

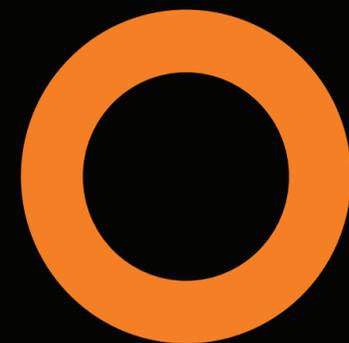
WAVEHUNTER™





POYNTING

The Most **Advanced** and **Fastest**
Cellular Antenna for Seamless
Connectivity

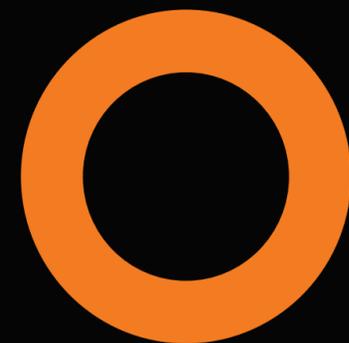


POYNTING

We created this new antenna out of our experience of the current line-up, **the evolution in cellular connectivity** and the feedback we got from the market. We wanted to look at the best possible combinations without constraint in size or parameters when designing it.

WaveHunter is the **highest performing 5G antenna dome** ever designed in the industry, meant to be installed on vessels, where you can house your 4/5G routers inside.

This Design will allow data connections to be **Faster, Smoother, and Furthest** from Shore, than ever before.



POYNTING





POYNTING



WHO WILL MAKE THE MOST OUT OF IT?



POYNTING

The **WaveHunter** was not designed for a particular type of vessel. It will find its purpose on all sorts of vessels, from Passenger vessels, to Cruise Liners, to Super yachts and even on ferry boats!

The **WaveHunter** is for those – **BUSINESSES AND INDIVIDUALS** – who are NOT willing to settle for second best!

It is meant:

For the ones who want to **REACH FURTHER!**

For the ones who want to **BE CONSISTENT!**



KEY CHARACTERISTICS



Frequency Band:
617 – 4200 MHz



4x4 MIMO
Multi-MIMO:
6 (4x4 MIMO)



Multi-Directional



2x GPS/Glonass



4x Dualband
Wi-Fi

- A theoretical max throughput of up to 6Gbps (router and infrastructure dependent)
- A predicted max reach of 100 Km (Installation location and infrastructure dependent)
- Houses the routers inside the antenna itself
- Peak gain of 11dBi maximised by minimal cable loss with 75cm cables
- Polarization: Horizontal, Vertical -45 & +45 degrees
- Mounting options according to industry standards

Different arrays may be used, when connecting the routers to the antennas – router configuration and selection flexibility.

Based on the proven
XPOL-2-5G



POYNTING



MECHANICAL SPECIFICATIONS



POYNTING

Antenna Compartment



Antenna base with 5G Router Compartment



Poynting Pedestal



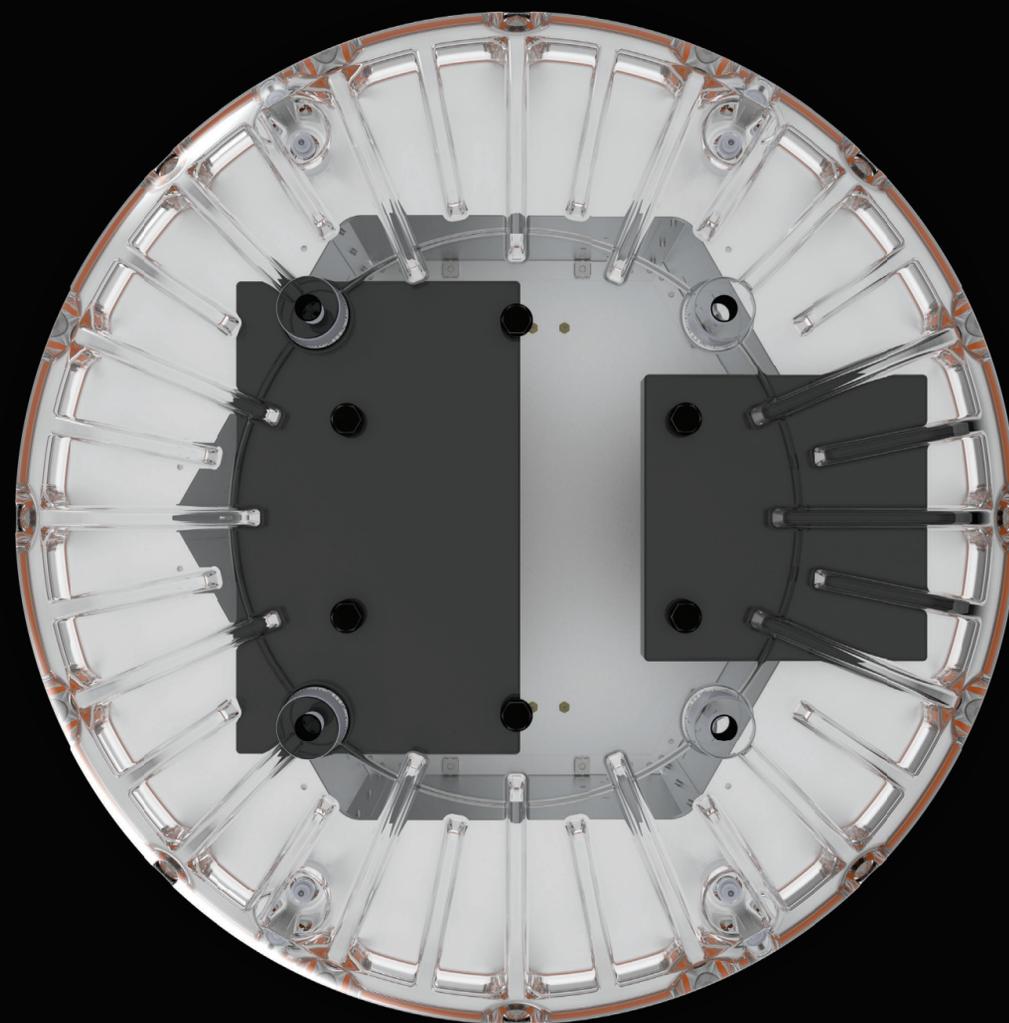
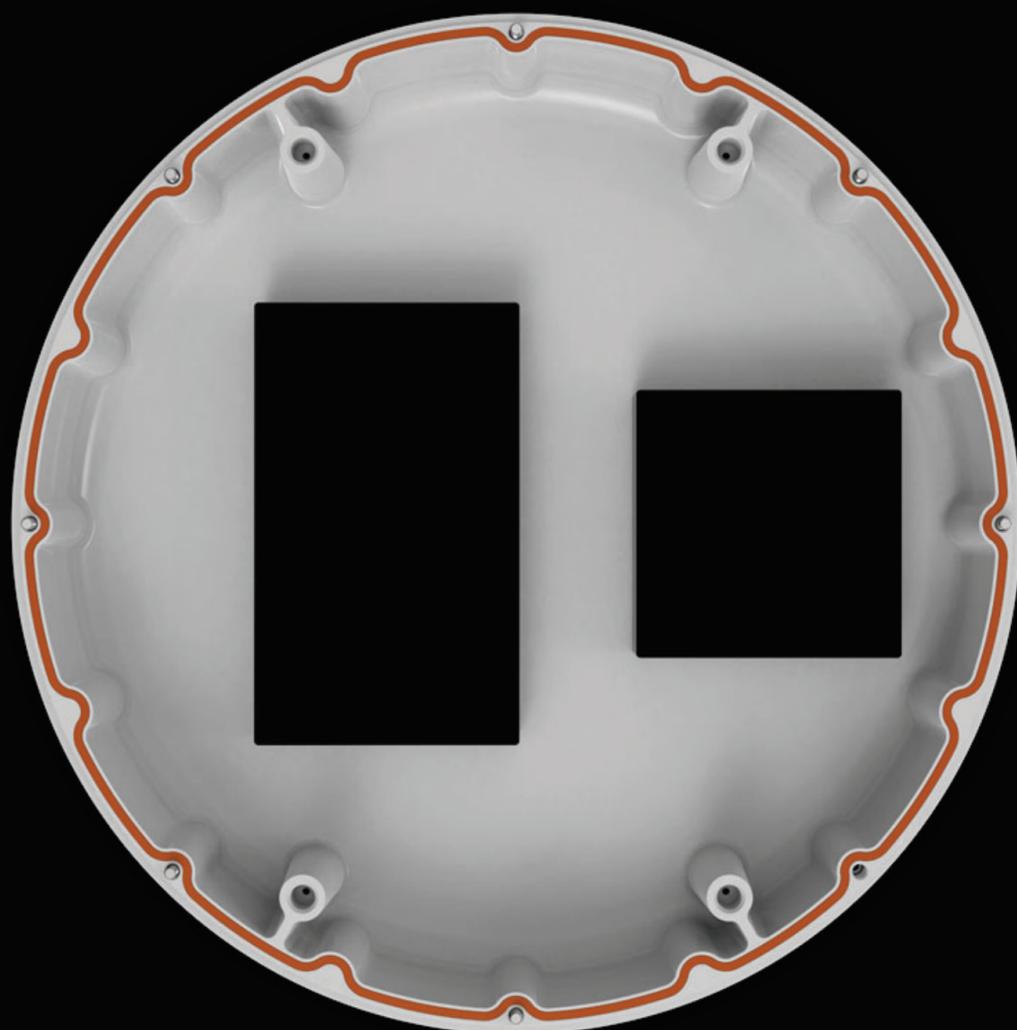
Side View with Poynting Pedestal Mounting Base

Registered Design & Patent Pending
Preliminary design. Poynting ribbons will be added

5G ROUTER COMPARTMENT



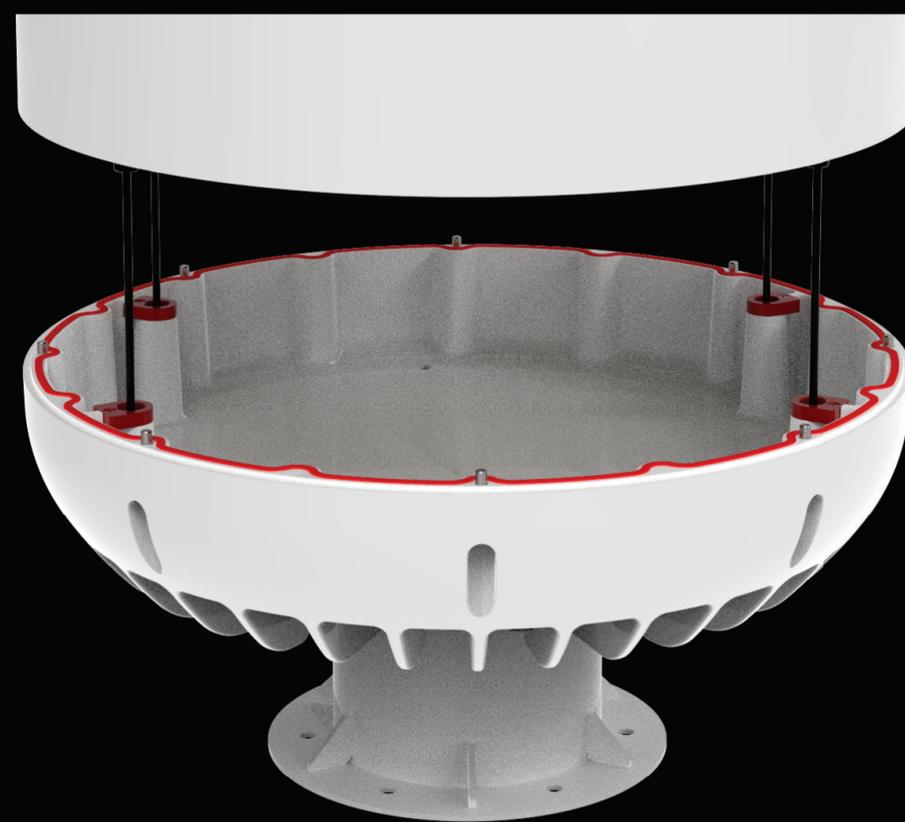
POYNTING



ANTENNA COMPARTMENT LIFTING



POYNTING



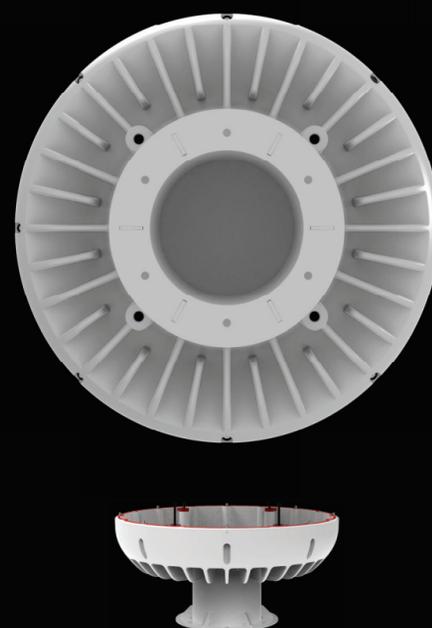
MOUNTING OPTIONS



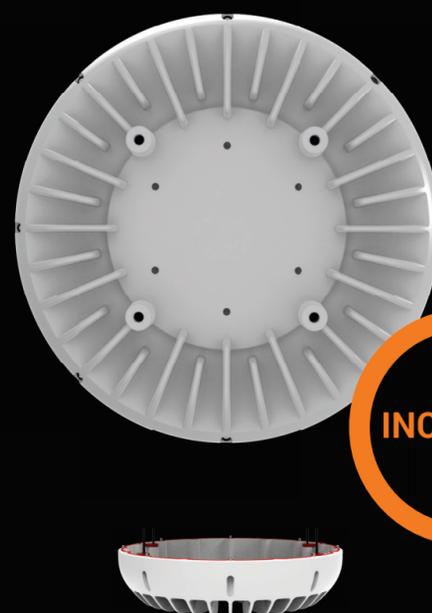
POYNTING



POYNTING Pedestal
Mounting Base



V-SAT Industry Standard
Mounting Base



INCLUDED

ENVIRONMENTAL SPECIFICATIONS, CERTIFICATION & APPROVALS



- Weight and Dimensions:
 - POYNTING Pedestal Mounting Base: 89 x 65 cm, 50kg
 - V-SAT Industry Standard Mounting Base: 75 x 65 cm, 45kg
- Salt-spray protected, low pressure water jets protected, impact protected
- -40°C to +80°C (System temperature limited to routers used)
- Ethernet cabling for below deck connectivity



POYNTING

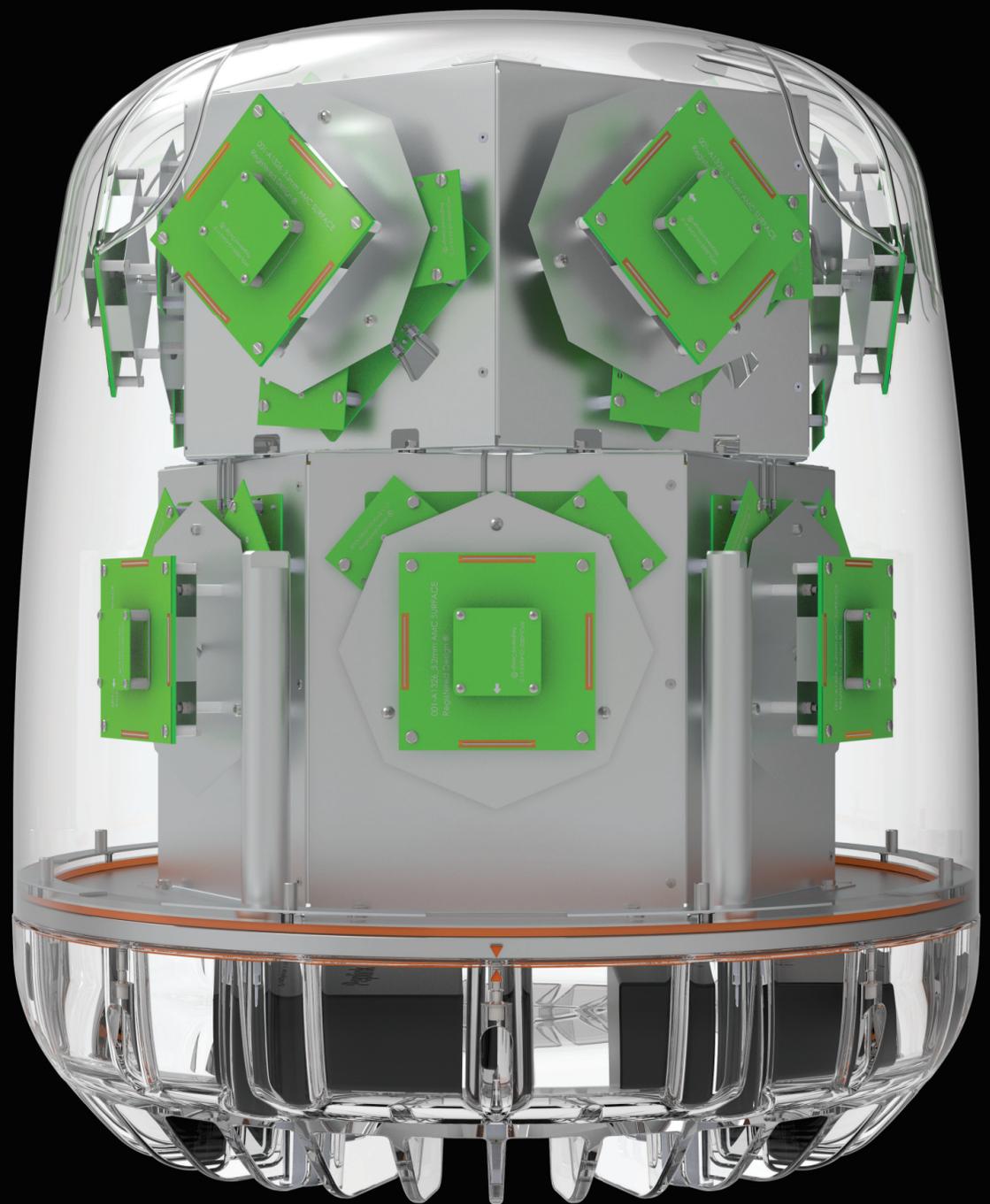


ELECTRICAL SPECIFICATIONS

POWERFUL ON THE INSIDE



Multi-directional, multi-polarization antenna. So, multi-directional, because we have a number of directional antennas. Multi-polarized, because we have 4 different polarizations in each direction.

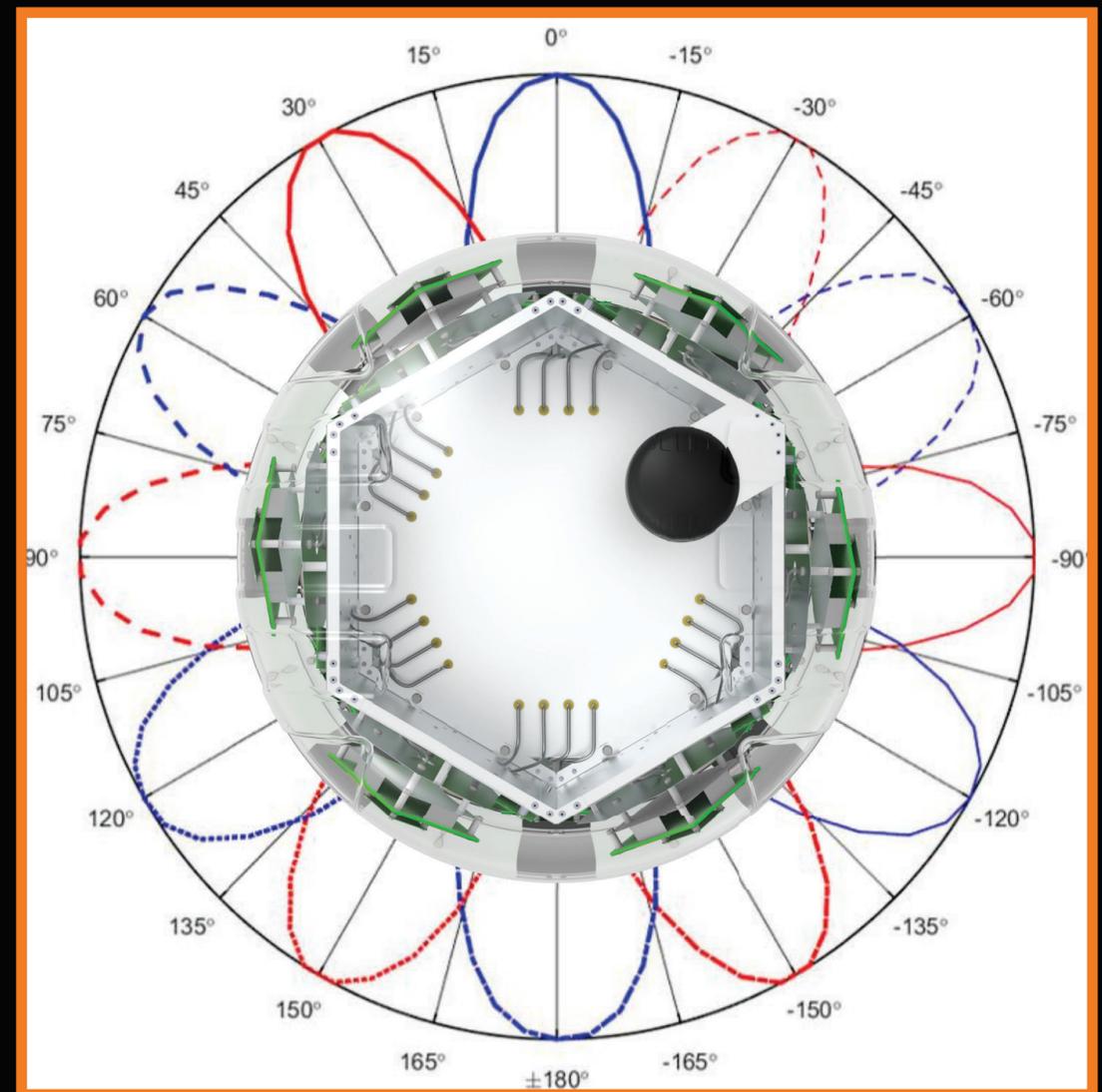


MULTI-DIRECTIONAL, MULTI-POLARIZATION



This is a pictorial representation of the radiation patterns of each antenna element, indicating the multi-directional overlapping patterns created by the lower and upper antenna arrays. We can see that each antenna is separated from its neighbouring antenna by 30° , while its horizontal aperture is close to 90° .

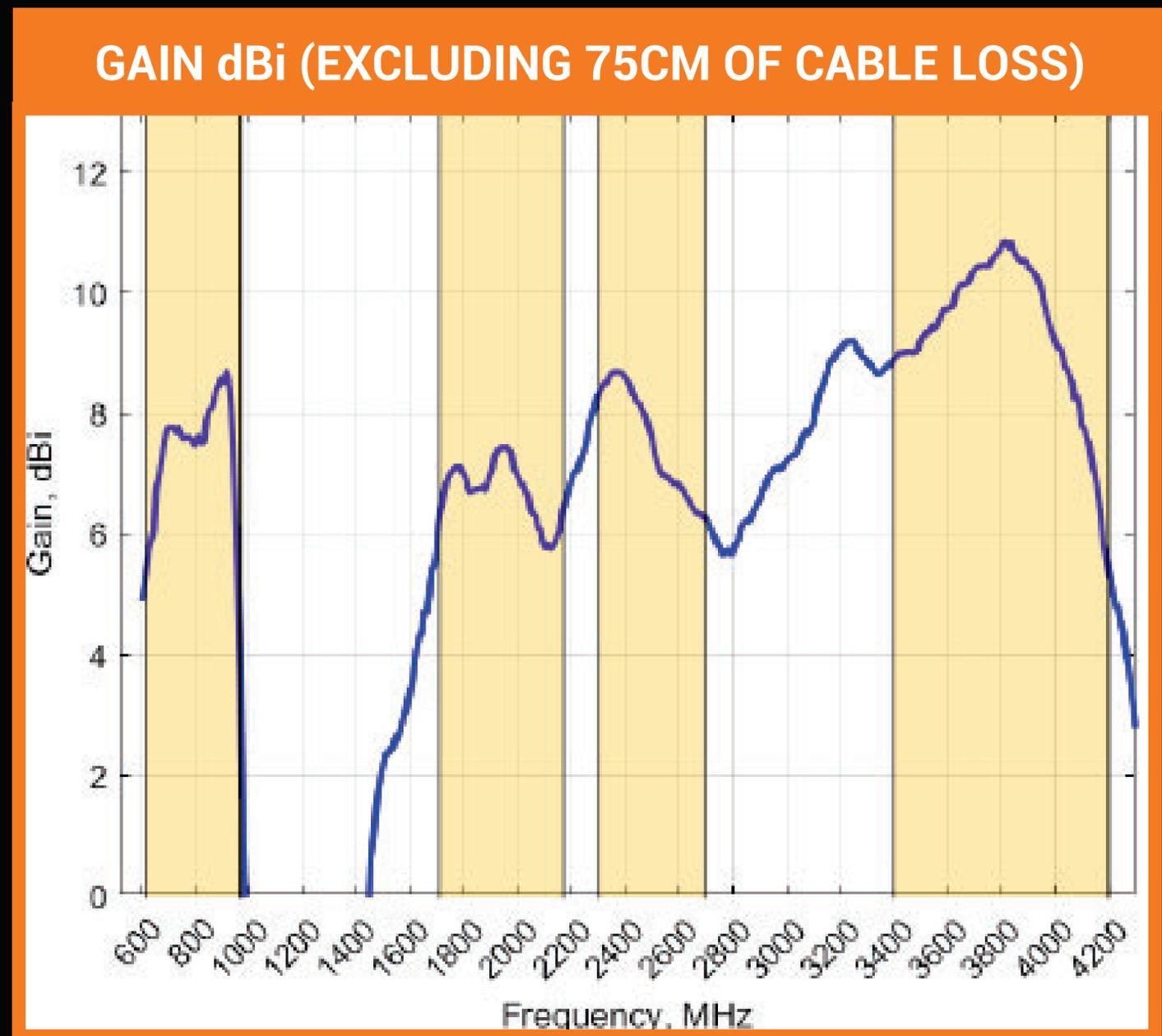
This is a key contributor for the **WaveHunter's** final performance: the 4 polarizations covering each sector of 60° , compared to the traditional single polarization offered by a typical omnidirectional antenna, makes all the difference!



GAIN AND VSWR



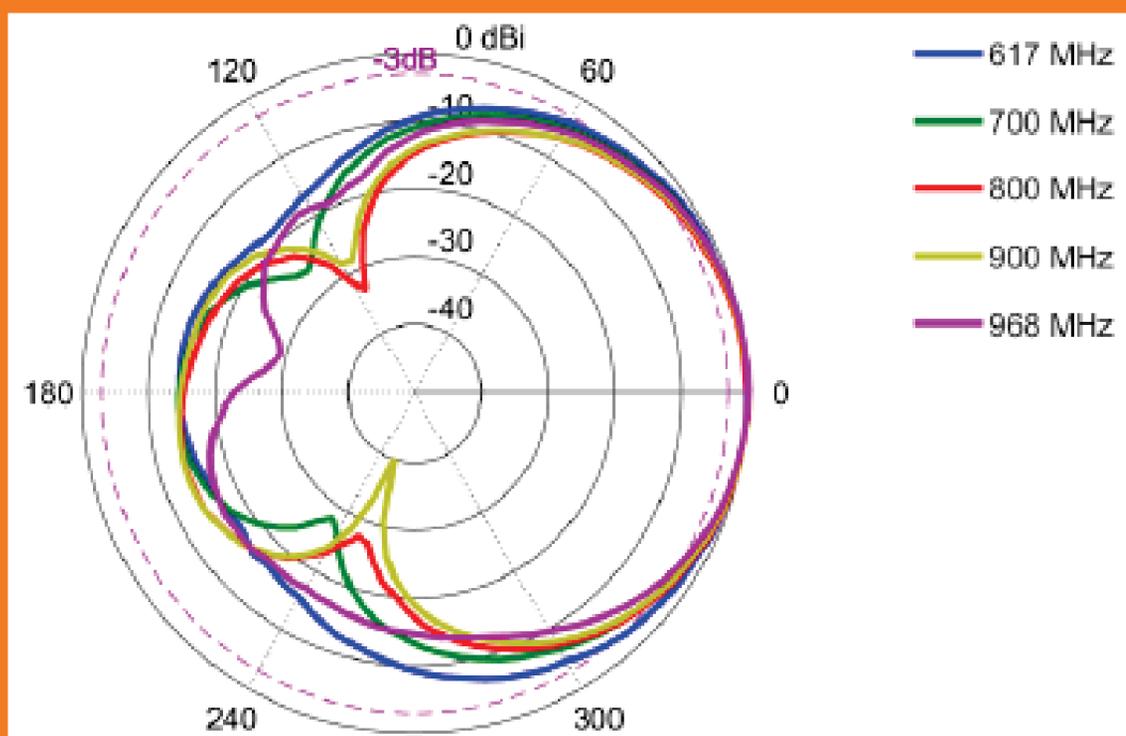
On the gain side, we can see an almost flat gain response on the lower frequencies, which will be the ones more important for the most remote/further locations. This gain response is important, but only so, when combined with a good radiation diagram. Gain will get you far but only the right antenna aperture will keep you connected!



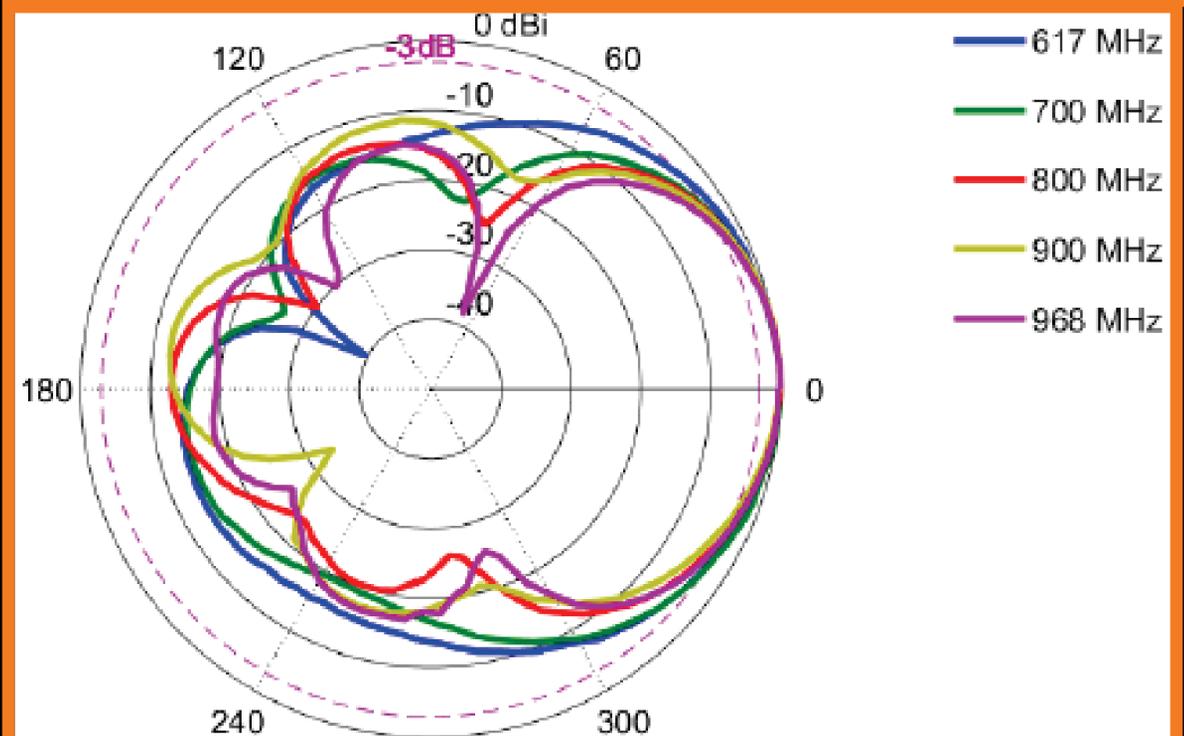
RADIATION PATTERN



AZIMUTH (Top View): 617 - 970MHz



ELEVATION (Side View): 690 - 960MHz



Radiation patterns of one of the 12 antennas inside of the dome.

Lower frequencies: as they will be the ones contributing to the furthest connections most of the times.

The horizontal aperture of each antenna: Wavehunter has two levels, each of them covering the 360° with superior gain. So each pair of two consecutive antennas, one on the top and one on the bottom level, will cover the 60° with the 4 polarizations!

SEA TRIALS

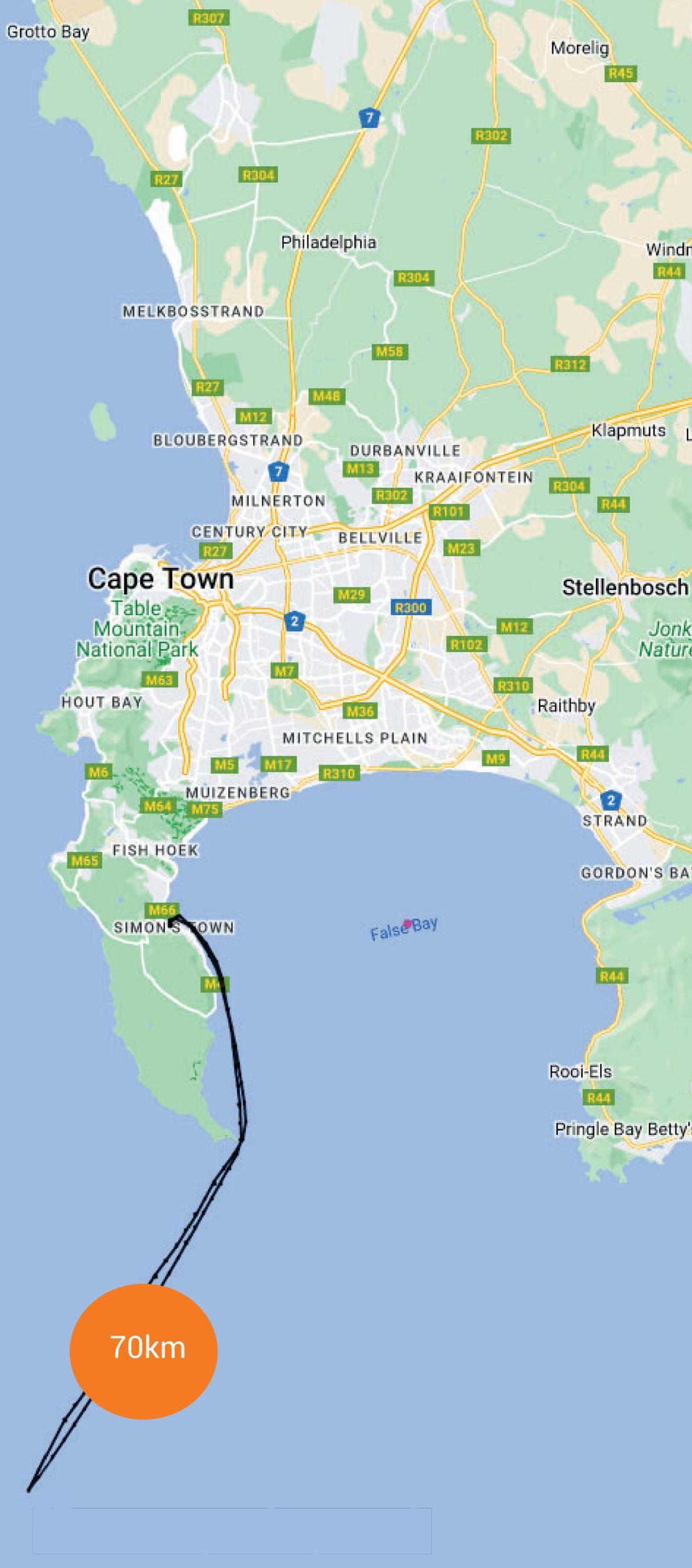
CAPE TOWN
FEBRUARY 2022

The test setup was simple.
We equipped the **WaveHunter** with
6 5G radios – making each radio
responsible for a sector of 60°!



POYNTING



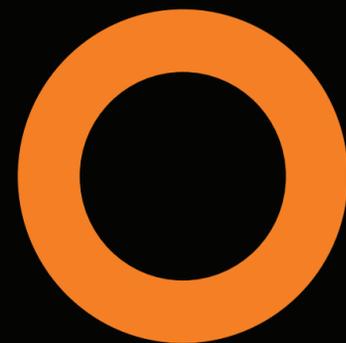


POYNTING

- Max download vs distance 173Mbit @ 10km
- Max download vs distance 121Mbit @ 26km
- Max download vs distance 92Mbit @ 28km
- Max download vs distance 88Mbit @ 33km
- Max download vs distance 58Mbit @ 50km
- Max download vs distance 46Mbit @ 53km
- Max download vs distance 45Mbit @ 70km

These results, come from the best radio at each location. So, the first 173Mbits @10km, for example, was not the aggregate bandwidth from all the radios inside the wavehunter, but the throughput from only the best performing one.

Tool was developed by our team, to help visualize the datapoints we had collected



POYNTING

WAVEHUNTER™

The Most Advanced and Fastest Cellular
Antenna for Seamless Connectivity