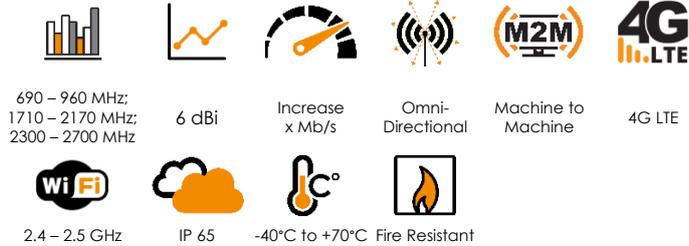


## ANTENNAS | OMNI-121 SERIES

# OMNI-DIRECTIONAL, WIDEBAND LTE ANTENNA

690 - 960 MHz, 1.8 dBi; 1710 - 2700 MHz, 6 dBi



- Cover 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 range
- Popular choice with installers because of its versatile base station
- Vandal and water-resistant enclosure (IP 65)



APPLICATION AREAS

## 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. The antenna is a popular choice with installers because of its versatile base station capabilities. 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
- Lightweight
- Covers most international GSM and LTE bands

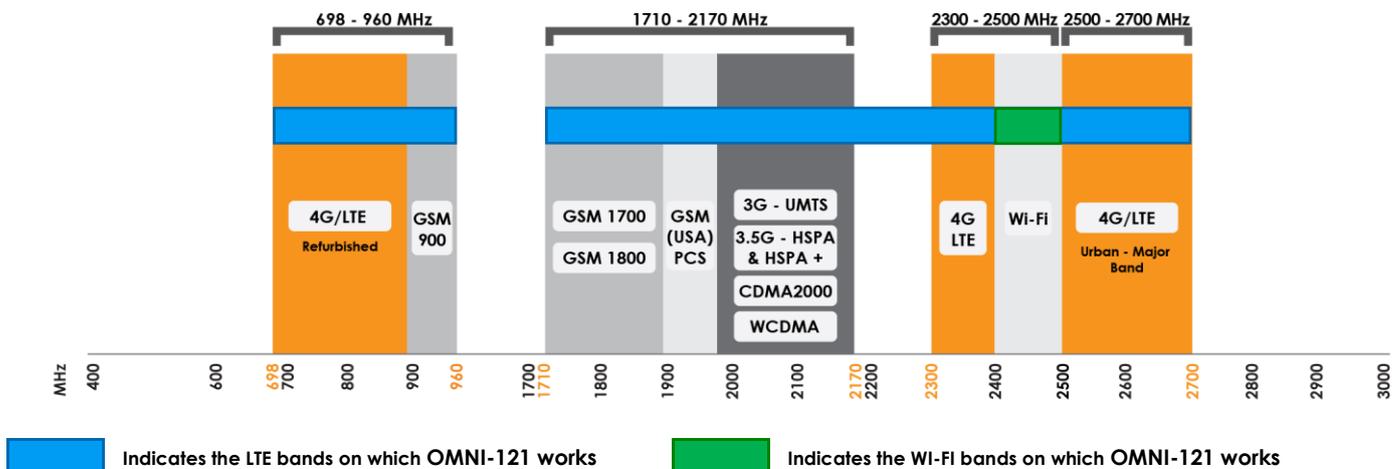
## Application Areas

- 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 is an omni-directional antenna that works from 690 – 960 MHz | 1710 – 2170 MHz | 2300 – 2700 MHz



### Antenna Derivatives

Product Order Code (SKU)	A-OMNI-0121-V3	A-OMNI-0121-01-V3	A-OMNI-0121-02-V3
Ports	1	1	1
SISO / MIMO	SISO	SISO	SISO
Coax Cable Type	HDF 195	HDF 195	HDF 195
Coax Cable Length	8m	5m	4m
Connector Type	SMA (M)	SMA (M)	TNC (M)
Weight	0.57 kg	0.43 kg	0.41 kg
Packaged Weight	0.72 kg	0.60 kg	0.58 kg
EAN	6009693810709	0707273469977	0707273470355

\*The coax cable & connector are factory mounted to the antenna

## Electrical Specifications

<b>Frequency bands:</b>	690 – 960 MHz 1710 – 2170 MHz 2300 – 2700 MHz
<b>Gain (max):</b>	1.8 dBi @ 690-960 MHz 6 dBi @ 1710-2170 MHz 5 dBi @ 2300-2700 MHz
<b>VSWR:</b>	<2:1 across 90% of the bands
<b>Feed power handling:</b>	10 W
<b>Input impedance:</b>	50 Ohm (nominal)
<b>Polarisation:</b>	Linear Vertical
<b>Coax cable loss:</b>	0.385 dB/m @ 900 MHz 0.565 dB/m @ 1800 MHz 0.666 dB/m @ 2400 MHz
<b>DC short:</b>	Yes

## Product Box Contents

<b>Antenna:</b>	A-OMNI-0121-V3
<b>Mounting bracket:</b>	Pole up to 50mm diameter Wall and pole mount stainless steel bracket

## Mechanical Specifications

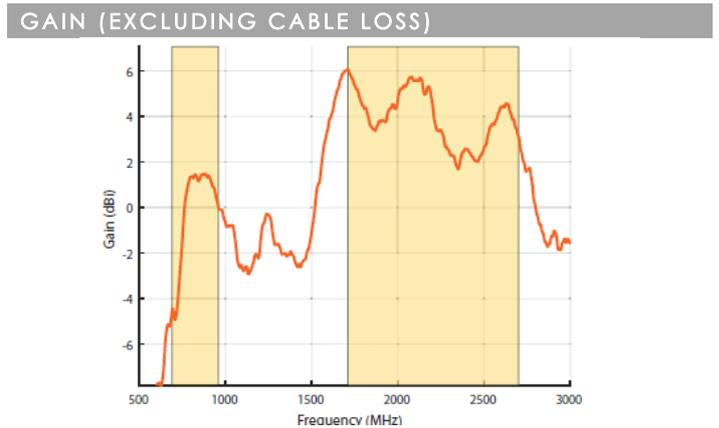
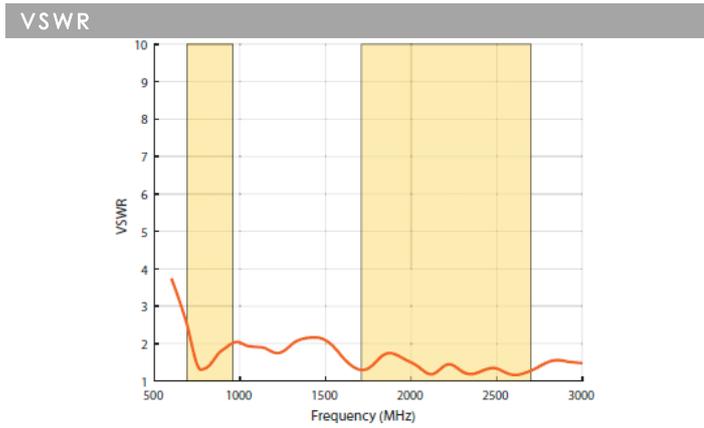
<b>Product dimensions</b>	590 mm x 80 mm x 55 mm
<b>Packaged dimensions:</b>	595 mm x 130 mm x 65 mm
<b>Radome material:</b>	ABS (Halogen Free)
<b>Radome colour:</b>	Pantone – Cool Gray (1C) RAL - 7047
<b>End cap colour:</b>	Pantone - Black RAL - Black
<b>Mounting Type:</b>	Pole and wall mount

## Environmental Specifications, Certification & Approvals

<b>Wind Survival:</b>	≤160 km/h
<b>Temperature Range (Operating):</b>	-40°C to +70°C
<b>Environmental Conditions:</b>	Outdoor/Indoor
<b>Water ingress protection ratio/standard:</b>	IP 65
<b>Salt Spray:</b>	MIL-STD 810F/ASTM B117
<b>Operating Relative Humidity:</b>	Up to 98%
<b>Storage Humidity:</b>	5% to 95% - non-condensing
<b>Storage Temperature:</b>	-40°C to +70°C
<b>Enclosure Flammability Rating:</b>	UL 94-HB
<b>Impact resistance:</b>	IK 08
<b>Product Safety &amp; Environmental:</b>	Complies with CE and RoHS standards



**Antenna Performance Plots**



**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 <2:1 or better across 90% of the bands.

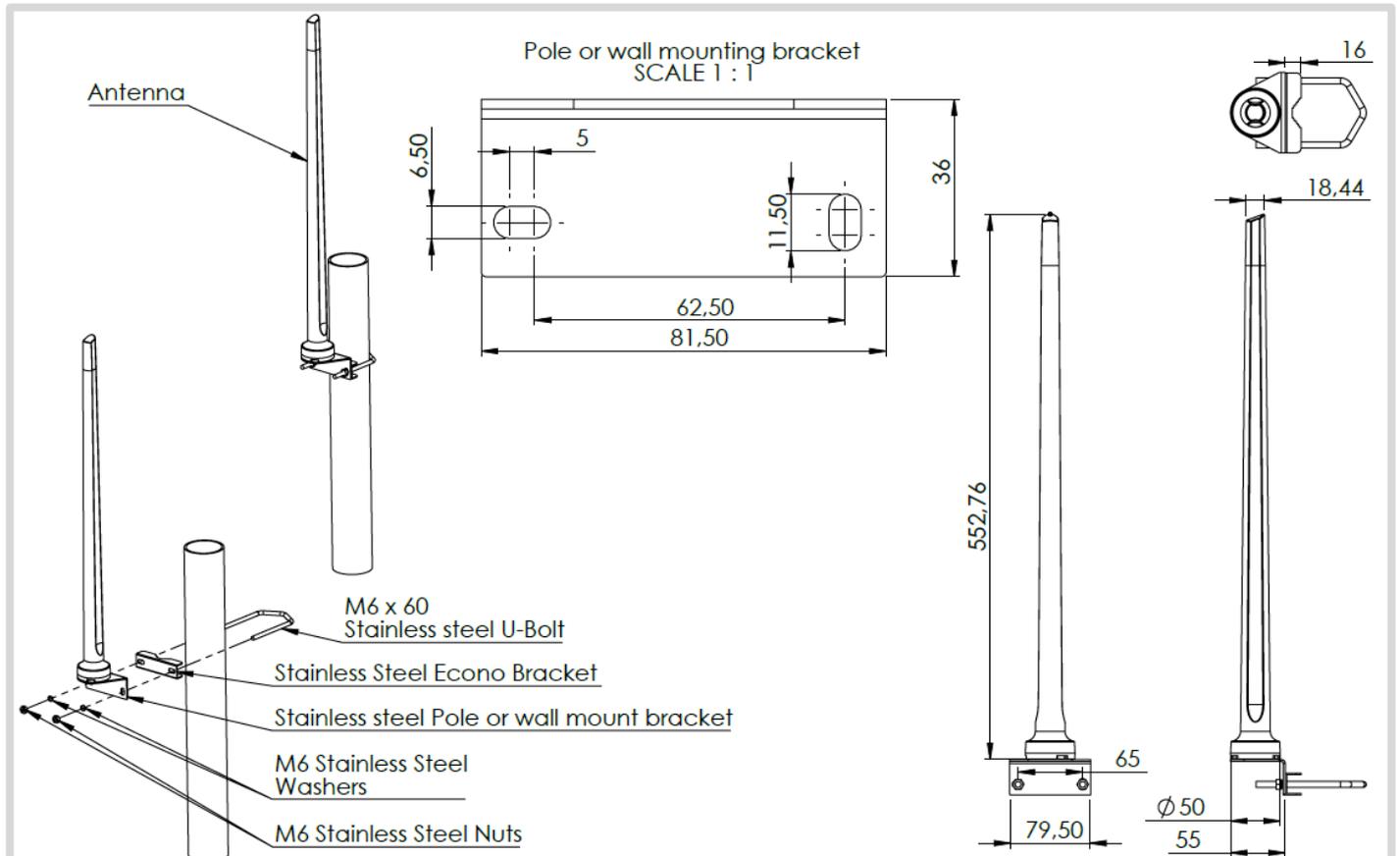
**Gain\* in dBi**

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

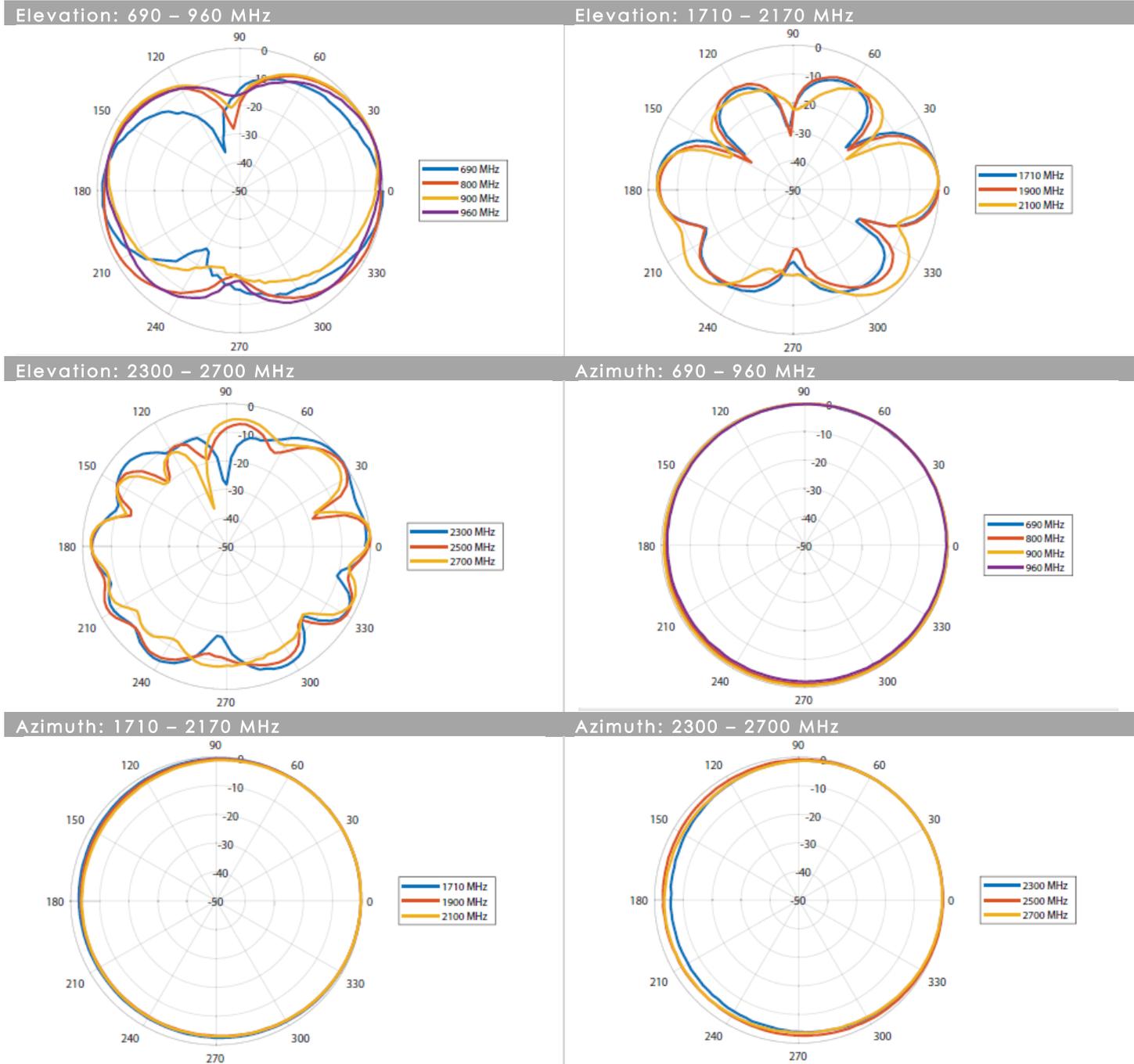
Gain @ 690 – 960 MHz:	1.8 dBi
Gain @ 1710 – 2170 MHz:	6 dBi
Gain @ 2300 – 2700 MHz:	5 dBi

*\*Antenna gain measured with polarisation aligned standard antenna*

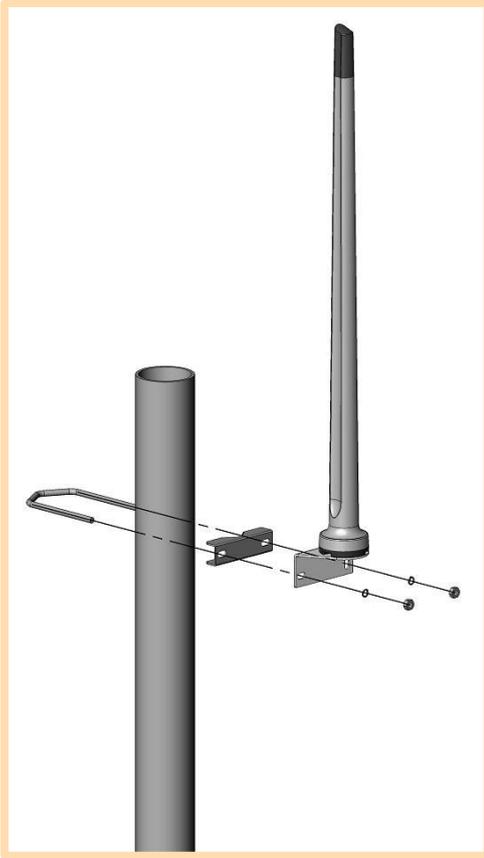
**Technical Drawings**



**Radiation Patterns**



## Mounting Options



### Pole Mount

Wall/pole mounted bracket included



### Wall Mount

Wall/pole mounted bracket included

---

### Additional Accessories

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

See accessories technical specifications on [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)

#### **Poynting Europe**

Regus Business Center Neue Messe Riem  
Kronstadter Straße 4  
81677 München  
Germany

**Phone:** +49 89 208026538

**E-mail:** [sales-europe@poynting.tech](mailto:sales-europe@poynting.tech)