



SMA Solar Technology AG—Press Release

SMA and Infineon reduce system costs for inverters

Niestetal/Munich, Germany – January 21, 2020 - The installed photovoltaic capacity is growing rapidly worldwide. Photovoltaic systems with a total output of around 600 GW now supply clean and cost-effective electricity - replacing around 600 medium-sized coal-fired power plants. SMA Solar Technology AG (SMA) and Infineon Technologies AG (FSE: IFX / OTCQX: IFNNY) support this growth trend with the latest generation of innovative silicon carbide (SiC)-based solar inverters. The new semiconductor material reduces the system costs for inverters and increases their efficiency. The production costs for solar power are thus further reduced.

With the Sunny Highpower PEAK3 from SMA, available since 2019, decentralized photovoltaic power plants can be planned flexibly and efficiently up to the megawatt range. The basis for this is the compact design for 1500 VDC, which delivers an output of 150 kW per unit. This is made possible by SiC technology from Infineon: Six power modules of the type CoolSiC™ EasyPACK™ 2B and 36 gate drivers of the EiceDRIVER™ family 1ED20 convert the direct current generated by the solar cells into grid-compatible alternating current - with an efficiency of over 99 percent.

Silicon carbide offers advantages for the overall system

“Silicon carbide enables us to build the inverters compact, powerful and reliable,” said Sven Bremicker, Head of Technology Development Center at SMA. “In the Sunny Highpower PEAK3, the CoolSiC modules almost double the specific output from 0.97 to 1.76 kW/kg. Due to the compact design, the inverters are much easier to transport and much faster to install.” The advantages of a decentralized plant layout can thus be combined with those for central inverters. Expansions are easily possible even after the photovoltaic power plant has been commissioned.

“SiC-based power semiconductors are more expensive than silicon solutions,” said Dr. Peter Wawer, President of the Industrial Power Control Division of Infineon. “But thanks to the electrical properties of the material, this is more than offset at system level. Higher switching speeds and efficiency allow transformers, capacitors, heat sinks and ultimately packages to be smaller – and thus save system costs. We are very proud to have convinced with SMA the European market leader in photovoltaic inverters of the advantages and to support volume production with our innovative SiC products.” Not only photovoltaic systems profit from these advantages. Demand for SiC-based solutions from Infineon is also growing in other industrial sectors and for applications such as uninterruptible power supply and charging infrastructure for electric vehicles.



About SMA

As a leading global specialist in photovoltaic system technology, the SMA Group is setting the standards today for the decentralized and renewable energy supply of tomorrow. SMA's portfolio contains a wide range of efficient PV inverters, holistic system solutions for PV systems of all power classes, intelligent energy management systems and battery-storage solutions as well as complete solutions for PV diesel hybrid applications. Digital energy services as well as extensive services up to and including operation and maintenance services for PV power plants round off SMA's range. SMA inverters with a total output of 80 gigawatts have been installed in more than 190 countries worldwide. SMA's multi-award-winning technology is protected by approximately 1,400 patents and utility models. Since 2008, the Group's parent company, SMA Solar Technology AG, has been listed on the Prime Standard of the Frankfurt Stock Exchange (S92) and is listed in the SDAX index.

About Infineon

Infineon Technologies AG is a world leader in semiconductor solutions that make life easier, safer and greener. Microelectronics from Infineon is the key to a better future. In the 2019 fiscal year (ending 30 September), the Company reported sales of €8.0 billion with about 41,400 employees worldwide. Infineon is listed on the Frankfurt Stock Exchange (ticker symbol: IFX) and in the USA on the over-the-counter market OTCQX International Premier (ticker symbol: IFNNY).

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