ERX+ ™

EMxpert ™

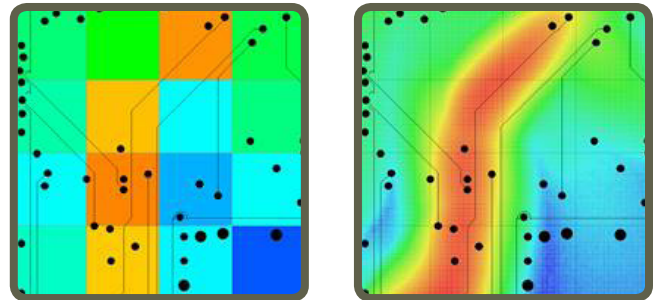## High resolution EMC and EMI testing has never been this fast! (minimum resolution ≈ 120 microns)

World's fastest EMC/EMI diagnostic system has been reinvented to assist high density board designers to visualize the root causes of potential EMC and EMI problems during pre- and post-EMC compliance testing.

ERX+ enables the PCB and design engineers to diagnose EMC/EMI problems between 150 kHz and 8 GHz. ERX+ provides 7 levels of resolution (120 microns - 7.5 mm). Level 1 resolution (7.5 mm) allows the engineers to visualize the hot spots, current loops or intermittent problems in **real-time**. After locating the unintended radiators, engineers can zoom into the problem by selecting the resolution level based on the density of the board design.
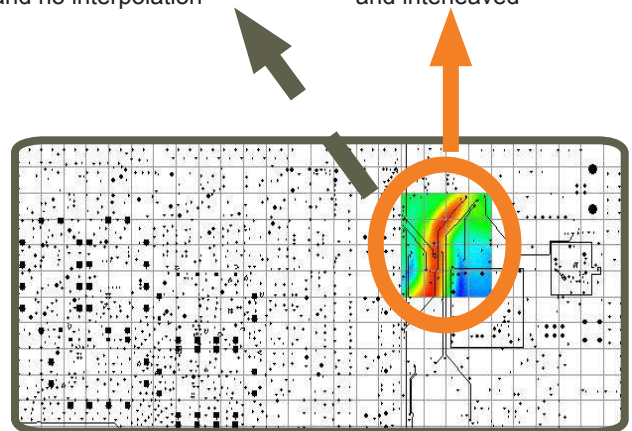
There is no need for an external spectrum analyzer to run ERX+. Built-in spectrum analyzer turns ERX+ into a plug-and-play test system.

Standard 7.5 mm resolution and no interpolation

High 0.12 mm resolution and interleaved

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

ERX+ quickly delivers **repeatable** and **reliable** results that pinpoint 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.

EMSCAN real-time results

ERX+ 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 for entire scan area when Level 1 selected Level 1: 20 sec. (Selected area entire scanner, 1,218 probes activated) Level 2: 5 sec. (Selected area 2.25 cm x 2.25 cm, 9 probes activated) Level 3: 5 sec. (Selected area 2.25 cm x 2.25 cm, 9 probes activated) Level 4: 20 sec. (Selected area 2.25 cm x 2.25 cm, 9 probes activated) Level 5: 1 min. 10 sec. (Selected area 2.25 cm x 2.25 cm, 9 probes activated) Level 6: 4 min. 30 sec. (Selected area 2.25 cm x 2.25 cm, 9 probes activated) Level 7: 18 min. 00 sec. (Selected area 2.25 cm x 2.25 cm, 9 probes activated)
Spectral scan time	5 seconds for L 10 cm x W 10 cm (L 4" x W 4") PCB with a 100 MHz span and 120 kHz RBW. Scanning area, span and RBW are user selectable within spectrum analyzer specifications
Supported operating systems	Windows 10®, Windows 8®, Windows 7®, Windows Vista® and Windows XP®
Supported overlays	Picture in JPEG format Standard Gerber© RS274x and HPGL CAD files

ERX+ Scanner Specifications

Broadband frequency coverage	150 kHz to 8 GHz Base configuration (3-year warranty) 150 kHz to 8 GHz (Part #: 3000-2805) Alternate configuration (5-year warranty) 150 kHz to 8 GHz (Part #: 3000-2806)
Antenna array	1,218 (42 x 29) H-field probes
Spatial resolution	Level 1: 7.50 mm Level 2: 3.75 mm Level 3: 1.88 mm Level 4: 0.94 mm Level 5: 0.47 mm Level 6: 0.24 mm Level 7: 0.12 mm
Scan area	L 31.6 cm x W 21.8 cm (L 12.44" x W 8.58")
Frequency accuracy of peaks	Peak marking accuracy of spectrum analyzer
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: Ethernet
Enclosure	Anodized non-conductive metal
Dimensions of the scanner	L 34.5 cm x W 43.5 cm x H 11 cm (L 13.58" x W 17.13" x H 4.33")
Weight	12.70 Kg / 28 lb. (including cables and the adaptor)
Power requirements	12 VDC, 3.33 A