

Reliable Connectivity Below [Means Going Above and Beyond]

Helical Antennas

Ideal for 2.4 or 5.8 GHz

IIOT • Mining • Underground

Video / Data Transfer / VoIP Phones / LCD Screens



UNDERGROUND MINING



SUBWAY SECURITY



SUBTERRANEAN TUNNELS



ELEVATORS

TACO circularly polarized signals communicate with linearly polarized antennas such as handhelds, regardless of their antenna orientation. Traditional linear polarized signals can drop up to 20dB when antennas are not held in the same orientation as each other.

TACO Helicals are directional, giving you the most signal possible in the direction you need it. Many other underground solutions use omni antennas, which cast energy in every direction, reducing signal level and increasing reflections.

Those are just a few of the benefits you will realize with our superior Helical antennas!

TACOTM
A N T E N N A

TACO Reaches Higher [So You Can Connect Deeper]



Helical Antennas

You need underground wireless coverage, but severe reflection makes connectivity difficult. TACO Helical antennas are the solution. The reflected signal of our circularly polarized helical simply reverses polarization, resulting in less interference and superior multi-path rejection than with conventional linearly polarized antennas.

No matter what your mining operation, TACO's helicals offer reliability and consistency, even under the most difficult conditions.

2.4 GHz Helical Antennas **H1024 / H2024**

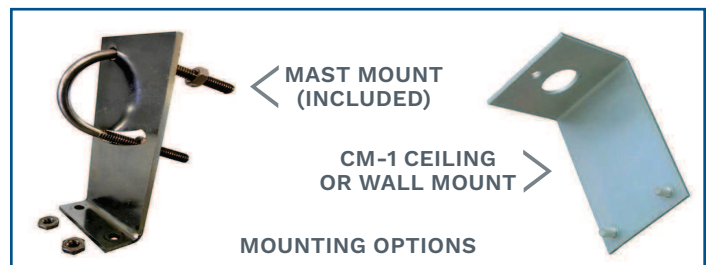
Circular polarized helical antennas are enclosed with an anti-static coated, polycarbonate radome for protection from the environment. The higher gain H2024 and bi-directional BDH2024 are available in right-turn or left-turn helix. All models include a mast mount, and wall and ceiling mounting is also available as an accessory (CM-1). These antennas are ideally suited to harsh environments that have severe reflections from rock faces, mining equipment, metal surfaces and water.



H1024



H2024



MOUNTING OPTIONS

ELECTRICAL SPECIFICATIONS

MODEL	H1024	H2024
FREQUENCY - GHz	2.4 - 2.5	2.4 - 2.5
GAIN - dBic	13.8	17.4
IMPEDANCE - Ohm	50	50
VSWR	1.5:1	1.5:1
F/B RATIO - dB	36	31
POLARIZATION	RHCP Standard	RHCP Standard
HPBW - °	35	24
TERMINAL TYPE	N Female	N Female
MAX POWER - W	50	50

MECHANICAL SPECIFICATIONS

MODEL	H1024	H2024
LENGTH - in (mm)	13.1 (333)	31.1 (795)
GROUND PLANE DIAM - in (mm)	5.5 (138)	5.5 (138)
HOUSING	Polycarbonate	Polycarbonate
WEIGHT - lb (kg)	1.1 (0.5)	1.6 (0.73)
MOUNTING O.D. - in (mm)	1-5/8 (40.6) Mast or Wall	1-5/8 (40.6) Mast or Wall

APPLICATIONS

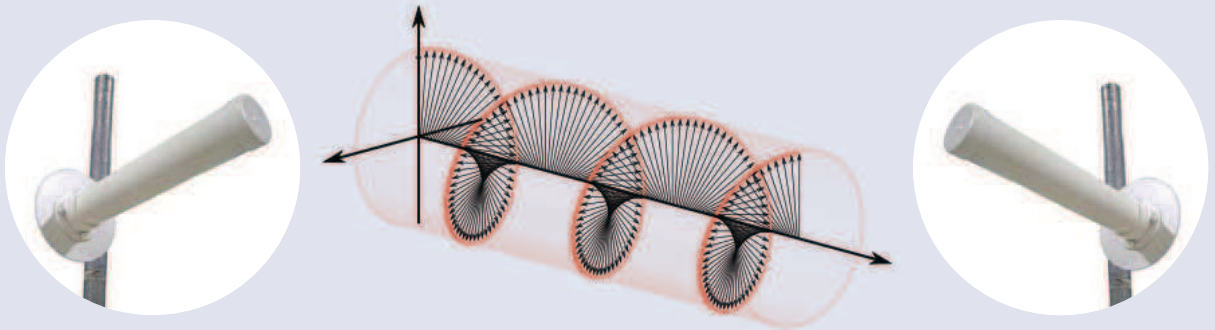
Wi-Fi Mesh, WiMax, ISM, VOiP, Point-to-Point, tunnels, mining applications, elevator shafts, video surveillance, downtown corridors, parking lots, wireless security cameras, warehousing.

A TRUSTED LEADER
IN ANTENNA INNOVATION
SINCE 1934

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SPEC0064_F02

Circular Polarization



5.8 GHz Helical Antenna **H2058**

The TACO model H2058 is a right hand circular polarized antenna ranging from 5.7 to 5.85 GHz. The antenna is enclosed with an anti-static plastic radome for protection from the environment. It can be mounted to a mast or wall and ceiling mounts are also available as an accessory (CM-1). This antenna is ideally suited to harsh environments that have severe reflections from metal surfaces and water.



APPLICATION

Wi-Fi, ISM, RFID, VoIP, Point-to-Point, warehousing, tunnels, mining applications, elevator shafts, video surveillance, downtown corridors, parking lots, wireless security cameras.

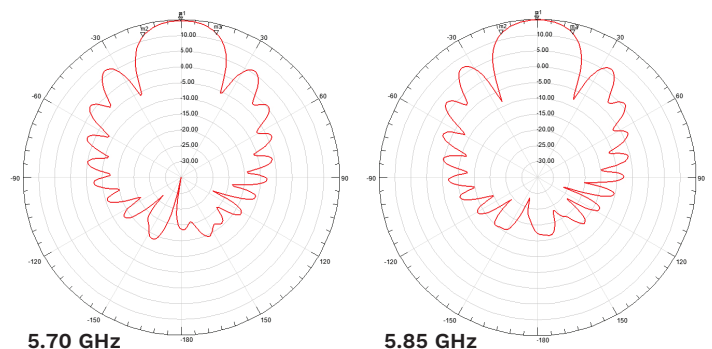
ELECTRICAL SPECIFICATIONS

FREQUENCY - GHz	5.7-5.85
GAIN - dBic	15
IMPEDANCE - Ohm	50
VSWR	1.5:1
F/B RATIO - dB	33
POLARIZATION	RHCP
HPBW - °	28
CONNECTOR	N Female
MAX POWER - W	50

MECHANICAL SPECIFICATIONS

LENGTH - in (mm)	12.0 (305)
GROUND PLANE DIAM - in (mm)	5.5 (40.6)
HOUSING	Polycarbonate
WEIGHT - lb (kg)	1.4 (0.64)
MOUNTING O.D. - in (mm)	1-5/8 (40.6) Mast or Wall

ANTENNA PATTERNS



Bi-Directional Helical Antenna BDH2024

TACO Antenna's new bi-directional, anti-static Helical Antenna is designed for the Wi-Fi 2.4 - 2.5 GHz frequency band. It is based on our H2024 high gain Helical Antenna and is available in both right and left-turn helix. Additional mounting options are also available.



BDH2024



BDH2024 DETAIL

APPLICATION

Ideal for underground corridors, mining, security and other wireless applications.

ELECTRICAL SPECIFICATIONS

FREQUENCY - GHz		2.4 - 2.5
GAIN - dBic		15 (Assumed)
IMPEDANCE - Ohm		50
CROSS POL. REJECTION - dB		20
POLARIZATION		Right or Left Circular
VSWR:	Minimum	1.1
	Maximum	2.2
	Typical	1.5
HPBW:	Horizontal	23
	Vertical	23
STD. CONNECTOR		N-Female
MAX. INPUT POWER - W		50
OPERATING TEMPERATURE - °C (°F)		-40 to +70 (-40 to +158)

MOUNTING OPTIONS

MAST OD - in (mm)	2 (50.8)
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TACO Antenna's ongoing policy of continuing development may result in specification changes to its products.

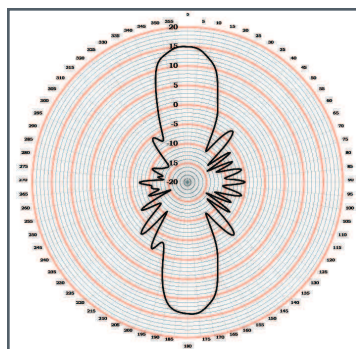
MECHANICAL SPECIFICATIONS

NUMBER OF ELEMENTS (TURNS)	20
OVERALL LENGTH - in (mm)	60.4 (1535)
GROUND PLANE DIAMETER - in (mm)	5.5 (138)
HELICAL DIAMETER - in (mm)	2 (50.8)
ANTENNA WITH MOUNT WEIGHT - lbs (kg)	2.5 (1.13)

WIND LOADING

WIND AREA:	Ft ² (No Ice)	0.6
	(1/2" Radial Ice)	0.9
WIND LOAD:	Ft-lbs* (No Ice)	27
	** (1/2" Radial Ice)	12

ANTENNA PATTERN



TACOTM
ANTENNA

Above and beyond.TM

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SPEC0064_F04