

ANTELLIGEN TECHNOLOGIES



Signalshape

Adaptive Near-field Antenna
Measurement Platform



Empowering an intelligent wireless generation

Adaptive Algorithm Advantages

The Anteligen Adaptive Algorithm data acquisition technique is implemented to sequentially sample fields in areas with highly dynamic behavior and skip regions which have smooth near-field variations. Utilizing this method significantly reduces the number of samples by up to 75% while attaining the same measurement accuracy. Furthermore, our adaptive sampling, reduces measurement time by more than 80%. This approach helps to reduce the post processing time for source reconstruction.

Anteligen developed a near-field source reconstruction method in conjunction with machine learning algorithms to detect radiated emissions from defective elements while the device is under normal operation.

This method, combined with the antenna characterization, allows one measurement procedure to capture OTA testing and fault detection. This yields significant advantages to those with exposure to mass production and quality control procedures.

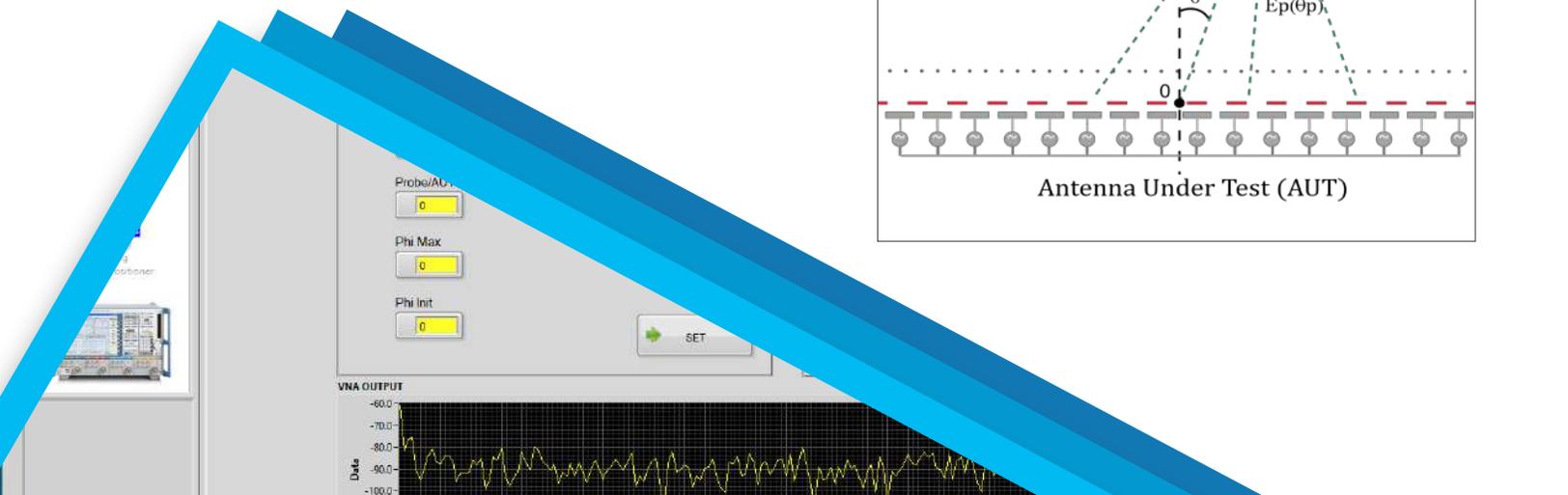
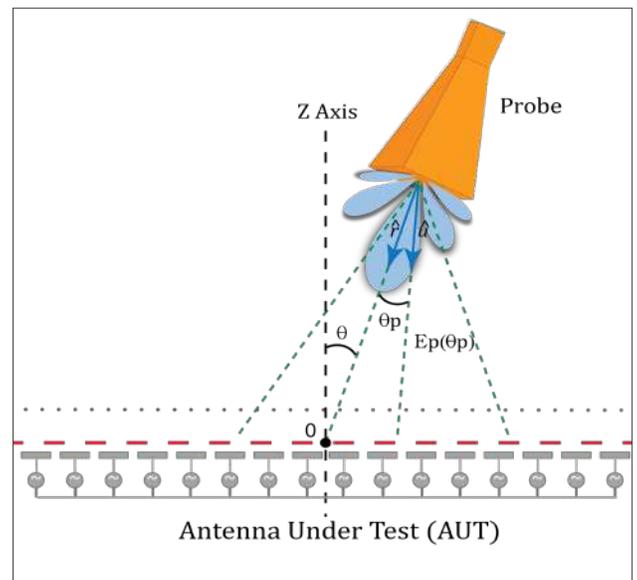
Our hardware platform considerably reduces the significant amount of time needed in the movement of positioners in antenna measurement setups (planar, cylindrical, or spherical) to a simple fast linear belt movement. Implementing this design concept for measurement probes, makes the implementation ideal in a manufacturing process. The measurement platform, along with our adaptive software, creates unprecedented automation that decreases the time of OTA testing to less than a minute per wireless device.



DVTEST dbSafe ARMOR 90 GHz OTA RF Test Enclosure with positioner, probe, AUT, extreme temperature ready

Full Probe Correction

Full probe correction is used jointly with a source reconstruction method for antenna diagnosis and near-field-to-far-field (NF-FF) transformation. The method is based on the introduction of the probe antenna's pattern as a weighting function into the field integral equations relating the measured near field and the antenna's equivalent sources. In this way, the equivalent currents are reconstructed without distortion due to the probe's pattern, as well as the fields calculated from those currents.



Signalshape

Anteligen's innovative very near-field software platform with adaptive sampling and machine learning capability, is a fast and accurate way to measure OTA performance of a device under test (DUT) and detect faulty elements in one integrated platform. The software is capable of reducing measurement time by more than 80% compared to what is available in the market.

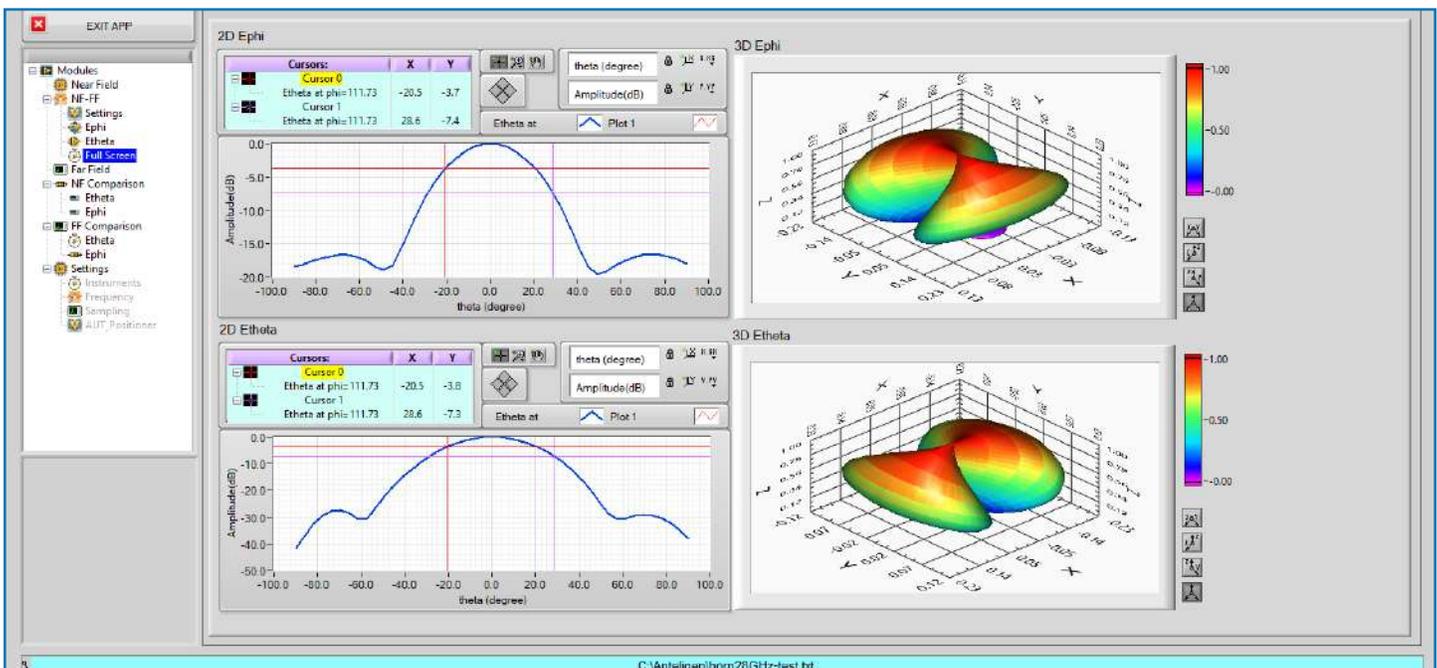
75%
FEWER
SAMPLES

80%
FASTER

100%
SAME
RESULT

- » Accurate far-field patterns calculation from very close measured data
- » De-embed reflections from metallic structures within the chamber (by knowing the position and geometry of these elements)
- » Filter out reflections from other sources including positioner, absorber, camera, etc.
- » Obtain valid far-field pattern if the AUT has an unknown offset from the center of measurement

Measurement Capabilities	Advanced Features
2D planar/cylindrical	Extreme near-field measurement
3D Spherical	Full Probe Correction
Single & Dual polarization	Interfering object correction
Phase center extraction	Compatible with LabView, MATLAB



Signalshape NF-FF Transformation GUI

ABOUT US

Anteligen Technologies brings intelligence to antenna technology facilitating the development of RF, microwave, and mmWave devices. Whether your application is wireless, 5G IoT, automotive radar, or UAVs, Anteligen has developed artificial intelligence and machine learning algorithms that help you get to market faster than any other measurement software.

STAY IN TOUCH



9450 Trans Canada Hwy
St. Laurent QC H4S 1R7



+1-514-905-8082



info@anteligen.com
www.anteligen.com

