

TDEMI® eXtreme series



Highest measurement speed. Highest accuracy. Incredible dynamic. New operation modes. The novel product line TDEMI eXtreme (TDEMI X) is the latest and most advanced level of full digital measurement equipment for emission testing on the fast lane. It is based on the unrivaled and patented TDEMI® real-time technology of GAUSS INSTRUMENTS. It is easy and efficient in upgrading its frequency range by a various number of extensions which can be integrated into the instrument step by step. The frequency ranges are 1 GHz, 3 GHz, 6 GHz, 18 GHz, 26.5 GHz or 40 GHz respectively. A large variety of configuration possibilities makes the TDEMI X to the customized solution perfect fitting into your lab and to your application according to civil standards (e. g. CISPR, EN, FCC Part 15, ANSI C63.2, ANSI C63.4), military standards (e. g. MIL-461G, but also its previous versions and revisions) as well as avionic standards (e. g. DO-160). The frequency range of the TDEMI X instruments starts at 9 kHz in its standard configuration and can be extended down to 10 Hz by the option MIL/DO-UG or even down to DC by the available option OSC-UG as well. Like all other TDEMI measurement systems, the TDEMI X measurement systems can be remotely controlled and fully automated via Ethernet (TCP/IP) very easily.

Using the leading-edge analog-to-digital converters with the best ratio of signal-to-noise power density available on the market, most modern high-speed FPGAs with a calculation power of about 250 state-of-the-art PCs and in-house designed high performance microwave circuits, highest measurement accuracy and highest measurement speed is achieved over the entire frequency range starting from 10 Hz up to 40 GHz. The TDEMI X measurement system offers in its standard configuration already a fully integrated spectrum analyzer and also a real-time spectrum analyzer. An additional option provides a two-channel oscilloscope, extending the frequency range even down to DC. The product line of TDEMI X stands for highest performance and due to its various operation modes it can be used in a vast range of applications, e.g. also for measurements and testing according to telecommunication standards as ETSI - as well as for general analysis of signals as well - all this can be done fully gapless in real-time with an absolutely unique instantaneous bandwidth of 645 MHz and an unrivaled measurement speed and dynamic range of about 100 dB (@0dB attenuation and preselection off) or even up to more than 170 dB including the automatically stepped attenuator.

The instruments of the TDEMI eXtreme series are available in the following frequency range models and can be configured to your specific needs also with many different options:

- TDEMI X1 (DC – 1 GHz, with Opt. OSC-UG, upgradeable to 3 GHz, 6 GHz, 18 GHz, 26.5 GHz, and 40 GHz resp.)
- TDEMI X3 (DC – 3 GHz, with Opt. OSC-UG, upgradeable to 6 GHz, 18 GHz, 26.5 GHz, and 40 GHz resp.)
- TDEMI X6 (DC – 6 GHz, with Opt. OSC-UG, upgradeable to 18 GHz, 26.5 GHz, and 40 GHz resp.)
- TDEMI X18 (DC – 18 GHz, with Opt. OSC-UG, upgradeable to 26.5 GHz, and 40 GHz resp.)
- TDEMI X26 (DC – 26.5 GHz, with Opt. OSC-UG, upgradeable to 40 GHz)
- TDEMI X40 (DC – 40 GHz, with Opt. OSC-UG)