



Affordable Test & Measurement

MegiQ

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RMS-0740

Radiation Measurement System

The MegiQ Radiation Measurement System (RMS) is a compact test system that performs 3-axis radiation pattern measurement in non-anechoic spaces.

With a frequency range of 700MHz to 4GHz it is very well suited for characterization and measurement of **Antenna Radiation Patterns, Antenna Gain, ERP, TRP, Field Strength.**

Extensive evaluation has shown that – with proper setup - the accuracy of the RMS is similar to that of anechoic test labs.

Characterize wireless devices of today, like IOT devices, routers, phones, domotica products, electronic gadgets, tablets, laptops, RF-modules etc.



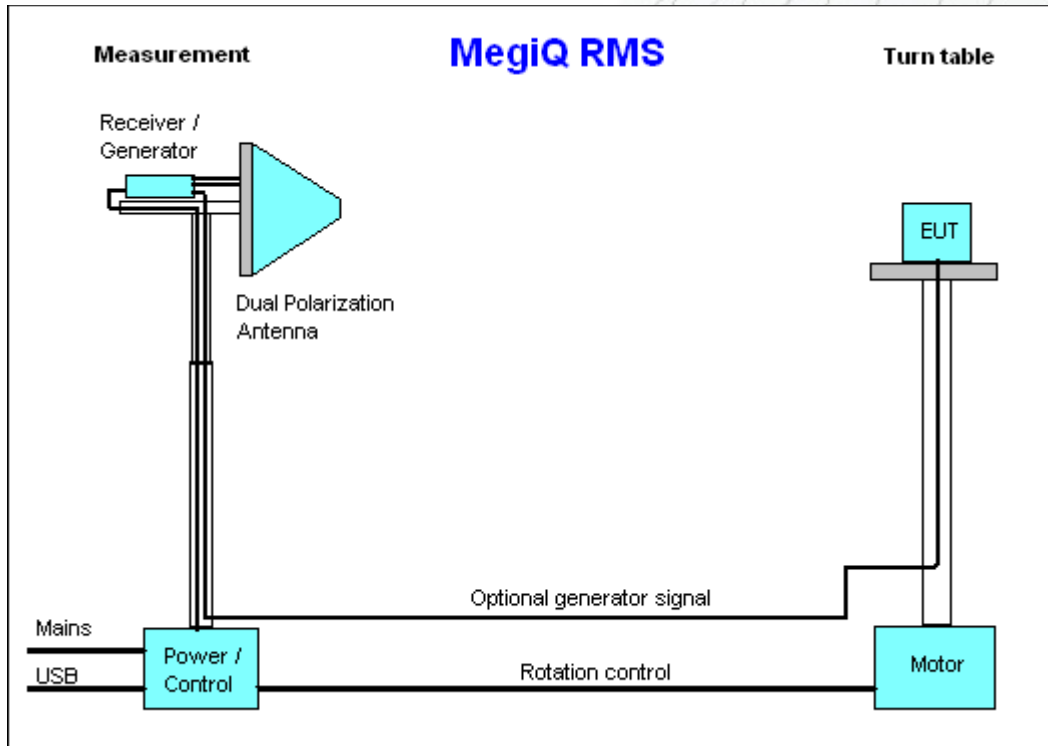
Measure Wireless Radiation Patterns in minutes

No anechoic chamber required

features

- Measurement of RF device Constant Carrier radiation patterns.
- System frequency range 700 to 4000 MHz.
- Measuring distance 0.8 to 3 meter.
- Simultaneous Horizontal and Vertical polarization measurement.
- Simultaneous measurement of harmonic radiation.
- 3-axis measurement (1 turn per axis)
- Narrow antenna beam-width for non-anechoic environments.
- Narrow receiver bandwidth for non-shielded environments.
- Plots per axis and semi 3D.
- Plots of radiated power ERP (dBm), Antenna Gain (dBi), Field Strength (dBuV/m).
- Calculation of TRP, Minimum, Maximum and Average radiation.
- Integrated PC software suite supports measurement setup, rotation control, graphing, data storage and report generation.
- Optional Generator (RMS0740-GEN) for standalone antenna measurement.
- Optional Heavy Duty turntable (30kg).

Measurement System

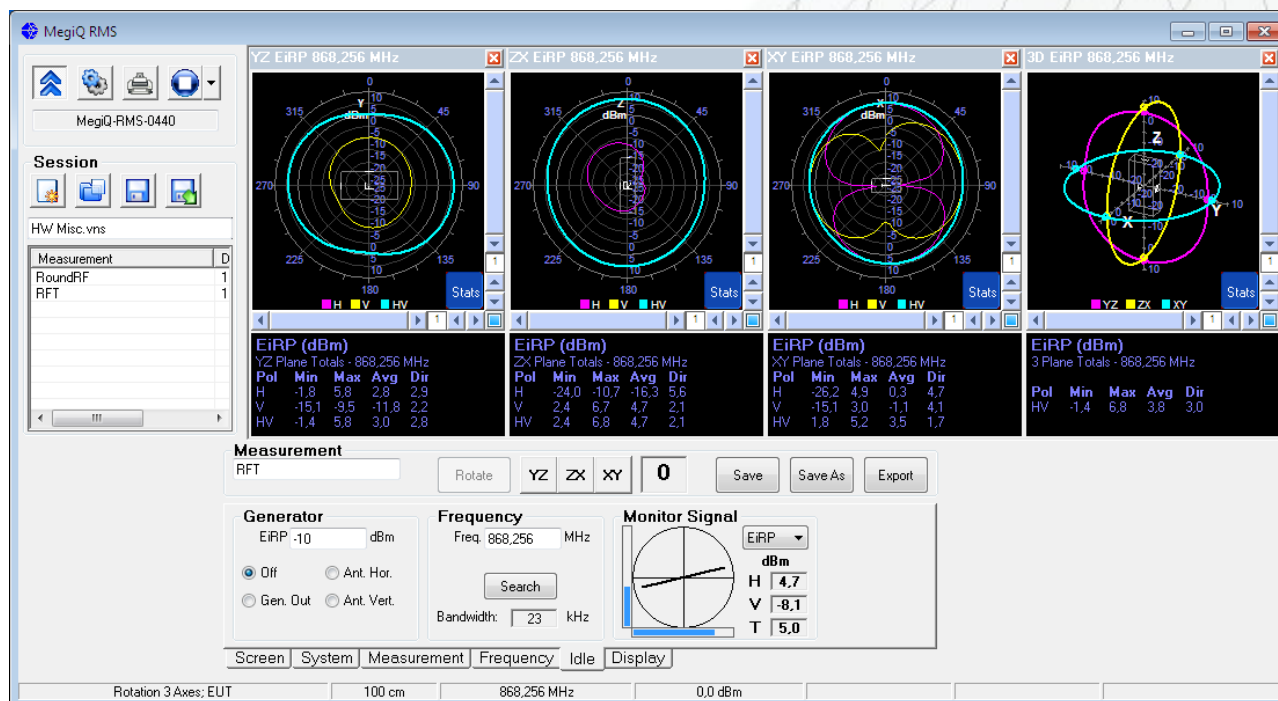


Measurement	Turn Table
<ul style="list-style-type: none"> • Antenna height 100cm to 180cm • Dual Polarization Antenna • Dual channel measuring receiver • Generator output (option) • Rotation controller unit • Power supply • USB connection for computer control • Mains connection 	<ul style="list-style-type: none"> • Height 70cm and 130cm • Stepper motor drive • Smooth acceleration • Less than 30 seconds per rotation • Table 28 x 28cm • Max EUT weight at 130cm: 2.5kg • Max EUT weight at 70cm: 7.5kg • Heavy Duty option for 30kg

The RMS rotates an object on the turntable and measures the radiation. With a rotation around the X, Y and Z axis the software plots the patterns and calculates statistics including Total Radiated Power (TRP). Each measuring point can contain a sweep of multiple frequency, so that multiple radiation patterns can be measured in one rotation sequence.

With the Generator options the RMS can also perform an antenna sweep and show the antenna gain over frequency.

Software



The software shows statistics of the radiation patterns. It also provides functions for organizing the measurements and create reports.

Measurement modes:

- Monitor mode: Search and monitor a signal. The software shows the horizontal and vertical signal in a polarization circle.
- Radiation patterns: Rotate and measure radiation patterns
- Antenna frequency sweep: Shows the antenna gain over a frequency range.
- Transmit a carrier with a calibrated power on the horizontal or vertical antenna.

The software controls:

- The measurement receiver
- The turntable
- Optional generator output
- Import of S parameters of the feed coax from the generator to the EUT antenna.

The results are presented for the 3 axes and in a semi-3D form. They can be plotted in:

- Antenna Gain (dBi)
- Radiated Power EIRP (dBm)
- Field Strength

Reports

