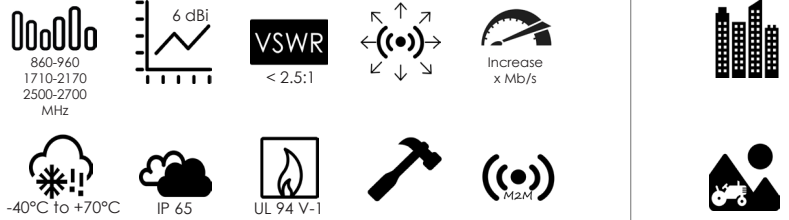


## ANTENNAS | OMNI-121

# OMNI-121

## 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 8m 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

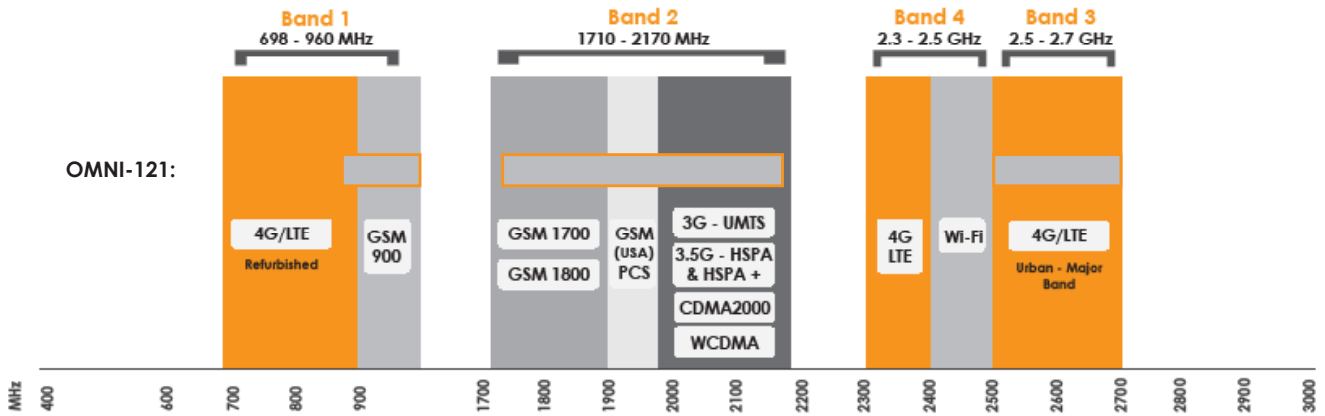
- Enables rural and remote wireless service provision
- M2M communications (ATMs, financial data processing, telemetry etc)
- Extending wireless data to weak signal areas (can extend connectivity range by factor of 3 or more)
- Poor data signal reception (indoor or outdoor)
- Slow data transmission connection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



## Frequency bands

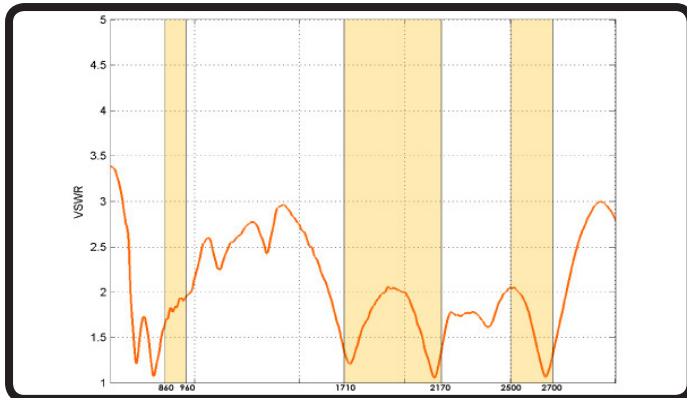
The OMNI-121 works on the 860 - 960 MHz, 1710 - 2170 and 2500 - 2700 MHz bands

 Indicates the bands on which this antenna works



## Antenna Performance Plots

### VSWR:

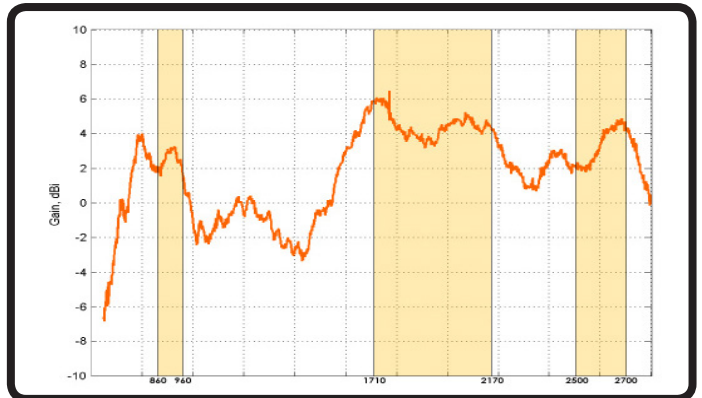


### Voltage Standing Wave Ratio (VSWR)

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

### Gain: (excluding cable loss)



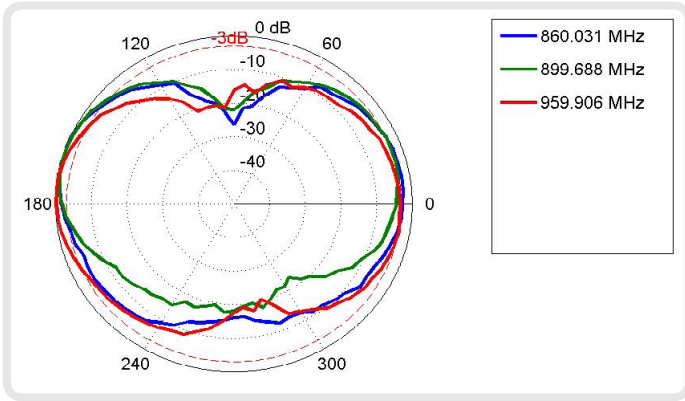
### Gain\* in dBi

6 dBi is the peak gain across all bands from 860 - 2700 MHz

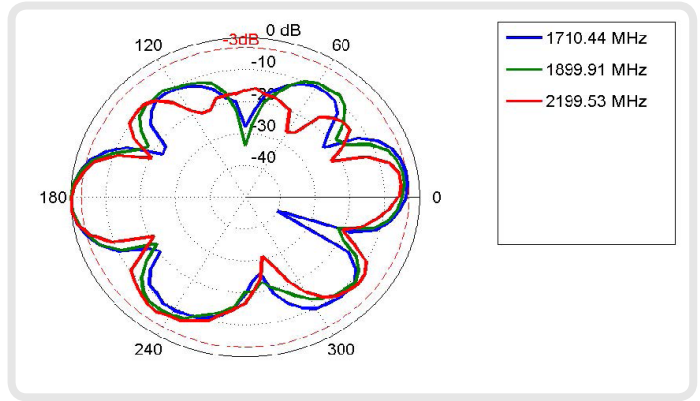
|                         |       |
|-------------------------|-------|
| Gain @ 860 - 960 MHz:   | 4 dBi |
| Gain @ 1710 - 2170 MHz: | 6 dBi |
| Gain @ 2500 - 2700 MHz: | 4 dBi |

## Radiation Patterns

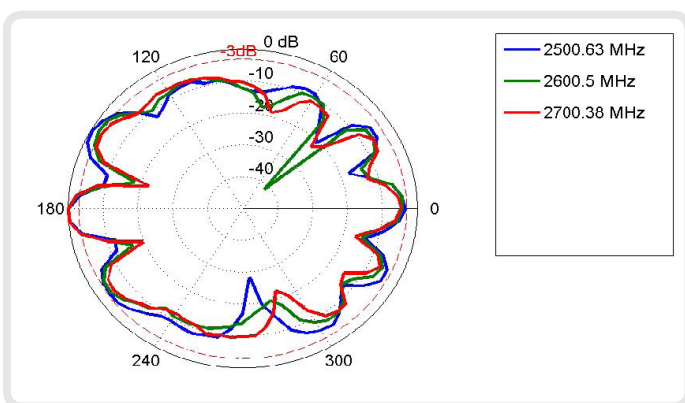
H-Plane: 860 - 960 MHz



H-Plane: 1700 - 2200 MHz



H-Plane: 2500 - 2700 MHz



## Electrical Specifications

|                      |  |
|----------------------|--|
| Frequency Bands:     | 860-960 MHz<br>1710-2170 MHz<br>2500-2700 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<br>0.53 dB/m @ 2000 MHz<br>0.6 dB/m @ 2500 MHz |
| 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             |

## Ordering Information

|                     |                |
|---------------------|----------------|
| Commercial name:    | OMNI-121       |
| Order Product Code: | A-OMNI-0121-V3 |
| EAN number:         | 6009693810709  |

## Additional Accessories Available

|                   |                   |
|-------------------|-------------------|
| Extension Cables: | Up to 15m HDF 195 |
|-------------------|-------------------|

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

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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)<br>RAL - 7047 |
| End Cap Colour:                 | Pantone - Black<br>RAL - Black         |

## Product Box Contents

|                   |   |
|-------------------|---|
| Antenna:          | A-OMNI-0121-V3  |
| Mounting Bracket: | Pole up to 50mm diameter Wall<br>and Pole mount stainless steel bracket |
| Cable Length:     | 8m  |
| Cable Type:       | HDF 195   |
| Connector:        | SMA (m)   |

*The connector is factory mounted to the antenna*



A-OMNI-0121-V3



## Certification Approvals and Standards

|  |  |
|--|--|
| Flammability rating:                     | UL 94-V1<br>EN 13823                               |
| 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,<br>CSA and IEC standards |



### OMNI-121

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Product Specifications may change without prior notice  
Revised: October 2015

Regulatory Compliance: RoHS 2011/65/EU Compliant | ISO 9001:2008  
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[www.poynting.tech](http://www.poynting.tech)