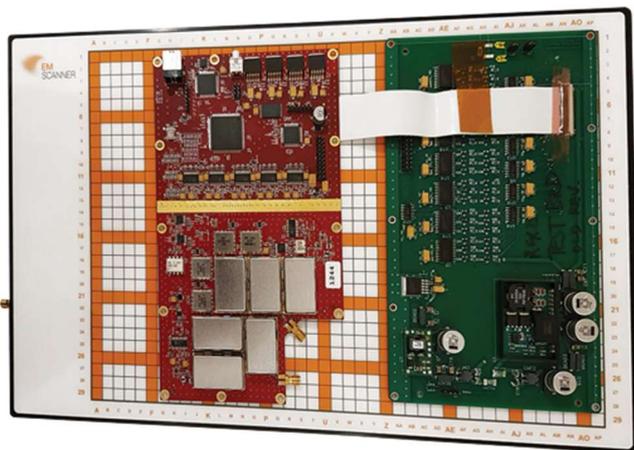




# EMScanner

## Datasheet

**High speed 8GHZ real-time EMC and EMI diagnostic tool on your lab bench.**



EMC and signal integrity are major concerns in the design of ultra-high speed (>2 GHz) PCBs. **EMScanner** enables design engineers to diagnose EMC/EMI problems between 150kHz and 8GHz.

The **EMScanner** provides unique pre and post EMC compliance testing that shows **real-time emissions**. **EMScanner** 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. **EMScanner** allows board designers to pre-test and resolve EMC and EMI problems early on, thus avoiding unexpected EMC compliance test results.

**EMScanner** 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.

**EMScanner** consists of a patented scanner and compact adaptor, and of a customer-supplied spectrum analyzer and PC running **EMViewer** software. The **EMViewer** software is recommended to use the unit's full features and capabilities in the easiest and fastest way. The user can also directly control the **EMScanner** through our public API by using C or Python.

**EMScanner** 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 analyse and compare design iterations.

Ideal PCB projects for **EMScanner** are boards designed for high speed, high power, and/or high density/complexity. The compact, flat scanner provides PCB design teams with an **easy-to-use, cost-effective, and proven tabletop solution**.



## Features

<b>Capability</b>	Spectral scan, spatial scan, peak-hold, continuous scanning, spectral and spatial comparison, scripting, limit lines and report generation.
<b>Spatial scan time</b>	Continuous real-time or sub-second single scan for entire scan area dependent on Spectrum Analyzer performance.
<b>Spectral scan time</b>	45 seconds for L 10 cm x W 10 cm (L 4" x W 4") PCB with a 100 MHz span and 100 kHz RBW. Scanning area, span and RBW are user selectable within Spectrum Analyzer specifications
<b>Supported spectrum analyzers</b>	<a href="https://yictechnologies.com/compatible-devices/">https://yictechnologies.com/compatible-devices/</a>
<b>Supported operating systems</b>	Windows 11®
<b>Supported CAD overlays</b>	Standard Gerber© JPEG and PNG

## Specifications

<b>Broadband frequency coverage</b>	EMS08 Base configuration 150 kHz to 8 GHz
<b>Antenna array</b>	1,218 (42 x 29) H-field probes
<b>Measurement sensitivity</b>	Dependent on Spectrum Analyzer performance
<b>Spatial resolution</b>	Probe spacing of 7.5 mm with an 'effective' resolution of 3.75 mm
<b>Scan area</b>	L 31.6 cm x W 21.8 cm (L 12.44" x W 8.58")
<b>Probe to probe uniformity</b>	Scanners are calibrated during manufacturing. Software correction factors adjust for frequency dependent probe responses with +- 3dB accuracy.
<b>Measurement plane isolation</b>	> 20 dB
<b>Maximum radiated power load</b>	10 W / 40 dBm
<b>Enclosure</b>	Anodized non-conductive metal
<b>Maximum DUT voltage</b>	Glass Cover: 4kV DC; 2.6kV AC   Metal Case: 260V DC; 200V AC (Measured as dielectric withstanding voltage - DWV)
<b>Operating temperature</b>	From 15° C to 40° C (continuous spectral and spatial scans at 50 MHz)
<b>In situ scanning</b>	6U Size C scanner fits into VXI and VME chassis
<b>Scanner connections</b>	Spectrum analyzer: RF SMA to type N coaxial cable   Adaptor: Proprietary DB25
<b>Dimensions of the scanner</b>	L 39.2 cm x W 24.4 cm x H 1.7 cm (L 15.43" x W 9.61" x H 0.67")
<b>Weight</b>	2.80 Kg / 6.17 lb. (including cables and the adaptor)



## Specifications continued

<b>Probe Sensitivity</b>	EMS sensitivity: -135 dBm to 35 dBm (Dependent on spectrum analyzer performance)										
	<b>Frequency (MHz)</b>	0.05	1	300	696	1500	2000	2600	3000	3500	4000
	<b>Sensitivity</b>	-3	-50	-100	-108	-107	-100	-95	-85	-85	-80
	<b>Frequency (MHz)</b>	4000	4500	5000	5500	6000	6500	7000	7500	8000	
	<b>Sensitivity</b>	-78	-68	-70	-75	-70	-65	-70	-60	-60	

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

If you can **see** it, you can **fix** it!