



FUTUREPROOF INNOVATIVE ANTENNAS

INDUSTRY GUIDE

Defence Sector

A summarised technical overview of our antenna solutions suitable for Defence applications.

POYNTING

COMPANY OVERVIEW

THE COMPANY

POYNTING Antennas designs, manufactures and sells cellular antenna products and related equipment mainly to the telecommunications, broadcasting and related industries.

Established in 1996, POYNTING has grown to become one of the leading antenna manufacturers in South Africa. POYNTING exists for advancing antenna applications: its name is derived from the POYNTING vector, a directional measure of energy in an electromagnetic field. POYNTING was founded on the deep knowledge and understanding of the principles of electromagnetics, RF propagation, antenna design and development.

POYNTING employees include graduate as well as professionally registered engineers with PhD doctorate level expert knowledge of the technology and the industry. POYNTING has a legacy of innovative design and delivery with customers and partners worldwide.

We began as an antenna manufacturing company and, over time, expanded our operations to include a dedicated defense and military division. This division remained an integral part of our business until 2014, when it was successfully spun off into an independent entity.

FOOTPRINT

Apart from South Africa, roughly 80% of total sales are International with the main markets being Europe, USA, Canada and Australia. International sales are fulfilled through long-standing distribution partners.

COMMITMENT TO QUALITY

POYNTING Antennas (Pty) Ltd is dedicated to ensure that its products and services fully meet the requirements of its customers at all times.

POYNTING has a legacy of innovation, design and fulfilment, taking pride in its solid ethical approach. Innovation and creative independence, team spirit and continual learning ensures the organisation can respond to challenges with agility.

POYNTING

INNOVATION

POYNTING holds extensive Intellectual Property (IP) with over 70 registered designs, patents and trademarks filed to differentiate our products from competitive offerings. POYNTING R&D is constantly on the edge of novel innovation.

OPERATIONS

With production facilities in Samrand, South Africa (for specialised and unique products), POYNTING has established satellite manufacturing facilities in Shenzhen China (90% of all antenna productions) with strict quality and manufacturing metrics to ensure the integrity of product performance. International logistics and high volume supply are further streamlined from Shenzhen, China.

INTERNATIONAL SALES AND BUSINESS DEVELOPMENT

POYNTING has embarked on a long term strategy to expand its reach into the international arena. POYNTING opened its office with full representation in Germany focusing on deepening the approach in Europe.

In April 2021 we opened offices and a warehouse in the USA and with this expansion POYNTING will be able to accelerate our growth and take on the huge demand for broadband antennas in the region.

POYNTING is continuously improving – a careful and selective approach for growth in new markets and regions. We seek to promote our products and solutions worldwide and therefore seek distributors in regions where our market share is still small.

Servicing new customers better, expanding the business in “undiscovered” regions with new and exciting products.

POYNTING - BEYOND A CONNECTED LIFE

LAND, SEA, & SUBTERRANEAN DEFENCE

COMMERCIAL RELIABILITY MEETS MILITARY RIGOR

POYNTING Antennas delivers **Commercially-Off-The-Shelf (COTS) connectivity solutions** that excel in the most demanding defence environments. Our standard, high-performance antenna range offers the **proven reliability, resilience, and cutting-edge technology** essential for modern military operations, all stemming from our extensive commercial expertise.

PROVEN PERFORMANCE FOR CRITICAL MISSIONS

Leveraging our expertise in rugged **business and commercial connectivity**, POYNTING antennas are the ideal choice for demanding defence applications. Our standard commercially available antennas are already in use across the theatre, providing critical connectivity for:

- **Autonomous Drones and Unmanned Systems**
- **Tactical Command Vehicles and Vessels**
- **Forward Operating Bases and Field Hospitals**
- **Mobile Hotspots and Battlefield Communication Networks**

Built to withstand harsh operational conditions, including extreme temperatures, dust, moisture, and intense vibration, these antennas ensure **uninterrupted and secure connectivity** in mission-critical scenarios. The inherent **volume and cost advantages** of using our established commercial products mean you get superior, battle-ready performance without the long lead times or proprietary lock-in.

SEAMLESSLY INTEGRATE CUTTING-EDGE TECHNOLOGY

Our range is engineered for the rapidly evolving modern battlespace, supporting:

- **LTE and 5G Tactical Networks:** Many models are fully 5G compliant, covering both low-frequency bands (such as 450 MHz LTE/CDMA) and higher-frequency bands (including 3.5 GHz LTE/CBRS). This broad compatibility enables seamless integration with emerging military communication infrastructures.
- **Dual-Band Wi-Fi:** Provides secure, fast connectivity for field operations and temporary network deployments.

CUSTOM SOLUTIONS FOR UNIQUE REQUIREMENTS

While our standard commercial catalogue meets a vast range of defence needs, we understand that specific missions may have unique operational requirements. **On special request, POYNTING has the capability to customize antennas** for specific customer needs, from tailored frequency bands to specialized mounting solutions, ensuring a perfect fit for even the most stringent specifications.

Trusted by leading defence organizations worldwide, POYNTING antennas are a vital, **cost-effective component** for resilient, mission-critical communication systems across **LAND, SEA, & SUBTERRANEAN** defence operations.



COMPACT AND MIGHTY

- Smallest antenna in our range
- Rugged, water-resistant design for durability
- Supports 4G/5G, Wi-Fi, and GPS connectivity
- A comprehensive all-in-one antenna system capable of integrating multiple technologies
- Effortlessly stay



MIMO-4 SERIES



PERFORMANCE MEETS PRECISION

- The optimal choice for size and performance balance
- Seamlessly integrates into your military vehicle
- Supports multiple frequencies (latest 4G/5G standards)
- Easy installation and water-resistant construction





MIMO-3 SERIES



ULTIMATE PERFORMANCE



- Unparalleled performance for the most demanding users
- X4 high-gain LTE antenna with integrated GNSS
- Exceptional coverage and signal strength, even in challenging environments like remote areas
- Compact, durable, and resistant to water



SWIRL SERIES



CONNECTIVITY IN MOTION

4x4 & 8x8 Cross Polarized For Single/Dual 5G Radio

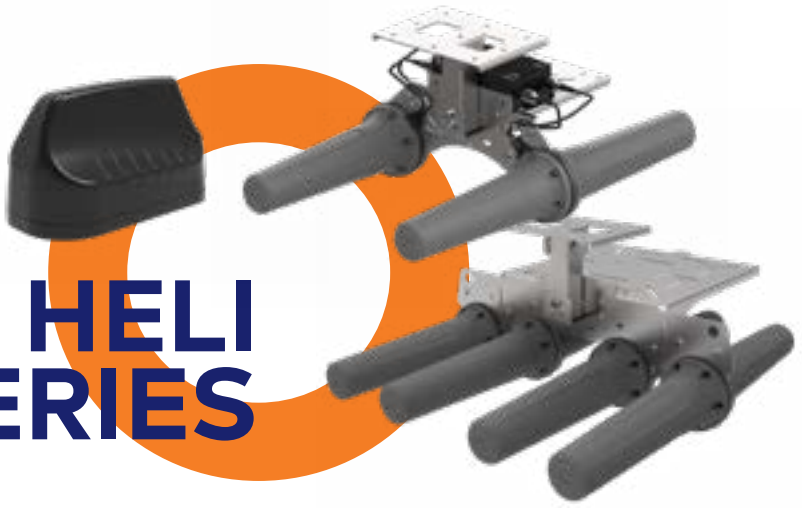
Experience seamless connectivity with our advanced multi-technology antenna, supporting LTE/5G, Wi-Fi, and GNSS in a single 13-in-1 solution.

Ultra-wideband performance covers 617–6000 MHz, with cross-polarized design for enhanced signal quality. Its cast aluminum base with innovative heat sink ensures superior temperature regulation, compatible with popular 5G routers.

Compact, low-profile, and rugged, it meets IP69K/IP68 and IK10/IK08 standards. Delivering reliable and affordable maritime connectivity with effortless integration.



HELI SERIES



CIRCULAR POLARISED, UNDERGROUND OPERATIONS

HELI antennas are built for underground operations, offering circular polarization with LTE/5G and dual-band Wi-Fi (2.4 & 5–6 GHz). With variable gain and rugged IP65-rated enclosures, they ensure reliable telemetry and automation in harsh conditions. Intrinsically safe models support deployment in hazardous environments.



LPDA SERIES



WIDEBAND LOG-PERIODIC DIPOLE ARRAY ANTENNA



The LPDA Series is a dual-band, high-gain directional antenna operating from 698–3800 MHz (up to 7200 MHz for LPDA-500) with a peak gain of 11 dBi. It supports all major cellular and wireless data bands, including GSM, UMTS, LTE, 5G and extended WiMAX ranges like the Digital Dividend and 2.3–2.7 GHz bands. Designed for versatile wireless systems, it offers consistent high-gain performance across an ultra-wide frequency range with a narrower antenna aperture.

EPNT SERIES



CROSS-POLARISED, LTE/5G & WI-FI ANTENNA

The ePoynt series transforms our high-performance antennas into complete Customer Premises Equipment (CPE) by housing a variety of LTE/5G routers directly inside the enclosure.

This all-in-one design supports multiple technologies, reduces cables and signal losses while boosting performance. With both omni-directional and hybrid (directional + omni-directional) options, ePoynt delivers reliable connectivity and optimized coverage for any scenario.





XPOL SERIES



X-POLARISED LTE/5G ANTENNA



POYNTING's XPOL-5G series offers high-performance cross-polarised antennas for 4G and 5G connectivity.

- XPOL-1-5G-PLUS: Omni-directional, available in 2×2 and 4×4 MIMO, with wideband 410–6000 MHz coverage and up to 7 dBi gain.
- XPOL-2-5G: Directional 2×2 MIMO for reliable performance.
- XPOL-24: Directional 4×4 MIMO for maximum throughput in demanding environments.

From broad coverage to high-gain precision, XPOL-5G ensures fast, stable connections.

PRECISION CONNECTIVITY FOR PRECISION OPERATIONS





OMNI-700 SERIES



OMNI DIRECTIONAL WI-FI ANTENNA

The OMNI-700 series antennas, form part of our latest “POYNTING Rhino” antenna range and offer a small profile antenna for use in Naval operations.

The OMNI-700 antenna series offers various configurations for covering the popular Wi-Fi frequency bands namely, the 2.4 GHz and 5 to 6 GHz bands with gains varying from 4 to 8 dBi. The OMNI-700 series antennas were specifically designed to be rugged and ideal for operation in harsh environmental conditions.



NARWHAL SERIES



OMNI-DIRECTIONAL, MARINE & COASTAL



Narwhal Series antennas are built for marine and coastal use, offering 5G/LTE omni-directional coverage in 2x2 to 4x4 MIMO configurations. With ultra-wideband support from 617–4200 MHz and gains of 3–8 dBi, they deliver near-perfect radiation patterns for reliable performance.

Designed for harsh environments, Narwhal features IP68 water protection and saltwater-resistant fiberglass radomes. Global-ready and corrosion-proof, they ensure strong signal reception virtually anywhere.



SWIRL CPE SERIES



CONNECTIVITY IN MOTION

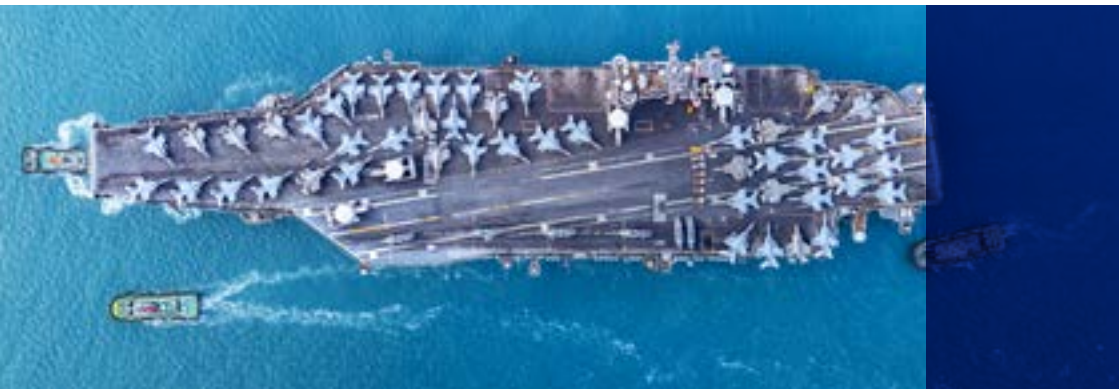
4x4 & 8x8 Cross Polarized For Single/Dual 5G Radio

Integrated Antenna-Router Enclosure for Rugged Outdoor Use:

- Combines high-performance antennas and router in one weatherproof unit for easy installation
- Eliminates long RF cables, minimizing signal loss
Omni-directional antenna with up to 8x8 MIMO
- Supports full 5G/LTE spectrum from 617–6000 MHz



POYNTING Antennas proudly introduces the SWIRL antenna solution. The SWIRL-8 features a high-performance antenna array that ensures seamless connectivity across multiple networks, making it a versatile choice for demanding environments.





RIPPLE SERIES



X-POLARISED, OMNI-DIRECTIONAL

RIPPLE is a high-performance omni-directional antenna built for the maritime industry, offering ultra-wideband coverage from 617–7200 MHz for reliable cellular connectivity at sea. It supports up to 8x8 or 16x16 MIMO with vertically and horizontally polarized antennas for optimal signal quality.

Designed for vessels of all sizes, RIPPLE includes a compact equipment bay (300x250x120 mm) that accommodates most 5G routers, ensuring flexibility and seamless integration. It delivers enhanced connectivity, adaptability, and reliability in remote marine environments.





WAVEHUNTER



X-POLORISED, HIGH GAIN, MULTI-DIRECTIONAL

5G/LTE, 24x24 Multi Mimo Antenna Array

617-960MHz & 1710-4200MHz, 11dBi, 6x(4x4 MIMO) + 4x4 MIMO DualBand Wi-Fi + 2x2 GPS/Glonass. Six 4x4 MIMO Marine & Coastal Antenna Array. The WAVEHUNTER enclosures are designed to fit a variety of router and networking modules, transforming the antenna enclosure into a Customer Premises Equipment (CPE) – just add your own LTE/5G routers and networking equipment. The WAVEHUNTER enclosure can accommodate routers up to the size of 250 x 150 x 50 mm.





SUCCESSFUL STORIES



Reliable Connectivity for Critical Missions: Safe Extraction in Hostile Environments

ARX Robotics, a German company founded by military veterans, develops autonomous ground vehicles designed for the most demanding environments.

Their GEREON RCS platform, capable of carrying up to 500 kg, supports missions such as medical evacuation, logistics, surveillance, and reconnaissance, reducing risks to human personnel in battlefield and disaster zones.



To achieve uninterrupted communication in these mission-critical scenarios, ARX integrated POYNTING's PUCK-5 antenna into their robotic systems. The PUCK-5 delivers exceptional performance through:

- 5-in-1 functionality: 5G (2x2 MIMO), WiFi (2x2 MIMO), and GPS/GLONASS.
- Ultra-wideband coverage from 617 MHz to 6000 MHz, ensuring global compatibility.
- Rugged, compact design with IP69K protection and flexible mounting options.
- Redundant communication capability for reliable, always-on connectivity.

THE RESULTS



The result is faster response times, enhanced situational awareness, and greater safety for both injured personnel and rescue teams.

By combining advanced robotics with world-class antenna technology, ARX and POYNTING are redefining how autonomous systems operate in high-risk environments.



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