

Compact Dual-band Reach Xtend™ (NN01-004)

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.

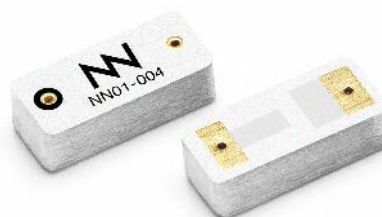
The Compact Dual-band Reach Xtend™ chip antenna for 802.11 ac/a/b/g/n WLAN systems is a tiny rectangular 3D-shaped antenna specifically designed for high performance USB devices and other small PCB devices operating at both 2.4 GHz and 5 GHz bands, where high performance and low-cost are mandatory. The Compact Dual-band Reach Xtend™ antenna is built on glass epoxy substrate. Its small dimensions allow various configurations within the USB devices and may help Card-bus devices in the enhancement of their throughput by using MIMO algorithms with more than 2 antennas.

Taking advantage of the space-filling properties, this small monopole antenna is ideal for use within indoor (highly scattered) environments. The Fractus Compact Dual-band Reach Xtend™ chip antenna speeds your time to market by allowing you to easily integrate it within your industrial design (SMD mounting).

Product Benefits

- **Small form factor**
Allows integration into space limited areas easily and efficiently with minimum clearance area.
- **High efficiency**
Increases your device range, signal quality battery life.
- **Multiband behavior**
Provides superior performance for both 2.4 and 5 GHz ISM bands in the same structure areas easily and efficiently.
- **Omnidirectional pattern**
Optimizes device usage due to a uniform radiation pattern.
- **Worldwide functionality**
Enables devices to work globally in WLAN systems: Europe/ US/ Asia.

7.0 mm x 3.0 mm x 2.0 mm

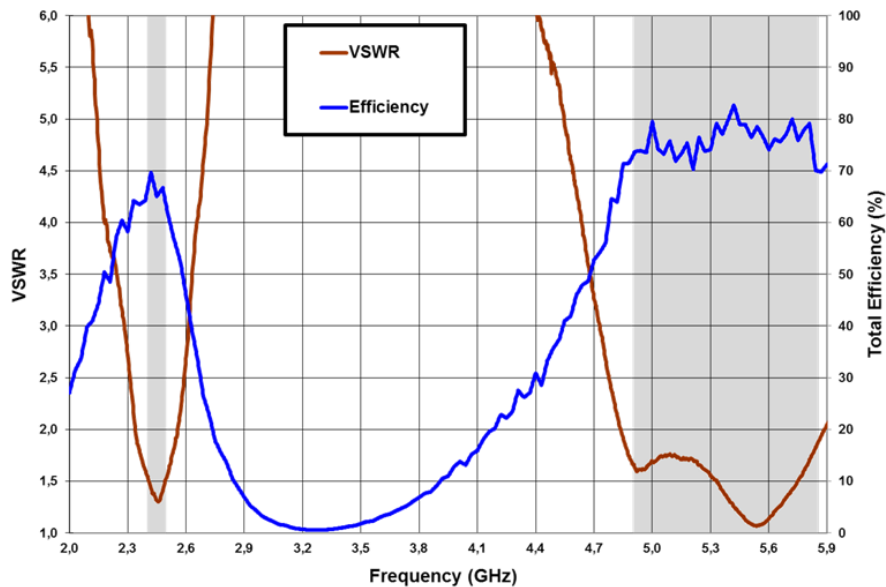


PAT US 7,148,850, US 7,202,822

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



Technical Features	802.11 b/g/n	802.11 ac/a/n
Frequency Range	2.4 – 2.5 GHz	4.9 – 5.875 GHz
Average Efficiency	66.5 %	75.9 %
Peak Gain	1.5 dBi	4.7 dBi
VSWR	< 2:1	< 2:1
Radiation Pattern	Omnidirectional	
Polarization	Linear	
Weight (approx.)	0.1 g	
Temperature	-40 to +125 °C	
Impedance	50 Ω	
Antenna Dimensions (L x W x H)	7.0 mm x 3.0 mm x 2.0 mm	

Measures from the evaluation board (EB_NN01-004) (55.4 mm x 20.0 mm x 0.8 mm)

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/>

¹ See terms and conditions for a free NN Wireless Fast-Track service in 24h at: <https://www.fractusantennas.com/fast-track-project/>

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