



Fractus specialises in enabling effective mobile communications. Using fractal technology, we design and manufacture optimised antennas to make your wireless devices more competitive. Our mission is to help our clients develop innovative products and accelerate their time to market through our expertise in antenna design, testing and manufacturing.

High Performance Chip Antenna for Cardbus32 Devices

Fractus® Dual-band Reach Xtend™ Chip Antenna

P/N: FR05-S1-NO-1-003

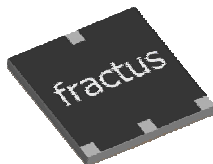
The **Fractus Dual-band Reach Xtend 802.11 a/b/g WLAN Chip Antenna** is engineered specifically for Cardbus32 devices operating at 2.4 GHz and 5 GHz.

Dual-band Reach Xtend lets you achieve high performance at a low cost. Taking advantage of both spatial and polarisation diversity, it will increase the reliability of your device's data rate. This combined with high isolation, makes it ideal for use within indoor (highly scattered) environments while navigating through inconsistent hotspot infrastructures.

802.11 a/b/g WLAN



Front view



Bottom view

10 x 10 x 0,9 mm

Patent Pending: WO0154225, WO0122528, PCT/EP01/10589, PCT/EP02/07837, US60/613394, US60/627653 and PCT/EP02/07836 ©FRACTUS S.A. 2005

Product Benefits

- **High efficiency:** Increases your device range, signal quality and lengthens battery life.
- **Multiband behaviour:** Includes both ISM bands in a single structure.
- **Worldwide functionality:** Enables devices to work in all WLAN systems: Europe/US/Asia
- **Small form factor:** Integrates into space limited areas easily and efficiently.
- **Omnidirectional pattern:** Optimises device signal reception due to a uniform radiation pattern.

Measured results with a Standard Cardbus32 device (105 x 48 mm)

	802.11 b/g	802.11 a
Frequency range	2.4-2.5 GHz	4.9-5.875 GHz
Efficiency	> 70%	> 70%
Peak Gain	> 2 dBi	> 2 dBi
VSWR	> 2:1	> 2:1
Weight	0.2 g	
Temperature	-40 to +85°C	
Impedance	50 Ohm unbalanced	
Dimensions	10 x 10 x 0,9 mm	



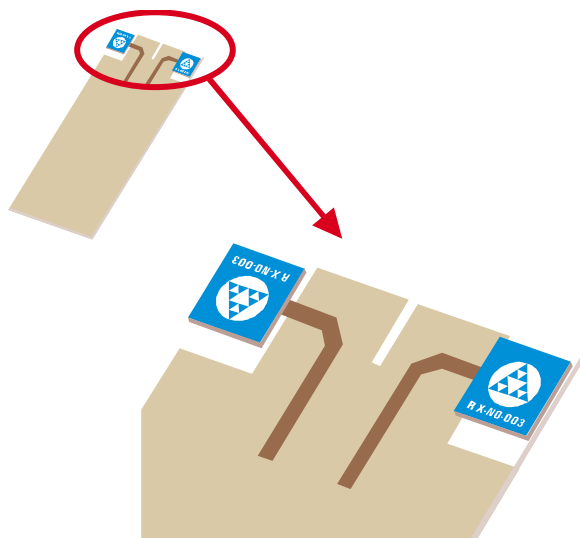
Please, contact your sales representative at Richardson Electronics to get additional information on recommended configurations for different devices:

RICHARDSON ELECTRONICS www.rell.com
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Ref: DS_FR05-S1-NO-1-003_v01
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Antenna design optimised for several PCB configurations



Configurations fit within a 20 mm space on in the top part of a Cardbus32 PCBs

	802.11 b/g	802.11 a
Frequency range	2.4-2.5 GHz	4.9-5.875 GHz
Isolation	> -12 dB	> -15 dB
Polarisation	Xpol	
Mounting	SMT with reflow soldering process	

Second Generation Product

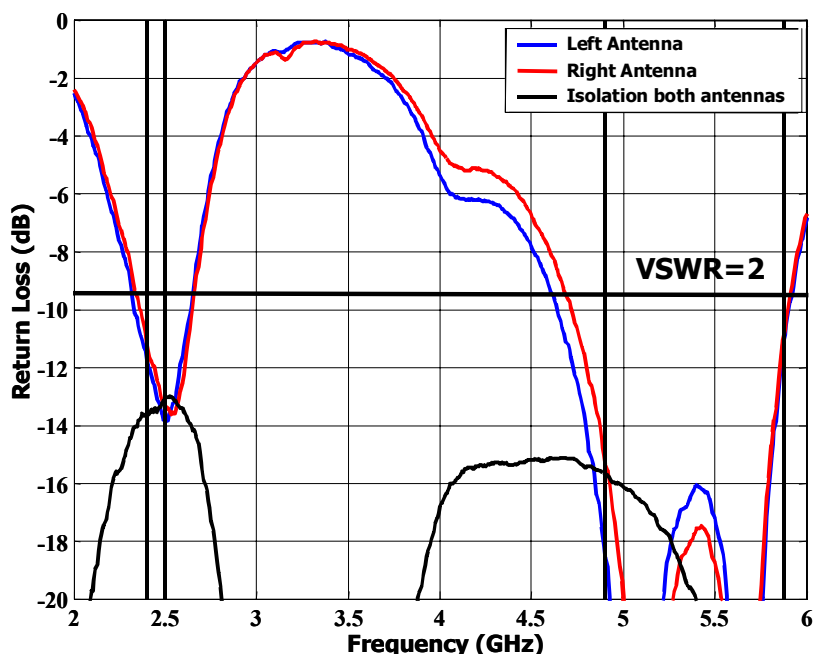
- **Flexible design:** Several standard PCB configurations (clearances, locations & tolerances) are available providing robust performance.
- **Cross polarisation:** Improves signal reception within indoor (highly scattered) environments, thus increasing the reliability of the communication link.
- **Easy-to-use:** Takes into account standard plastic housing used in Cardbus32 devices.

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Dual-band 802.11 a/b/g WLAN Chip Antenna

Best ratio performance over cost

Measured results with a Standard Cardbus32 device (105 x 48 mm)



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