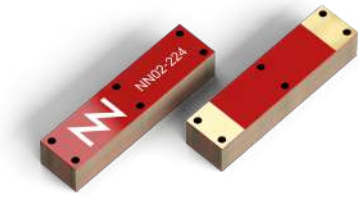
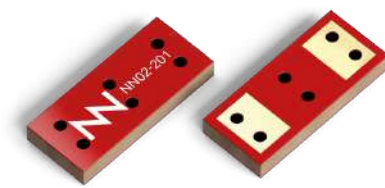
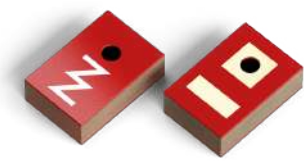


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**Product portfolio**



	NANO mXTEND™	ONE mXTEND™	DUO mXTEND™	TRIO mXTEND™	ALL mXTEND™	RUN mXTEND™
<b>Part Number</b>	NN02-101	NN02-201	NN03-320	NN03-310	NN02-220	NN02-224
<b>Dimensions (L x W x H) mm</b>	3.0 x 2.0 x 0.8	7.0 x 3.0 x 1.0	7.0 x 3.0 x 2.0	30.0 x 3.0 x 1.0	24.0 x 12.0 x 2.0	12.0 x 3.0 x 2.4
<b>Number of Antenna Ports</b>	1 port solution	1 port solution	1-2 port solution	1-3 port solution	1 port solution	1 port solution
<b>Operating Range (MHz)</b>	2400 - 10600	800 - 10600	1500 - 10600	400 - 8000	400 - 8000	698 - 8000
<b>Best for (MHz)</b>	2400 - 8500	824 - 7125	1561 - 8500	698 - 3800	698 - 2690	824 - 5875
<b>Weight (g) aprox.</b>	0.01	0.02	0.11	0.25	1.23	0.19
<b>Reference Design Frequencies (MHz)</b>	2400 - 2500	3300 - 5000	1561 - 1606    2400 - 2500	698 - 960    1710 - 2690	698 - 960    1710 - 2690	824 - 960    1710 - 2690
<b>Average Efficiency (%)</b>	>65	>70	>45    >50	>55    >65	>55    >75	>65    >70
<b>Efficiency Range (%) (min - max)</b>	60.1 - 77.3	64.0 - 86.3	44.6 - 54.6    47.2 - 57.7	48.5 - 64.3    52.9 - 80.2	40.2 - 71.1    71.6 - 90.3	54.3 - 78.6    57.2 - 86.0
<b>Peak Gain (dBi)</b>	1.1	4.1	-1.1    -0.9	1.1    2.4	2.3    3.1	2.8    1.8
<b>VSWR</b>	<2.5:1	<2.5:1	<3:1	<3:1	<3:1	<3:1
<b>Ref. Design Part Number</b>	EB_NN02-101-m-BT	EB_NN02-201-5G	EB_NN03-320-m-GNSS-BT	EB_NN03-310-M	EB_NN02-220-1B-2R-1P	EB_NN02-224-1B-2RJ-1P

**Examples of wireless service applications**

- BLUETOOTH
- WI-FI
- UWB

- 2G   3G   4G   5G
- NB-IOT   LTE CAT-M
- CELLULAR IOT
- WI-FI DUAL BAND
- WI-FI 5   WI-FI 6
- WI-FI 6E   CBRS
- WI-FI

- 5G
- GNSS   BLUETOOTH
- WI-FI DUAL BAND
- UWB   CBRS
- WI-FI 5   WI-FI 6

- 2G   3G   4G   5G
- NB-IOT   LTE CAT-M
- LORA   SIGFOX   ZIGBEE
- RFID   GNSS   ISM
- BLUETOOTH   CBRS
- THREAD   SIDEWALK
- Z-WAVE   MATTER
- CELLULAR IOT

- 2G   3G   4G   5G
- NB-IOT   LTE CAT-M
- CELLULAR IOT

- 2G   3G   4G   5G
- NB-IOT   LTE CAT-M
- LORA   SIGFOX   ZIGBEE
- GNSS   WI-SUN   ISM
- CBRS   CELLULAR IOT
- SIDEWALK   MATTER
- Z-WAVE   THREAD
- WI-FI 5   WI-FI 6
- WI-FI DUAL BAND

All Virtual Antenna® chips are omnidirectional, 50 Ω, linear (polarization), SMT (mounting) and suitable for temperatures from -40 to +125°C.

All above antenna specs have been measured using a corresponding evaluation board. Additional Evaluations Boards for assessing the operation of the product in other supported communication standards (such as LTE, UMTS, GSM, GPRS, BT, Wi-Fi, GNSS, ISM) are available along with the associated product User Manuals and Application Notes. More information about Ignion products or services please visit ignion.io.

**ISO 9001: 2015 Certified**

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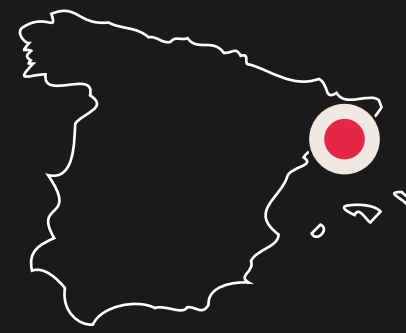
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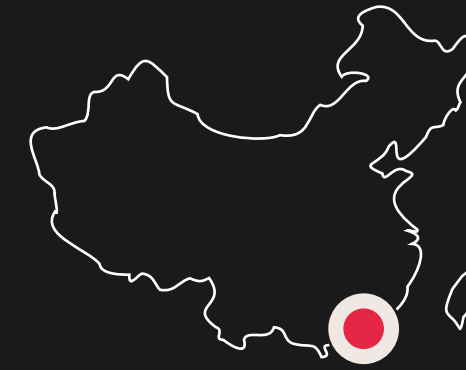


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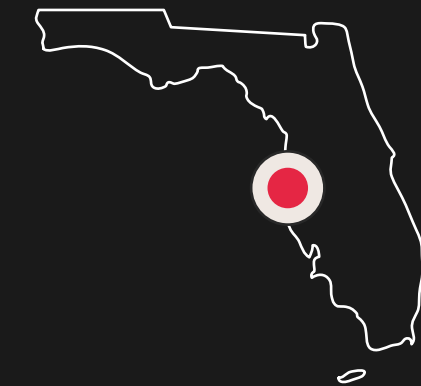
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