

PRESS RELEASE

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Fraunhofer IPMS presents new controller IP-Core MACsec

New controller IP core for secure data

Data security is one of the most important issues in today's digital age. Increasing system attacks and cybercrime make it necessary to secure data in new ways. For this purpose, the Fraunhofer Institute for Photonic Microsystems IPMS developed the MACsec Controller IP-Core, which implements the latest Ethernet security standards. It provides authentication, integrity and encryption of data between different nodes of a Local Area Network (LAN).

Fraunhofer IPMS has been developing and licensing IP cores to companies from a wide range of industries around the world for 20 years. Increasing digitalization and the resulting growing danger of cyber-attacks make it necessary to continuously adapt and further develop IP cores. This is the only way to ensure data security in the future.

The latest controller IP core Media Access Control Security (MACsec) implements the Layer 2 security standard specified in IEEE 802.1AE. "MACsec protects Ethernet connections at the second layer of the OSI model by using a combination of authentication, encryption, and integrity protection to ensure that only authorized nodes communicate on the network, that traffic remains confidential, and that data integrity is ensured," explains Dr. Frank Deicke, Division Director DCC at Fraunhofer IPMS.

The MACsec can be used with Fraunhofer IPMS' LLEMAC IP core, as well as any other Ethernet MAC IP core, and in standalone mode.

Due to the platform independence an easy system integration is possible, so that the MACsec can be integrated on every FPGA as well as ASIC.

Fraunhofer IPMS will present the new MACsec at the embedded world trade fair in Hall 4, Booth 4-457. From March 14 to 16, visitors can learn more about the latest developments of the Fraunhofer IPMS. For example, in addition to licensing IP cores, the institute also offers integration support and customer-specific adaptations and extensions.

Editor

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FRAUNHOFER INSTITUTE FOR PHOTONIC MICROSYSTEMS IPMS

About Fraunhofer IPMS

Fraunhofer Institute for Photonic Microsystems IPMS stands for applied research and development in the fields of industrial manufacturing, medical technology and mobility. Fraunhofer IPMS works on electronic, mechanical and optical components and their integration into miniaturized devices and systems. Our services range from conception and product development to pilot production in our own laboratories and clean rooms. The business unit DCC develops and licenses IP cores such as CAN, LIN, Ethernet TSN and RISC-V to companies from various industries worldwide with a special focus on automotive functional safety according to ISO-26262. With several hundreds of users, the IP Cores are used in industries like automotive, aerospace and automation. In addition, Fraunhofer IPMS offers integration support, customer-specific adaptations, and extensions, as well as analog and mixed-signal design for specific solutions.

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Images



MACsec Controller IP-Core: Authentication, confidentiality and integrity of data between nodes in an Ethernet network

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