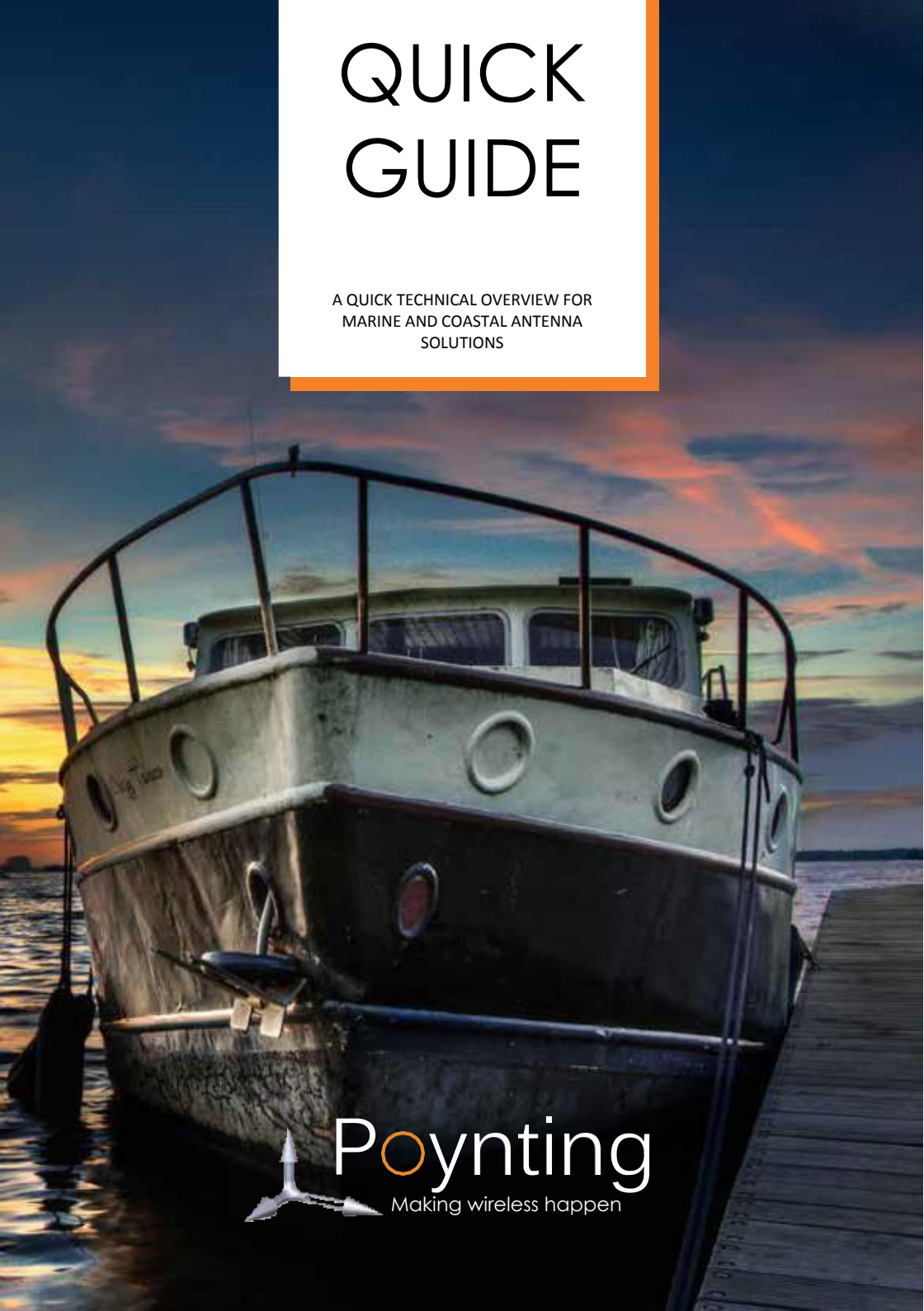
QUICK GUIDE

A QUICK TECHNICAL OVERVIEW FOR MARINE AND COASTAL ANTENNA SOLUTIONS



Poynting

Making wireless happen

ABOUT US

Poynting was established as a consultancy in 1990, Poynting evolved into an official PTY in 1997 and in 2001 established Poynting Antennas. Poynting supplies antenna solutions for wireless high speed data applications.

We provide solutions for 3G/4G/5G and LTE, GPS and Glonass, IoT LoRa and Sigfox as well as RFID and Wi-Fi applications. Our antennas are used in all industry sectors that require wireless communication whether it is residential, automotive, industrial and IoT solutions. We also have specialised antenna solutions for the marine, mining and tunneling markets.

Headquartered in Samrand, the fast growing business hub in Johannesburg, Africa's financial capital,
Poynting services commercial clients across the globe. Its growing international business has led the establishment of a regional European office in Munich, Germany. Poynting has manufacturing operations in Johannesburg, as well as in Shenzhen, China.

'Poynting Antennas are the world leaders in cellular Marine and Coastal antenna solutions, our specially designed LTE and 5G antennas provide an integral part of the onboard communication solution in every continent in the world. In addition, Poynting antennas solution secure communication in remote harbours and ports and can secure solid Wi-Fi hotspot communication from land to vessel, boat, super yacht and e.g. cruise ships.

Poynting antenna solutions will help reduce onboard communication costs significantly, reduce latency and ensure a stable and reliable connection to carrier base stations. Poynting Wi-Fi antenna solutions will deal with interference and secure connectivity on board and on land as part of your hotspot.
Whether you are an operator of vessels or a harbour or port, you own a yacht or sailing boat — Poynting antennas form part of the digital and connected vessel or port and help keep you connected at all times, and also aid operational efficiency. '

MARINE AND COASTAL ANTENNAS

'Over the past 4 years, our Marine and Coastal range of cellular and Wi-Fi antennas have become known as the antenna standard bearer for the yachting and commercial vessels industry.

Robust, rugged, and with patented polarisation techniques, our Marine & Coastal antennas enable onboard and on land communication systems to communicate over much more distance and establish a stable and reliable connection with base stations of carriers, of hotspot of Internet Service Providers, thus saving capital expenditure for satellite communication costs.

Poynting antennas are designed with wide elevation beam-width to secure best connectivity on water. In 2016 the OMNI-291 high performance 4G SISO antenna was launched, followed in 2018 with the OMNI-402, a MIMO 4G/5G antenna covering all frequency used world wide for cellular communication. Poynting Antennas offer true world-wide cellular connectivity.'

MOVING OBJECTS - BOATS VESSELS YACHTS ETC

OMNI - 402

2 x 2 MIMO

Frequency:	410-3800 MHz
Max Gain:	6.2dBi - Omni Directional
Polarisation:	Linear Vertical
Size (LxWxD):	750mm x 75mm (Incl. BRKT-40)

OMNI - 291

Frequency:	450-470, 690-960, 1710-2700 MHz
Max Gain:	7.5dBi - Omni Directional
Polarisation:	Linear Vertical
Size (LxWxD):	560mm x 75mm

OMNI - 403

Frequency:	698-2700 MHz
Max Gain:	TBA
Polarisation:	Linear Vertical
Size (LxWxD):	250 mm x 75 mm (Incl. BRKT-40)

Expected Q1 2020

OMNI - 496

Frequency:	2400-2500, 3300-3800 & 5000-6000 MHz
Max Gain:	7.5dBi - Omni Directional
Polarisation:	Linear Vertical
Size (LxWxD):	560 mm x 75 mm (Incl. BRKT-40)

MOVING OBJECTS - BOATS VESSELS YACHTS ETC

PUCK - 2

2 x 2 MIMO

Frequency:	690-960, 1710-2170, 2300-2500, 2500-2600, 3200-3800 MHz
Max Gain:	6dBi - Omni Directional
Polarisation:	Linear Vertical
Size:	Ø99.3 mm x 36 mm

Please contact us for other available antenna configurations. **Expected Q1 2020**

PUCK - 12

2 x 2 MIMO

Frequency:	2400-2500 & 5000-6000 MHz
Max Gain:	7,5dBi - Omni Directional (2x2 MIMO)
Polarisation:	Linear Vertical
Size (LxWxD):	Ø99.3 mm x 36 mm

MIMO - 3

Frequency:	450-470, 698-960, 1710-2700, 3400-3800, 5000-6000 MHz
Max Gain:	6.0dBi - Omni Directional (2x2 MIMO)
Polarisation:	Linear Vertical
Size (LxWxD):	252mm x 134mm x 120mm

variants

MIMO-3-15	MIMO-3-13	MIMO-3-12
5-in-1 Antenna 2 x LTE; 2 x Wi-Fi; 1 x GPS	**3-in-1 Antenna** 2 x LTE; 1 x GPS	**2-in-1 Antenna** 2 x LTE
450-470, 698-960, 1710-2700, 3400-3800 MHz		
6.0dBi - Omni Directional (2x2 MIMO)		

NEAR COAST - HARBOUR AND PORTS

XPOL - 1

Frequency:	790-960, 1710-2700 MHz
Max Gain:	4dBi - Omni Directional (2x2 MIMO)
Polarisation:	+45° and -45°
Size (LxWxD):	215mm x 135mm x 85mm

XPOL - 2

Frequency:	698-2700 MHz
Max Gain:	9dBi - Directional (2x2 MIMO)
Polarisation:	Vertical & Horizontal
Size (LxWxD):	255mm x 250mm x 80mm

XPOL -2 - 5G

Frequency:	690-960, 1710-2700 & 3400-3800 MHz
Max Gain:	11dBi - Directional (2x2 MIMO)
Polarisation:	Vertical & Horizontal
Size (LxWxD):	255mm x 250mm x 80mm

OMNI-296

Frequency:	2400-2500, 3300-3800 & 5000-6000 MHz
Max Gain:	7.5dBi - Omni Directional
Polarisation:	Linear Vertical
Size (LxWxD):	485 mm x 75 mm x 75mm

NEAR COAST - HARBOUR AND PORTS

WLAN - 60

Frequency:	2400-2500, 3300-3800 & 5000-6000 MHz
Max Gain:	18dBi - Directional (SISO)
Polarisation:	Linear Vertical
Size (LxWxD):	240mm x 240mm x 60mm

WLAN - 61

4 x 4 MIMO

Frequency:	2400-2500 & 5000-6000 MHz
Max Gain:	11dBi - Directional (4X4 MiMo)
Polarisation:	Vertical & Horizontally, +45° & -45°
Size (LxWxD):	240mm x 240mm x 60mm

ACCESSORIES

BRKT - 37 -V2

Heavy Duty Stainless Steel Marine Flat Mount Antenna Bracket 1"-141
for OMNI 291, OMNI-400

BRKT - 38

Heavy Duty Stainless Steel Marine Ratchet Rail Mount Antenna Bracket
for OMNI 291, OMNI-400

BRKT - 39

Heavy Duty Stainless Steel Marine Mount Antenna Bracket 1"-141
for OMNI 291, OMNI-400

CAB

CAB-47		CAB, 5m HDF-195 Low Loss cable N(m) to SMA(m)
CAB-49		CAB, 10m HDF-195 Low Loss cable N(m) to SMA(m
CAB-92		5m twin HDF-195 Low Loss Cable SMA(m)-SMA(f)
CAB-109		10m twin HDF-195 Low Loss Cable SMA(m)-SMA(f)

SELECTED GUIDELINES FOR INSTALLATION AND MOUNTING

- Mount antennas as high as possible, but at the same time as close as possible to your cellular router
- When mounting 2 Single Input, Single Output antennas (e.g. OMNI-291), please ensure that the distance between antennas is 60cm or more. The more the better, however there is always a compromise.
- Please be aware that cables will have a loss. The longer the cable the more loss. We advise you to consider low loss cables when the distance is more than 10m to maximum 15m between the antenna and the cellular router.
- Please try to ensure there is quite some free space around our antenna.
- Please contact your Poynting antenna supplier for technical support and advice.

A ship rolls to 10° on moderate seas, either way, sometime more (vessel and sea conditions)

Antenna Gain of 9 dBi => 12° Antenna elevation beam-width => allows for +6° roll and -6° roll either way.

Antenna gain of 4 to 7 dBi => 20° to 40° elevation beam-width => allows for 10° to 20° roll either way.

Gain too high = overshooting the target base stations on shore Gain too low = inefficiency

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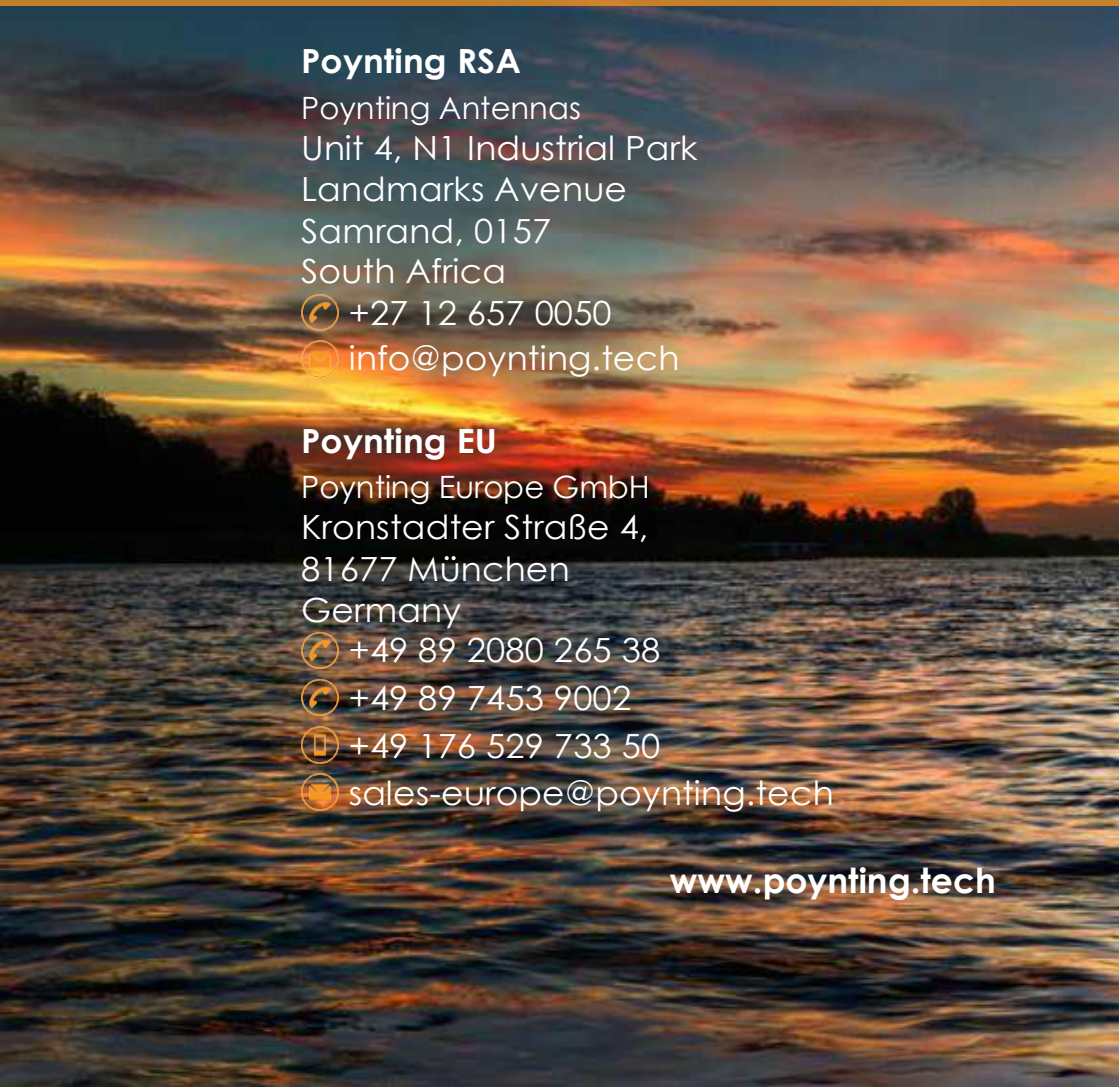

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