



TDEMI® ULTRA series



The novel and brand new product line TDEMI ULTRA is the latest and most powerful measurement equipment for emission testing on the market. It is based on the unrivaled and patented TDEMI® real-time technology of GAUSS INSTRUMENTS. Ultra high performance: Best RF performance. Lowest noise floor. The fastest FFT-based receiver on the planet & the fastest superheterodyne receiver on the planet - all at the same time. All at the same time? Yes, you're reading right. All at the same time. You're asking yourself, how the heck is that possible? By using the patented GAUSS INSTRUMENTS technology with the very most advanced DSP concept in combination with best in class performance RF components and microwave circuits. Its unrivaled Multi-GHz real-time scanning feature, ultrafast receiver scanning, as well as its outstanding dynamic range of about 100 dB (@0dB attenuation and preselection off) or even up to more than 170 dB including the automatically stepped attenuator and an ultrahigh performance preselection makes the TDEMI ULTRA receiver series outstanding and absolutely unique in the test and measurement market. The TDEMI ULTRA is the very first system combining an ultrahigh performance stepped scan mode with ultrahigh performance technology. The result is an instrument that allows to speed up the conventional stepped scan mode by orders of magnitude in combination with an ultrahigh performance preselection and an ultrahighly linear input stage that supersedes all prior art technology, especially for pulses and pulsed modulated carriers.

Highest measurement accuracy and highest measurement speed is achieved over the entire frequency range starting from DC up to 40 GHz. The TDEMI ULTRA measurement system provides a fully integrated spectrum analyzer and also a real-time spectrum analyzer. The TDEMI ULTRA product line 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 685 MHz. It is very easy and cost-efficient in upgrading its frequency range as well as by a various number of other extensions which can be integrated into the instrument also step by step. The frequency ranges are 6 GHz, 18 GHz, 26.5 GHz or 40 GHz respectively. A large variety of configuration possibilities makes the TDEMI ULTRA 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 ULTRA systems starts at 9 kHz in its standard configuration and can be extended down to DC by the available option DC-UG. Of course, like all other TDEMI measurement systems, the TDEMI ULTRA measurement systems can be remotely controlled and fully automated via Ethernet (TCP/IP) very easily or any other standard interface.

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

- TDEMI ULTRA 6 (DC – 6 GHz, with Opt. DC-UG, upgradeable to 18 GHz, 26.5 GHz, and 40 GHz resp.)
- TDEMI ULTRA 18 (DC – 18 GHz, with Opt. DC-UG, upgradeable to 26.5 GHz, and 40 GHz resp.)
- TDEMI ULTRA 26 (DC – 26.5 GHz, with Opt. DC-UG, upgradeable to 40 GHz)
- TDEMI ULTRA 40 (DC – 40 GHz, with Opt. DC-UG)

