

# EMScannerR+



*Delivering Software Solutions To You*

## Datasheet

### High speed, High Resolution 6GHz real-time EMC and EMI diagnostic tool with Internal Spectrum Analyzer



Electromagnetic compatibility (EMC) and signal integrity are critical challenges in the design of ultra-high-speed PCBs (>2 GHz). The **EMScannerR+** empowers design engineers to diagnose and resolve EMC/EMI issues across a frequency range of **150 kHz to 6 GHz**.

The **EMScanner** family offers unique **pre- and post-EMC compliance testing**, providing real-time visualization of emissions and interference sources. With **EMScannerR+**, engineers can quickly identify the **root causes of potential EMC and EMI problems**, accelerating the design and verification process.

During PCB development, it is essential to **locate, characterize, and mitigate unintended radiators or RF leakage** to ensure compliance success. **EMScannerR+** enables engineers to **pre-test and correct** EMC and EMI issues early in the design cycle, helping avoid unexpected compliance failures later on.

**EMScannerR+** delivers **repeatable and reliable results in under a second**, precisely pinpointing the cause of design issues. Engineers can independently test their boards, make design modifications, and **immediately verify their effectiveness**—eliminating the need for additional departments, test engineers, or costly off-site evaluations.

The system comprises a **patented scanner, internal spectrum analyzer and user PC** running **EMViewer** software. Its powerful diagnostic capabilities allow design teams to **reduce testing time**, with documented **50% reductions in design cycle time**. This enables immediate analysis and comparison of design iterations.



## Features

<b>Capability</b>	Spectral scan, spatial scan, peak-hold, continuous scanning, spectral and spatial comparison, scripting, limit lines, report generation and notes.								
<b>Spatial Scan Times &amp; Resolution</b>	<p>Continuous real-time for entire scan area (1,218 probes activated) when Level 1 selected: 5 sec.</p> <p>Selected area 2.25 cm x 2.25 cm, 9 probes activated.</p> <table><tr><td>Level 1</td><td>7.5mm, &lt;0.5 sec.</td></tr><tr><td>Level 2</td><td>3.75mm, 4 sec</td></tr><tr><td>Level 3</td><td>1.88mm, 9 sec</td></tr><tr><td>Level 4</td><td>0.94mm, 21 sec.</td></tr></table>	Level 1	7.5mm, <0.5 sec.	Level 2	3.75mm, 4 sec	Level 3	1.88mm, 9 sec	Level 4	0.94mm, 21 sec.
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<b>Internal spectrum analyzer</b>	Signal Hound, BB60C								
<b>Supported operating systems</b>	Windows 11®								
<b>Supported CAD overlays</b>	Standard Gerber© JPEG and PNG								

## Specifications

<b>Broadband frequency coverage</b>	Base configuration = 150 kHz to 6 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>	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   Level 8: 0.06 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>Fuse rating</b>	8A
<b>Dimensions of the scanner</b>	L 34.5 cm x W 43.5 cm x H 11 cm (L 13.58" x W 17.13" x H 4.33")
<b>Weight</b>	12.70 Kg / 28 lb. (including cables and the adaptor)