EHX+™ EMxpert™

Real-time EMC and EMI diagnostic tool now available with built-in super-fast spectrum analyzer

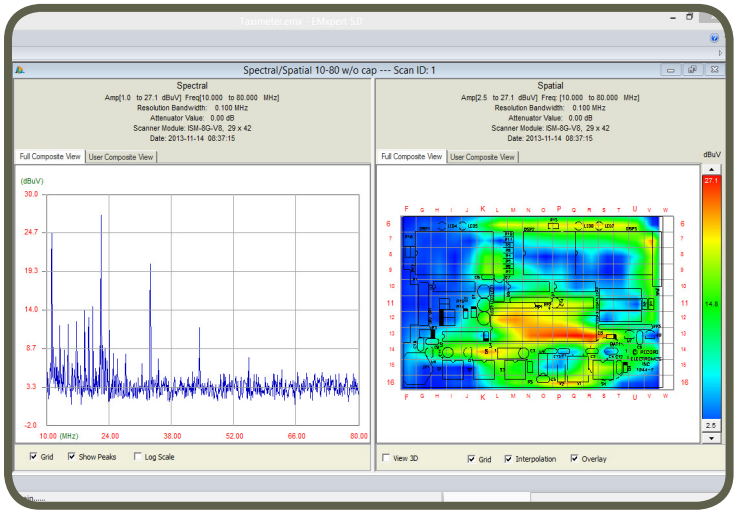
There is no need for an external spectrum analyzer to run EHX+. World's fastest EMC and EMI diagnostic tool is now a plug-and-play test system. EHX+ is equipped with a spectrum analyzer which has a 100 MHz instantaneous bandwidth (IBW) and 75 GSPS scan rate. This analyzer has an industry leading combination of wide instantaneous bandwidth, sensitivity, tuning range, deep fast real-time caching and sophisticated capture control.

With the scan range of 150 kHz - 8 GHz, EHX+ addresses EMC and signal integrity concerns in the design of ultra-high speed (>2 GHz) PCBs. EHX+ provides unique pre- and post-EMC compliance testing that displays emissions in **real-time**. EHX+ allows engineers to visualize the root causes of potential EMC and EMI problems.

During any new PCB development process, design engineers must find, characterize, and address unintended radiators or RF leakage to pass compliance testing. EHX+ allows board designers to pre-test and resolve EMC and EMI problems early on, thus avoiding unexpected EMC compliance test results.

EHX+ delivers **repeatable** and **reliable** results that pinpoint in less than a second the cause of a design failure. As a result, the user can personally test the design without having to rely on another department, test engineer, or time-consuming off-site testing. After diagnosing even an intermittent problem, the engineer can implement a design change and retest. The results provide concrete verification of the effectiveness (or not) of the design change.

EHX+ diagnostic capabilities allow design teams to **reduce testing time** by more than two orders of magnitude. Users have also documented fifty percent reductions in design cycle times. This allows the design team to immediately analyze and compare design iterations.



Ideal PCB projects for EHX+ are boards designed for high speed, high power, and/or high density/complexity. Any PCB that places a premium on board real-estate also qualifies as an excellent candidate.

EHX+ provides PCB design teams with an **easy-to-use, cost-effective, and proven tabletop solution**. Emission, immunity, filtering, EMI shielding, broadband noise and Common Mode testing are some of the applications that the EHX+ system addresses in mere seconds.

EMSCAN real-time results

EHX+ Features

Capability	Spectral scan, spatial scan, peak-hold, continuous scanning, spectral and spatial comparison, scripting, limit lines, report generator, notes
Spatial scan time	Continuous real-time or 5 seconds spatial scan over the entire scanner (1,218 probes activated)
Spectral scan time	11 seconds for L 10 cm x W 10 cm (L 4" x W 4", 178 probes activated) from 10 MHz to 110 MHZ and 122 kHz RBW. Scanning area, span and RBW are user selectable within spectrum analyzer specifications (Tested on the ERX+)
Supported operating systems	Windows 10®
Supported overlays	Picture in JPEG format Standard Gerber© RS274x and HPGL CAD files

EHX+ Scanner Specifications

Broadband frequency coverage	150 kHz to 8 GHz Base configuration (3-year warranty) 150 kHz to 8 GHz (Part #: 3000-1905) Alternate configuration (5-year warranty) 150 kHz to 8 GHz (Part #: 3000-1906)
Antenna array	1,218 (42 x 29) H-field probes
Measurement sensitivity	For models using ThinkRF R5500 with firmware 2.0.4.0

Frequency (MHz)	0.15	0.5	1	10	50	300	1000	1500	2000
Internal Preamp (dBm)	-10	-25	-35	-55	-65	-80	-95	-95	-85
with 50x Averaging and preamp (dBm)	-20	-40	-45	-65	-80	-95	-110	-105	-100

Frequency (MHz)	3000	4000	5000	6000	7000	8000
Internal Preamp (dBm)	-90	-90	-90	-90	-85	-70
with 50x Averaging and preamp (dBm)	-100	-100	-100	-100	-100	-80

Internal pre-amp set to High Gain; gain is frequency dependent. RBW set to 238 Hz

Spatial resolution	Probe spacing of 7.5 mm with an 'effective' resolution of 3.75 mm
Scan area	L 31.6 cm x W 21.8 cm (L 12.44" x W 8.58")
Probe to probe uniformity	Calibrated before shipment. Firmware correction factors adjust for frequency dependant probe responses with +/- 3 dB accuracy
Measurement plane isolation	> 20 dB
Maximum radiated power load	10 W / 40 dBm
Scanner connections	PC: USB and Ethernet (via a LAN or crossover)
Enclosure	Anodized non-conductive metal
Maximum DUT voltage	Glass Cover: 4kV DC; 2.6kV AC | Metal Case: 260V DC; 200V AC (measured as dielectric withstanding voltage - DWV)
Dimensions of the scanner	L 34.5 cm x W 43.5 cm x H 11.0 cm (L 13.58" x W 17.13" x H 4.33")
Weight	11.79 Kg / 26 lb. (incl. cables)
Power supply	120 - 240V AC, 47 - 63 Hz, 8.3A
Fuse rating	8A
Temperature	From 15º C to 40º C

EMSCAN real-time results
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