitors explore ST's broad portfolio of technologies, products and solutions, and discover how we are enabling various Smart Factory applications, including factory automation, industrial communications, motor control, power and energy management, and predictive maintenance.

Smart Home (Augmented by ST): The Industrial Summit 2019 will also host a smart-home demo with smart appliances using ST's power and motor-control devices. The various ST customer products on display covering every aspect of daily life include air conditioner, TV, refrigerator, vacuum cleaner, washing machine, IH (Induction Heat) rice cooker, smart mirror, hair dryer, and supersonic and bladeless fan.

To experience all these innovative demonstrations at Industrial Summit 2019 (May 29, 2019 in Shenzhen, China), please contact your STMicroelectronics representative.

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You can also read our blog post related to Industrial Summit 2019 at <https://blog.st.com/industrial-summit-2019/>

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About STMicroelectronics

ST is a global semiconductor leader delivering intelligent and energy-efficient products and solutions that power the electronics at the heart of everyday life. ST's products are found everywhere today, and together with our customers, we are enabling smarter driving and smarter factories, cities and homes, along with the next generation of mobile and Internet of Things devices.

By getting more from technology to get more from life, ST stands for life.augmented.

In 2018, the Company's net revenues were \$9.66 billion, serving more than 100,000 customers worldwide. Further information can be found at www.st.com.

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