OMNI-705

ANTENNAS | OMNI-705 SERIES

OMNI-DIRECTIONAL WI-FI ANTENNA

5000 – 6000 MHz, 7.5 dBi

5000 - 6000 MHz; 7.5 dBi; Increase x Mb/s; Omni-Directional; 5.0 – 6.0 GHz; IoT & M2M

-40°C to +80°C; Fire Resistant; IP 69K; IK 10

- **High gain, omni-directional Wi-Fi antenna**
- **Suitable for 5 GHz Wi-Fi deployment**
- **Compliant with IEEE 802.11a and 802.11ac wireless standard**
- **Ideal for IoT and M2M applications**
- **Rugged and low-profile design**
- **High pressure water and dust ingress protected enclosure (IP69K)**

APPLICATION AREAS: Rural/Farm; Industrial; Mining; Tunnelling

Product Overview

The OMNI-705 antenna is an omni-directional Wi-Fi antenna, developed by Poynting Antennas. The antenna operates from 5.0 – 6.0 GHz, covering the 5 GHz Wi-Fi band, and has a maximum gain of 7.5 dBi. The constant gain throughout the entire band offers improved performance with reliable connections. The antenna was designed for superior pattern control over the entire frequency range, making the OMNI-705 an exceptional omni-directional antenna for its size. The antenna can connect to any Wi-Fi access point and resolve channel saturation and provide ultimate Wi-Fi performance and flexibility. The rugged enclosure design offers protection in adverse environmental conditions with an IP 69K and IK 10 rating. The antenna has an N-Type female connector at its base, which can be connected to a cable of the desired type and length.

Features

- Omni-directional antenna
- High gain Wi-Fi antenna from 5000 to 6000 MHz
- Easy installation, pole- or wall mountable
- Stylish and robust design
- High pressure water and dust proof enclosure (IP 69K)

Application Areas

- Smart Utilities: Smart Power Metering, Gas & Water Metering
- Smart Buildings: Climate control, access control, security, irrigation
- Smart Environmental & Water Systems
- Warehouses & Logistics systems
- Industrial factory automation and M2M systems
- Farming & Agricultural M2M IoT

Revised: December 2021

Regulatory Compliance: RoHS 2011/65/EU Compliant | ISO 9001:2015
Document version: TS-OMNI-0705-V1-01 REV 2
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Frequency Bands

The OMNI-705 is an omni-directional antenna that works from 5000 - 6000 MHz

Indicates the WI-FI bands on which OMNI-705 works

Antenna Overview

	LTE
Ports	1
SISO / MIMO	SISO
Frequency Bands	5000 – 6000 MHz
Polarisation	Linear (Vertical)
Peak Gain	7.5 dBi
Coax Cable Type	N/A
Coax Cable Length	N/A
Connector Type	N-Type (F)

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Electrical Specifications

Frequency bands:	5000 - 6000 MHz
Gain (Max):	5.5 dBi @ 5000 – 5200 MHz 7.5 dBi @ 5200 – 5800 MHz 7.5 dBi @ 5800 – 6000 MHz
Gain (Mean):	3.5 dBi @ 5000 – 5200 MHz 5.5 dBi @ 5200 – 5800 MHz 6.0 dBi @ 5800 – 6000 MHz
VSWR:	<1.5:1 @5000 – 5200 MHz: <2:1 @ 5200 – 5800 MHz <1.5:1 @ 5800 – 6000 MHz
Feed power handling:	10 W
Input impedance:	50 Ohm (nominal)
Polarisation:	Linear Vertical
DC short:	Yes

Product Box Contents

Antenna:	A-OMNI-0705
Mounting bracket:	Included L-Bracket, Adhesive Surface Mount

Ordering Information

Commercial name:	OMNI-705
Order product code:	A-OMNI-0705-V1-01
EAN number:	6009710922248

Mechanical Specifications

Product dimensions:	306 mm x Ø70 mm
Packaged dimensions:	386 mm x 80 mm x 96 mm
Weight:	0.25Kg
Packaged weight:	0.555Kg
Radome material:	UV Stable ASA
Radome colour:	Grey Pantone 429C
Mounting Type:	Wall and Pole Mount Using Bracket, Surface Mount Using Adhesive Disc

Environmental Specifications, Certification & Approvals

Wind Survival:	≤190 km/h
Temperature Range (Operating):	-40°C to +80°C
Environmental Conditions:	Outdoor/Indoor
Water ingress protection ratio/standard:	IP 69K
Salt Spray:	MIL-STD 810G/ASTM B117
Operating Relative Humidity:	Up to 98%
Storage Humidity:	5% to 95% - non-condensing
Storage Temperature:	-40°C to +80°C
Enclosure Flammability Rating:	UL 94-HB
Impact resistance:	IK 10
Product Safety & Environmental:	Complies with CE and RoHS standards

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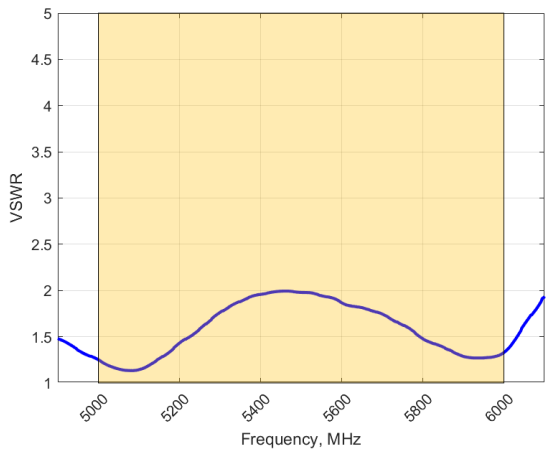
Antenna Performance Plots

VSWR



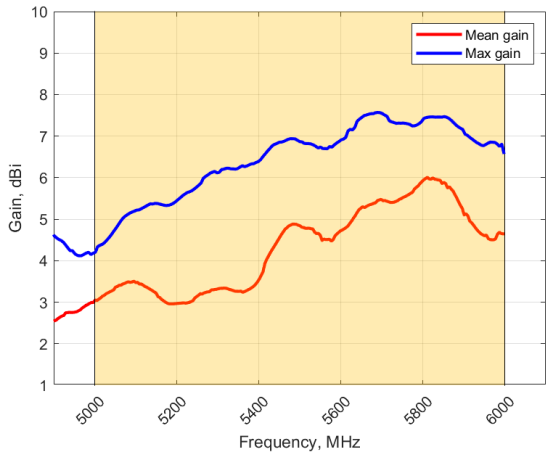
Voltage Standing Wave Ratio (VSWR)*

VSWR is a measure of how efficiently radio-frequency power is transmitted from a power source, through a transmission line, into a load. In an ideal system, 100% of the energy is transmitted which corresponds to a VSWR of 1:1.

The OMNI-705 delivers superior performance across all bands with a VSWR of 1.8:1 or better across 90% of the band.

**VSWR measured with no cable*

GAIN (EXCLUDING CABLE LOSS)



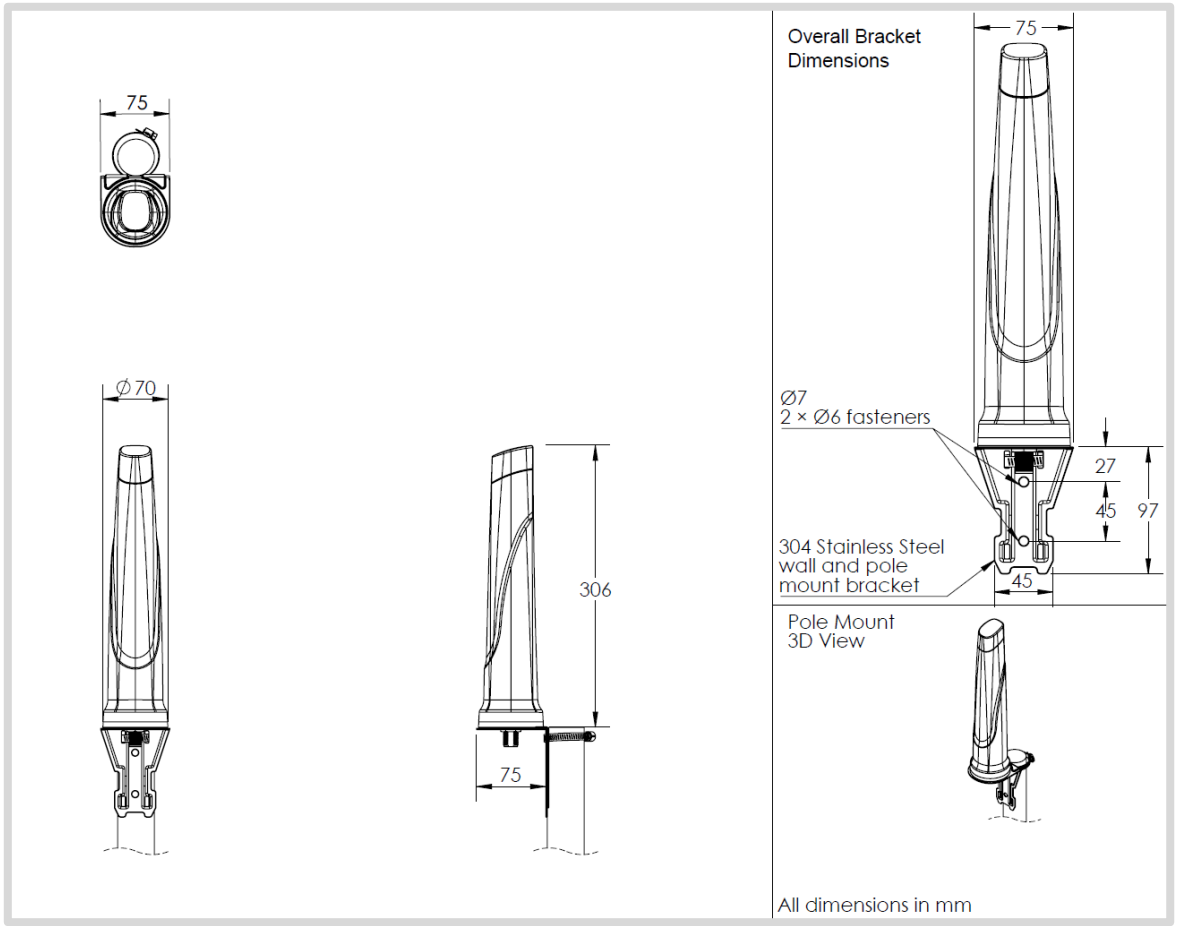
Gain+ in dBi

7.5 dBi is the peak gain across all bands from 5000 – 6000 MHz.

Gain @ 5000 - 5200 MHz (Max; Mean):	5.5 dBi; 3.5 dBi
Gain @ 5200 – 5800 MHz (Max; Mean):	7.5 dBi; 5.5 dBi
Gain @ 5800 - 6000 MHz (Max; Mean):	7.5 dBi; 6.0 dBi

+Antenna gain measured with polarisation aligned standard antenna

Technical Drawings



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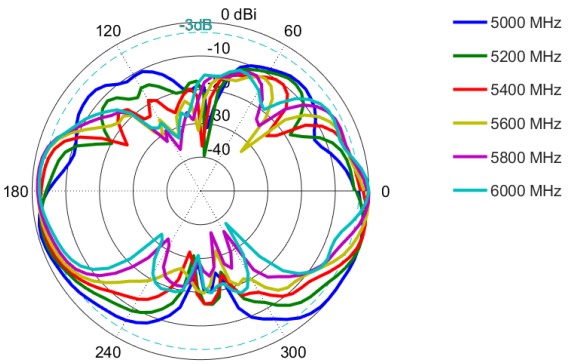
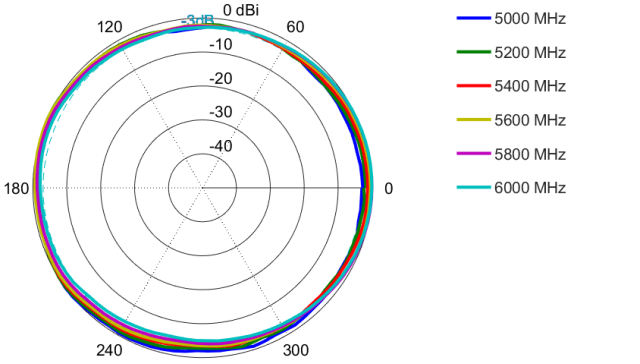
Radiation Patterns

Elevation: 5000 - 6000 MHz



Azimuth: 5000 – 6000 MHz



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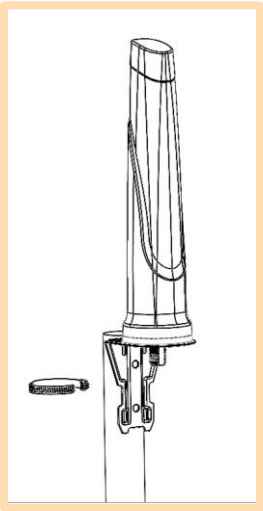
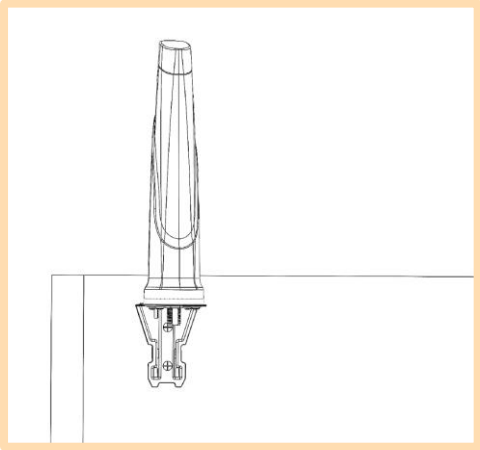
Mounting Options



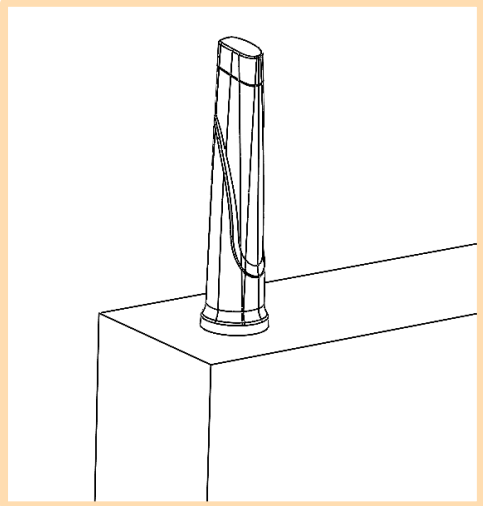
Pole Mount

Pole mounted using included L-Bracket and cable clamp



Wall Mount

Wall/Cabinet mounted using included L-Bracket



Surface Mount

Surface mounted using included adhesive disc

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Optional Accessories

See accessories technical specifications on www.poynting.tech

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