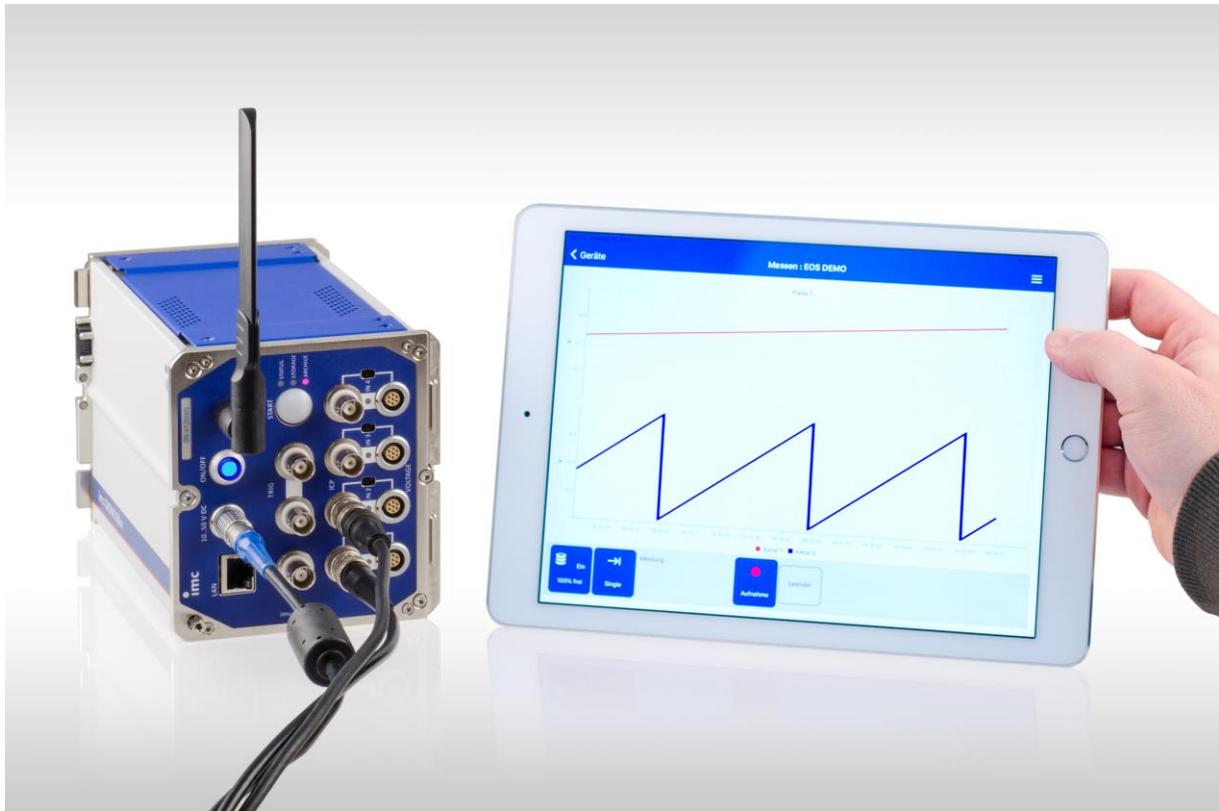


New imc EOS MHz DAQ system for analysis of very fast processes



Berlin, 12 March 2020 –

At the SENSOR+TEST trade show in Nuremberg, Germany, imc Test & Measurement GmbH will present imc EOS, its first measurement system that operates in the megahertz range. With sampling rates of up to 4 MHz, very fast, dynamic processes can be precisely measured. A four-channel, isolated measurement amplifier allows the direct connection of voltage, current transformers and IEPE sensors for acceleration, sound or force. The areas of application are therefore quite diverse: from high-speed recorder use in blasting tests to structure-borne sound and vibration measurements, analysis of switching processes on control units or airbag and crash tests, right through to e-mobility experiments. An especially attractive feature is the possibility to operate imc EOS synchronously together with other imc measurement systems.

imc EOS is equipped with four individually galvanically isolated precision measurement amplifiers. The signal connection is either via BNC or LEMO. Voltage signals up to ± 60 V, IEPE/ICP sensors such

as accelerometers, microphones or force sensors can be measured. Precision current transformers are also supported. The acquired signals are digitized with 24 bits at up to 4 MHz per channel – the analog bandwidth extends to 1.7 MHz. In addition, imc EOS has a channel-specific sensor supply for feeding active sensors.

Operation & storage

The imc EOS systems can be operated independently or networked. For PC-independent data storage, the device is equipped with an onboard flash memory. Depending on the configuration, this can hold up to 1 TB of data. If the imc EOS is networked via Ethernet, real-time data transfer to a PC is just as possible as archiving on a network storage device (NAS).

imc EOS is compatible with all other imc DAQ systems and can be operated together with them synchronously in one measurement. This is of particular interest for users who already work with imc systems and want to extend their existing measurement setup with high-speed channels. Configuration and data visualization for all imc systems is done with the imc STUDIO measurement software.

Clever mechanics with click connection

The imc EOS systems are mechanically compatible with the imc CRONOS*flex* series. This means that users can directly click on suitable accessories from the *flex* family such as handles, battery-buffered UPS solutions (“power handle”) or supply modules for high-performance current transformers and current clamps. Similarly, several imc EOS systems can be combined to form a block or attached to an imc CRONOS*flex* system. With the imc NET-SWITCH, which can also be clicked on, a 5-port GBit network switch is also available, which enables the synchronous networking of the systems. Particularly convenient for users: complete systems that are clicked together only need to be powered centrally from a single source. This significantly reduces the cabling effort and saves space.

Application areas

Thanks to high-speed DAQ technology and universal measurement inputs, the imc EOS is particularly suitable for testing very fast processes in materials testing, vibration analysis or component testing. In addition to crash, ballistics, pyrotechnics and explosion processes, measurements on turbines or

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engines are typical areas of application. In the automotive sector, imc EOS can be used to investigate processes during fuel injection and ignition, to record high-frequency vibrations in engines, transmissions and chassis, or to analyze shifting processes of control units. In the e-mobility environment, the system can be used to characterize inverter-controlled electric motors.

In the future with App control

In a next step, imc EOS will be extended by an additional operating option via App. Users will be able to start and stop a measurement, or trigger and view data in real time directly from their smartphone or tablet. Even with a slow Wi-Fi connection, the App displays low-resolution overview curves as well as high-resolution trigger events.

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After consultation, we will assume costs associated with publication.

imc Test & Measurement GmbH

imc Test & Measurement GmbH is a manufacturer and solution provider of productive test and measurement systems. Together with its customers from the fields of automotive engineering, mechanical engineering, railway, aviation and energy, imc implements metrological solutions for R&D, service and manufacturing. Every day customers use imc measurement devices, software solutions and test benches to validate prototypes, optimize products, monitor processes and gain knowledge from measurement data. The performance promise “productive testing” is consistently pursued by imc. The company offers its customers top technological performance along the entire measurement chain.

The core of the product portfolio consists of imc's modular measurement, control and automation systems, which are supplemented by custom-fit sensor and telemetry systems for customer applications. Using the imc software platform, users can quickly and easily implement comprehensive test and measurement processes, perform real-time analyses and automate test benches. With powerful software tools for the analysis and management of test and measurement data, as well as cloud services, imc sets trends in future technologies, such as smart data analysis, and brings measurement technology solutions to industry 4.0 and the Internet of Things (IoT).

imc has particular expertise in the design and production of turnkey electric motor test benches. Equipped with state-of-the-art test procedures, such as load-free acquisition of motor parameters and automated test sequences, they accelerate customer testing. imc test benches work reliably worldwide, both in R&D and in production environments.

As a solution provider, imc offers its customers an attractive range of services. These include project consulting, contract measurements, data evaluation, outsourcing of specialists, customer-specific software development and system integration.

imc customers benefit both nationally and internationally from a strong expertise and sales network that implements test and measurement solutions locally in more than 25 countries.

Founded in 1988 in Berlin, the company employs around 250 people at three locations in Germany. Together with other companies, imc forms the "imc group". These include the international headquarters in France, Switzerland, the Netherlands, the USA and China, as well as the German sensor and telemetry specialist CAEMAX Technologie GmbH. A strategic partnership also connects imc with the telemetry specialist KMT Krauss Messtechnik GmbH.

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