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2J Phoenix 4G-5G Ultraband MIMO + Dual-Band WiFi-6E + GNSS 4-Port Combo Stud Antenna, 617 to 7125 MHz

SKU
ANT-2J-00033
MPN
2J6986BGFC 8M

Description

The 2J Phoenix 4G-5G Ultraband MIMO + Dual-Band WiFi-6E + GNSS 4-Port Combo Stud Antenna (SKU: ANT-2J-00033) is a versatile solution designed for robust connectivity across multiple applications. Operating within a wide frequency range of 617 to 7125 MHz, this antenna is ideal for automotive, marine, telematics, automation, and M2M markets.

Constructed from durable polycarbonate and ASA plastic, the antenna is IP67 rated for superior protection against water and dust, making it suitable for harsh environments. With a temperature tolerance from -40 °C to 85 °C, it ensures reliable performance in extreme conditions. The antenna features four input ports providing 4 RF connections, including 2x2 MIMO 5G for enhanced data throughput and dual-band WiFi-6E for high-speed, reliable internet connectivity.

Additionally, the integrated GNSS element supports GPS and GLONASS with an active LNA, ensuring precise location tracking. This component is...

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2J

2J is a worldwide supplier of antenna solutions for Automotive, Marine, Telematic, Automation and M2M markets. 2J utilise a plethora of modern engineering tools, from network analysers and anechoic chambers, to simulation software and 3D printers. These tools help reduce design phases, and enable us to react to customers' needs promptly and efficiently.

Over the past decade, 2J has established ...

RF Specification

Cable 1: 5GNR

Start Frequency
617 MHz
Stop Frequency
5925 MHz
Max. Input Power
25 W
Polarisation
Linear
Input Impedance
50 Ω
RF Connectors

Ports	RF Interface	Body Shape	Cable Series	Length
1	SMA Male	Straight	A-302	3000 mm

Frequency Test Data

Start Freq.	Stop Freq.	Peak Gain	Return Loss	VSWR	Azimuth	Avg. Gain	Efficiency
617 MHz	960 MHz	3.1 dBi	> 15.5 dB	< 1.5:1	360°	-4.6 dBi	35%
1427 MHz	2690 MHz	2.7 dBi	> 12.1 dB	< 1.8:1	360°	-5.4 dBi	27%

Cable 2: 5GNR

Start Frequency
617 MHz
Stop Frequency
5925 MHz
Max. Input Power
25 W
Polarisation
Linear
Input Impedance
50 Ω
RF Connectors

Ports	RF Interface	Body Shape	Cable Series	Length
1	SMA Male	Straight	A-302	3000 mm

Frequency Test Data

Start Freq.	Stop Freq.	Peak Gain	Return Loss	VSWR	Azimuth	Avg. Gain	Efficiency
617 MHz	960 MHz	3.2 dBi	> 16.8 dB	< 1.4:1	360°	-4.8 dBi	34%
1427 MHz	2690 MHz	2.9 dBi	> 12.8 dB	< 1.7:1	360°	-5.7 dBi	27%

Cable 3: WiFi

Start Frequency
2410 MHz
Stop Frequency
7125 MHz
Max. Input Power
25 W
Polarisation
Linear

Input Impedance
50 Ω
RF Connectors

Ports	RF Interface	Body Shape	Cable Series	Length
1	SMA Male	Straight	A-302	3000 mm

Frequency Test Data

Start Freq.	Stop Freq.	Peak Gain	Return Loss	VSWR	Azimuth	Avg. Gain	Efficiency
2410 MHz	2490 MHz	0.2 dBi	> 11.4 dB	< 2:1	360°	-6.1 dBi	25%
4920 MHz	5925 MHz	1.7 dBi	> 18 dB	< 1.3:1	360°	-5.6 dBi	27%

Cable 4: GPS/GLONASS

Start Frequency
1575.42 MHz
Stop Frequency
1606 MHz
Input Impedance
50 Ω
Polarisation
Right Hand Circular (RHCP)

Low Noise Amplifier (LNA)

LNA Gain
28 dBic
Noise Figure
≤ 1.8 dB
Power Consumption
< 24.3 mW
Min. Operating Voltage
1.5 V
Max. Operating Voltage
3.6 V
RF Connectors

Ports	RF Interface	Body Shape	Cable Series	Length
1	SMA Male	Straight	L-100	3000 mm

Physical Specification

Subtype
Fin / Stud / Combo
Input Ports
4
MIMO
2x2 MIMO
Min. Operating Temperature
-40 °C
Max. Operating Temperature
85 °C
Dimensions
80 x 74 x 25.6
Ingress Protection
IP67
Materials
ASA Plastic, Polycarbonate (PC)
Mounting
Stud / Bulkhead / Panel
Compliance/Certifications
RoHS

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