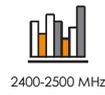


ANTENNAS | HELI-4

2400 – 2500 MHz HIGH GAIN MINE/TUNNEL ANTENNA



2400-2500 MHz



15.5 dBi



Increase
x Mb/s



-20°C to +70°C



Fire Resistant



IP 65



M2M
Machine to
Machine



Mining



Tunnelling



MASC
MASC



Urban

APPLICATION AREAS

- Circular polarised helical antenna
- Wi-Fi compatible
- Uni-directional
- Ruggedised
- Future proof

Product Overview

This high gain 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 directional antenna, exploits Poynting's fifteen years' experience in designing and manufacturing antennas for underground mining data networks. The tunnel antenna is the ideal antenna for 2.4-2.5 GHz wireless applications in tunnels. In tests, both the data rate and range achieved with this antenna was greater than obtained when using linearly polarized panel antennas of the same gain. The hardy construction of this antenna makes it ideal for the mining environment. A-HELI-0004 is a directional antenna whilst the closely related A-HELI-0008 fires in both directions (bi-directional). This antenna gives you a low-cost network infrastructure for current voice and data needs in mines and tunnels.

Features

- Proven antenna performance giving maximum range in all directions
- Ideal where the other devices used polarisation could change
- High gain over the 2400 MHz Wi-Fi band

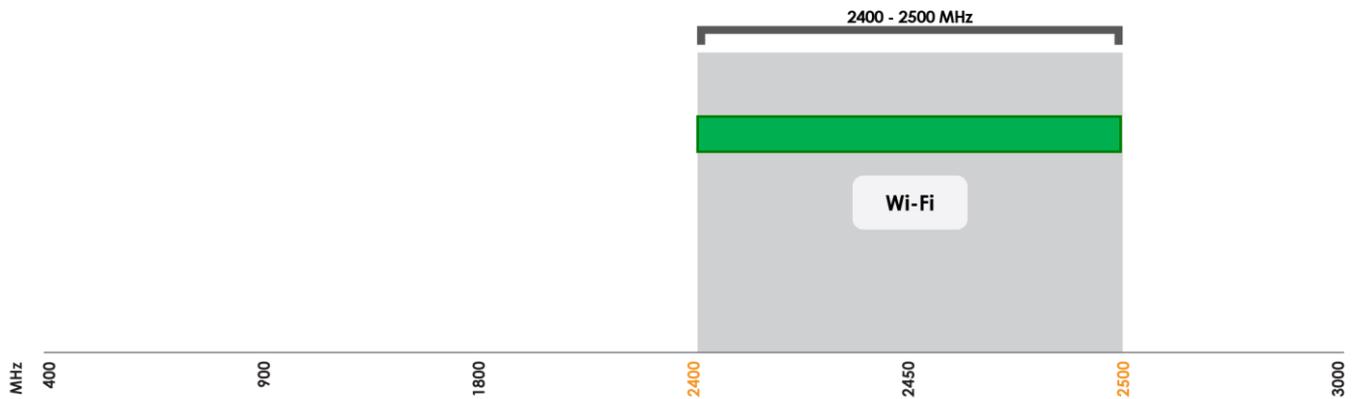
Application Areas

- Supplementing fibre/cable networks by providing wireless "Hotspots" to areas to enhance mobility or extend networks to inaccessible areas such as mines and tunnels.
- Underground telemetry
- Creation of complete in tunnel/mine wide data networks and or internet connectivity
- Seamless connection to personnel using VOIP phones, smart devices and tablets
- M2M applications



Frequency Bands

The HELI-4 is a wide-band antenna that works from 2400 – 2500 MHz



 Indicates the WIFI bands on which HELI-4 works

Antenna Overview

	
Ports	1
SISO / MIMO	SISO
Frequency Bands	2400 - 2500 MHz
Peak Gain	15.5 dBi
Coax Cable Type	N/A
Coax Cable Length	N/A
Connector Type	N-type(f)

Electrical Specifications

Frequency bands:	2400-2500 MHz
Gain (max):	15.5 dBi
VSWR:	<1.3:1
Feed power handling:	30 W
Input impedance:	50 Ohm (nominal)
Polarisation:	Left-Hand Circular
DC short:	No

Coax Cable & Connector Type

Cable length:	Up to 15m HDF 195 (extension)
Coax cable type:	N/A
Connector type:	N-type(f)

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

Product Box Contents

Antenna:	A-HELI-0004
Mounting bracket:	Two 6mm eyebolts for ceiling mount

Ordering Information

Commercial name:	HELI-4
Order product code:	A-HELI-0004
EAN number:	0707273468741

Mechanical Specifications

Product dimensions	405 mm x 110 mm x 130 mm
Packaged dimensions:	450 mm x 160 mm x 160 mm
Weight:	1.25 kg
Packaged weight:	1.26 kg
Radome material:	PVC
Radome colour:	429C RAL 7038
Mounting Type:	Ceiling Mount

Environmental Specifications, Certification & Approvals

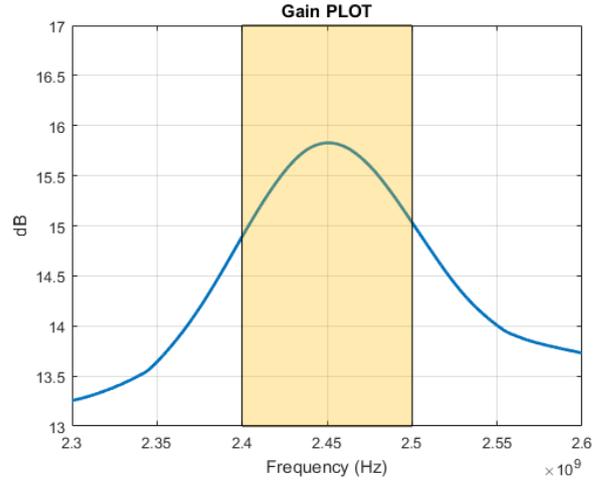
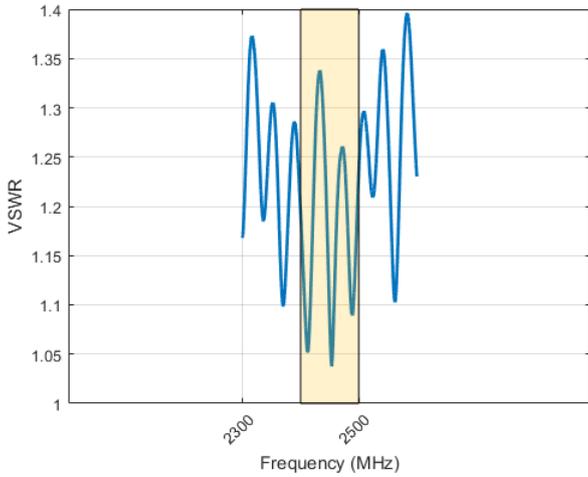
Wind Survival:	<120 km/h
Temperature Range (Operating):	-20°C to +70°C
Environmental Conditions:	Outdoor/Indoor
Water ingress protection ratio/standard:	IP 65
Salt Spray:	MIL-STD 810F /ASTM B117
Operating Relative Humidity:	Up to 98%
Storage Humidity:	5% to 95% - non-condensing
Storage Temperature:	-20°C 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

VSWR

GAIN (EXCLUDING CABLE LOSS)



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 HELI-4 delivers superior performance across all bands with a VSWR of 1.3:1 or better across 90% of the bands.

Gain* in dBi

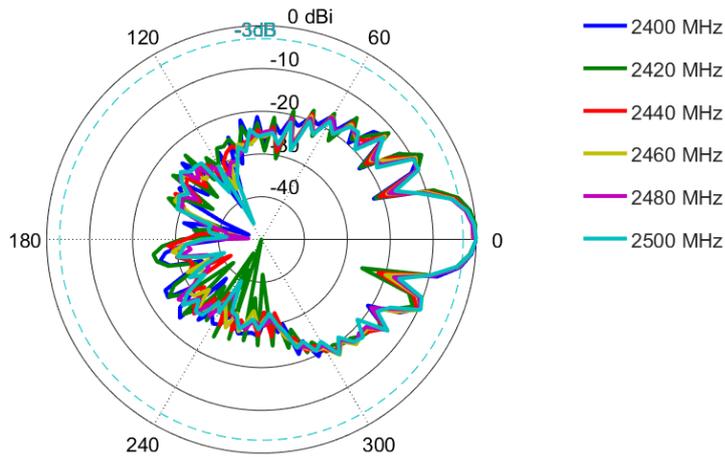
15.5 dBi is the peak gain across all bands from 2400 – 2500 MHz

Gain @ 2400 – 2500 MHz: 15.5 dBi

**Antenna gain measured with polarisation aligned standard antenna*

Radiation Patterns

Azimuth & Elevation: 2400 – 2500 MHz



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

Poynting Europe

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

Phone: +49 89 208026538

E-mail: sales-europe@poynting.tech