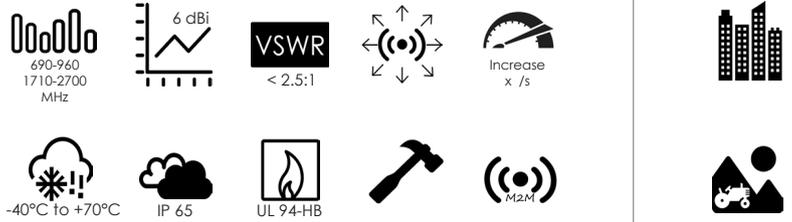


**ANTENNAS | OMNI-121-02**

# OMNI-121-02

## ALL-BAND GSM OMNI-DIRECTIONAL ANTENNA



- Covers the GSM 900, GSM 1800/UMTS and LTE Frequency bands
- Increased connectivity stability
- Machine-to-machine (M2M) capabilities
- Consistent high gain over a very wide frequency band
- Popular choice with installers because of its versatile base station
- Vandal and water resistant enclosure

### Product Overview

This medium gain omni-directional antenna covers the GSM 900, GSM1800 / UMTS and LTE frequency bands. It is a light-weight antenna that is easy to install. This is a cost- effective omni-directional solution as it comes with a 5m cable. This antenna is a popular choice with installers because of its versatile base station. It is also ideal for machine to machine (M2M) applications that are communicating through GSM network (GPRS/ EDGE/ 3G/ HSPA/ LTE)

### Features

- Medium gain omni-directional antenna
- Wall and pole mountable
- Base station agile
- Water resistant
- Lightweight
- Covers most international GSM and LTE bands

### Application areas

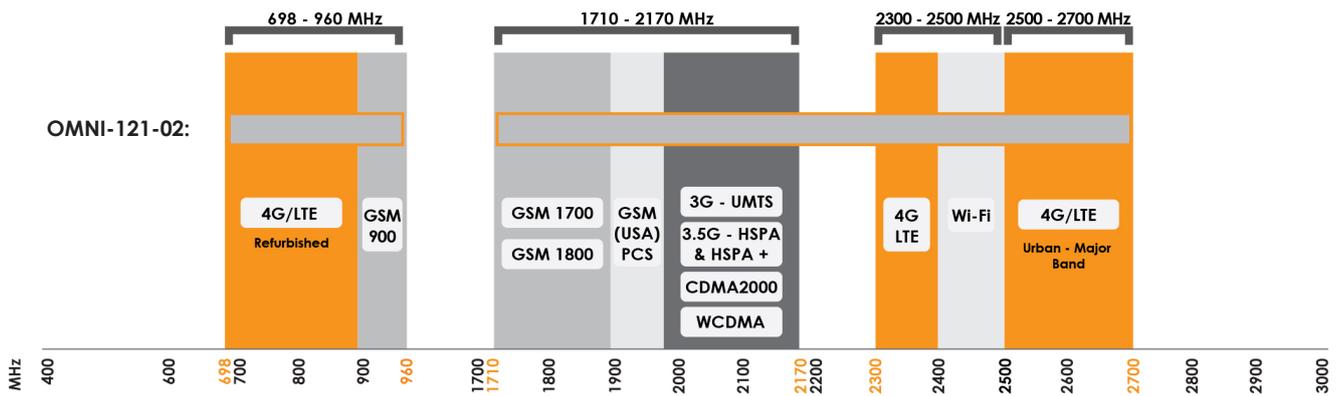
- Enables rural and remote wireless service provision
- M2M communications (ATMs, financial data processing, telemetry etc)
- Extending wireless data to weak signal areas (can extend connectivity range by factor of 3 or more)
- Poor data signal reception (indoor or outdoor)
- Slow data transmission connection
- Unstable connection
- Increase system transmission reliability



## Frequency bands

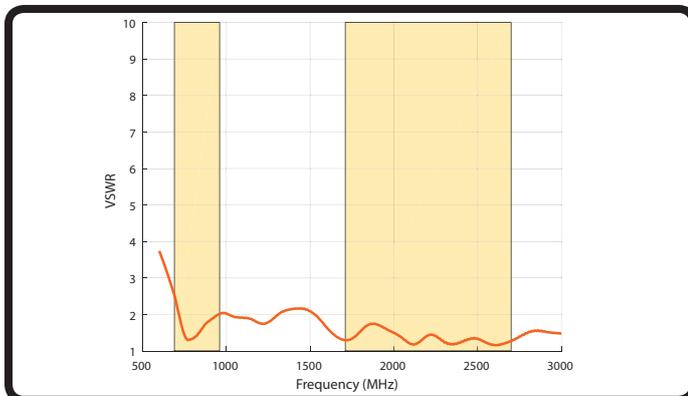
The OMNI-121-02 works on the 690 - 960 MHz, 1710 - 2700 MHz bands

 Indicates the bands on which this antenna works



## Antenna Performance Plots

### VSWR:

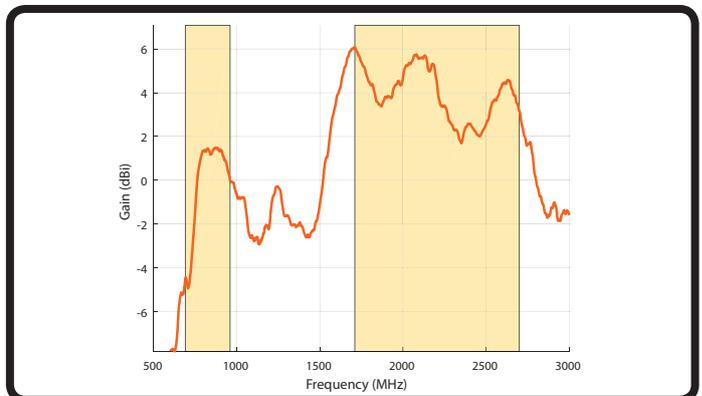


### Voltage Standing Wave Ratio (VSWR)

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-121-02 delivers superior performance across all bands with a VSWR of 2.5:1 or better.

### Gain: (excluding cable loss)



### Gain\* in dBi

6 dBi is the peak gain across all bands from 690 - 2700 MHz

Gain @ 690 - 960 MHz:

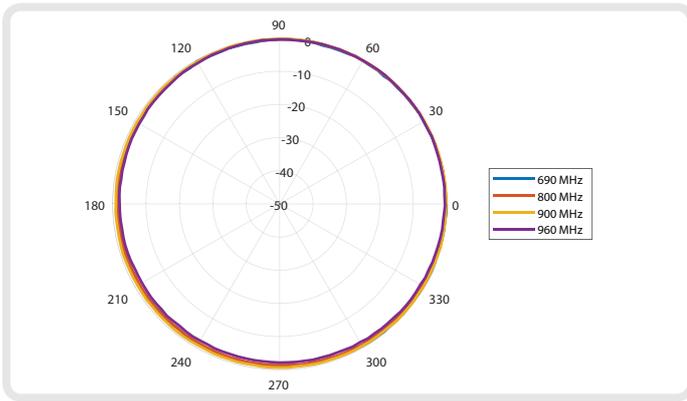
1.8 dBi

Gain @ 1710 - 2700 MHz:

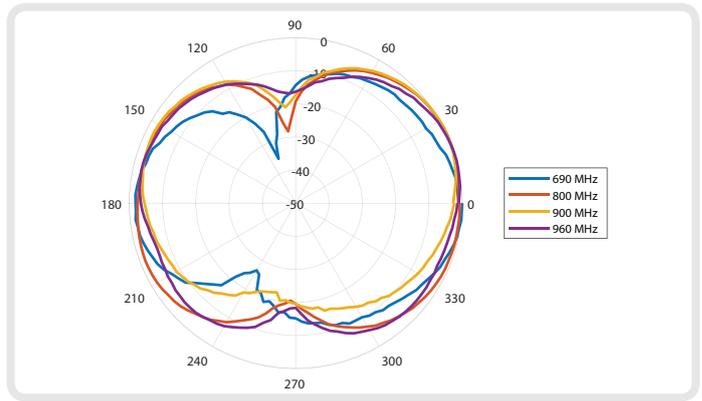
6 dBi

# Radiation Patterns

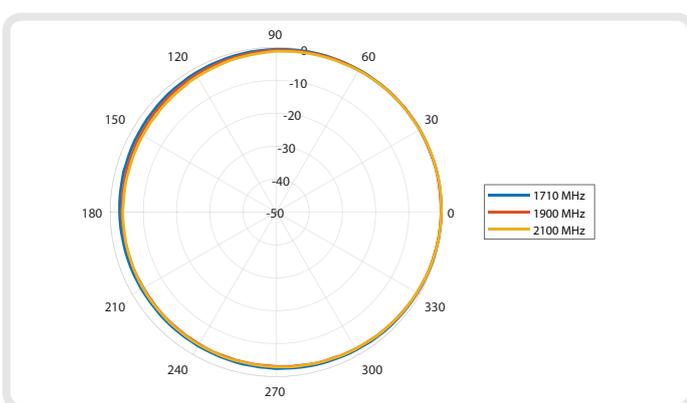
### H-Plane: 690 - 960 MHz



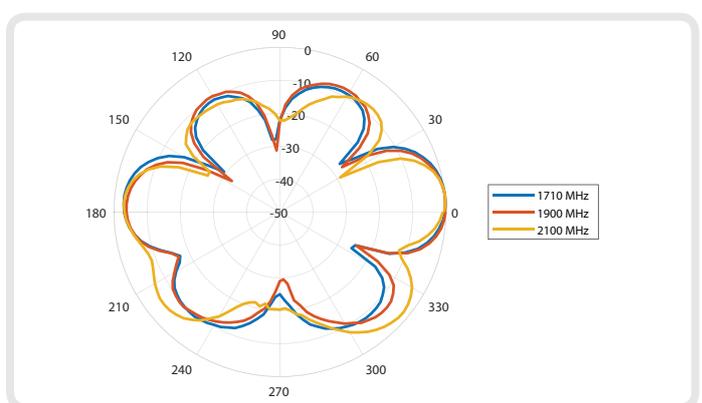
### E-Plane: 690 - 960 MHz



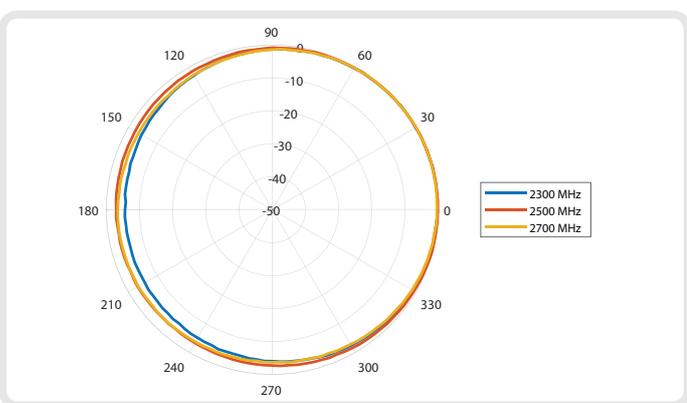
### H-Plane: 1710 - 2100 MHz



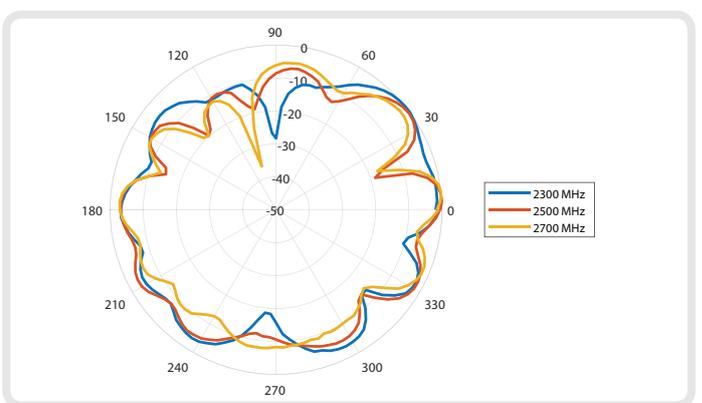
### E-Plane: 1710 - 2100 MHz



### H-Plane: 2300 - 2700 MHz



### E-Plane: 2300 - 2700 MHz



## Electrical Specifications

Frequency Bands:	690-960 MHz 1710-2700 MHz
Gain (Max):	6 dBi
VSWR:	<2.5:1
Feed Power Handling:	10 W
Input impedance:	50 Ohm (nominal)
Polarisation:	Linear Vertical
Cable loss:	0.35 dB/m @ 900 MHz 0.53 dB/m @ 2000 MHz 0.6 dB/m @ 2500 MHz
Cable Length:	4m ±5%
Cable Type:	HDF 195
Connector:	TNC (m)
DC Short:	Yes

## Environmental Specifications

Wind Survival:	160 km/h
Temperature Range (Operating):	-40°C to +70°C
Environmental Conditions:	Outdoor/Indoor
Operating Relative Humidity:	Up to 98%
Storage Humidity:	5% to 95% - non condensing
Storage Temperature:	-40°C to +70°C
Flammability rating:	UL 94-HB

## Ordering Information

Commercial name:	OMNI-121-02
Order Product Code:	A-OMNI-0121-02-V3
EAN number:	0707273470355

## Additional Accessories Available

Extension Cables:	Up to 15m HDF 195
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Various connectors available  
Installation poles and brackets available

For more detailed information and availability in your region,  
visit our web site: [www.poynting.tech](http://www.poynting.tech)

## Contact Poynting

### Poynting Antennas (Pty) Ltd - Head Office

Unit 4, N1 Industrial Park  
Landmarks Avenue,  
Samrand, 0157  
South Africa

**Phone:** +27 (0) 12 657 0050  
**E-mail:** [sales@poynting.co.za](mailto:sales@poynting.co.za)

## Mechanical Specifications

Product Dimensions (L x W x D):	555 mm x 50 mm x 50 mm
Packaged Dimensions:	595 mm x 130 mm x 65 mm
Weight:	0.50 kg
Packaged Weight:	0.65 kg
Radome Material:	ABS (Halogen Free)
Radome Colour:	Pantone - Cool Gray (1C) RAL - 7047
End Cap Colour:	Pantone - Black RAL - Black

## Product Box Contents

Antenna:	A-OMNI-0121-02-V3
Mounting Bracket:	Pole up to 50mm diameter Wall and Pole mount stainless steel bracket

*The connector is factory mounted to the antenna*



A-OMNI-0121-02-V3



## Certification Approvals and Standards

Water Ingress Protection Ratio/Standard:	IP 65
Impact resistance:	IK 08
Salt Spray:	MIL-STD 810F/ASTM B117
Product Safety:	Complies with UL, CE, EN, CSA and IEC standards

