

OMNI-121

ANTENNAS | OMNI-121 SERIES

OMNI-DIRECTIONAL, WIDEBAND LTE ANTENNA

698 - 2700 MHz; 6 dBi



698 – 960 MHz;
1427 - 1517 MHz;
1710 – 2170 MHz;
2300 – 2700 MHz



6 dBi



Increase
x Mb/s



Omni-
Directional



Machine to
Machine



4G LTE



2.4 – 2.5 GHz



IP 65



-40°C to +70°C



Fire Resistant



Urban



Rural/Farm

APPLICATION AREAS

- 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)

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

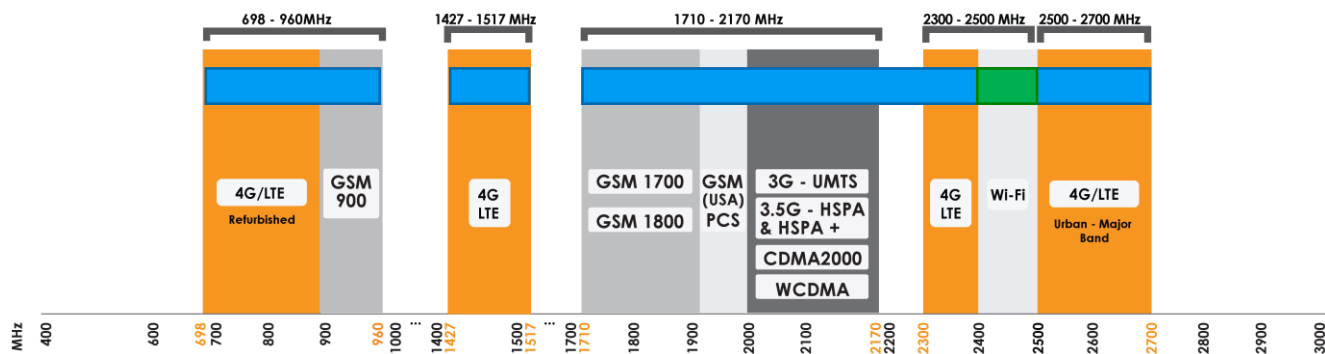
Application Areas

- 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 698 – 960 MHz | 1427 – 1517 MHz | 1710 – 2170 MHz | 2300 – 2700 MHz



■ Indicates the LTE bands on which OMNI-121 works ■ Indicates the WI-FI bands on which OMNI-121 works

Antenna Derivatives

Product Order Code (SKU)	A-OMNI-0121-V3	A-OMNI-0121-01-V3	A-OMNI-0121-03-V3
Ports	1	1	1
SISO / MIMO	SISO	SISO	SISO
Coax Cable Type	HDF 195	HDF 195	HDF 195
Coax Cable Length	8m	5m	5m
Connector Type	SMA (M)	SMA (M)	FME (F)
Weight	0.57 kg	0.43 kg	0.375 kg
Packaged Weight	0.72 kg	0.60 kg	0.63 kg
EAN	6009693810709	6009710923887	6009710922507
Stock Status	Stock Item	Stock Item	Made to Order (Requires MOQ)

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

Electrical Specifications

Frequency bands:	698 – 960 MHz 1427 – 1517 MHz 1710 – 2170 MHz 2300 – 2700 MHz
Gain (max):	1.8 dBi @ 698 - 960 MHz 0 dBi @ 1427 – 1517 MHz 6 dBi @ 1710 - 2170 MHz 5 dBi @ 2300 - 2700 MHz
VSWR:	<2:1 across 90% of the bands
Feed power handling:	10 W
Input impedance:	50 Ohm (nominal)
Polarisation:	Linear Vertical
Coax cable loss:	0.385 dB/m @ 900 MHz 0.507 dB/m @ 1500 MHz 0.565 dB/m @ 1800 MHz 0.666 dB/m @ 2400 MHz
DC short:	Yes

Product Box Contents

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

Mechanical Specifications

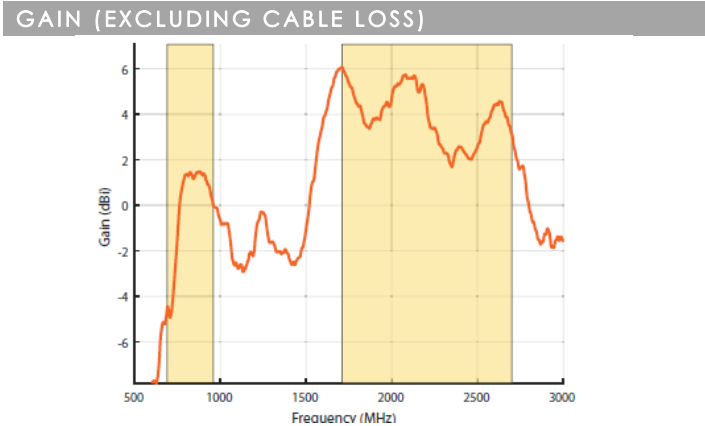
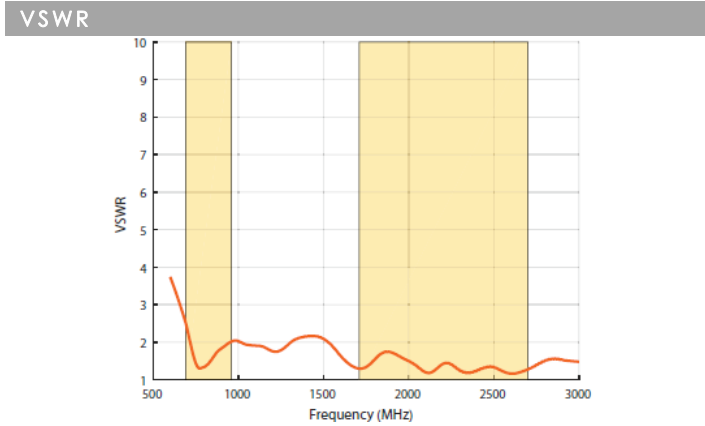
Product dimensions	553 mm x Ø50 mm
Packaged dimensions:	595 mm x 130 mm x 65 mm
Radome material:	ABS (Halogen Free)
Radome colour:	Pantone – Cool Gray (1C) RAL - 7047
End cap colour:	Pantone - Black RAL - Black
Mounting Type:	Pole and wall mount

Environmental Specifications, Certification & Approvals

Wind Survival:	≤160 km/h
Temperature Range (Operating):	-40°C to +70°C
Environmental Conditions:	Outdoor/Indoor
Water ingress protection ratio/standard:	IP 65
Salt Spray:	MIL-STD 810F/ASTM B117
Operating Relative Humidity:	Up to 98%
Storage Humidity:	5% to 95% - non-condensing
Storage Temperature:	-40°C to +70°C
Enclosure Flammability Rating:	UL 94-HB
Impact resistance:	IK 08
Product Safety & Environmental:	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 across 90% of the bands.

*VSWR measured with 8m low loss cable

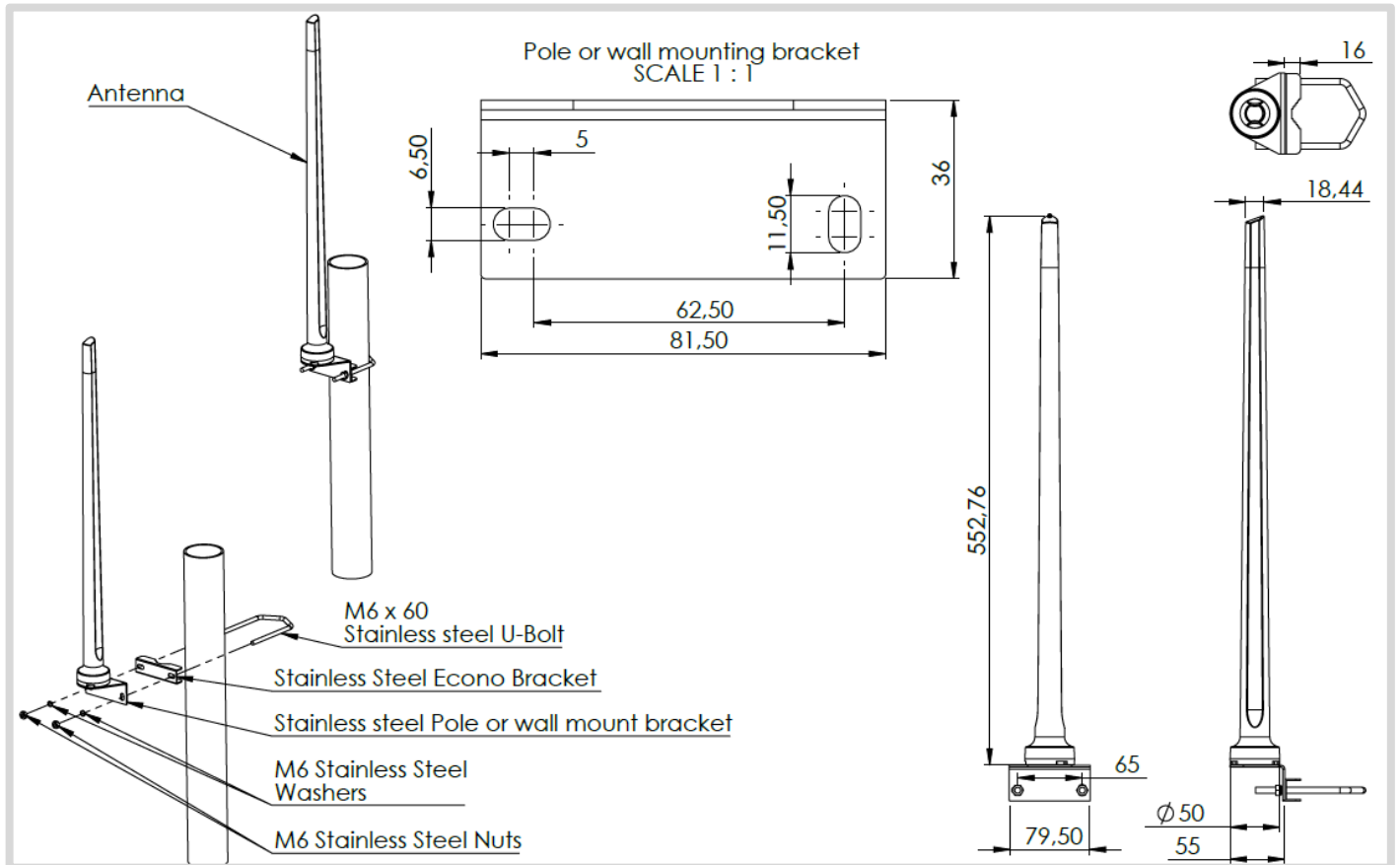
Gain* in dBi

6 dBi is the peak gain across all bands from 698 – 2700 MHz

Gain @ 698 – 960 MHz:	1.8 dBi
Gain @ 1427 – 1517 MHz:	0 dBi
Gain @ 1710 – 2170 MHz:	6 dBi
Gain @ 2300 – 2700 MHz:	5 dBi

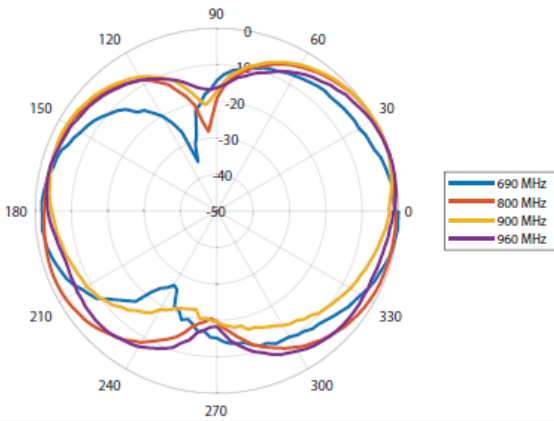
*Antenna gain measured with polarisation aligned standard antenna

Technical Drawings

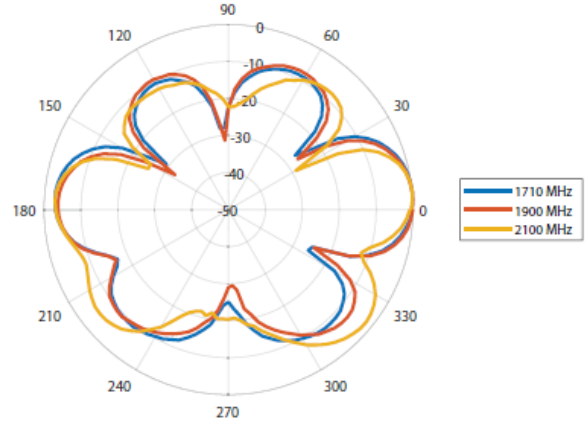


Radiation Patterns

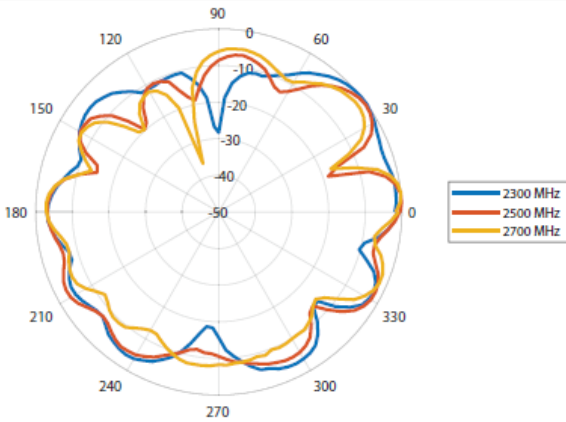
Elevation: 698 – 960 MHz



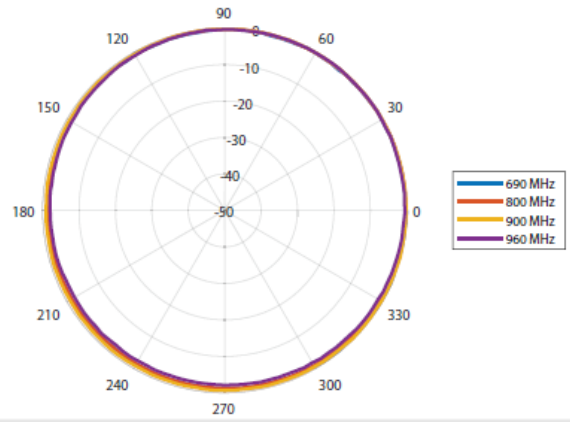
Elevation: 1710 – 2170 MHz



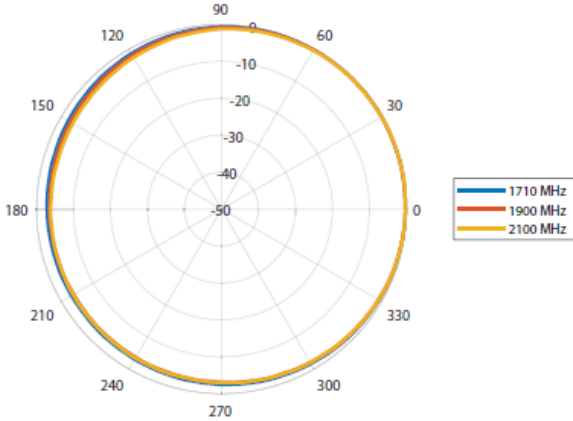
Elevation: 2300 – 2700 MHz



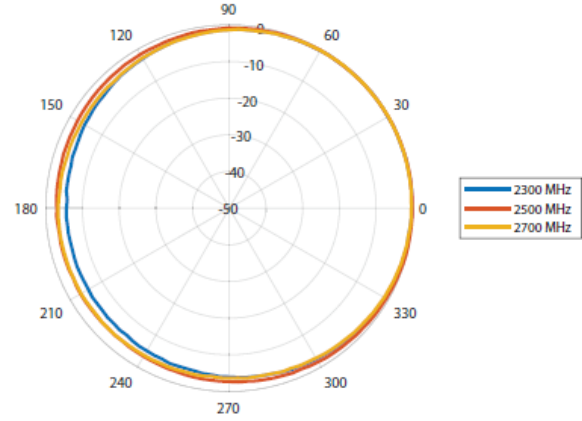
Azimuth: 698 – 960 MHz



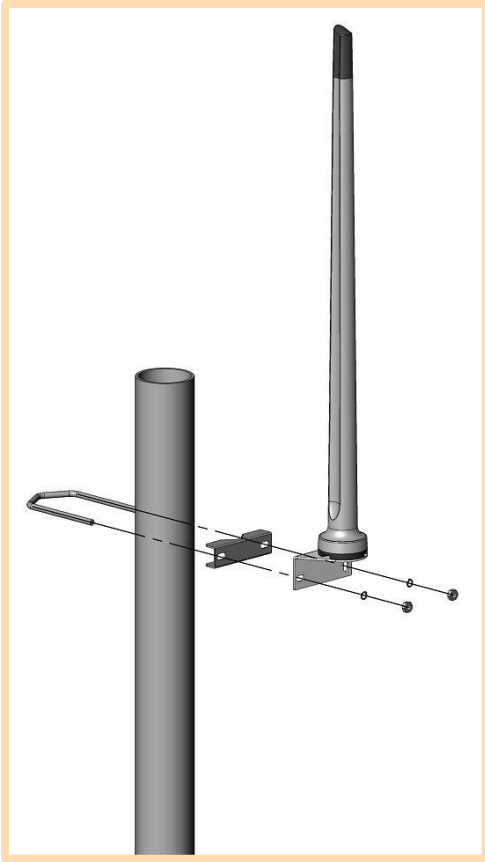
Azimuth: 1710 – 2170 MHz



Azimuth: 2300 – 2700 MHz



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

Contact Poynting

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