

ignion[™]

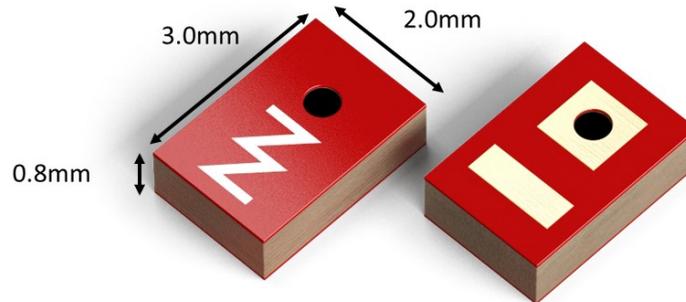
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NANO mXTEND[™] (NN02-101)

DATASHEET

NANO mXTEND[™] (NN02-101)

The NANO mXTEND[™] antenna booster is **the smallest Virtual Antenna[™] ever**. It's the product of choice when you're looking for a reliable and repetitive antenna solution for Bluetooth and Wi-Fi and you have a strictly limited device space.



Product Benefits

- **Smallest clearance:** 5mm x 5mm.
- **Miniature:** Smallest Virtual Antenna[™] form factor of 3.0 mm x 2.0 mm x 0.8 mm.
- **Versatile:** Can be mounted either on the device corner or on the center edge.
- **Reliability:** Off-the-Shelf standard product, no antenna part customization (electronic optimization).
- **Use cases:** smart home, tracking devices, wearables, gaming devices, IoT modules.

Operation Bands Summary

- Bluetooth and Wi-Fi (2400 – 2500MHz)

1. AVAILABLE SOLUTIONS SUMMARY

Class	Frequency Regions	Frequency range	More detailed info
1 Port	1	2400 MHz to 2500 MHz	BLUETOOTH/Wi-Fi

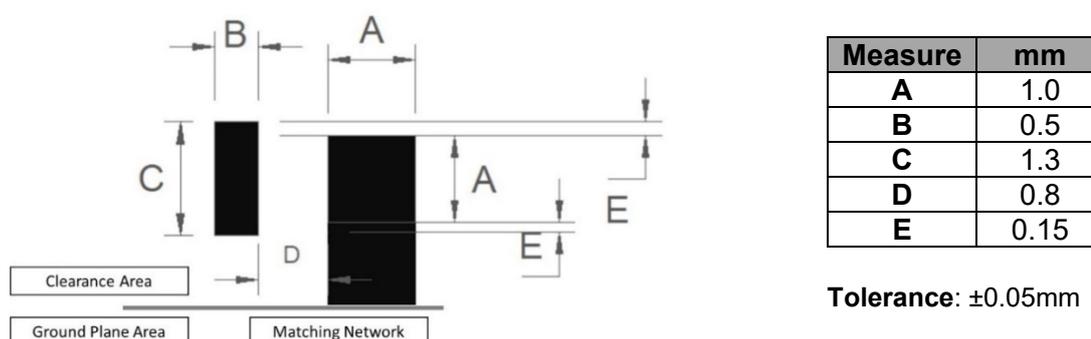
2. DETAILED AVAILABLE SOLUTIONS

2.1 BLUETOOTH AND Wi-Fi SOLUTION

2.2 ANTENNA FOOTPRINT: IN THE CORNER

Technical features	2400 MHz – 2500 MHz
Average Efficiency	>55 %
Peak Gain	2.4 dBi
VSWR	< 2.5:1
Radiation Pattern	Omnidirectional
Polarization	Linear
Weight (approx.)	0.01 g.
Temperature	-40 to +125 °C
Impedance	50 Ω
Dimensions (L x W x H)	3.0 mm x 2.0 mm x 0.8 mm

Technical features. Measurements from the evaluation board (80 mm x 40 mm x 1 mm).

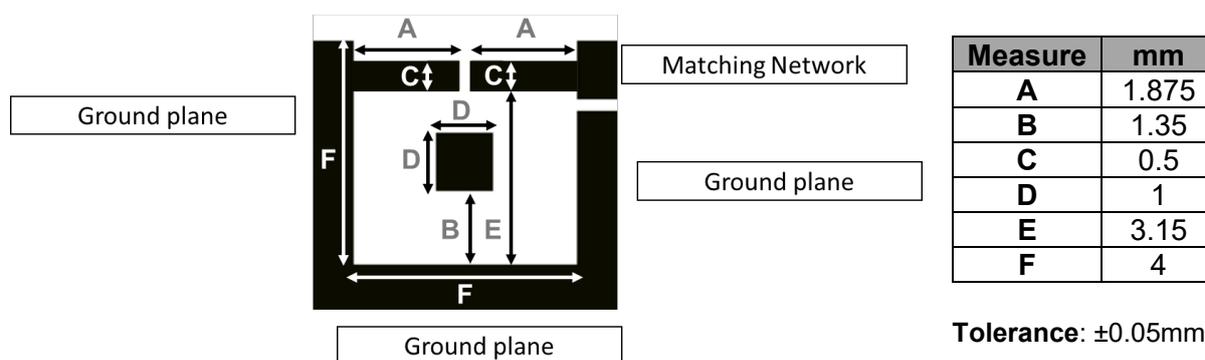


Footprint dimensions for the NANO mXTEND™ (NN02-101) antenna booster (in the corner).

2.3 ANTENNA FOOTPRINT: IN THE MIDDLE

Technical features	2400 MHz – 2500 MHz
Average Efficiency	>60 %
Peak Gain	2.4 dBi
VSWR	< 3.0:1
Radiation Pattern	Omnidirectional
Polarization	Linear
Weight (approx.)	0.01 g.
Temperature	-40 to +125 °C
Impedance	50 Ω
Dimensions (L x W x H)	3.0 mm x 2.0 mm x 0.8 mm

Technical features. Measurements from the evaluation board (80 mm x 40 mm x 1 mm).



Footprint dimensions for the NANO mXTEND™ (NN02-101) antenna booster (in the middle).

If you need assistance to design your matching network beyond this application note, please contact support@ignion.io, or if you are designing a **different device size** or a **different frequency band**, we can assist you in less than 24 hours. Please, try our free-of-charge¹ [Antenna Intelligence Cloud](#), which will get you a complete design report including a custom matching network for your device in 24h¹. Additional information related to Ignion's range of R&D services is available at: <https://ignion.io/rdservices/>

¹ See terms and conditions for a free Antenna Intelligence Cloud service in 24h at: <https://www.ignion.io/antenna-intelligence/>

ignion[™]

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Contact:

support@ignion.io

+34 935 660 710

Barcelona

Av. Alcalde Barnils, 64-68 Modul C, 3a pl.
Sant Cugat del Vallés
08174 Barcelona
Spain

Shanghai

Shanghai Bund Centre
18/F Bund Centre, 222 Yan'an Road East,
Huangpu District
Shanghai, 200002
China

New Dehli

New Delhi, Red Fort Capital Parsvnath Towers
Bhai Veer Singh Marg, Gole Market,
New Delhi, 110001
India

Tampa

8875 Hidden River Parkway
Suite 300
Tampa, FL 33637
USA