The World's First System-level
Electromagnetic Immunity Scanner
SmartScan
amber precision instruments

SmartScan-M Specifications

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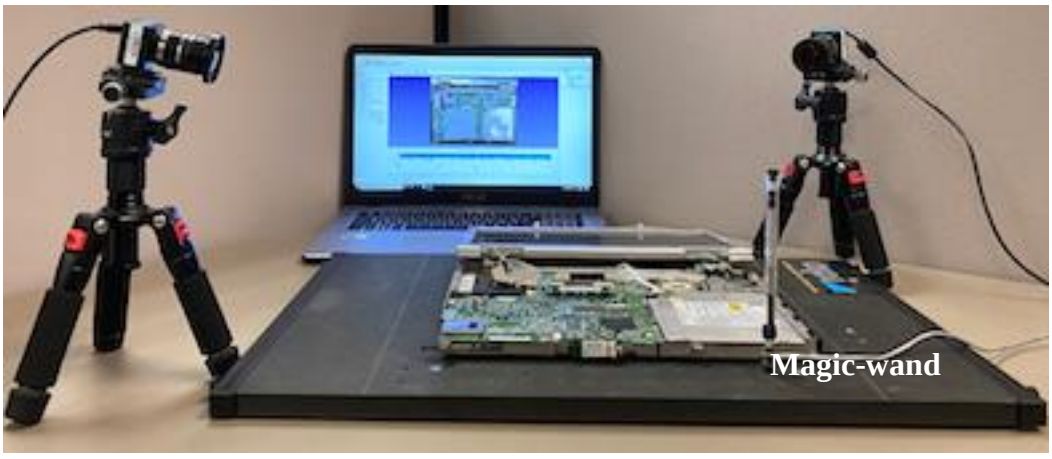
API is a research-oriented EMC solution provider and a near field scanner manufacturer providing measurement technologies to resolve urgent and long-sought-after industry solutions. API offers various scan technologies, both in emission and immunity areas, to understand EMC characteristics of electronics. *SmartScan* is a proprietary EMC scanner system name by API and is the name of the software that operates the SmartScan system.

SmartScan-M is a manual EMI scan system. The most serious constraint of manual scanners is the lack of data recording capability, i.e. inability to realize the measurement point coordinates. This inability leads to difficulties in superimposing test results over DUT images.

A new patent pending probe tip coordinate recognition technique, Magic-wand, is integrated to *SmartScan-M* and superimposing scan results over the source image is achieved in an automated way.



SmartScan-M : A camera for DUT picture taking is not shown in this picture

I. Hardware Specifications

Categories	Descriptions
Platform	- Tabletop - Scan area = 30 cm x 30 cm - Power supply requirement: 12 ~ 15V DC, < 1 Amp - Weight = 10 Kg
Accessories (for 6 GHz model)	- Two cameras on tripods for probe position recognition - One camera to take DUT pictures - Two RF amplifiers, Mini-Circuit, model ZX60-6013E+, 13~16 dB gain over 20 MHz ~ 6 GHz - "Magic-wand" - Probe positioning accuracy: +/- 1.0 mm
Options	- Frequency extension to 18 GHz • Hx-1mm probe, up to 18 GHz - Frequency extension to 40 GHz • Hx-0.25 mm probe (up to 40 GHz) and Ez-HF probe (up to 40+ GHz) • High frequency cables and connectors - User prepares RF amplifiers
Scan point recognition	- User defines a grid with desired X- and Y-spacing - Measurement is done when the probe that is attached to the 'Magic-wand' locates the grid point

II. Software Highlights

Categories	Descriptions
Data visualization	- Laying measured values over the DUT picture - Point - Color coded value at each measurement point - Peak search - Tracking points - Transparency control to see DUT below the measured data
Drivers	- One spectrum analyzer and one VNA driver (for system factor extraction) - Drivers for most R&S and KeySight SA and VNA models are available. - If a driver is not readily available, API writes a driver for the user specific SA or VNA model
Post-processing support	- Export of measured data in .txt format
PCB layout import	- ODB++ format import for scan points assignment
Others	- Automatic report generation (requires MS Words or Excel) in user defined template