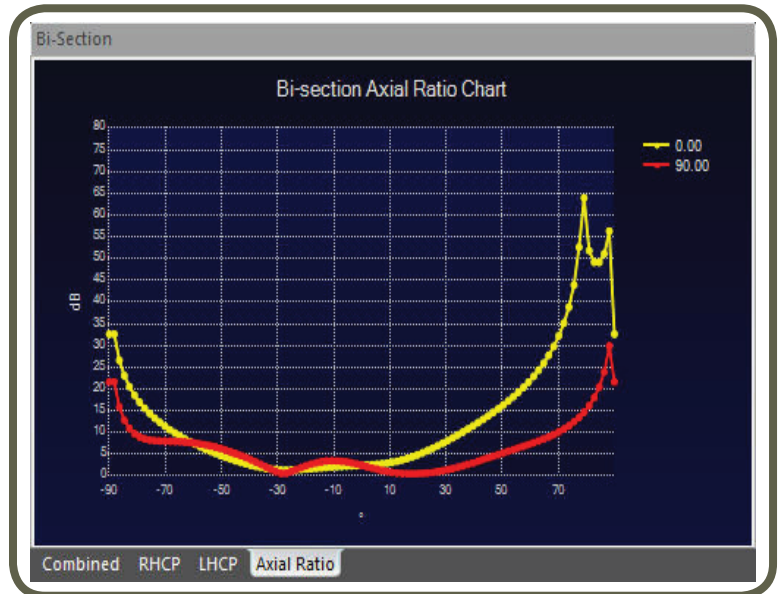


# Circular Polarization Option **RFxpert**<sup>™</sup>

**Determine proper alignment of antennas for maximum signal strength and characterize CP antennas in less than a second**

With the Circular Polarization (CP) option, the RFxpert calculates the right and left hand circularly polarized patterns and displays axial ratio patterns in sub-second. The CP application will also calculate and display axial ratio patterns. Having access to both the left hand and right hand patterns can be used to identify the orientation of the circular polarization as well. This feature will allow designers of circularly polarized antenna to characterize the effectiveness of their design in seconds.

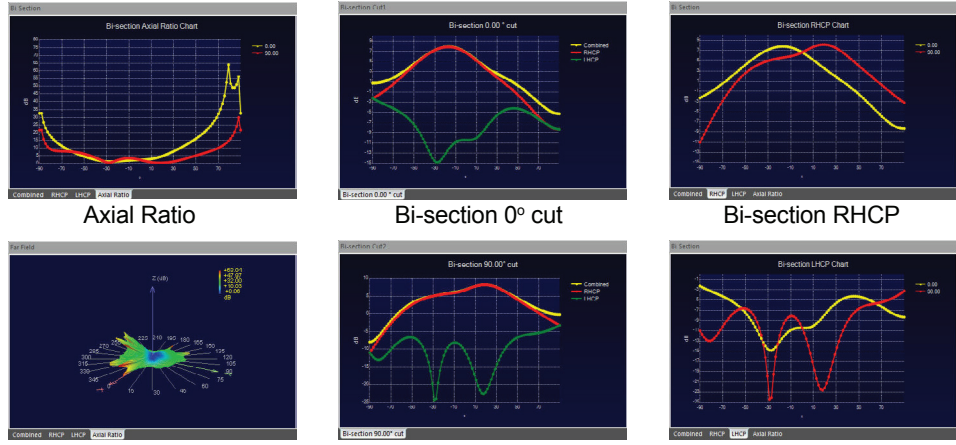


RFxpert users can execute real-time analysis of their embedded antenna designs and test multiple design iterations, on the lab bench, in seconds at each stage of the design process. RFxpert also gives wireless engineers the freedom to do rapid prototyping and explore new designs, new materials and new forms.



With the RFxpert wireless engineers and designers won't waste 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,

## Circular Polarization Features

<b>Part number</b>	3000-0300
<b>Features</b>	RHCP and LHCP 3D patterns and 2D cuts Axial Ratio 3D pattern and 2D cuts
<b>Measurement time</b>	<1 sec to display patterns on screen
<b>Frequency limits</b>	700 MHz to 6 GHz
<b>Accuracy</b>	Co-polarized patterns within +/- 1.5dB in +/-30degrees from center. Cross-polarized patterns accurate to -20dBc
<b>Software requirement</b>	RFxpert 3.2.0.4 and above
<b>Sample test results of a 2.4 GHz RHCP antenna</b>	 <p>The figure displays six plots related to the test results of a 2.4 GHz RHCP antenna. The plots are arranged in two rows of three. The top row contains: 'Bi-section Axial Ratio Chart', 'Bi-section 0.00° cut', and 'Bi-section RHCP Chart'. The bottom row contains: 'Bi-section LHCP Chart', 'Bi-section 90.00° cut', and 'Axial Ratio (Far-field)'. Each plot shows various metrics like gain, axial ratio, or radiation pattern against frequency or angle.</p>

## RFxpert Scanner Specifications

<b>Broadband frequency coverage</b>	300 MHz to 6 GHz
<b>Antenna array</b>	RFX 384 (24 x 16) H-field probes RFX2 1,600 (40 x 40) H-field probes
<b>Measurement sensitivity</b>	0 dBm source power for a reasonably efficient antenna
<b>Measurement accuracy</b>	Typically +/- 1.5 dB* (700 MHz - 6 GHz)
<b>Measurement repeatability</b>	+/- 0.2 dB
<b>Far-field resolution</b>	1.8° for theta and 3.6° for phi
<b>Maximum radiator size</b>	RFX L 16 cm x W 10 cm (L 6.30" x W 3.94") RFX2 L 32 cm x W 32 cm (L 12.60" x W 12.60")
<b>Probe to probe uniformity</b>	Calibrated before shipment Firmware correction factors adjust for frequency dependant probe responses with < +/- 0.5 dB accuracy
<b>Probe to probe isolation</b>	> 20 dB
<b>Maximum radiated power</b>	+33 dBm
<b>Modulation formats</b>	GSM / CDMA / WCDMA / WiFi / WIMAX / LTE Bluetooth RFID GPS Custom antenna
<b>Scanner connections</b>	PC: USB Power for RFX: 6VDC, 3.0A Power for RFX2: 12VDC, 3.4A