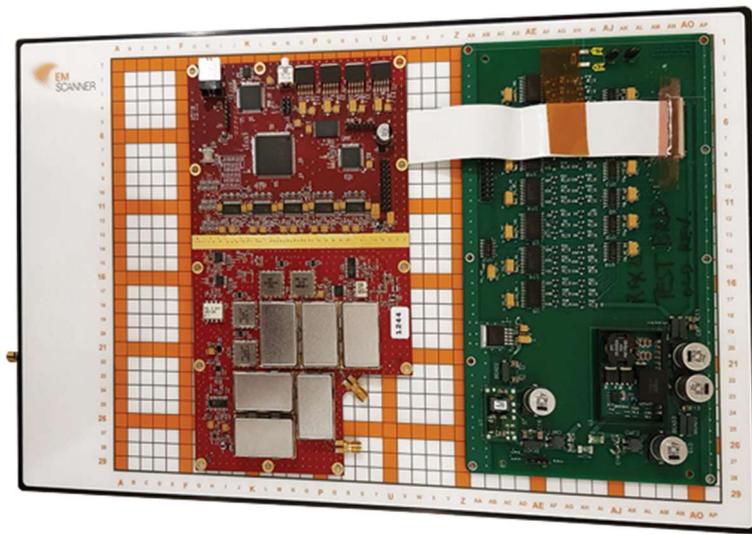




EMScanner

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 the 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.

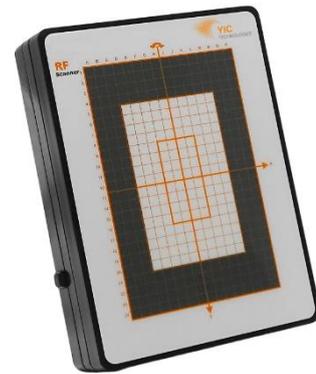
The **EMViewer** software is recommended to use the unit's full features and capabilities in the easiest and fastest way. The user can also directly control the **EMScanner** through our public API by using C or Python.

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.

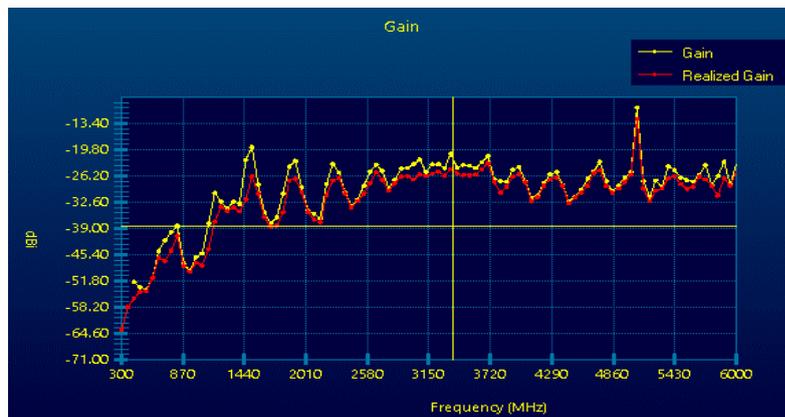
RFScanner

Antenna Pattern Measurement and Diagnostic Tool on your Lab-bench

The Scanner is a compact bench-top scanner that characterizes antennas in your own lab environment in real-time. The RFScanner provides far-field patterns, bisections, EIRP and TRP in seconds. Novel near-field results, including amplitude, polarity and phase give insights into the root causes of antenna performance challenges and help troubleshoot far-field radiation patterns.

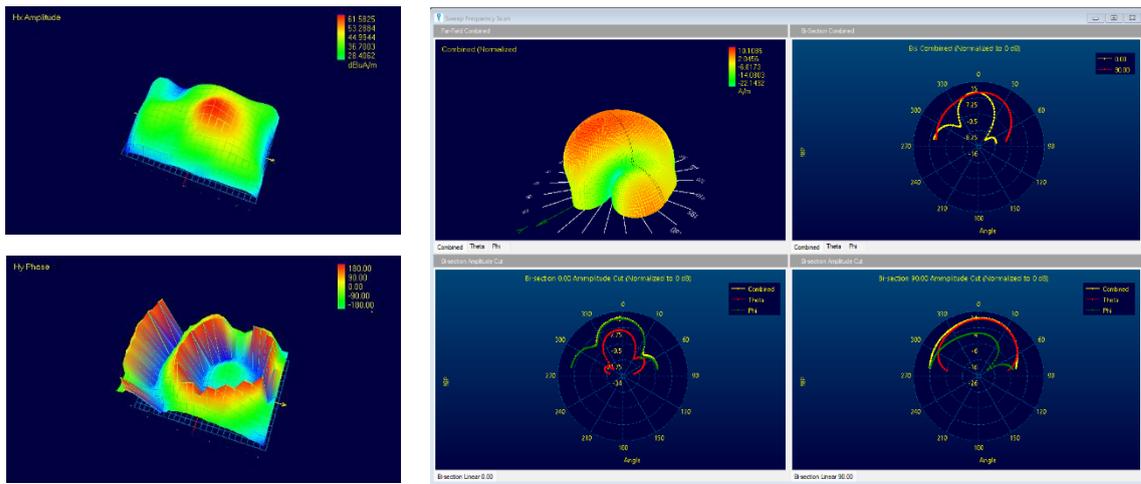


The RFScanner can also integrate with a network analyzer or a Spectrum Analyzer with a Tracking generator to measure gain, efficiency and S11 of an antenna across a frequency range. Users can execute real-time analysis of their embedded antenna designs and test multiple design iterations, on the lab bench, in seconds at each stage of the design process.



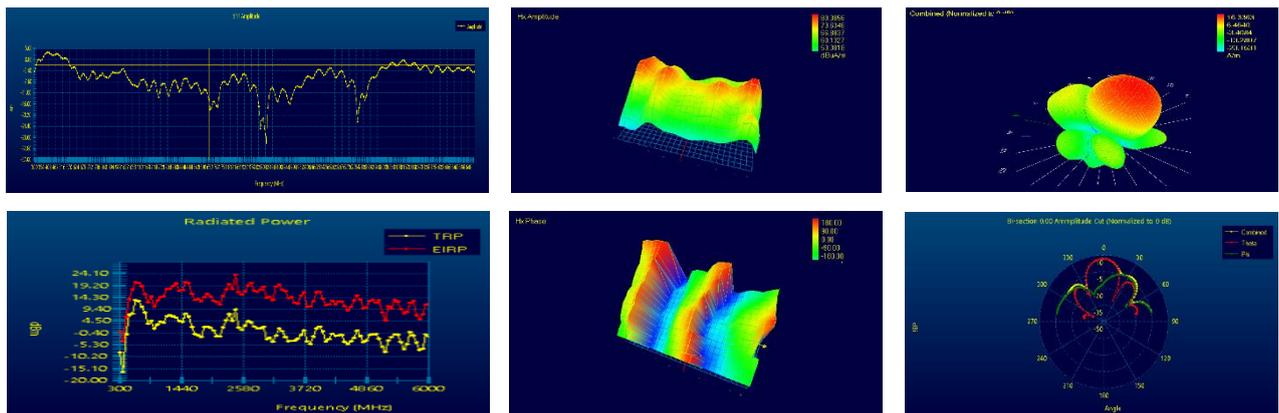


The RFSanner gives wireless engineers the freedom to do rapid prototyping and explore new designs, new materials and new forms. Wireless engineers and designers can test multiple design variations and optimize complex embedded antenna designs at their lab bench in seconds without wasting time waiting in congested anechoic chamber lines. They can optimize positioning and effects from layout, monitor changes from packaging or layout changes or verify performance of final product in real-time and then go to the chambers for final certification requirements with their mind at ease, knowing that their design will achieve a first-time pass.



With the Circular Polarization (CP) option, the RFS calculates the right and left hand circularly polarized patterns and displays axial ratio patterns. RFS can be integrated into virtually any automated test bed and production line by using DLL programming.

As a golden sample comparison tool with real time results, the RFS is also ideal for sample lot testing and product verification for wireless service providers or for manufacturing support. The RFS allows design teams to **reduce testing time** by at least one order of magnitude, provides an **easy-to-use, cost effective, and proven tabletop solution**.





Real-time results

Features

Capability	2D and 3D near-field patterns (amplitude, phase and polarization) Far-field patterns and bi-sections (cartesian and polar) EIRP and TRP Graph S11 Calculate gain and efficiency Circular Polarization: Right (RHCP) and left hand circularly polarized patterns (LHCP) and Axial Ratio (AR)
Scan time	Seconds
Supported network analyzers	Most of the common Keysight & R&S VNAs. Please contact Y.I.C. Technologies for more information
Supported operating systems	Windows 10®
warranty	One year, optional 3-years warranty and 5-years warranty

Specifications

Broadband frequency coverage	300 MHz to 6 GHz
Measurement sensitivity	0 dBm source power for a reasonably efficient antenna
Measurement accuracy	Typically +/- 1.5 dB* (700 MHz - 6 GHz)
Measurement repeatability	+/- 0.2 dB
Far-field resolution	1.8° for theta and 3.6° for phi
Maximum radiator size	L 16 cm x W 10 cm (L 6.30" x W 3.94")
Resolution Bandwidth	Resolution Bandwidth = IF Bandwidth of 60MHz
Probe to probe uniformity	Calibrated before shipment Firmware correction factors adjust for frequency dependent probe responses with < +/- 0.5 dB accuracy
Probe to probe isolation	> 20 dB
Maximum radiated power	+33 dBm
Operating temperature	From 15 °C to 40 °C (continuous fixed frequency scan at 2440 MHz)
Modulation formats	GSM / CDMA / WCDMA / Wi-Fi / WiMAX / LTE Bluetooth RFID GPS Custom antenna
Scanner connections	PC: USB Power: 6 VDC, 3.0 A
Dimensions	L 32.1 cm x W 24 cm x H 7 cm (L 12.64" x W 9.45" x H 2.76")
Weight	3.8 kg / 8.38 lb. (including cables and adaptor)

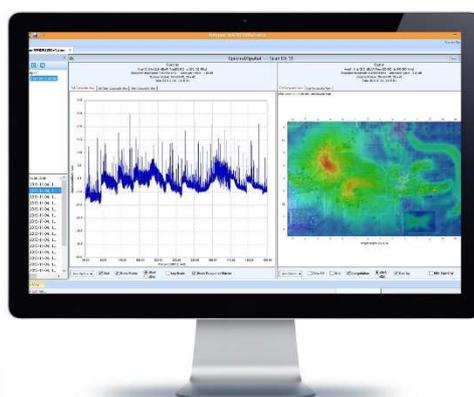
Y.I.C. Technologies Ltd

www.yictechnologies.com
support@yictechnologies.com

EMScannerR



High speed, High Resolution 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. **EMScannerR** enables the design engineers to diagnose EMC/EMI problems between 150 kHz and 8 GHz.

The EMScanner family provides unique pre and post - EMC compliance

testing showing **real-time emissions**. **EMScannerR** 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.

EMScannerR 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.

EMScannerR consists of a patented scanner and compact adaptor, and of a customer-supplied spectrum analyzer and PC running EMScanner software. EMScannerR 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 EMScannerR 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.

The compact, flat scanner 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 EMScannerR system addresses in mere seconds.

EMScannerR

Features

Capability	Spectral scan, spatial scan, peak-hold, continuous scanning, spectral and spatial comparison, scripting, limit lines, report generation and notes.								
Spatial Scan Times & Resolution	<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 border="1"> <tr> <td>Level 1</td> <td>7.5mm, <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.
Level 1	7.5mm, <0.5 sec.								
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Supported spectrum analyzers	List at www.yictechnologies.com/products/emscanner/ If your analyzer is not listed, please contact Y.I.C. Technologies								
Supported operating systems	Windows 10®								
Supported CAD overlays	Picture in JPEG format Standard Gerber® RS274x format and HPGL format CAD files								

Specifications

Broadband frequency coverage	Base configuration = 150 kHz to 8 GHz
Antenna array	1,218 (42 x 29) H-field probes.
Measurement sensitivity	Dependent on spectrum analyzer performance
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 Level 8: 0.06 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 dependent probe responses with +/- 3 dB 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 15° C to 40° C (continuous spectral and spatial scans at 50 MHz)
Fuse rating	8A
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)

Y.I.C. Technologies Ltd

www.yictechnologies.com
support@yictechnologies.com



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The compact, flat scanner 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 EMSscanner system addresses in mere seconds.

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 Dependent on spectrum analyzer performance.
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 area, span and RBW are user selectable within spectrum analyzer specifications
Supported spectrum analyzers	List at https:// www.yictec.co.uk/products/emscanner/ If your analyzer is not listed, please contact Y.I.C. for custom driver development.
Supported operating systems	Windows 10/11®
Supported CAD overlays	Standard Gerber© RS274x format and HPGL format

Specifications

Broadband frequency coverage	EMS08 Base configuration 150 kHz to 8 GHz
Antenna array	1,218 (42 x 29) H-field probes
Measurement sensitivity	Dependent on spectrum analyzer performance
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")
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Probe to probe uniformity	Calibrated before shipment. Firmware correction factors adjust for frequency dependent probe responses with +/- 3 dB accuracy
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Operating temperature	From 15° C to 40° C (continuous spectral and spatial scans at 50 MHz)
In situ scanning	6U Size C scanner fits into VXI and VME chassis
Scanner connections	Spectrum analyzer: RF SMA to type N coaxial cable Adaptor: Proprietary DB25
Dimensions of the scanner	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")
Weight	2.80 Kg / 6.17 lb. (including cables and the adaptor)

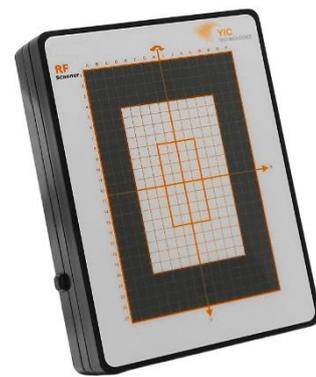
www.yictechnologies.com

If you can see it, you can fix it!

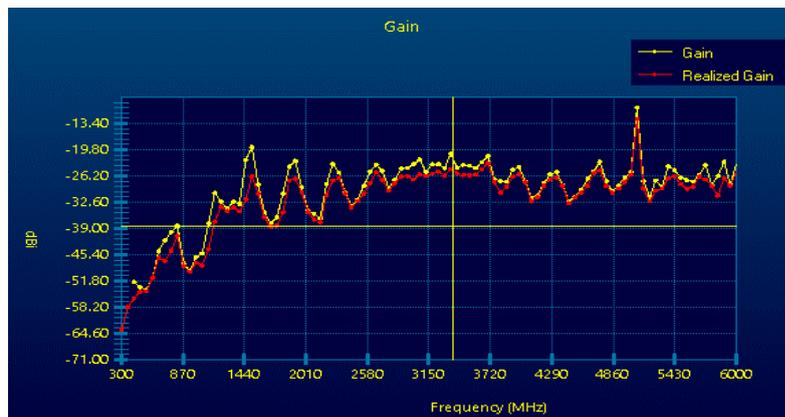
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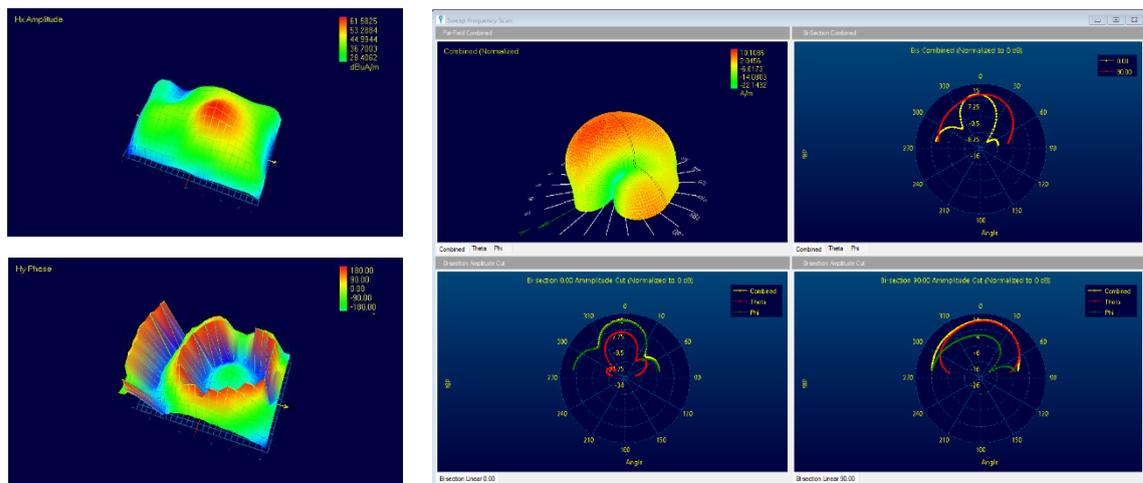


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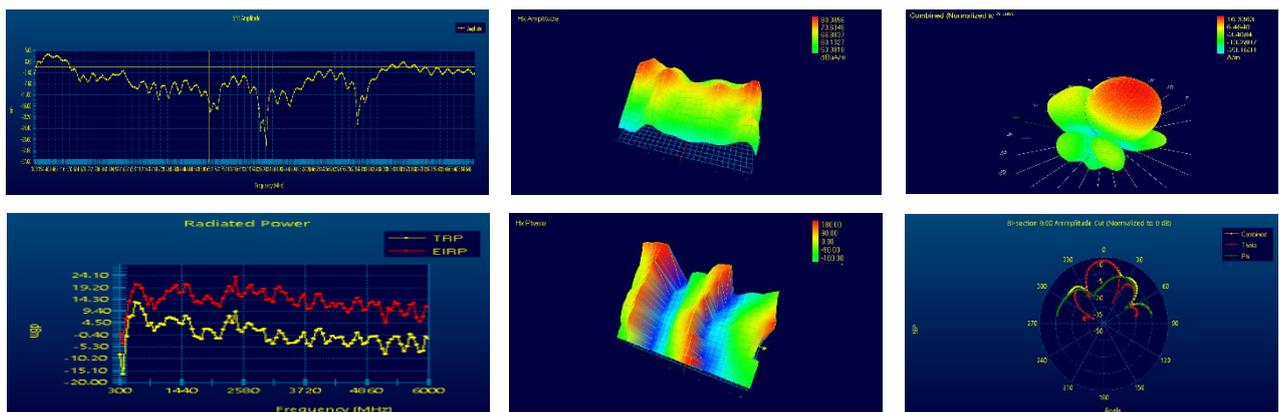


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Scan time	Seconds
Supported network analyzers	Most of the common Keysight & R&S VNAs. Please contact Y.I.C. Technologies for more information
Supported operating systems	Windows 10®
warranty	One year, optional 3-years warranty and 5-years warranty

Specifications

Broadband frequency coverage	300 MHz to 6 GHz
Measurement sensitivity	0 dBm source power for a reasonably efficient antenna
Measurement accuracy	Typically +/- 1.5 dB* (700 MHz - 6 GHz)
Measurement repeatability	+/- 0.2 dB
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Maximum radiator size	L 16 cm x W 10 cm (L 6.30" x W 3.94")
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Maximum radiated power	+33 dBm
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Scanner connections	PC: USB Power: 6 VDC, 3.0 A
Dimensions	L 32.1 cm x W 24 cm x H 7 cm (L 12.64" x W 9.45" x H 2.76")
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