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NEWS RELEASE

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GIGA-TRONICS INTRODUCES THE 8650A SERIES UNIVERSAL POWER METER

The New Power Meter has the Bandwidth to Test Third-Generation, Wideband CDMA Signals over an 80 dB Dynamic Range with a Single Sensor

San Ramon, California – Giga-tronics today announced the introduction of the new Giga-tronics 8650A Series Universal Power Meter, according to James R. Koehn, President of the Instrument Division of Giga-tronics Incorporated.

The Giga-tronics 8650A Series Universal Power Meters are available in single and dual channel configurations, and both have the extensive measurement capabilities and unique features required to measure the CW, peak, and average power of TDMA, GSM, and CDMA (IS-95 and Third-Generation) signals from 10 MHz to 40 GHz.

The new meter features a 20 MHz uniform sampling rate for CW measurements that delivers greater than 1,750 readings per second over GPIB and a 2.5 to 5 MHz random sampling rate that minimizes the aliasing effects of modulated signals for measuring the average power of modulated signals at greater than 300 readings per second over GPIB. And the 8650A features statistical power measurement analysis to evaluate communications system efficiency.

The 8650A incorporates several time saving measurement features. The burst average power mode provides average power measurement automatically between the 3 dB points of a TDMA pulse burst. This feature ensures accurate meter readings even if the duty cycle changes over time, and it eliminates the need for time gating.

Time gating is available, when needed, for programming a measurement start time and duration to measure the average power during a specific time slot of a burst signal. This feature can be used to accurately measure average power during 5% to 95% of the burst duration — the 'useful' portion of the burst defined in the GSM specification.

The peak hold feature of the 8650A displays the highest instantaneous power measured from the time the feature is enabled until it is reset. The display value tracks the measured value only when it is rising to a new maximum; when the measured value falls, the display value holds at the maximum.

The crest factor feature of the 8650A displays the ratio of the maximum peak power (peak hold) measurement to the average power measurement (in dB) from the time the feature is enabled until it is reset. The crest factor capability operates in the same manner as the peak hold capability: the display value holds at the maximum until reset.

The burst start exclude and burst end exclude features of the 8650A allow you to exclude the beginning or end of a burst when measuring the average burst power. Masking the beginning or end of a burst signal, in order to exclude overshoot or other distortions, can be desirable or even required for certain types of measurements.

Giga-tronics power meter architecture provides for a broad choice of functional sensors. The 8650A can use all of the existing Giga-tronics sensors to measure the CW power, peak power, and average power of TDMA, GSM and CDMA (IS-95) signals. And the new Giga-tronics 80701A Modulated Power Sensor provides bandwidth up to 10 MHz to measure the average power of third-generation, wideband CDMA signals over an 80 dB range.

Giga-tronics uses diode sensors and a built-in power sweep calibration system to provide speed, range, and accuracy unavailable from any other power meter. The power sweep calibrator uses an amplitude controlled oscillator to step from –30 to +20 dBm in 1 dB increments. Each step is set using an internal thermistor — the standard for linearity.

Configuring the power meter for measurements is easy because calibration factors are programmed into the sensor. When the measurement frequency is entered, the meter automatically applies the correct cal factor from the sensor EEPROM, and the meter automatically reads a new set of cal factors whenever a sensor is changed. This avoids the chance of measurement error from incorrectly entering new cal factors when you change sensors, or from completely forgetting to enter new cal factors.

The 8650A incorporates a 3.7 inch wide by 2.1 inch high liquid crystal display with 240 x 120 dot resolution, 0.38 dot pitch, and cold cathode fluorescent lamp back light for maximum detail and optimum viewing. The display shows four lines of information and works in tandem with the meter controls to present numerous menu selections and display input data as it is entered.

Giga-tronics designs, manufactures and markets RF and microwave synthesizers, synthesized sweepers and power meters. Giga-tronics has an 18 year history of building test and measurement gear for the most demanding requirements, and the company has shipped thousands of test instruments to commercial and military customers for use in radar testing, electronic warfare, satellite and telecommunications systems. Giga-tronics is ISO-9001 qualified.