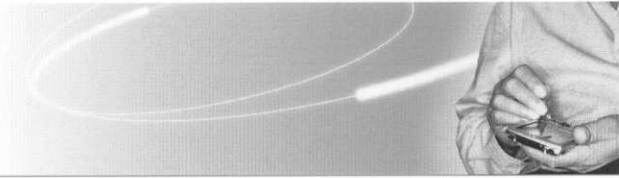




DATA SHEET · PRODUCTS & SERVICES

## High performance chip antenna for Cardbus32 devices



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.

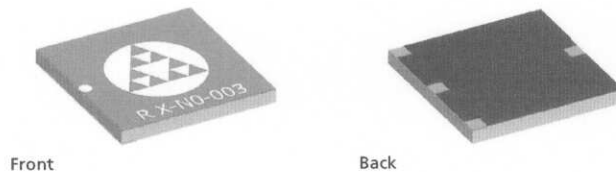
### Fractus®Dual-bandReach Xtend™ Chip Antenna

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.

10 x 10 x 0.9 mm (image larger than actual size)



PAT.PEND. WO2004/010531, US11/033,788; WO2005/076409, US10/587119; PAT. US7148850

### Product Benefits

- **High efficiency**  
Increases your device range, signal quality and lengthens battery life.
- **Omnidirectional pattern**  
Optimises device signal reception due to a uniform radiation pattern.
- **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.



	802.11 b/g	802.11 a
Frequency Range	2.4 - 2.5 GHz	4.9 - 5.875 GHz
Efficiency	> 60 %	> 70 %
Peak Gain	> 1 dBi	> 3 dBi
VSWR	< 2:1	< 2:1
Weight	0.2 g	0.2 g
Temperature	-40 to +85 °C	-40 to +85 °C
Impedance	50 Ω	50 Ω
Dimensions	10 x 10 x 0.9 mm	10 x 10 x 0.9 mm

Measured results from a Standard Cardbus32 device (105 x 47.5 mm)

DATA SHEET · PRODUCTS & SERVICES

High performance chip antenna  
for Cardbus32 devices

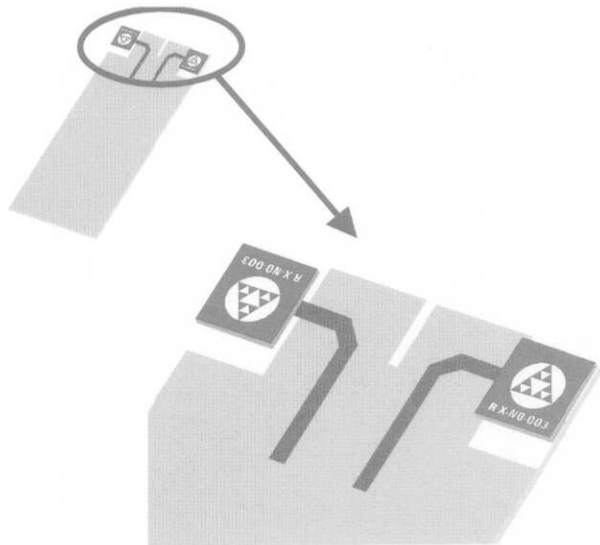


**Fractus® Dual-bandReach Xtend™ Chip Antenna**

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

Antenna design optimised for several PCB configurations

Configuration fit within a 20 mm space on in the top part of a Cardbus32 PCB



PAT.PEND. WO2004/010531, US11/033,788; WO2005/076409, US10/587119; PAT. US7148850

**Second Generation Product**

■ **Flexible design**

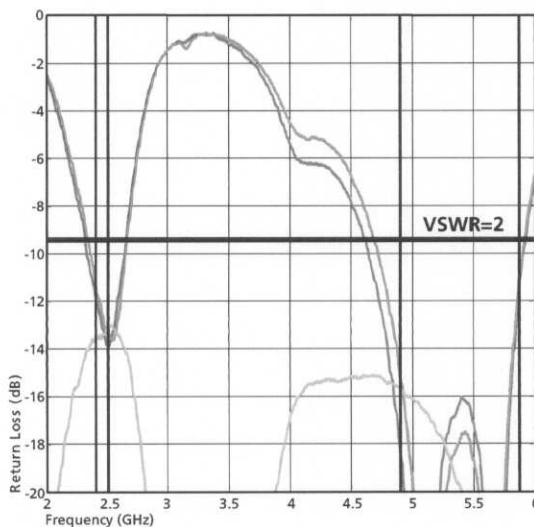
Several standard PCB configurations (clearances, locations & tolerances) are available providing robust performance.

■ **Cross polarisation**

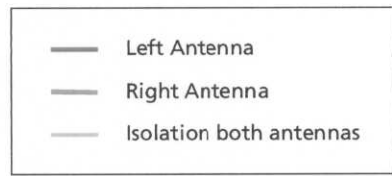
Improves signal reception within indoor (highly scattered) environments, thus increasing the reliability of the communication link.

■ **Easy-to-use**

Takes into account standard plastic housing used in Cardbus32 devices.



	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	Xpol
Mounting	SMT with reflow soldering process	



Measured results from a Standard Cardbus32 device (105 x 47.5 mm)

Please contact your sales representative at [wireless@fractus.com](mailto:wireless@fractus.com) to obtain additional information on recommended configurations for different UWB devices.  
Fractus: [www.fractus.com](http://www.fractus.com) Reference: DS\_FR05-S1-N-0-003\_v01