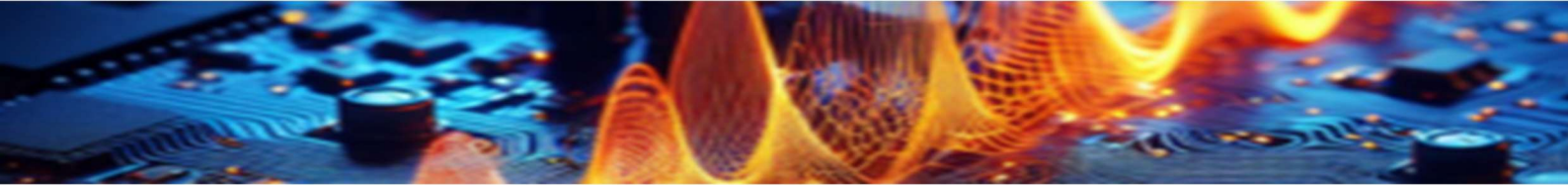


EMScanner+

Datasheet

High speed 6GHZ real-time EMC and EMI diagnostic tool with Internal Spectrum Analyzer

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

The system provides **pre- and post-EMC compliance testing**, delivering real-time emissions data without the need for an external spectrum analyzer. Its plug-and-play design allows engineers to quickly visualize the root causes of potential EMC and EMI problems, streamlining the debugging process.

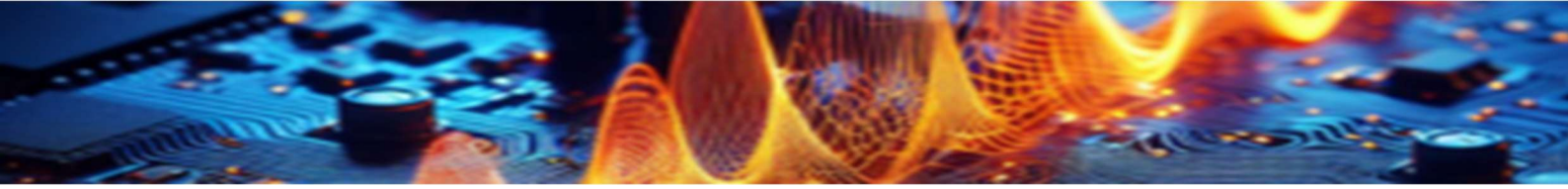
During PCB development, engineers must locate, characterize, and mitigate unintended radiators or RF leakage to meet compliance requirements. EMScanner+ enables **early-stage pre-testing**, allowing designers to address EMC and EMI issues before formal compliance testing, thereby avoiding unexpected failures.

EMScanner+ delivers **repeatable and reliable results in under a second**, pinpointing the cause of design failures. Engineers can independently test designs, implement corrections, and immediately verify the effectiveness of design changes—eliminating dependence on other departments or off-site testing.

The system consists of a patented scanner and compact adaptor featuring an internal spectrum analyzer, paired with the user's PC running EMViewer software. EMViewer maximizes the unit's capabilities through an intuitive interface.

Key Benefits:

- Reduces testing time which **reduces financial outlay for testing**
- Achieves documented **50% reductions in design cycle time**
- Provides immediate comparison and analysis of design iterations
- Ideal for **high-speed, high-power, or high-density PCBs**



With EMScanner+, design teams gain a fast, reliable, and user-friendly tool for **efficiently diagnosing EMC and EMI issues**, ensuring their ultra-high-speed PCBs meet both performance and compliance requirements.

Features

Capability	Spectral scan, spatial scan, peak-hold, continuous scanning, spectral and spatial comparison, scripting, limit lines and report generation.
Spatial scan time	Continuous real-time or sub-second single scan for entire scan area.
Spectral scan time	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 time varies with size of scan area and node setting with the software.
Internal Spectrum Analyzer	Signal Hound, BB60C
Supported operating systems	Windows 11®
Supported CAD overlays	Standard Gerber© JPEG and PNG

Specifications

Frequency coverage	EMSP06 Base configuration 150 kHz to 6 GHz
Antenna array	1,218 (42 x 29) H-field probes
Displayed average noise level	• 9 kHz to 500 kHz: ~ -140 dBm/Hz • 500 kHz to 10 MHz: ~ -154 dBm/Hz • 10 MHz to 6 GHz: ~ -158 dBm/Hz + 1.1 dB/GHz
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	Scanners are calibrated during manufacturing. Software correction factors adjust for frequency dependent probe responses with +- 3dB accuracy.
Measurement plane isolation	> 20 dB
Maximum radiated power load	10 W / 40 dBm
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)
Operating temperature	From 15º C to 40º C (continuous spectral and spatial scans at 50 MHz)
Scanner connections	USB Cable
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 Kg