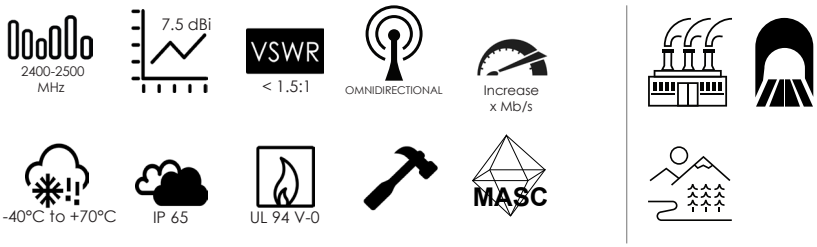
OMNI-50IS

2400-2500 MHZ INTRINSICALLY SAFE HIGH GAIN OMNI-DIRECTIONAL ANTENNA



- **Reliable Wi-Fi connectivity in hazardous environments**
- **High gain over the 2400 MHz Wi-Fi band**
- **Vandal and water resistant enclosure**
- **Intrinsically Safe with high resistivity non static radome.**
- **Versatile installation mounting options.**

Product Overview

This high gain omni-directional antenna compliments our Wi-Fi MinePoynt tunnel and mine antennas. The combination of MinePoynt beam antennas for long distance thru-tunnel links with this Omni for open areas, exploits Poynting's fifteen years' experience in designing and manufacturing antennas for underground mining data networks. This antenna is also suitable for oil/gas chemical environments where IS equipment is required.

Features

- Proven antenna performance giving maximum range in all directions.
- Wall and pole mountable with flexible adaption options for other mounting requirements.
- Water resistant Lightweight
- Intrinsically safe/anti- static radome with high resistivity using Poynting's propriety low conductive coating.

Application areas

- Underground telemetry
- Seamless connection to personnel using VOIP phones, smart devices and tablets.
- Creation of complete in tunnel/mine wide data networks and or internet connectivity.
- Supplementing fiber/cable networks by providing wireless "Hotspots" to areas to enhance mobility or extend networks to inaccessible areas.
- Extension/deployment of wireless connectivity on oil rigs, refinery, factories where intrinsically safe equipment is required.

Revised: October 2015

Regulatory Compliance: RoHS 2011/65/EU Compliant | ISO 9001:2008
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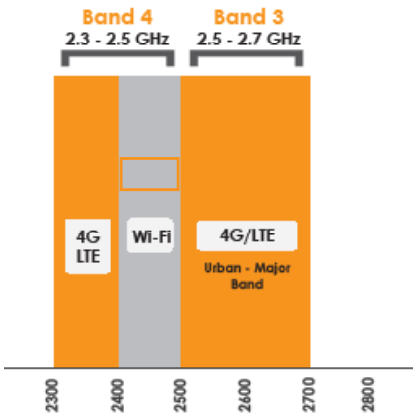
Frequency bands

The OMNI-50IS works on the 2400 - 2500 MHz bands

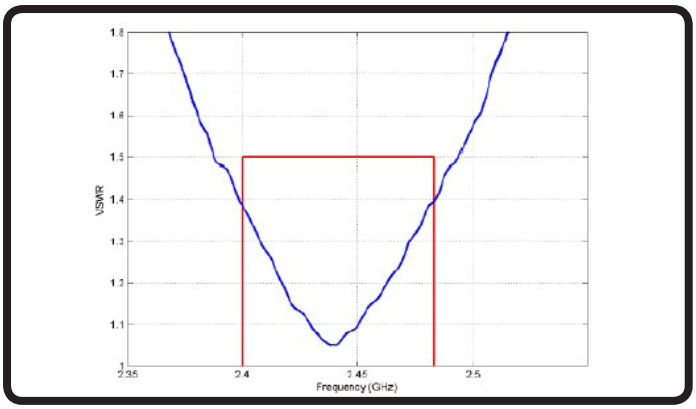
Indicates the bands on which this antenna works

OMNI-50IS:



Antenna Performance Plots

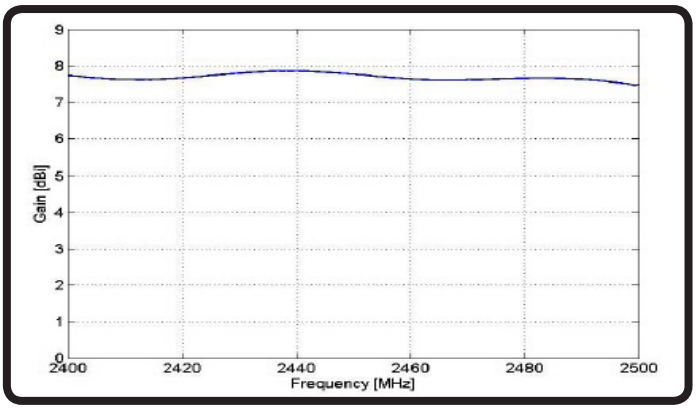
VSWR:



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 2:1.
The OMNI-50 delivers superior performance accross all bands with a VSWR of 2.0:1 or better.

Gain: (excluding cable loss)



Gain* in dBi

7.5 dBi is the peak gain across all bands from 2400 - 2500 MHz

Gain@ 2400 - 2500 MHz: 7.5 dBi

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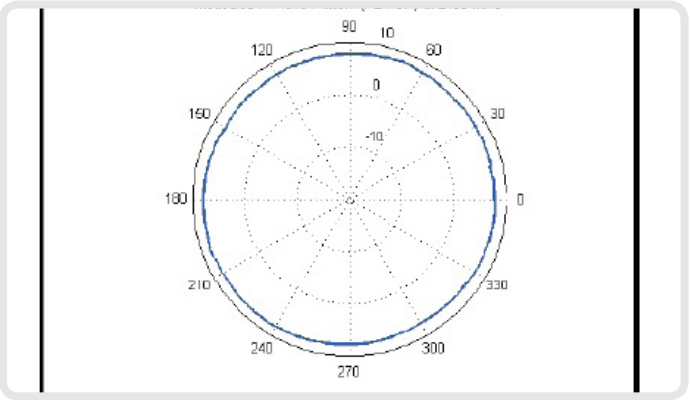
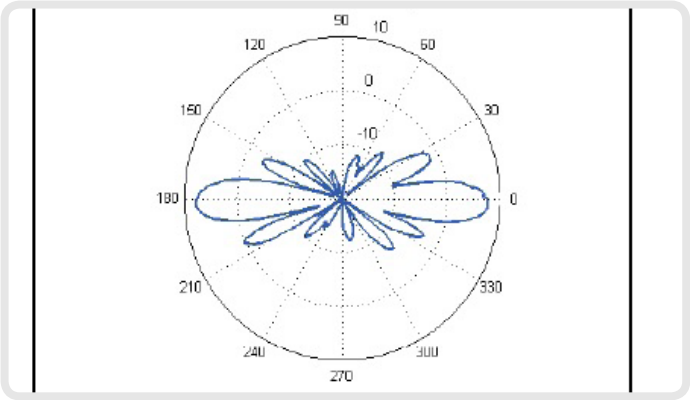
Radiation Patterns

H-Plane:



E-Plane:



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Electrical Specifications

Frequency Bands:	2400-2500 MHz
Gain (Max):	7.5 dBi
VSWR:	<1.5:1
Feed Power Handling:	10 W
Input impedance:	50 Ohm (nominal)
Polarisation:	Vertical
DC Short:	Yes

Mechanical Specifications

Product Dimensions (L x W x D):	570 mm x 50 mm x 50 mm
Packaged Dimensions:	600 mm x 135 mm x 65 mm
Weight:	254 g
Packaged Weight:	512 g
Radome Material:	ABS (Halogen Free)
Radome Colour:	Pantone - Cool Gray (1C) RAL - 7047
End Cap Colour:	Pantone - Black RAL - Black

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
Intrisically Safe	Yes

Product Box Contents

Antenna:	A-OMNI-0050-IS
Mounting Bracket:	Pole up to 50mm diameter Wall and Pole mount stainless steel bracket
Cable Length:	8m
Cable Type:	HDF 195
Connector:	SMA (m)

The conntector is factory mounted to the antenna

A-OMNI-0050IS

Ordering Information

Commercial name:	OMNI-50IS
Order Product Code:	A-OMNI-0050-IS
EAN number:	6009693810990

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

Certification Approvals and Standards

Flammability rating:	UL 94-V0 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, CSA and IEC standards

Contact Poynting

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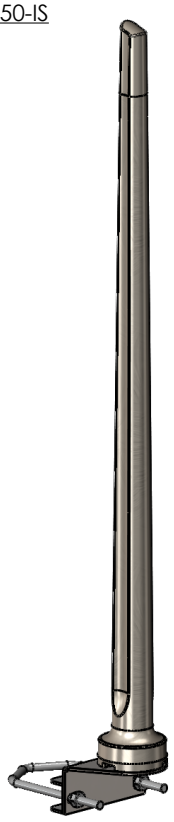
Process :	Material:	General Tolerance: Unless otherwise stated ± mm	Surface Finish: µm

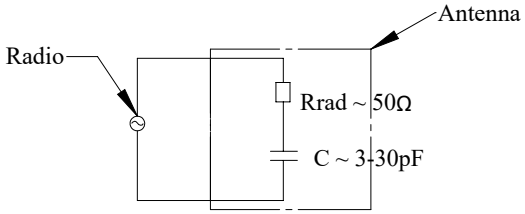
NOTES

- Capacitance as measured between the inner conducting wire of the coaxial cable to the outer conductor of the coaxial cable 3-30 pF
- Frequency 2.4-2.5 GHz
- The A-OMNI-0050 are transducers that transforms the electrical currents and voltages received at its input terminals and radiates this energy in the form of an electromagnetic wave (and visa-versa)

A-OMNI-0050-IS



Equivalent Circuit

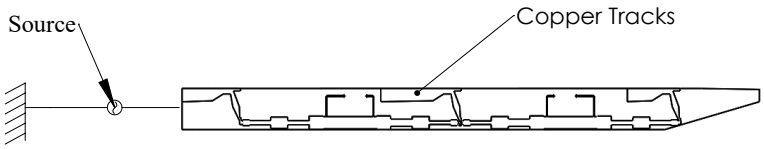


Typical Power consumption and associated parameters

- Pmax = 87 mW
- Vmax = 2,95V
- Imax = 60mA

Surface resistivity: 1MΩ/square to 50MΩ/square

Electrical Schematic A-OMNI-0050-IS



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