

1 GHz Quasi-Peak in full Real-time at GAUSS INSTRUMENTS – The TDEMI Ultimate

Combining all the latest leading-edge ADC technology with highest-performance FPGAs and modern MMICs up to 44 GHz, the recently released TDEMI Ultimate series is the latest FFT-based measurement system and the top-of-the line model of the GAUSS INSTRUMENTS product line card.

It comes with the standard quasi-peak real-time bandwidth of 345 MHz and with the add-on options of 685 MHz, or even 1000 MHz quasi-peak real-time bandwidth for full compliance EMC testing. Furthermore the real-time scanning features enables measurements across several GHz with peak detector and average simultaneously. These real-time measurements which –of course - meet all the requirements of the latest CISPR 16-1-1 edition even at 0 dB attenuator and several GHz bandwidth, enable high-speed, precise, and fully standard-compliant EMC measurements in real-time. Also telecommunication measurements according to the ETSI standards, such as occupied bandwidth, channel and adjacent channel power as well as measurement of pulse width and pulse height etc., can be performed easily and very fast in real-time.



Fig 1: TDEMI Ultimate

The TDEMI Ultimate is the first measurement system that fully utilizes all the vast advantages and power of digitization and thereby offers a wide range of leading-edge technological capabilities and added value. It also provides an improved measurement uncertainty, and even spans across several GHz can be measured in real-time – at the same time providing a very good sensitivity and a high dynamic range. The range from 30 MHz to 1 GHz can now be measured in just one single segment with the fully CISPR 16-1-1 compliant quasi peak detector (option 1000M-UG) in real-time. Together with the software automation suite EMI64k of GAUSS INSTRUMENTS all kind of test procedures can be significantly simplified and speed up - resulting once more in tremendously reduced overall test times, increased measurement accuracy, and improved overall test quality all at the same time.

The TDEMI measurement systems can also be combined with all other third party off-the-shelf automation software solutions resulting in a significantly reduction of the overall test times and improvement of the measurement quality in comparison to other devices using traditional test methods from the past.

The TDEMI Ultimate measurement systems are available in the several frequency ranges starting from 9 kHz to 6 GHz, 18 GHz, 26 GHz, 40 GHz, and 44 GHz. The low end frequency range can optionally be extended down to even DC.