

ignion[™]

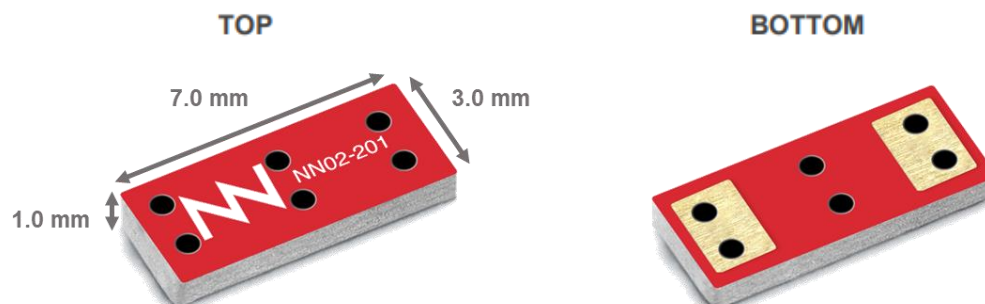
Your innovation.
Accelerated.

ONE mXTEND[™] (NN02-201)

DATASHEET

ONE mXTEND[™] (NN02-201)

The ONE mXTEND[™] antenna booster, with a **volume of only 21mm³**, is the smallest chip of the Virtual Antenna[™] family. This miniature, multipurpose and ultra slim component is designed to provide multiband connectivity at **cellular IoT**, including connectivity within several 2G, 3G, 4G and 5G bands, but also for other regions of the spectrum, such as **Wi-Fi 6E**.



Product Benefits

- **Smallest volume:** Multiband cellular/ISM IoT performance in the smallest volume form factor: 7.0 mm x 3.0 mm x 1.0 mm.
- **Multiband:** 2G/3G, NB-IoT/LTE-M, 5G, ISM and Wi-Fi 6E applications.
- **Wide reach:** Multi regional product (compatible with multiple regional standards).
- **Reliability:** Off-the-Shelf standard product, no antenna part customization (electronic optimization).
- **Use cases:** Wi-Fi 6E devices and IoT entry level products such as miniature trackers, IoT sensors, wearables and alike.

Operation Bands Summary

- GSM, UMTS, 5G, Wi-Fi 6E (824 – 960MHz, 1710 – 2170MHz, 3300 – 5000MHz, 5170 – 5835 MHz and 5925 – 7125 MHz)

1. AVAILABLE SOLUTIONS SUMMARY

| Class | Frequency Regions | Frequency range | More detailed info |
|--------|-------------------|---|-------------------------------|
| 1 Port | 1 | 3300 – 5000 MHz | <u>5G</u> |
| 1 Port | 2 | 880 – 894 MHz & 1710 – 2170 MHz | <u>CELLULAR EUROPE</u> |
| 1 Port | 2 | 824 – 960 MHz & 1710 – 2170 MHz | <u>CELLULAR USA</u> |
| 1 Port | 3 | 2400 – 2500 MHz & 5170 – 5835 MHz & 5925 – 7125 MHz | <u>Wi-Fi 6E</u> |

2. DETAILED AVAILABLE SOLUTIONS

2.1. 5G SOLUTION

| Technical features | 3300 MHz – 5000 MHz |
|------------------------|--------------------------|
| Average Efficiency | > 70 % |
| Peak Gain | 4.1 |
| VSWR | < 3:1 |
| Radiation Pattern | Omnidirectional |
| Polarization | Linear |
| Weight (approx.) | 0.02 g. |
| Temperature | -40 to +125 °C |
| Impedance | 50 Ω |
| Dimensions (L x W x H) | 7.0 mm x 3.0 mm x 1.0 mm |

Technical features. Measures from the evaluation board (131 mm x 60 mm x 1 mm).

2.2 CELLULAR EUROPE SOLUTION

| Technical features | 880 – 960 MHz | 1710 – 2170 MHz |
|------------------------|--------------------------|-----------------|
| Average Efficiency | > 55% | > 65% |
| Peak Gain | 1.3 dBi | 1.7 dBi |
| VSWR | < 3:1 | |
| Radiation Pattern | Omnidirectional | |
| Polarization | Linear | |
| Weight (approx.) | 0.02 g. | |
| Temperature | -40 to +125 °C | |
| Impedance | 50 Ω | |
| Dimensions (L x W x H) | 7.0 mm x 3.0 mm x 1.0 mm | |

Technical features. Measures from the evaluation board (131 mm x 60 mm x 1 mm).

2.3 CELLULAR USA SOLUTION

| Technical features | 824 – 894 MHz | 1850 – 2170 MHz |
|------------------------|--------------------------|-----------------|
| Average Efficiency | > 65% | > 70% |
| Peak Gain | 1.9 | 2.0 |
| VSWR | < 3:1 | |
| Radiation Pattern | Omnidirectional | |
| Polarization | Linear | |
| Weight (approx.) | 0.02 g. | |
| Temperature | -40 to +125 °C | |
| Impedance | 50 Ω | |
| Dimensions (L x W x H) | 7.0 mm x 3.0 mm x 1.0 mm | |

Technical features. Measures from the evaluation board (131 mm x 60 mm x 1 mm).

2.4 WI-FI 6E SOLUTION

| Technical features | 2400 – 2500 MHz | 5170 – 5835 MHz | 5925 – 7125 MHz |
|------------------------|--------------------------|-----------------|-----------------|
| Average Efficiency | > 80% | > 85% | > 85% |
| Peak Gain | 3.2 | 3.3 | 5.0 |
| VSWR | < 2.5:1 | | |
| Radiation Pattern | Omnidirectional | | |
| Polarization | Linear | | |
| Weight (approx.) | 0.02 g. | | |
| Temperature | -40 to +125 °C | | |
| Impedance | 50 Ω | | |
| Dimensions (L x W x H) | 7.0 mm x 3.0 mm x 1.0 mm | | |

Technical features. Measures from the evaluation board (86 mm x 54 mm x 1 mm).

If you need assistance to design your matching network, please contact support@ignion.io

You can also try our free of charge¹ **NN Wireless Fast Track service** you will receive a tailored antenna design approach for free in 24h¹. discover the feasibility of your next wireless project including the antenna!

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

ignion[™]

Your innovation.
Accelerated.

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