

2J Phoenix 4G-5G WiFi Ultraband 2x2 MIMO + GNSS 3-Port Combo Stud Antenna, 617 to 5925 MHz

SKU: ANT-2J-00018
MPN: 2J6984BGFA

Description

The 2J Phoenix 4G-5G WiFi Ultraband 2x2 MIMO + GNSS 3-Port Combo Stud Antenna (SKU: ANT-2J-00018, Part Number: 2J6984BGFA) is a high-performance, multi-functional antenna designed for versatile applications across automotive, marine, telematics, automation, and M2M markets. Its rugged ASA plastic construction and IP67 certification ensure durability in harsh environments, with an operating temperature range from -40 °C to 85 °C.

The antenna features three RF connections for enhanced connectivity: two 5G NR ports supporting frequencies from 617 to 5925 MHz, offering reliable linear polarisation and a 50 Ω impedance. Each port includes an SMA Male connector on a 3 metre L-100 cable. The integrated GNSS functionality operates within 1575 to 1602 MHz, featuring a right-hand circular polarisation and an active LNA with a 28 dBic gain, ensuring precise positioning data.

2J's commitment to quality and innovation is reflected in the Phoenix...

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RF Specification

2J

Cable 1: 5G NR

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 ...

| | | | |
|-------------------|----------|------------------|--------|
| Start Frequency: | 617 MHz | Polarisation: | Linear |
| Stop Frequency: | 5925 MHz | Input Impedance: | 50 |
| Max. Input Power: | 25 W | | |

RF Connectors

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

Frequency Test Data

| Start Freq. | Stop Freq. | Peak Gain | Return Loss | VSWR | Avg. Gain | Efficiency |
|-------------|------------|-----------|-------------|---------|-----------|------------|
| 617 MHz | 960 MHz | 2.1 dBi | > 11.2 dB | < 2:1 | -3.5 dBi | 46% |
| 1427 MHz | 2690 MHz | 5 dBi | > 8.3 dB | < 2.6:1 | -3.1 dBi | 51% |
| 3300 MHz | 5000 MHz | 3.8 dBi | > 7.1 dB | < 3.2:1 | -5.1 dBi | 33% |
| 5150 MHz | 5925 MHz | 3.9 dBi | > 7.4 dB | < 2.6:1 | -5.2 dBi | 31% |

Cable 2: 5GNR

| | | | |
|-------------------|----------|------------------|--------|
| Start Frequency: | 617 MHz | Polarisation: | Linear |
| Stop Frequency: | 5925 MHz | Input Impedance: | 50 |
| Max. Input Power: | 25 W | | |

RF Connectors

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

Frequency Test Data

| Start Freq. | Stop Freq. | Peak Gain | Return Loss | VSWR | Avg. Gain | Efficiency |
|-------------|------------|-----------|-------------|---------|-----------|------------|
| 617 MHz | 960 MHz | 3.2 dBi | > 9.6 dB | < 2.1:1 | -3.7 dBi | 45% |
| 1427 MHz | 2690 MHz | 5 dBi | > 8.2 dB | < 2.6:1 | -3 dBi | 52% |
| 3300 MHz | 5000 MHz | 5.1 dBi | > 6.9 dB | < 3.3:1 | -4.3 dBi | 40% |
| 5150 MHz | 5925 MHz | 4.7 dBi | > 7 dB | < 2.8:1 | -4.9 dBi | 34% |

Cable 3: GNSS

| | | | |
|------------------|-------------|------------------|----------------------------|
| Start Frequency: | 1575.42 MHz | Input Impedance: | 50 |
| Stop Frequency: | 1602 MHz | Polarisation: | Right Hand Circular (RHCP) |

Low Noise Amplifier (LNA)

| | | | |
|--------------------|-----------|-------------------------|-------|
| LNA Gain: | 28 dBic | Min. Operating Voltage: | 1.5 V |
| Noise Figure: | ≤ 1.5 dB | Max. Operating Voltage: | 3.6 V |
| Power Consumption: | < 24.3 mW | | |

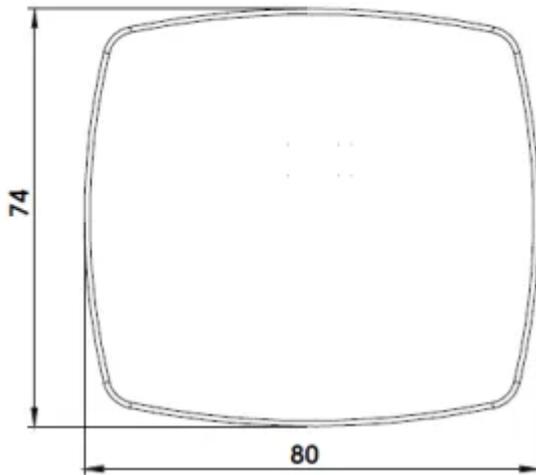
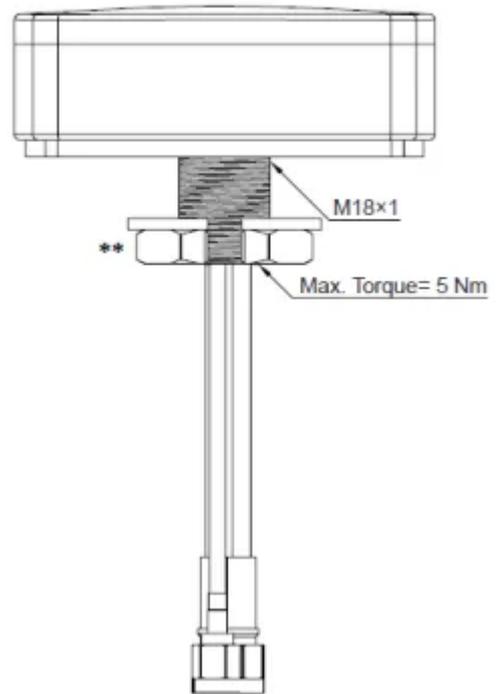
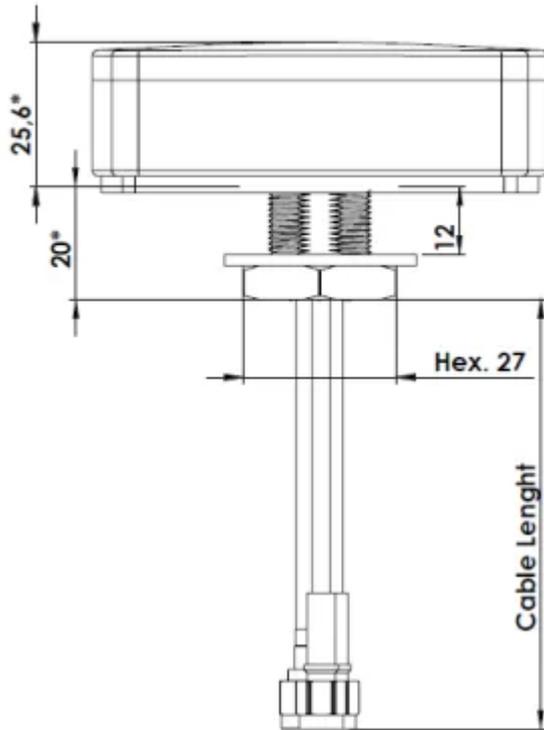
RF Connectors

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

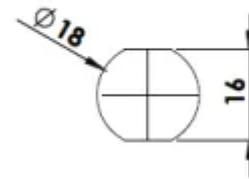
Physical Specification

| | | | |
|-----------------------------|--------------------|----------------------------|----------------|
| Subtype: | Fin / Stud / Combo | Dimensions: | 80 x 74 x 25.6 |
| Input Ports: | 3 | Ingress Protection: | IP67 |
| MIMO: | 2x2 MIMO | Materials: | ASA Plastic |
| Min. Operating Temperature: | -40 °C | Compliance/Certifications: | RoHS |
| Max. Operating Temperature: | 85 °C | | |

Drawing



Mounting hole



Max. mounting thickness 12mm
Note: Dimensions are in millimeters
*Dimensions are after mounting
**Max. Torque= 5 Nm

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