ignion

Your innovation.
Accelerated.

TRIO mXTEND™ (NN03-310)

DATASHEET

TRIO mXTEND™ (NN03-310)

The TRIO mXTEND™ chip antenna component is an **ultra slim,** off-the-shelf, component that measures only 1.0 mm in height, giving the designer freedom to integrate it in just about all wireless platforms. Thanks to its modular, multiband and **multiport configuration,** this chip antenna works in multiple frequency regions, including connectivity within **2G, 3G, 4G** and **5G bands**, but also for other regions of the spectrum such as **GNSS** and **Bluetooth**.

Product Benefits

- **Top performance**: Top multiband worldwide sub-6GHz cellular/IoT performance in a multi-RAT and 3 independent port antenna component.
- **Multiband & Multiport:** All cellular/ISM bands: 2G/3G/4G/5G and NB-IoT/LTE-M applications with additional GNSS, Bluetooth, Wi-Fi 6E, UWB simultaneously.
- **Versatile**: Triple radio architecture in a single, small and ultra-slim antenna package: 30mm x 1.0mm x 3.0mm.
- **Global reach:** Through multiband performance (worldwide standard compatible)
- **Reliability**: Off-the-Shelf standard product, no antenna part customization (electronic optimization)
- **Use cases**: Best for top performing compact tracking devices, IoT sensors, IoT cellular/ISM modules and mobile devices.

Operation Bands Summary

- GSM, UMTS, LTE, 5G, GNSS, Bluetooth (617 – 960MHz, 1710 – 2690MHz, 3300 – 3800MHz, 1561 – 1606 MHz and 2400 – 2500 MHz)

1. AVAILABLE SOLUTIONS SUMMARY

Class	Frequency Regions	Frequency range	More detailed info
1 Port	2	698 – 960 MHz & 1710 – 2690 MHz	CELLULAR LTE
2 Ports	3	698 – 960 MHz, 1710 – 2690 MHz & 3400 – 3800 MHz	CELLULAR LTE + 5G
2 Ports	5	824 – 960 MHz, 1710 – 2170 MHz, 1561 MHz, 1575 MHz & 1598 – 1606 MHz	CELLULAR LTE + GNSS
3 Ports	6	824 – 960 MHz, 1710 – 1990 MHz, 1561 MHz, 1575 MHz, 1598 – 1606 MHz & 2400 – 2500MHz	MOBILE + GNSS + BLUETOOTH

2. DETAILED AVAILABLE SOLUTIONS

2.1. LTE SOLUTION

Technical features	698 – 960 MHz	1710 – 2690 MHz
Average Efficiency	> 55 %	> 65 %
Peak Gain	1.1 dBi	2.4 dBi
VSWR	< 3:1	
Radiation Pattern	Omnidirectional	
Polarization	Linear	
Weight (approx.)	0.25 g	
Temperature	-40 to +125 ºC	
Impedance	50 Ω	
Dimensions (L x W x H)	30.0 mm x 3.0 mm x 1.0 mm	

Technical features. Measures from the evaluation board (142 mm x 60 mm x 1 mm).

2.2 LTE + 5G SOLUTION

Average Efficiency	> 50 %	> 60 %	> 65 %
Peak Gain	1.5 dBi	2.7 dBi	3.8 dBi
VSWR	< 3:1		< 2:1
Radiation Pattern	Omnidirectional		
Polarization	Linear		
Weight (approx.)	0.25 g		
Temperature	-40 to +125 ºC		
Impedance	50 Ω		
Dimensions (L x W x H)	30.0 mm x 3.0 mm x 1.0 mm		

Technical features. Measures from the evaluation board (142 mm x 60 mm x 1 mm)

2.3 LTE + GNSS 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 ºC	
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 (142 mm x 60 mm x 1 mm).

2.4 LTE + GNSS + BLUETOOTH SOLUTION

Technical features	Port 1 824-960 MHz	Port 1 1710-1990 MHz	Port 2 1561-1606 MHz	Port 3 2400-2500MHz
Average Efficiency	> 50%	> 60%	> 50%	> 75%
Peak Gain	0.4 dBi	1.9 dBi	0.9 dBi	2.4 dBi
VSWR	< 2.8:1	< 2.1:1	< 2.1:1	< 2.0:1
Radiation Pattern	Omnidirectional			
Polarization	Linear			
Weight (approx.)	0.25 g.			
Temperature	-40 to +125 ºC			
Impedance	50 Ω			
Dimensions (L x W x H)	30.0 mm x 3.0 mm x 1.0 mm			

Technical features. Measures from the evaluation board 142 mm x 60 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 charge[1] **NN Wireless Fast Track service** you will receive a tailored antenna design approach for free in 24h[1]. 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/