

Dual-band Reach Xtend™ (NN01-003)

WLAN (2.4 – 2.5 GHz and 4.9 – 5.875 GHz)

Fractus Antennas specializes in enabling effective mobile communications. Using Fractus technology, we design and manufacture optimized 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.

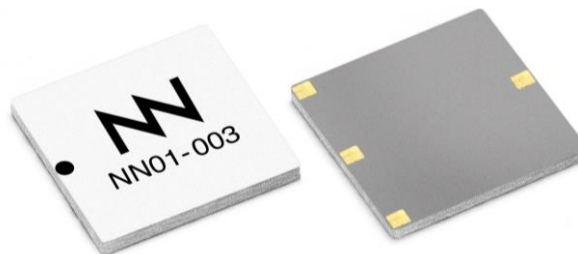
The Dual-band Reach Xtend™ 802.11 a/b/g/n WLAN Chip Antenna is engineered specifically for Cardbus32 devices operating at 2.4 GHz and 5 GHz.

Dual-band Reach Xtend™ lets you achieve high performance at a low cost. Dual-band Reach Xtend™ antenna is built on glass epoxy substrate. Taking advantage of both spatial and polarization 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.

Product Benefits

- **High efficiency**
Increases your device range, signal quality and lengthens battery life.
- **Omnidirectional pattern**
Optimizes device usage due to a uniform radiation pattern.
- **Multiband behavior**
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.

10.0 mm x 10.0 mm x 0.9 mm (image larger than real size)



PAT US 7,148,850, US 7,202,822

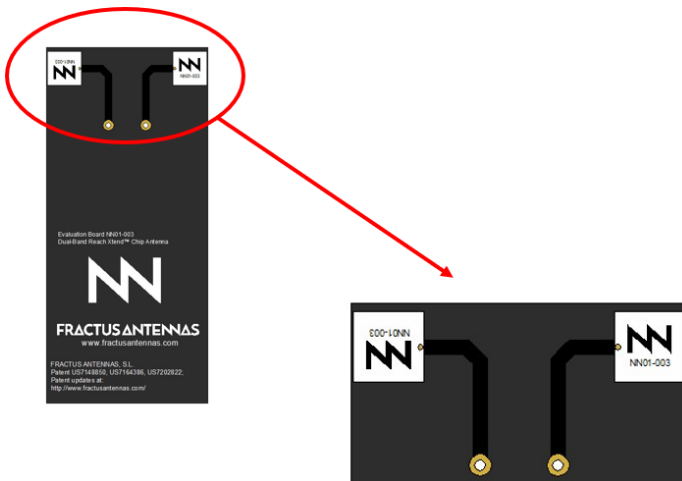
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Technical Features	802.11 b/g	802.11a
Frequency Range	2.4 – 2.5 GHz	4.9 – 5.875 GHz
Peak Gain	3.9 dBi	6.0 dBi
VSWR	< 2:1	< 2:1
Average Efficiency	75.0 %	74.6 %
Isolation	> 12.0 dB	> 16.0 dB
Polarization	Linear	
Radiation Pattern	Omnidirectional	
Weight (approx.)	0.2 g	
Temperature	-40 to +125 °C	
Impedance	50 Ω	
Dimensions (L x W x H)	10.0 mm x 10.0 mm x 0.9 mm	

Measures from the evaluation board (105.0 mm x 47.5 mm x 1.0 mm)

Antenna design optimized for several PCB configurations. It can be used in diversity solutions (e.g. Cardbus 32 PCB).

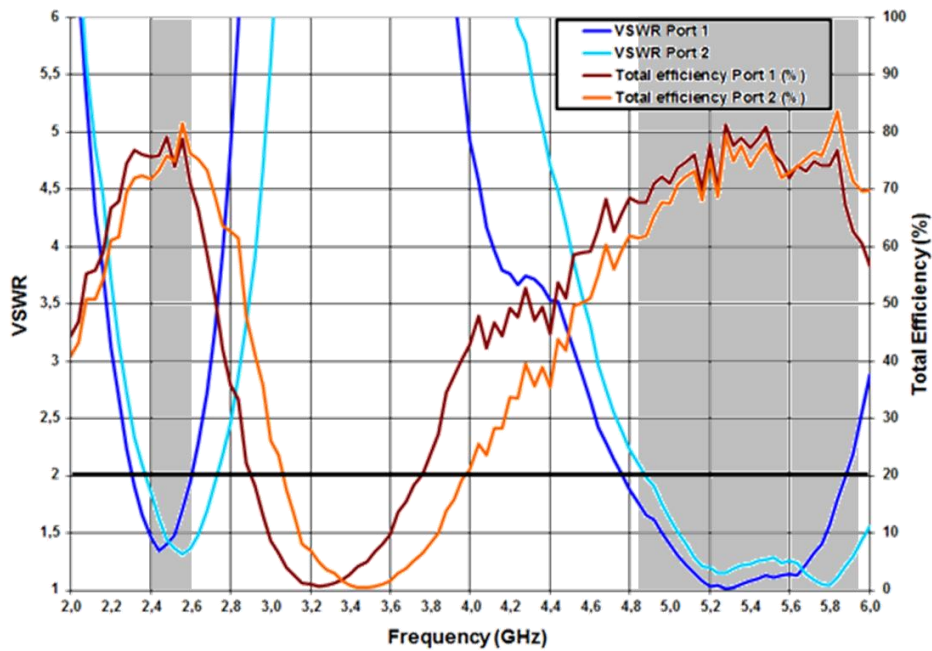


- Flexible design**
 Several standard PCB configurations (clearances, locations & tolerances) are available providing robust performance.
- Cross polarization**
 Improves signal reception within indoor (highly scattered) environments, thus increasing the reliability of the communication link.
- Easy-to-use**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

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VSWR and Total Efficiency (%) vs. Frequency (GHz)



See pictures of the evaluation boards and graphs of the specs in the [User Manual](#).

For additional information, please visit www.fractusantennas.com or contact info@fractusantennas.com.

If you need assistance to design your matching network, please contact support@fractusantennas.com, or try our free-of-charge¹ **NN Wireless Fast-Track** design service, you will get your chip antenna design including a custom matching network for your device in 24h¹. Other related to NN's range of R&D services is available at: <https://www.fractusantennas.com/rdservices/>

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