

# 2J Phoenix 4G-5G WiFi Ultraband 2x2 MIMO Stud Antenna, 617 to 5925 MHz

SKU: ANT-2J-00017

MPN: 2J6983BA

## Description

The 2J Phoenix 4G-5G WiFi Ultraband 2x2 MIMO Stud Antenna (SKU: ANT-2J-00017, Part Number: 2J6983BA) offers robust wireless connectivity across frequencies from 617 to 5925 MHz. This IP67-rated antenna ensures reliable performance in harsh conditions, with an operating temperature range from -40 °C to 85 °C. Designed for versatility, this Fin/Stud/Combo antenna supports 2x2 MIMO technology, enhancing data throughput and signal quality through its dual RF connections.

Each antenna element features a 50  $\Omega$  impedance and can handle up to 25 W input power. Linear polarisation facilitates consistent signal reception, making it ideal for applications in automotive, marine, telematics, and M2M markets. The antenna's RF performance across various frequency bands is characterised by peak gains ranging from 2.0 dBi to 5.1 dBi and VSWR values under 3.3:1, ensuring efficient energy transmission.

Connectivity is achieved via dual SMA Male interfaces...

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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  | 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        | 300 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   | 2.1 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        | 300 mm |

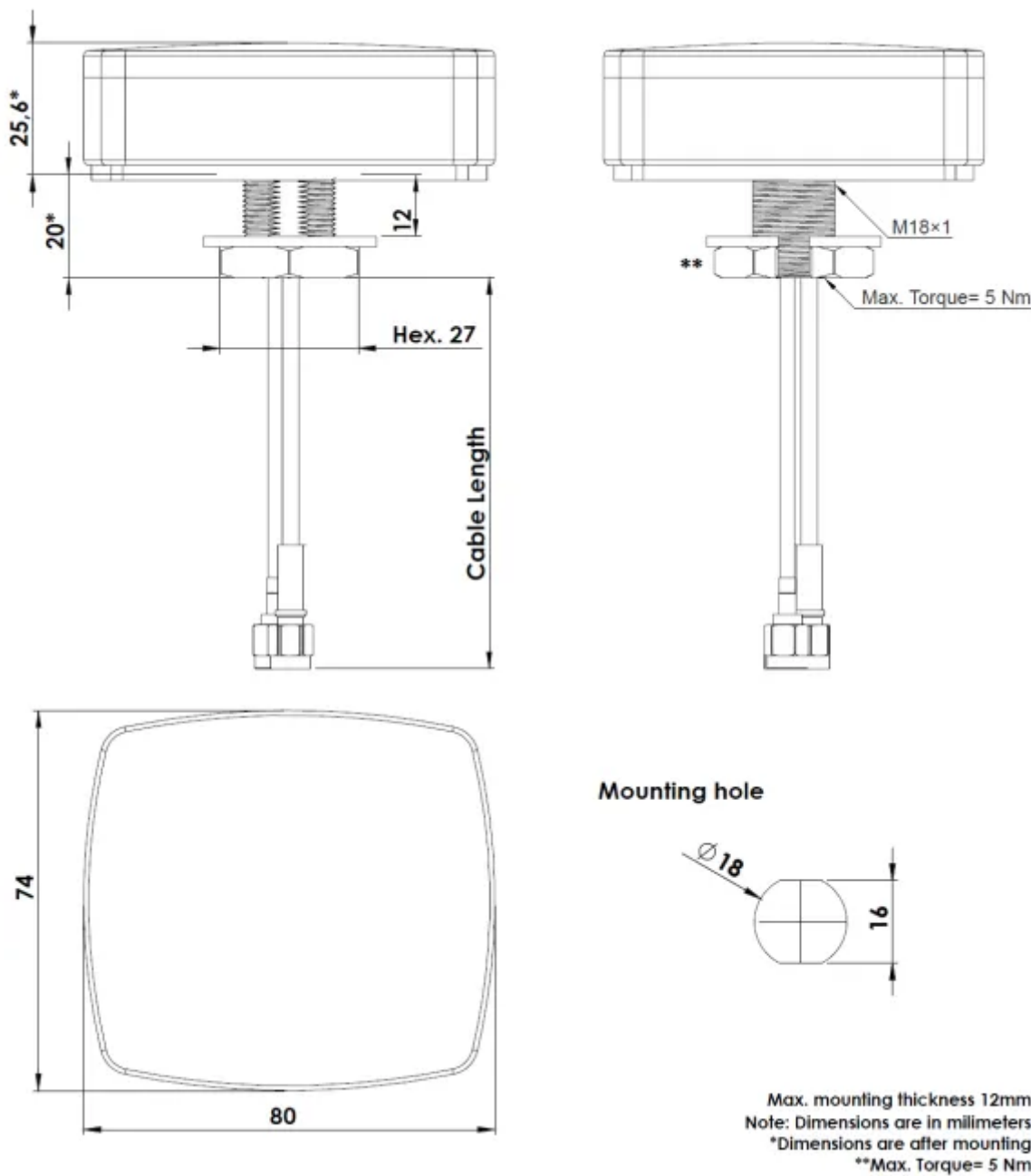
# Frequency Test Data

| 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   | 2 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%        |

# Physical Specification

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

Drawing



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