

ignion[™]

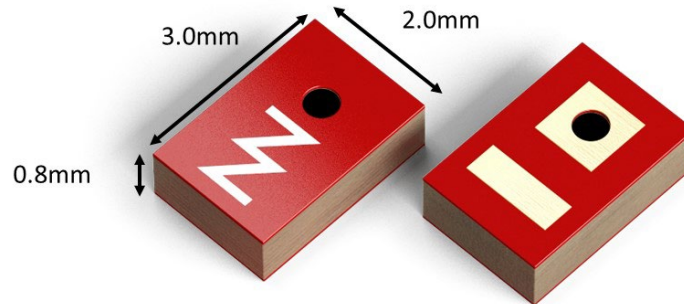
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NANO mXTEND[™] (NN02-101)

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

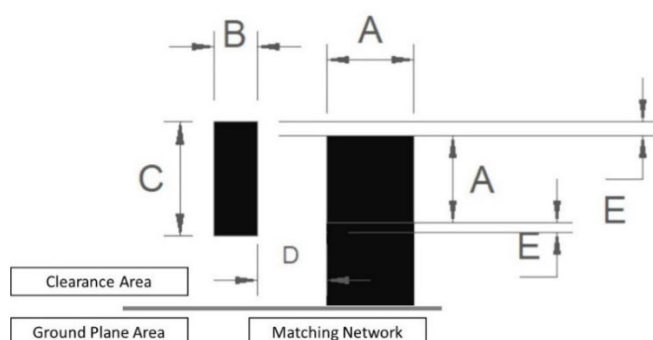
2. DETAILED AVAILABLE SOLUTIONS

2.1 BLUETOOTH AND Wi-Fi SOLUTION

Technical features	2400 MHz – 2500 MHz
Average Efficiency	>60 %
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).

2.2 ANTENNA FOOTPRINT: IN THE CORNER

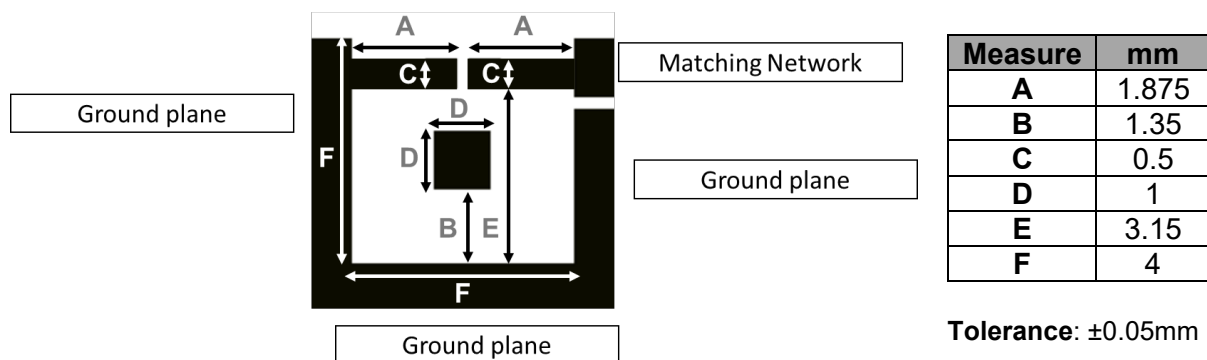


Measure	mm
A	1.0
B	0.5
C	1.3
D	0.8
E	0.15

Tolerance: ±0.05mm

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

2.3 ANTENNA FOOTPRINT: IN THE MIDDLE



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/>

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