

ignion[™]

Your innovation.
Accelerated.

DUO mXTEND[™] (NN03-320)

DATASHEET

DUO mXTEND[™] (NN03-320)

The DUO mXTEND[™] antenna booster can provide optimal performance, even under the restriction of **having no ground clearance beyond the antenna footprint**. This miniature and multipurpose component is designed to provide **GNSS** and **Bluetooth** connectivity worldwide, **simultaneously**, as well as other regions of the spectrum, such as 5G and UWB, simultaneously, thanks to its multiport nature.



Product Benefits

- **Multipurpose:** Multiband and multi-RAT IoT chip antenna component with 2 independent ports.
- **Smallest clearance:** No clearance beyond the antenna footprint.
- **Miniature:** Small form factor of 7.0 mm x 3.0 mm x 2.0 mm.
- **Best for combining:** One or more of GNSS, Bluetooth, UWB and 5G applications.
- **Versatile:** Dual mounting on device corner or center edge.
- **Reliability:** Off-the-Shelf standard product, no antenna part customization (electronic optimization).
- **Use cases:** tracking devices, wearables, gaming devices, IoT-5G modules.

Operation Bands Summary

- GNSS, Bluetooth, 5G and UWB (1561 – 1606MHz, 2400 – 2500MHz, 3400 – 3800MHz, 3100 – 4800MHz and 6000 – 10600 MHz).

1. AVAILABLE SOLUTIONS SUMMARY

Class	Frequency Regions	Frequency range	More detailed info
2 Ports	4	1561MHz, 1575MHz, 1598MHz to 1606MHz, and 2400MHz to 2500MHz.	<u>GNSS + BLUETOOTH</u>
1 Port	3	1561 MHz, 1575 MHz, 1598MHz to 1606MHz	<u>GNSS</u>
1 Port	1	2400 MHz to 2500 MHz	<u>BLUETOOTH</u>
1 Port	1	3400 MHz to 3800 MHz	<u>5G</u>
1 Port	1	3100 MHz to 4800 MHz and 6000 MHz to 10600 MHz	<u>UWB</u>

2. DETAILED AVAILABLE SOLUTIONS

2.1. GNSS AND BLUETOOTH SOLUTION

Technical features	BeiDou	GPS & GALILEO	GLONASS	Bluetooth
	1561MHz	1575MHz	1598 – 1606MHz	2400 – 2500MHz
Average Efficiency	> 40%	> 45%	> 50%	> 50%
Peak Gain	-1.1 dBi	-1.0 dBi	-1.0 dBi	-0.9 dBi
VSWR	< 3:1			
Radiation Pattern	Omnidirectional			
Polarization	Linear			
Weight (approx.)	0.11 g.			
Temperature	-40 to +125 °C			
Impedance	50 Ω			
Dimensions (L x W x H)	7.0 mm x 3.0 mm x 2.0 mm			

Technical features. Measures from the evaluation board (80 mm x 40 mm x 1 mm).

2.2 GNSS SOLUTION

Technical features	1561 MHz	1575 MHz	1598 – 1606 MHz
Average Efficiency	> 60 %	> 70 %	> 60 %
Peak Gain	1.6 dBi	1.8 dBi	1.1 dBi
VSWR	< 2.5:1		
Radiation Pattern	Omnidirectional		
Polarization	Linear		
Weight (approx.)	0.11 g.		
Temperature	-40 to +125 °C		
Impedance	50 Ω		
Dimensions (L x W x H)	7.0 mm x 3.0 mm x 2.0 mm		

Technical features. Measures from the evaluation board (80 mm x 40 mm x 1 mm).

2.3 BLUETOOTH SOLUTION

Technical features	2400 MHz – 2500 MHz
Average Efficiency	> 70 %
Peak Gain	1.8 dBi
VSWR	< 2.5:1
Radiation Pattern	Omnidirectional
Polarization	Linear
Weight (approx.)	0.11 g.
Temperature	-40 to +125 °C
Impedance	50 Ω
Dimensions (L x W x H)	7.0 mm x 3.0 mm x 2.0 mm

Technical features. Measures from the evaluation board (80 mm x 40 mm x 1 mm).

2.4 5G SOLUTION

Technical features	3.4 – 3.8 GHz
Average Efficiency	> 60%
Peak Gain	2.6 dBi
VSWR	< 3.0:1
Radiation Pattern	Omnidirectional
Polarization	Linear
Weight (approx.)	0.11 g.
Temperature	-40 to + 125 °C
Impedance	50 Ω
Dimensions (L x W x H)	7.0 mm x 3.0 mm x 2.0 mm

Technical features. Measures from the evaluation board (80 mm x 40 mm x 1 mm).

2.5 UWB SOLUTION

Technical features	Option 1 UWB (LFR)	Option 2 UWB (HFR)
	3.1 – 4.8 GHz	6.0 – 10.6 GHz
Average Efficiency	> 80%	> 80%
Peak Gain	2.3 dBi	3.6 dBi
VSWR	< 2.6:1	< 4.0:1
Radiation Pattern	Omnidirectional	
Polarization	Linear	
Weight (approx.)	0.11 g.	
Temperature	-40 to + 125 °C	
Impedance	50 Ω	
Dimensions (L x W x H)	7.0 mm x 3.0 mm x 2.0 mm	

Technical features. Measures from the evaluation board (25 mm x 20 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/>



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