

## EM-ISight ESD



The **EM-ISight-ESD** is a fully integrated test system designed to measure test subjects exposed to an electrostatic discharge (ESD) source. As an industry-first solution, it enables real-time measurement of certified ESD events across frequency, time, integrated, and spatial fields on devices subjected to controlled ESD events.

APREL supports third-party ESD source generators, providing users with confidence in the accuracy and reliability of high-speed event generation. By developing advanced measurement methodologies to capture ESD events in spatial locations, the system resolves time and frequency data through the integration of high-bandwidth oscilloscopes.

By combining multiple measurement functions into a single capture, the **EM-ISight-ESD** system revolutionizes how EMC engineers conduct ESD measurements, promoting best practices for measurement and circuit design. Designed to support a wide range of test applications, the EM-ISight-ESD is the ultimate solution for near-field analysis.

### System Software Windows 10/11 Pro 64 Bit

User friendly GUI that allows for easy setup and data retrieval : Automatic antenna probe movement control synchronized to ESD event : Automatic system control or user definable parametric setup incorporating vision system : Visual display including storage and retrieval of measured results in full 3/4D Data tracking for project improvement/quality control : Importation of previous measurement profiles to track design/quality improvements : Perform EM Test - measurements of (near-field) magnetic fields resultant from an ESD event and near field emissions : Record and plot time domain of and ESD event : Record and plot frequency domain of an ESD event : Record and plot spatial data of and ESD event

**Full suite of Near-Field software is included**

### Applications

Automotive Testing to **ISO 10605 Road vehicles** : **IEC 61000-4-2** : LCD/OLED Pannel and Televisions : Industrial Appliances : Home Appliances : Avionics and Radar Systems : Computers and Communication Devices : Medical devices : Electronic Susceptibility : Telecommunication Systems medium scale network equipment, routers, switches, and base stations

### Frequency Options

DC – 4GHz ESD : 9kHz-6GHz Near-Field Solution ; Fully upgradeable to other frequencies

### Measurement Units

Sensitivity ESD: 200V – 8kV contact, 200V – 8kV air, BODE in Fx 20dB decade / Pulse: 0.6nS – 1.0nS Typical (optional of >0.4nS with scope upgrade)  
Time Domain: Sample rate 20GSs, 4GHz analog BW, min time step 0.05pS / Frequency & Time:  
Simultaneous time capture = 0-200nS, Frequency = 1MHz – 4GHz  
Near-Field : dBm; dBuV; dBuA; dBuV/m; V/m; dBuT

### Reach and Movement

NO. of axes: 6 (X, Y, Z and  $\theta$ ) Built on Denso RC8 Controller  
Typical reach\*: Along X & Y axes: 600 x 600 mm : Along Z axis: 500 mm (Cartesian) Rotation  $\theta$  axis: 360°  
Resolution: X and Y axes: 0.02mm (upgrade to 0.01mm) Z axis: 0.02mm (upgrade to 0.01mm)  $\theta$  axis: 0.1°:  
Vision Calibrated using Vision Plate and VCS

### Probe Options

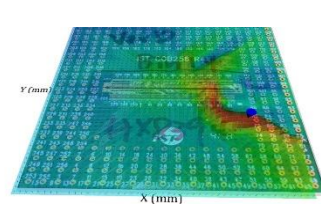
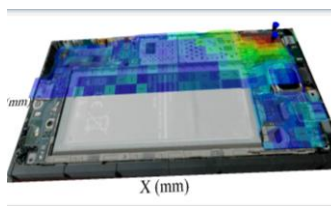
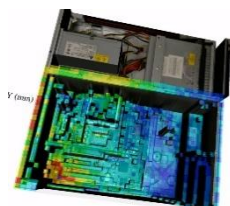
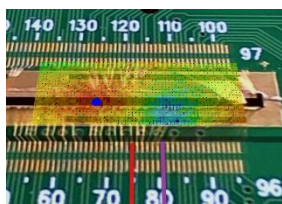
Fully Calibrated & Characterized Vector Probes – Long Probe ESD Hxy, Hxy, Exy, : Hz, Ez 1mm Exy, 2mm Hxy  
Standard Options

### Operating Voltage

220V AC Robotics: 5V USB Vision System

### Upgrade Highlights

Far-Field Approximation: Electromagnetic Susceptibility: Multi-Span : Active Phase and Wavefront  
RF-ISight advanced analysis tool for Import/Export of Simulation data.



**Available Upgrades on Next Page**

[www.aprel.com](http://www.aprel.com)



Available Options				
DC-200MHz Low Frequency Module includes Tesla Field Strength Measurement Function for Battery and Vehicles Includes Hxy/Hz Probe and LNA	•	•	•	•
10GHz to 72GHz Frequency Option	•	•	•	
10GHz to 110GHz Frequency Option		•	•	
Vector Probes (standard for all XY types)	•	•	•	•
Full Probe Rotation 360° (standard)	•	•	•	•
2mm Hxy & Exy Vector Probe (standard)	•	•	•	•
2mm Ez (optional)	•	•	•	•
2mm Hz (optional)	•	•	•	•
1mm Exy & Hxy Vector Probe (optional)	•	•	•	•
1mm Ez (optional)	•	•	•	•
Scan Volume 300 x 300 x 200mm	•	•	•	•
Scan Volume 500 x 500 x 400mm		•	•	•
Scan Volume 1,050 x 1,050 x 900mm			•	
Vision System for DUT Capture, Device Teaching and Measurement Parameters (standard)	•	•	•	•
Off Axis (horizontal scanning) includes 5 Scanning locations 2 x Horizontal & 3 x Cartesian		•	•	
Far Field Approximation		•	•	•
Ubiquitous Server Module	•	•	•	•
Advanced Measurement Suite Option, Includes Phase, s11/s22, Vector Network Analyser and Multi Span Support for Analysers	•	•	•	•
Active Phase Module, Supports the measurement of digital devices operating in normal conditions, includes Contact Probe and optional Exy/Ez/Hxy/Hz Characterized probes	•	•	•	•
RF-ISight Advanced measurement module, Power Density, Poynting Vector, Phase Passive/Active, Wavefront, Vector and Antenna Assessments and Backscatter: Includes Module for Import and Export of Simulation Data	•	•	•	•
ESD Measurement Upgrade		•	•	
ESD Launch Pad kit Option, includes probes, contact discharge, air discharge and ESD immunity measurement suite				•
Hearing Aid Compatibility for C63.19 20013 & 2019	•	•	•	•
Modular Workstation Options		•	•	
Mobile Isolation Chamber (shield)	•			
Shielded Enclosure	•	•	•	•
Advanced Device Positioner	•	•	•	•
ESD Extended Ground Plane				•
ESD 61000 workstation and ground plane				•
Calibration set for High frequency, includes horn, MSL and LNA (50-72GHz/50-110GHz)		•	•	
Electromagnetic Susceptibility Measurement Suite Includes 3V/m or 10V/m Support, RF Amplifier, DVM and Ez Probe	•	•	•	•
Extended Maintenance Program (software/hardware) Includes software updates and support beyond first 12 months	•	•	•	•