

ignion<sup>™</sup>

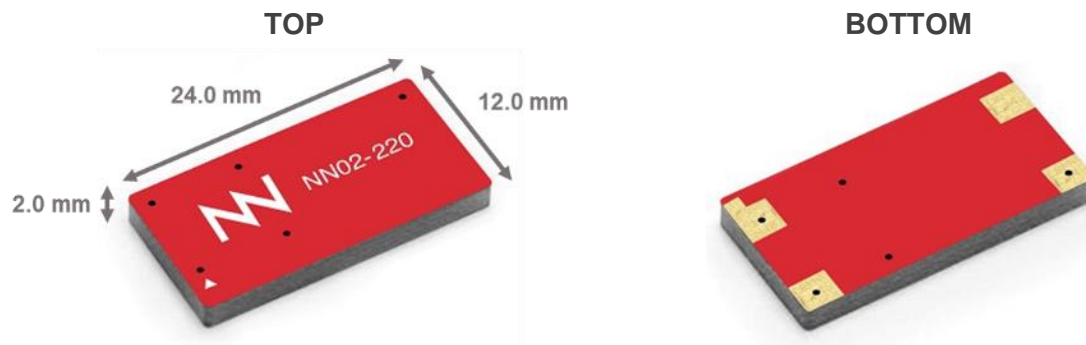
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# ALL mXTEND<sup>™</sup> (NN02-220)

DATASHEET

## ALL mXTEND<sup>™</sup>: A STANDARD ANTENNA SOLUTION FOR MOBILE FREQUENCY BANDS.

The ALL mXTEND<sup>™</sup> chip antenna component has been specifically designed for providing multiband performance in wireless devices, enabling worldwide coverage by allowing operation in the communication standards GSM850, GSM900, GSM1800/DCS, GSM1900/PCS, UMTS, LTE450, LTE700, LTE800, LTE850, LTE900, LTE1700, LTE1800, LTE1900, LTE2000, LTE2100, LTE2300, LTE2500, and LTE2600.



**Material:** The ALL mXTEND<sup>™</sup> chip antenna component is built on glass epoxy substrate.

### Most used industries.

- Smart Metering
- Smart Home & Buildings
- Industrial IoT
- Automotive Telematics
- Asset Tracking & Logistics

### ALL mXTEND<sup>™</sup> benefits.

- **High performance:** A global cellular antenna for IoT and mobile devices with high performance in the sub-GHz frequency range.
- **Multiband:** All cellular bands covered: 2G/3G/4G/5G and NB-IoT/LTE-M applications in a 24.0 mm x 12.0 mm x 2.0 mm antenna package.
- **Global reach:** Through multiband performance (worldwide standards compatible).
- **Reliability:** Off-the-Shelf standard product, no antenna part customization (electronic optimization)
- **Use cases:** Smart metering, smart city sensors, automotive.

### Operation bands summary.

GSM, UMTS, LTE, LTE-M, NB-IoT, 5G, and many more within the range of 400 MHz to 8000 MHz.

## 1. AVAILABLE SOLUTIONS SUMMARY

Configuration	Frequency range	Frequency Regions
<u>CELLULAR IoT</u>	698 – 960 MHz & 1710 – 2690 MHz	2
<u>CELLULAR FOR SMART METERS</u>	698 – 960 MHz & 1710 – 2690 MHz	2
<u>CELLULAR FOR SHARKFIN AUTOMOTIVE</u>	698 – 960 MHz & 1710 – 2690 MHz	2

## 2. DETAILED AVAILABLE SOLUTIONS

The following table presents the technical specifications of the ALL mXTEND<sup>™</sup> antenna booster, including its radiation pattern, polarization, weight, temperature range, impedance, and dimensions. These features make the ALL mXTEND<sup>™</sup> antenna booster a highly versatile and durable component that can be easily integrated into a wide range of wireless applications.

Technical Features	ALL mXTEND <sup>™</sup> (NN02-220)
<b>Radiation Pattern</b>	Omnidirectional
<b>Polarization</b>	Linear
<b>Weight (approx.)</b>	1.23 g
<b>Temperature</b>	-40 to +125 °C
<b>Impedance</b>	50 Ω

Technical features for the ALL mXTEND<sup>™</sup>.

## 2.1. LTE SOLUTION

Technical features	698 – 960 MHz	1710 – 2690 MHz
Average Efficiency	> 55 %	> 75 %
Peak Gain	2.3 dBi	3.1 dBi
VSWR	< 3:1	

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

## 2.2 LTE FOR SMART METERS SOLUTION

Technical features	698 – 960 MHz	1710 – 2690 MHz
Average Efficiency	> 65 %	> 70 %
Peak Gain	2.2 dBi	0.1 dBi
VSWR	< 3:1	

Technical features. Measures from the evaluation board (145 mm x 130 mm x 1 mm).

## 2.3 LTE FOR SHARKFIN AUTOMOTIVE SOLUTION

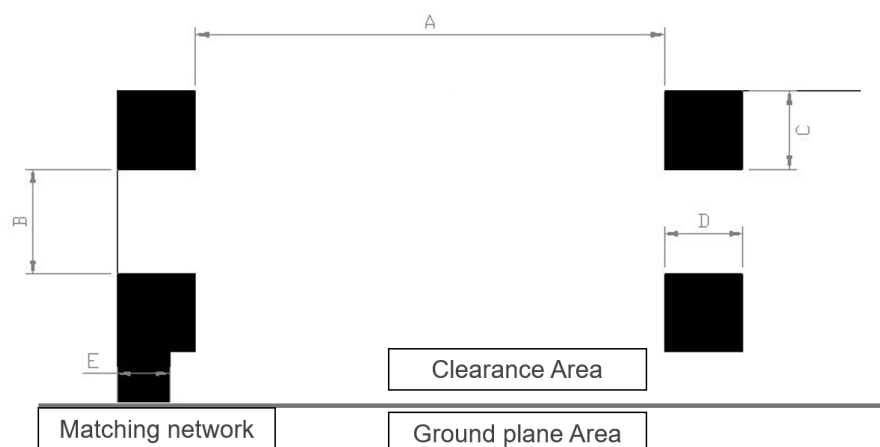
<sup>3</sup> Technical features	698 – 960 MHz	1710 – 2690 MHz
Average Efficiency	> 35 %	> 60 %
Peak Gain	1.8 dBi	7.1 dBi
VSWR	< 4.5:1	

Technical features. Measures from the evaluation board (40 mm x 40 mm x 1 mm) mounted at a centre of metallic ground plane of 600 mm x 600 mm.

## 2.4 ANTENNA FOOTPRINT

Measure	mm
A	18.0
B	4.0
C	3.1
D	3.1
E	2.0

Tolerance: ±0.05mm



Footprint dimensions for the single booster.

If you are designing a device with a different size or operating frequency than shown above, you can assess the performance of this configuration using our free-of-charge [Oxion™](#) platform. This platform provides a complete design report, including expected performance and tailored design guide, within 24 hours. For additional information about Ignion's range of R&D services, please visit: <https://ignion.io/resources-support/technical-center/engineering-support/>. If you require further assistance, please contact [support@ignion.io](mailto:support@ignion.io).

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