

ANT S.r.l.

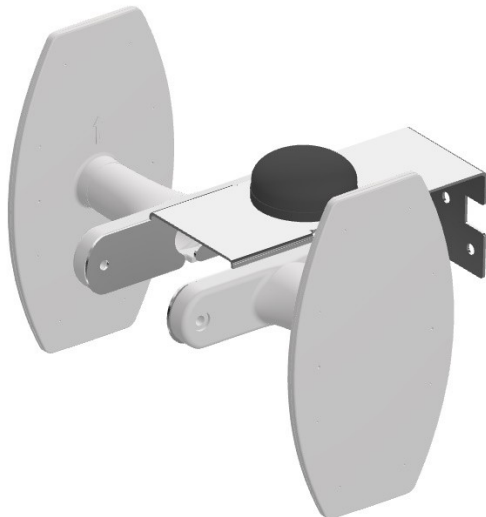
Via della Concordia, 4 – 37036
S. Martino B/A (VR) - Italia
Tel. +39 045 8781380
Fax +39 045 8795335
e-mail: commerciale@antsrl.eu
www.antsrl.eu

DESCRIPTION

PONAL-H 2xMIMO wideband system
suitable for applications
868/915MHz (LoRa, LoRaWAN, Sigfox, ISM),
GSM-GPRS 900/1800MHz, 3G-UMTS 2100MHz,
WiFi 2.4GHz, 4G-LTE / 5G (Bands 1, 2, 3, 5, 7, 8,
20, 28, 77, 78, 79) and GPS/GLSS

**Ponal-H 2xMIMO (cable 5m)****P/N: B20-050****Ponal-H 2xMIMO (cable 10m)****P/N: B20-051****Ponal-H 2xMIMO-GPS/GLSS (cable 5m)****P/N: C09-002****ELECTRICAL DATA**

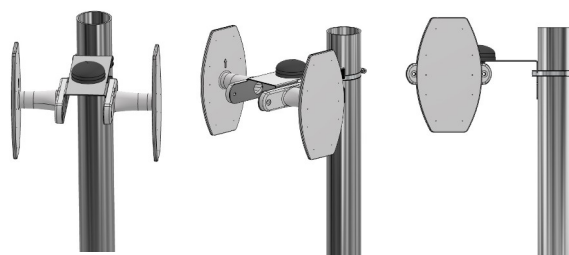
Frequency range (V.S.W.R. < 2 : 1):	698-960/1710-2170/ 2400-2690/3300-4700MHz
Impedance:	50 Ω
V.S.W.R. 698-960 MHz:	< 2 : 1
V.S.W.R. 1710-2170 MHz:	< 2 : 1
V.S.W.R. 2400-2690 MHz:	< 2 : 1
V.S.W.R. 3300-4700 MHz:	< 2 : 1
Max power:	10 W
Polarisation:	Linear
Radiation:	See patterns
Gain 698-960 MHz:	> 2.1 dBi
Gain 1710-2170 MHz:	> 3.0 dBi
Gain 2400-2690 MHz:	> 4.5 dBi
Gain 3300-5000 MHz:	> 4.5 dBi
Beamwidth (-3dB E-plane)	See patterns
Beamwidth (-3dB H-plane)	See patterns
MIMO Correlation coefficient	< 0.1

**ELECTRICAL DATA: GPS/GLSS**

Frequency range:	GPS (1575.42 MHz) GLONASS (1602 MHz) GALILEO (1575.42 MHz)
Gain (Zenith)	2.5 dBi typical at 1575.42 MHz 1.9 dBi typical at 1602 MHz
Polarisation:	R.H.C.P
Impedance:	50 Ω
LNA Performances	
Gain:	about 30 dB typical
Noise figure:	about 1.7dB typ. at 1575.42MHz about 2.1dB typ at 1602 MHz
V.S.W.R. (out)	about 2.0:1 typical.
Power:	3V - 15 mA / 5.0V - 22 mA

MECHANICAL DATA

Dimensions (approx):	175x230x200 mm
Connection:	SMA plug (other on request)
Cable 4G-LTE/5G:	lowloss Ø5mm 5 or 10m (other on request)
Cable GPS/GLSS:	0.3m RG174 + Extension lowloss (or other on request)
Operating temperature range:	-30° / +80°C
Weight (approx):	1 kg
Radome material:	Polyamide
Radiating element material:	Copper
Bracket material:	Stainless steel

**Protection against oxydation:**

The antenna is designed to withstand the worst climatic conditions and so that the oxydation of its parts is prevented, withits components being made of raw materials resistant to external environmental agents.

Protection against accidental hits:

The antenna is designed so that persons are protected from accidental hits against ots projecting parts, without any sharp edges

RoHS Directive:

The antenna complies with the RoHS Directive and its susequent.

INSTALLATION INSTRUCTIONS:

Pole mounting: please use the supplied installation kit

Wall mounting: please use 3 plugs for wall installation.

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Ponal-H 2xMIMO-GPS/GLSS (cable 5m)

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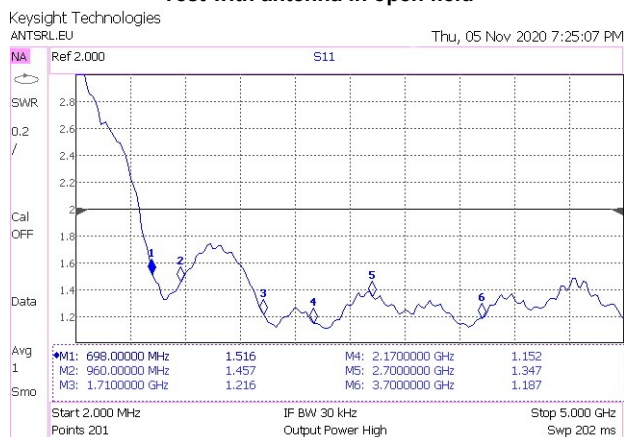
P/N: B20-051

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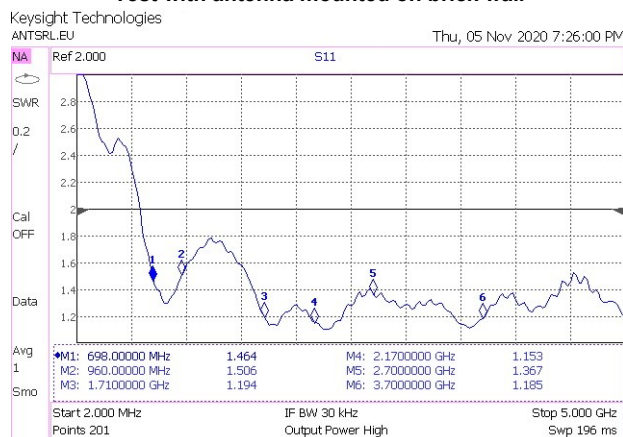
V.S.W.R.

(test of a single antenna with cable 1m)

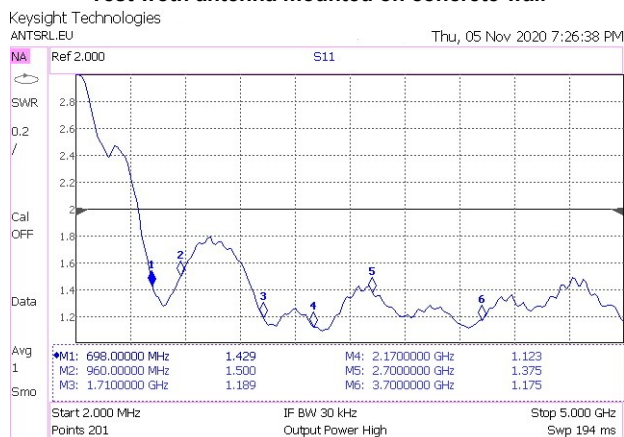
Test with antenna in open field



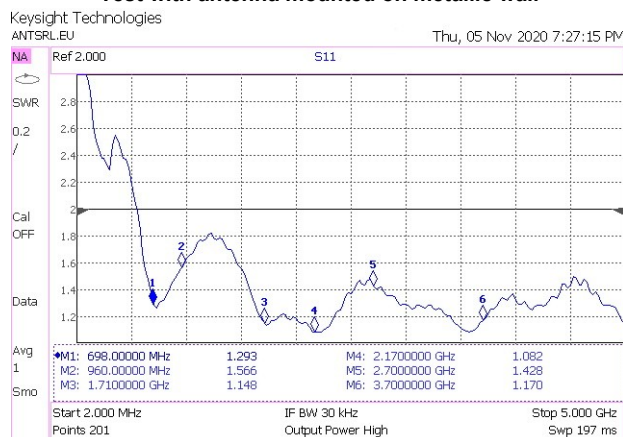
Test with antenna mounted on brick wall



Test with antenna mounted on concrete wall



Test with antenna mounted on metallic wall



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Ponal-H 2xMIMO (cable 5m)

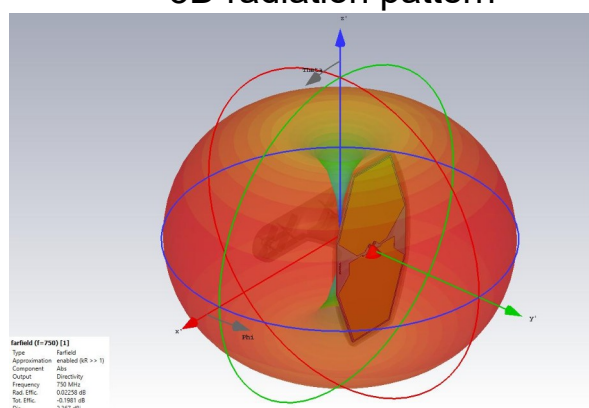
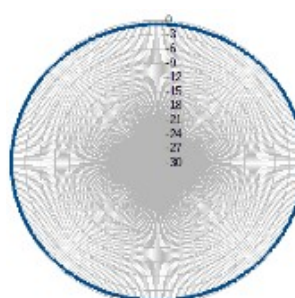
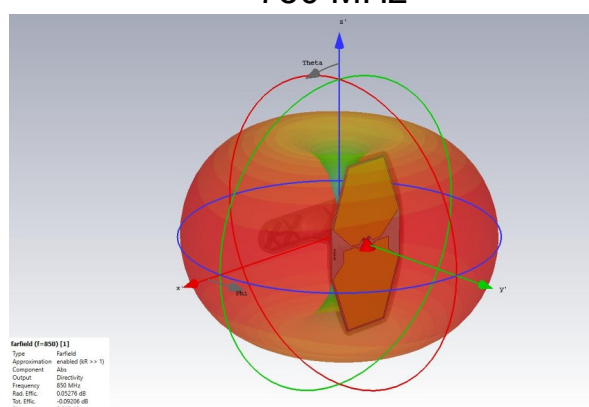
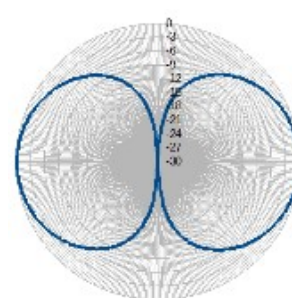
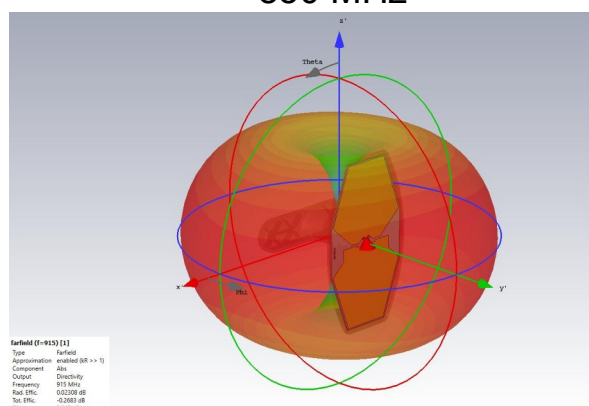
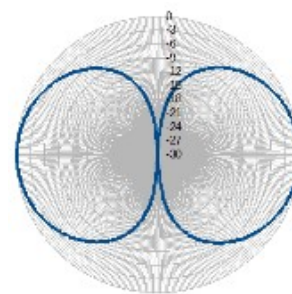
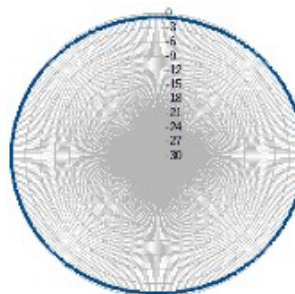
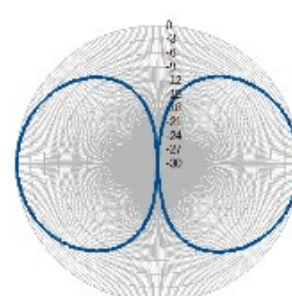
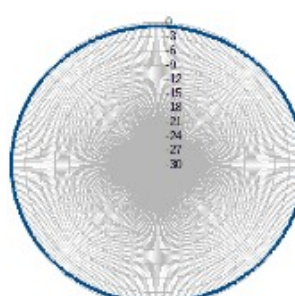
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Ponal-H 2xMIMO (cable 10m)

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Ponal-H 2xMIMO-GPS/GLSS (cable 5m)

P/N: C09-002

Radiation patterns (single antenna)**3D radiation pattern****750 MHz****H-Plane****E-Plane****850 MHz****915 MHz**

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Ponal-H 2xMIMO-GPS/GLSS (cable 5m)

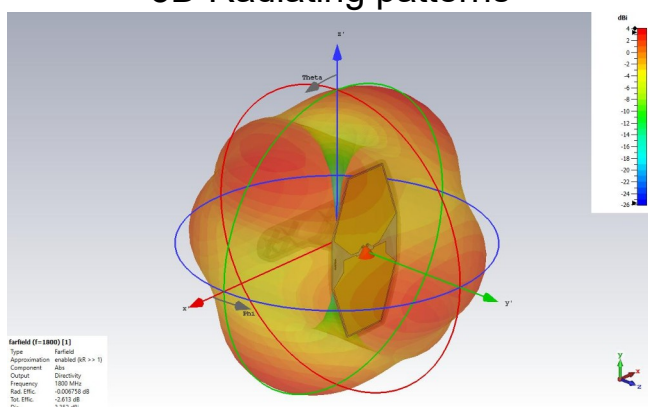
P/N: C09-002

Radiating patterns (single antenna)

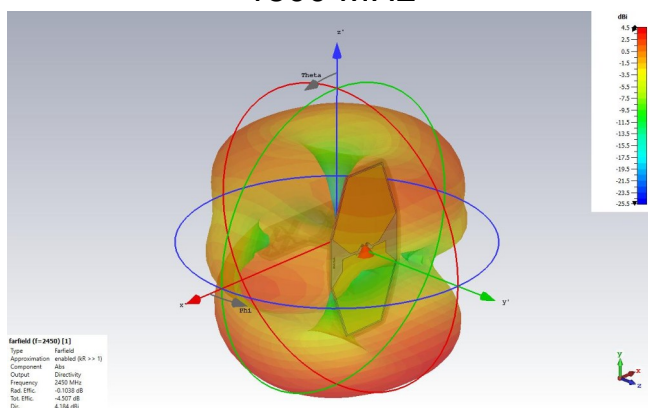
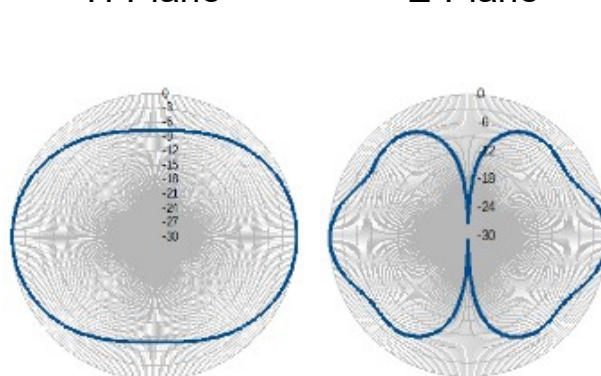
3D Radiating patterns

H-Plane

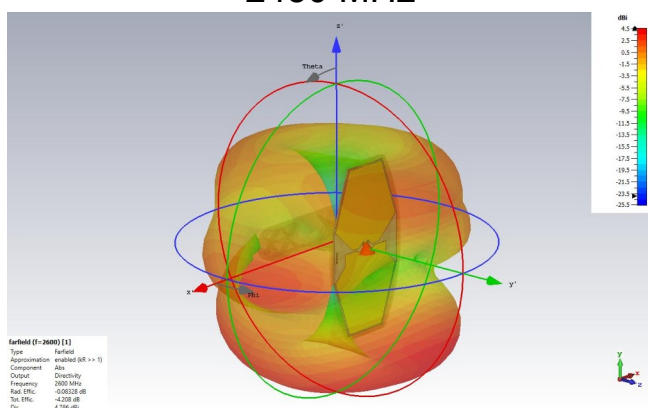
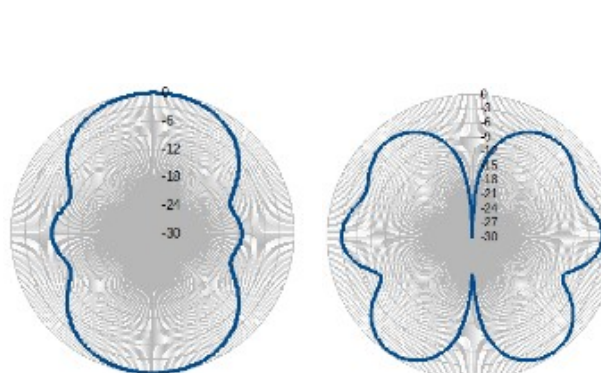
E-Plane



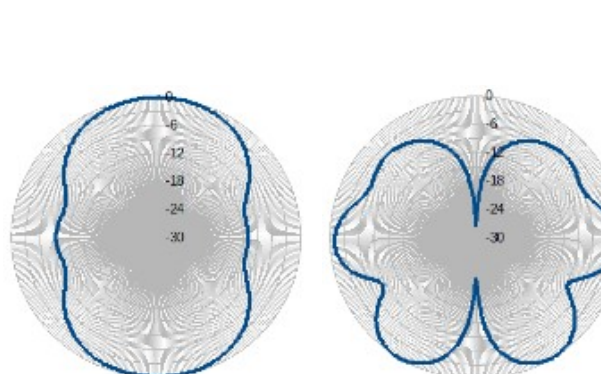
1800 MHz



2450 MHz



2600 MHz



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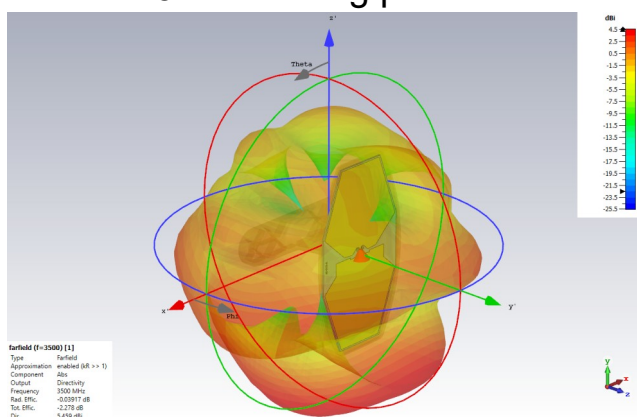
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Ponal-H 2xMIMO-GPS/GLSS (cable 5m)

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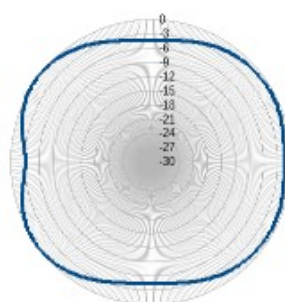
Radiating patterns (single antenna)

3D Radiating pattern

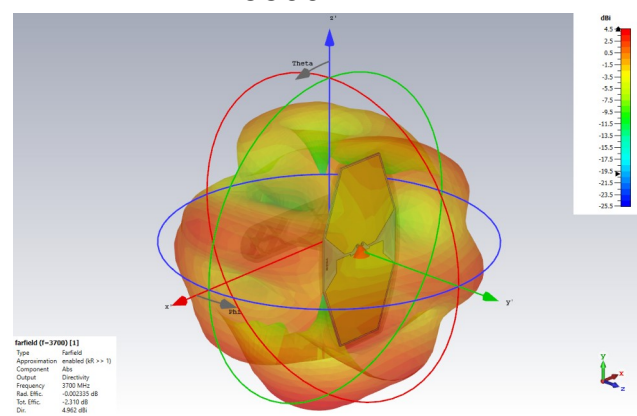
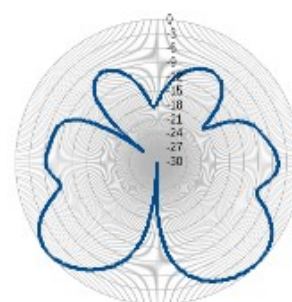


3500 MHz

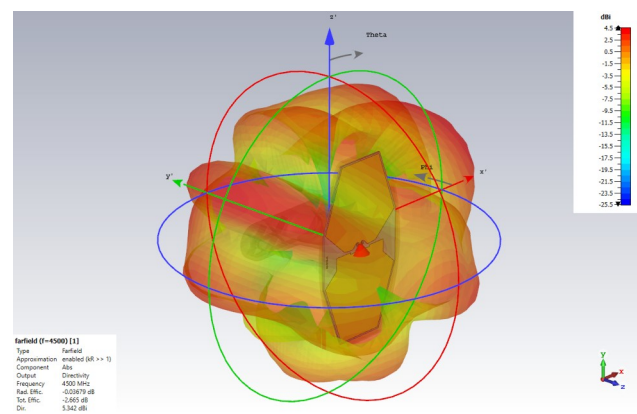
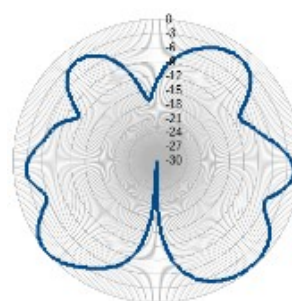
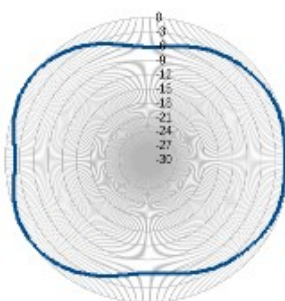
H-Plane



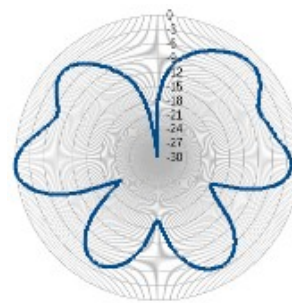
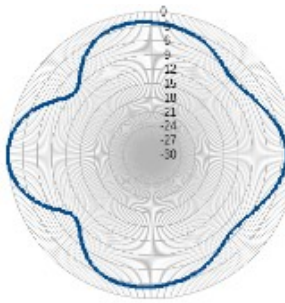
E-Plane



3700 MHz



4500 MHz



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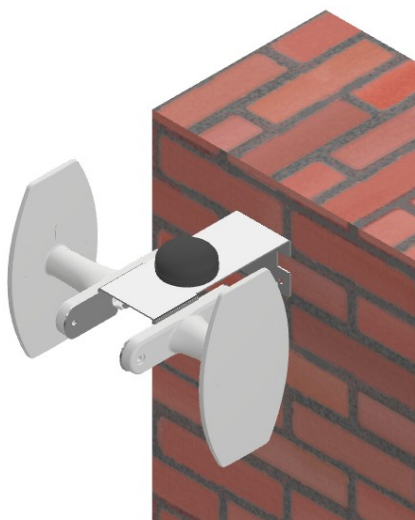
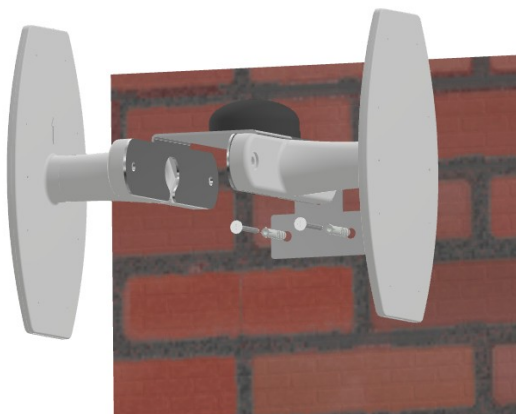
P/N: B20-050

Ponal-H 2xMIMO (cable 10m)

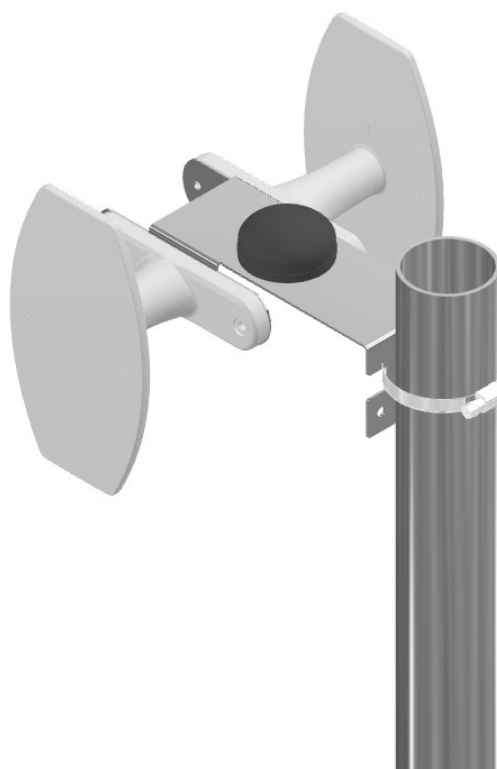
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Ponal-H 2xMIMO-GPS/GLSS (cable 5m)

P/N: C09-002

INSTALLATION ON WALL

Please use three Ø5 plugs for wall mounting.
Please make sure that the antenna is installed
with the arrow pointing upwards.

INSTALLATION ON POLE
pole min Ø38 to max Ø200mm (1.5/80 inch.)

Please use the provided stainless steel band to
secure the bracket to the pole.

ITS NAME:

Ponal is a strong summer wind blowing mornings and evenings from Ledro valley through the bed of the Ponale creek, to which it owes its name.