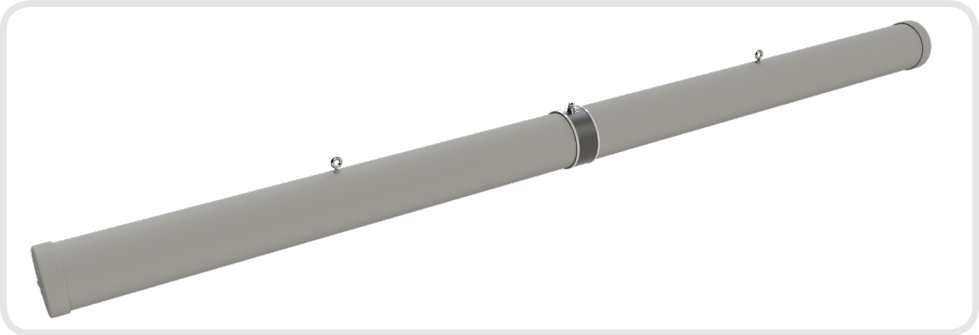
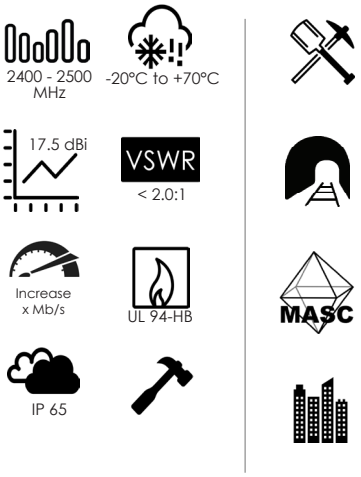
ANTENNAS | HELI-8

HELI-8

2400 - 2500 MHZ HIGH GAIN MINE/TUNNEL ANTENNA





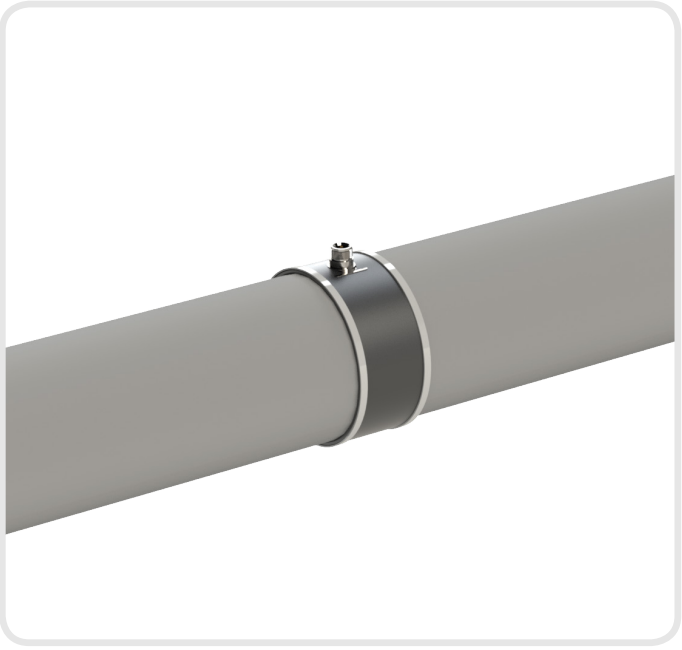
- **Circular polarised helical antenna**
- **WiFi compatible**
- **Bi-directional**
- **Ruggedised**
- **Future proof**

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. This antenna is also suitable in an Intrinsically Safe (IS) variant for oil/gas chemical environments, namely the HELI-8IS. The HELI 8 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-0008 is a Bi directional antenna whilst the closely related A-HELI-0003 fires in one direction. 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
- Versatile installation mounting options
- Lightweight



Application Areas

- Supplementing fiber/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

Revised: November 2018

Regulatory Compliance: RoHS 2011/65/EU Compliant | ISO 9001:2015
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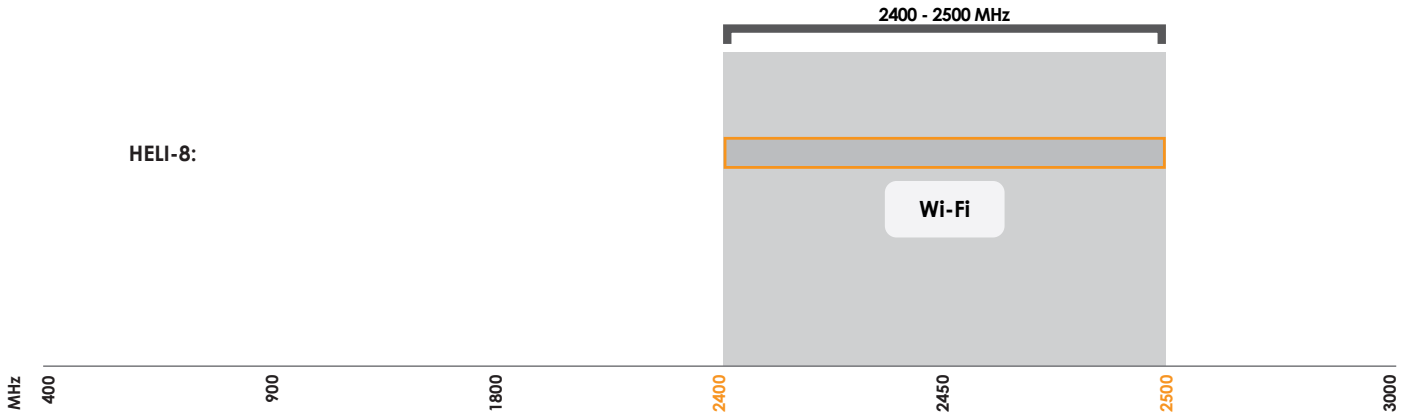
Frequency bands

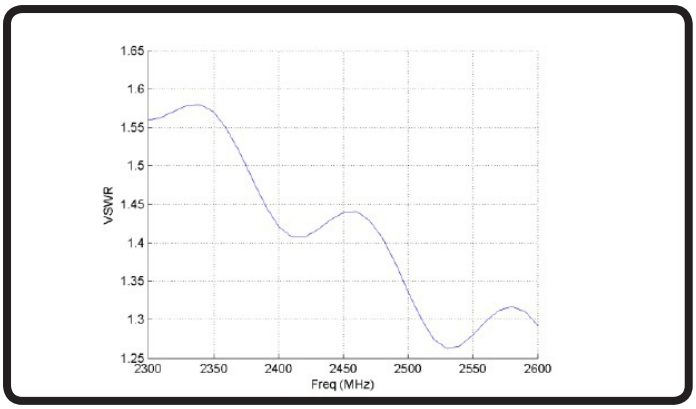
The HELI-8 is a wide-band antenna that works from 2400 - 2500 MHz

Indicates the bands on which this antenna works



Antenna performance plots

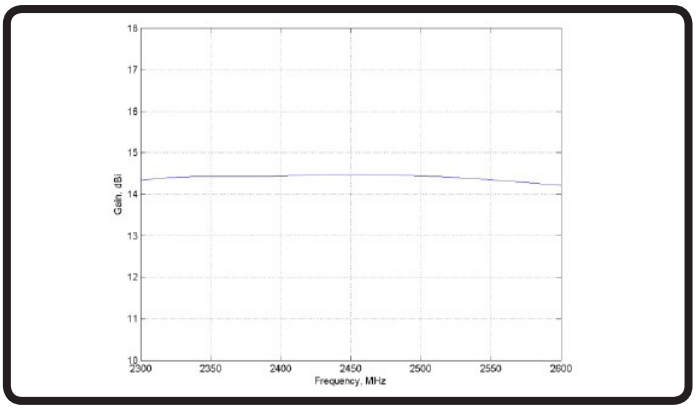
VSWR:



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 HELI-8 delivers superior performance across all bands with a VSWR of < 2.0:1 or better.

Gain: (excluding cable loss)



Gain* in dBi

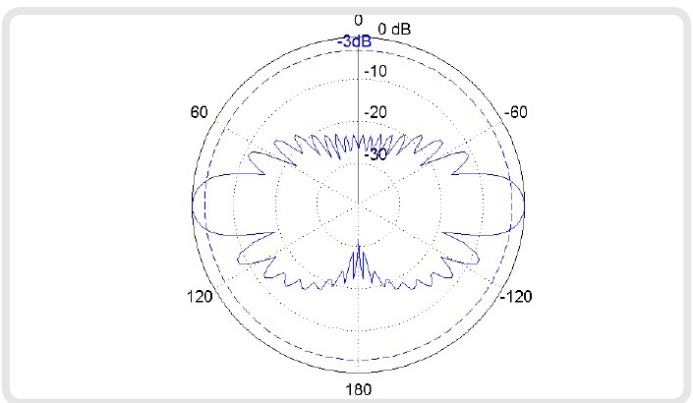
14 dBi is the peak gain across all bands from 2400 - 2500 MHz

Gain @ 2400-2500 MHz: 14 dBi

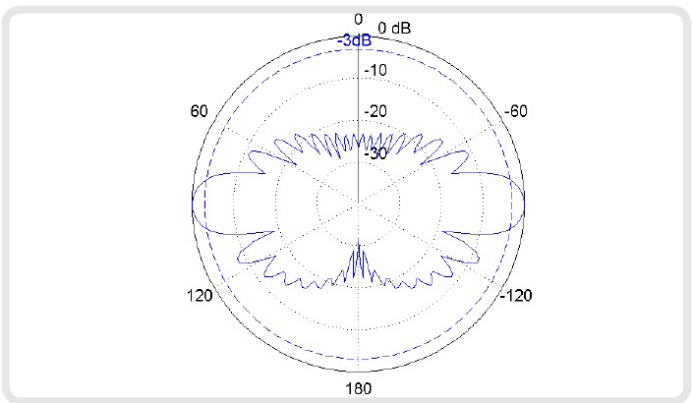
*Antenna gain measured with polarisation aligned standard antenna

Radiation patterns

Azimuth: 2400 - 2500 MHz (side view)



Elevation: 2400 - 2500 MHz (top view)



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Electrical specifications

Frequency bands:	2400 - 2500 MHz
Gain (Max):	14 dBi
VSWR:	<2.0:1
Feed power handling:	30 W
Input impedance:	50 Ohm (nominal)
Polarisation:	Circular
DC Short:	No
Connector type:	N-type solder Jack, panel mount

Mechanical specifications

Product dimensions (L x W x D):	2050 mm x 140 mm x 140 mm
Packaged dimensions:	2100 mm x 150 mm x 190 mm
Weight:	5.1 kg
Packaged weight:	6.02 kg
Radome material:	PVC
Radome colour:	429C RAL 7038

Environmental specifications

Temperature range (operating):	-20°C to +70°C
Environmental conditions:	Outdoor/Indoor
Operating relative humidity:	Up to 98%
Storage humidity:	5% to 95% - non condensing
Storage temperature:	-20°C to +70°C
Flammability rating:	UL 94-HB

Product box contents

Antenna:	A-HELI-0008
Mounting bracket:	Four 6mm eyebolts for ceiling mount

The connector is factory mounted to the antenna

Ordering information

Commercial name:	HELI-8
Order product code:	A-HELI-0008
EAN number:	0707273468765

Additional accessories available

Extension cables:	None

Certification approvals and standards

Water ingress protection ratio/standard:	IP 65 (NEMA 4X)
Impact resistance:	IK 08
Salt spray:	MIL-STD 810F /ASTM B117
Product safety:	Complies with UL, CE, EN, CSA and IEC standards

For more detailed information and availability in your region, visit our web site: www.poynting.tech

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