

## 2J 2j7050BGa 5-in-1 Combination 2X2 MIMO Stud Mount Antenna

### Product Code

2j7050BGa

### Polarisation

Right Hand Circular (RHCP)

2x2 MIMO

### Design Type

Combination Planar

### Application Category

IoT/M2M

Transit/Rail

### RF Category

Cellular

GNSS

WiFi



2J7050BGa is one of the smallest form factor, multiple technology antennas still offering the highest level of performance.

2J7050BGa Antenna is compact, heavy duty 5-in-1 combination antenna solution with LTE-MIMO, Dual WiFi-MIMO and GNSS (GPS/GLONASS). High gain and 60% efficiency across worldwide 4G LTE and 2G, 3G bands, its ideal for high-end public safety applications such as police, ambulance and fire, HD video broadcasting, resource management, transportation, critical communications and other industries. Having extremely low ECC (Envelope Correlation Coefficient) allows for low latency and high data transfer rates. High gain, low noise and pre-filtered GNSS antenna for more accurate geo-location and navigation, as well as high performance dual WI-FI-MIMO antennas for better signal reception.

The IP67 and IP69 ingress ratings provide this compact antenna with maximum protection against dust and water penetration, while the IK09 rating adds an extra level of anti-vandal security, with high impact resistance. The antenna has also been tested to EN61373 (Vibration and Shock) and EN45545-2 (Fire Protection) for use in railway applications while the UV stable housing material is available in a range of colored finishes.

This screw mount antenna comes with low loss cables thread through a single mounting hole for easy installation. Cables and connectors can be customized to specific requirements. A truly versatile antenna solution allowing to change (other technologies) or remove antennas and its respective cable to satisfy your end application.

- Wideband MIMO covering most cellular bands between 698 and 2700 MHz (cables 1 & 2)
- 2.4 and 5 GHz Dual-band MIMO Wi-Fi (cables 3 & 4)
- GPS/GLONASS/QZSS/Galileo (cable 5)
- Weatherproof IP67/IP69K/IK09 design
- Stud mount with anti-rotation mechanism
- 5x 3 metre LMR-195 cables with SMA Male connectors
- Fully customisable cable lengths and connectors

### ▼ Antenna Technical Data

## Physical Characteristics

Construction Material	Aluminium ASA Plastic	RF Connections	5
Radome Colour	Other - Black	Environmental Rating	IP69K IK09
Dimensions	90 x 96 mm (H x ø)	Operating Temperature	-40 °C to 85 °C
Weight	No Data	Mounting	M27 Stud

### ▼ Cellular MIMO-1 Element

#### Electrical Specifications

Input Impedance	50 Ω
Polarisation	Vertical (V)
Max. Input Power	25 W
PIM, 3rd Order	-

#### Mechanical Specifications

Input Connector	SMA
Input Connector Gender	Male
Cable Series	LMR-195
Cable Length	3000 mm

### ▼ Range: 698 to 960 MHz

Peak Gain	2.10 dBi	Azimuth Beamwidth	360°
VSWR	1.9:1	Elevation Beamwidth	No Data
Radiation Efficiency	57%	Electrical Tilt	0°
Front-to-Back Ratio	-	Inter-Port Isolation	> 5 dB
Cross-Polar Discrimination	-	Cross-Polar Isolation	-

### ▼ Range: 1710 to 2170 MHz

Peak Gain	4.20 dBi	Azimuth Beamwidth	360°
VSWR	1.6:1	Elevation Beamwidth	No Data
Radiation Efficiency	57%	Electrical Tilt	0°
Front-to-Back Ratio	-	Inter-Port Isolation	> 15 dB
Cross-Polar Discrimination	-	Cross-Polar Isolation	-

### ▼ Range: 2500 to 2700 MHz

Peak Gain	3.10 dBi	Azimuth Beamwidth	360°
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VSWR	1.7:1	Elevation Beamwidth	No Data
Radiation Efficiency	47%	Electrical Tilt	0°
Front-to-Back Ratio	-	Inter-Port Isolation	> 20 dB
Cross-Polar Discrimination	-	Cross-Polar Isolation	-

### ▼ Cellular MIMO-2 Element

#### Electrical Specifications

Input Impedance	50 Ω
Polarisation	Vertical (V)
Max. Input Power	25 W
PIM, 3rd Order	-

#### Mechanical Specifications

Input Connector	SMA
Input Connector Gender	Male
Cable Series	LMR-195
Cable Length	3000 mm

### ▼ Range: 698 to 960 MHz

Peak Gain	3.00 dBi	Azimuth Beamwidth	360°
VSWR	1.9:1	Elevation Beamwidth	No Data
Radiation Efficiency	63%	Electrical Tilt	0°
Front-to-Back Ratio	-	Inter-Port Isolation	> 5 dB
Cross-Polar Discrimination	-	Cross-Polar Isolation	-

### ▼ Range: 1710 to 2170 MHz

Peak Gain	3.20 dBi	Azimuth Beamwidth	360°
VSWR	1.6:1	Elevation Beamwidth	No Data
Radiation Efficiency	54%	Electrical Tilt	0°
Front-to-Back Ratio	-	Inter-Port Isolation	> 15 dB
Cross-Polar Discrimination	-	Cross-Polar Isolation	-

### ▼ Range: 2500 to 2700 MHz

Peak Gain	4.00 dBi	Azimuth Beamwidth	360°
VSWR	1.4:1	Elevation Beamwidth	No Data

Radiation Efficiency	57%	Electrical Tilt	0°
Front-to-Back Ratio	-	Inter-Port Isolation	> 20 dB
Cross-Polar Discrimination	-	Cross-Polar Isolation	-

### ▼ WiFi MIMO-1 Element

#### Electrical Specifications

Input Impedance	50 Ω
Polarisation	Vertical (V)
Max. Input Power	25 W
PIM, 3rd Order	-

#### Mechanical Specifications

Input Connector	SMA
Input Connector Gender	Male
Cable Series	LMR-195
Cable Length	3000 mm

### ▼ Range: 2410 to 2490 MHz

Peak Gain	5.60 dBi	Azimuth Beamwidth	360°
VSWR	1.9:1	Elevation Beamwidth	No Data
Radiation Efficiency	58%	Electrical Tilt	0°
Front-to-Back Ratio	-	Inter-Port Isolation	> 20 dB
Cross-Polar Discrimination	-	Cross-Polar Isolation	-

### ▼ Range: 4920 to 5925 MHz

Peak Gain	5.50 dBi	Azimuth Beamwidth	360°
VSWR	1.6:1	Elevation Beamwidth	No Data
Radiation Efficiency	64%	Electrical Tilt	0°
Front-to-Back Ratio	-	Inter-Port Isolation	> 25 dB
Cross-Polar Discrimination	-	Cross-Polar Isolation	-

### ▼ WiFi MIMO-2 Element

#### Electrical Specifications

Input Impedance	50 Ω
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#### Mechanical Specifications

Input Connector	SMA
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## Electrical Specifications

## Mechanical Specifications

Polarisation	Vertical (V)	Input Connector Gender	Male
Max. Input Power	25 W	Cable Series	LMR-195
PIM, 3rd Order	-	Cable Length	3000 mm

### ▼ Range: 2410 to 2490 MHz

Peak Gain	5.50 dBi	Azimuth Beamwidth	360°
VSWR	2.1:1	Elevation Beamwidth	No Data
Radiation Efficiency	57%	Electrical Tilt	0°
Front-to-Back Ratio	-	Inter-Port Isolation	> 20 dB
Cross-Polar Discrimination	-	Cross-Polar Isolation	-

### ▼ Range: 4920 to 5925 MHz

Peak Gain	4.40 dBi	Azimuth Beamwidth	360°
VSWR	1.6:1	Elevation Beamwidth	No Data
Radiation Efficiency	59%	Electrical Tilt	0°
Front-to-Back Ratio	-	Inter-Port Isolation	> 25 dB
Cross-Polar Discrimination	-	Cross-Polar Isolation	-

## ▼ GNSS Specifications

### Electrical Specifications

### Mechanical Specifications

Input Impedance	50 Ω	Input Connector	SMA
Polarisation	Right Hand Circular (RHCP)	Input Connector Gender	Male
DC Input Power	1.50 to 3.60 Vdc	Cable Series	LMR-100
Power Consumption	24.30 mW	Cable Length	3000 mm

### ▶ Galileo GPS QZSS Specifications

### ▶ GLONASS Specifications

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