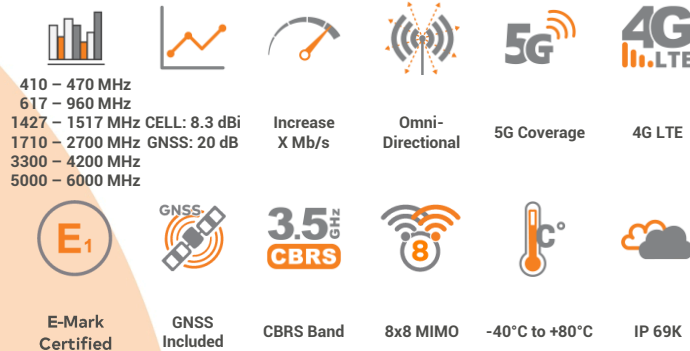
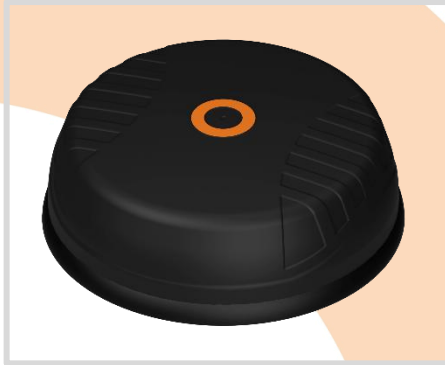


ANTENNAS | MIMO-8 SERIES

9-IN-1 TRANSPORTATION & AUTOMOTIVE ANTENNA

410 – 6000 MHz, 8.3 dBi; Cellular 8x8 MIMO, 1 x GNSS; 20 dB



- 9-in-1 High-performance multi-frequency automotive antenna
- Ultra-wideband coverage from 410 to 6000 MHz for cellular
- 8x8 MIMO LTE/5G & GNSS
- Antenna supports Private 5G/5G/4G/3G/2G/Wi-Fi-6/LoRa/Bluetooth
- Robust and weather-resistant antenna with an IP 69K rating
- Ideal for transportation and marine implementation
- Multiple mounting options available for ease of installation



Vehicle



Marine



Urban



Internet of
Things

APPLICATION AREAS

Product Overview

The MIMO-8-801-5M is a high-performance 9-in-1 antenna system that integrates eight ultra-wideband cellular elements and a dual-band GNSS antenna within a single rugged enclosure. Designed for high-bandwidth, data-intensive, and mission-critical applications, the MIMO-8-801-5M is purpose-built for modern multi-port 5G routers with four or more cellular ports, including devices with eight cellular ports, dual 4-port 5G modems, or two independent 4-port routers operating simultaneously.

The eight cellular elements provide an 8x8 MIMO configuration with wideband coverage from 410 to 6000 MHz, supporting all contemporary 4G/LTE and 5G bands for future-proof deployments. The ultra-wideband performance enables seamless operation across multiple network operators and technologies, making it ideal for carrier aggregation and high throughput 5G applications up to 6 GHz. The dual-band GNSS antenna enhances navigation performance by providing fast, accurate, and reliable location tracking even in challenging environments.

Designed for environments where maximum throughput, reliability, and continuous connectivity are non-negotiable, the MIMO-8-801-5M delivers a comprehensive, high-performance communication solution in a single, rugged enclosure.

Features

- Ultra-Wide Frequency Coverage: Cellular antennas (410 to 6000 MHz)
- High Gain Performance: Peak gain of 8.3 dBi for strong signal strength and reliable connectivity
- Features 8 x cellular and 1 x GNSS antenna
- Durable Construction: IK10 and IP69K ratings for protection against impacts and environmental factors
- Ground plane independent: Ensures consistent performance on any surface
- Multiple mounting options available

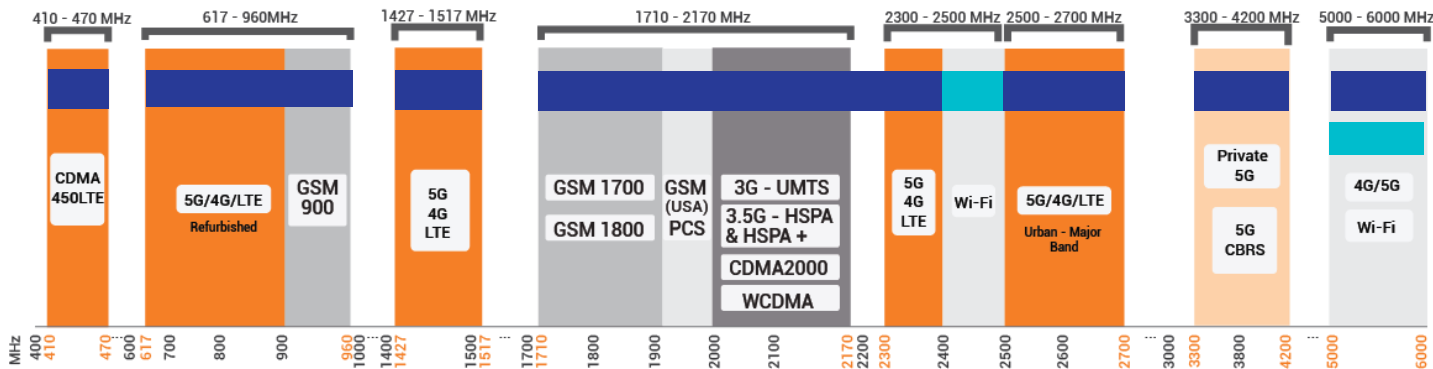
Application Areas

- Mobility & Transportation: High-speed 5G, Wi-Fi, and GNSS for buses, trucks, public safety and fleet vehicles
- Broadcasting & Media: Reliable connectivity for broadcasting trucks and mobile production vans
- Marine Sector: Robust Cellular, Wi-Fi, and GNSS for vessels and offshore platforms
- IoT, Industrial & Temporary Deployments: Supports high-throughput IoT, smart logistics, construction sites, events, and emergency setups



Frequency Bands

The MIMO-8-801-5M is an Omni-directional antenna that works from 410 – 470 MHz | 617 – 960 MHz | 1427 – 1517 MHz | 1710 – 2700 MHz | 3300 – 4200 MHz | 5000 – 6000 MHz | and the following Wi-Fi frequency bands | 2400 – 2500 MHz | and | 5000 – 6000 MHz |



Indicates the 5G/LTE bands on which MIMO-8-801-5M works

Indicates the WI-FI bands on which MIMO-8-801-5M works

Antenna Derivatives

Product Order Code (SKU)	A-MIMO-8-V1-801-5M-B	A-MIMO-8-V1-801-5M-W
Radome Colour	Black	White
Radome Material	PC+ABS (Halogen Free)	UV Stable ASA
Ports	9	9
SISO/MIMO	8x8 MIMO - 5G SISO - GNSS	8x8 MIMO - 5G SISO - GNSS
Coax Cable Type	RTK-031 – CELL & GNSS	RTK-031 – CELL & GNSS
Coax Cable Length	5m – CELL & GNSS	5m – CELL & GNSS
Connector Type	Cellular: SMA (M) GNSS: SMA (M)	Cellular: SMA (M) GNSS: SMA (M)
EAN	6009716250963	6009716250987
E-Mark Certification Number	E1*10R07/00*10901*00	E1*10R07/00*10901*00

*The coax cable & connector are factory mounted to the antenna

Electrical Specifications - Cellular

Frequency Bands:	410 – 470 MHz 617 – 960 MHz 1427 – 1517 MHz 1710 – 2700 MHz 3300 – 4200 MHz 5000 – 6000 MHz
Gain (Max):	-4 dBi @ 410 – 470 MHz -1 dBi @ 617 – 960 MHz 3 dBi @ 1427 – 1517 MHz 8 dBi @ 1710 – 2700 MHz 8.3 dBi @ 3300 – 4200 MHz 8 dBi @ 5000 – 6000 MHz
VSWR:	<1.5:1 across 85% of the bands
Feed Power Handling:	10 W
Input Impedance:	50 Ohm (nominal)
Polarisation:	Linear Vertical
Coax Cable Loss:	0.39 dB/m @ 400 MHz 0.54 dB/m @ 900 MHz 0.68 dB/m @ 1500 MHz 0.79 dB/m @ 1800 MHz 1.09 dB/m @ 3000 MHz 1.65 dB/m @ 5800 MHz
DC Short:	Yes

Electrical Specifications - GNSS

Frequency Range (GPS):	L1: 1575.42 MHz L5: 1176.45MHz
LNA Gain:	20±2 dB
VSWR:	<2:1
DC Voltage:	2.7-5 V
Operating Current:	<15mA
Nominal Impedance:	50 Ω
Polarisation:	RHCP
Coax Cable Loss:	0.68 dB/m @ 1500 MHz

Product Box Contents

Antenna:	A-MIMO-8-V1-801-5M
Mounting Accessories:	M30 Threaded Spigots (60mm and 120mm), Adhesive Surface Mount Foam & Magnet Mount Foam
Fasteners:	4 x M6x12mm Cap Screws

Mechanical Specifications

Product Dimensions:	Ø268 mm x 84.8 mm (Incl. base seal)
Packaged Dimensions:	324 x 279 x 202 mm
Weight:	1.96 kg
Packaged Weight:	3.02 kg
Mounting Type*:	Spigot, Surface & Optional Pole/Wall and Magnet Mounting

Environmental Specifications, Certification & Approvals

Wind Survival:	≤220 km/h
Temperature Range (Operating):	-40°C to +80°C
Environmental Conditions:	Outdoor/Indoor
Water Ingress Protection Ratio/Standard:	IP 69K
Salt Spray:	MIL-STD 810G/ASTM B117
Operating Relative Humidity:	Up to 98%
Storage Humidity:	5% to 95% - non-condensing
Storage Temperature:	-40°C to +80°C
Enclosure Flammability Rating:	UL 94-HB
Impact Resistance:	IK 10**
Product Safety & Environmental:	Complies with RoHS standards

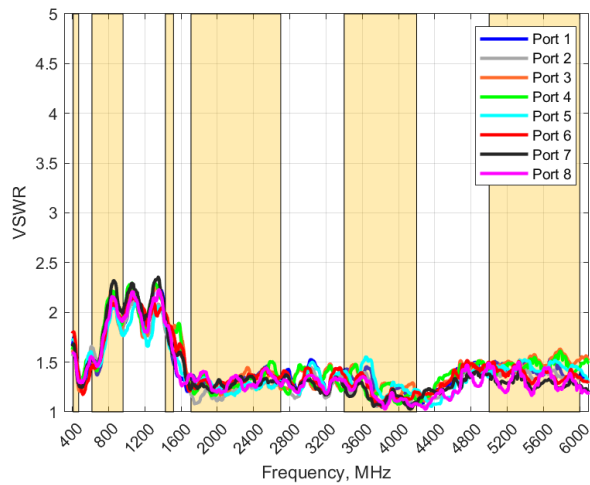
*Pole/wall mount for non-mobility applications

**IK 08 for pole/wall mount options



Antenna Performance Plots

VSWR: Cellular Antenna



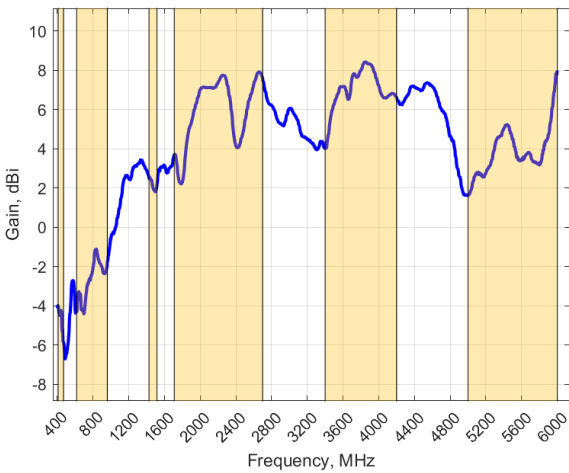
Voltage Standing Wave Ratio (VSWR)*

VSWR is a measure of how efficiently radio-frequency power is transmitted from a power source, through a transmission line, into a load. In an ideal system, 100% of the energy is transmitted which corresponds to a VSWR of 1:1.

The MIMO-8-801-5M delivers superior performance across all bands with a VSWR of <1.5:1, across 85% of the bands.

* VSWR measured with 5m low loss cable

GAIN (EXCLUDING CABLE LOSS): Cellular Antenna



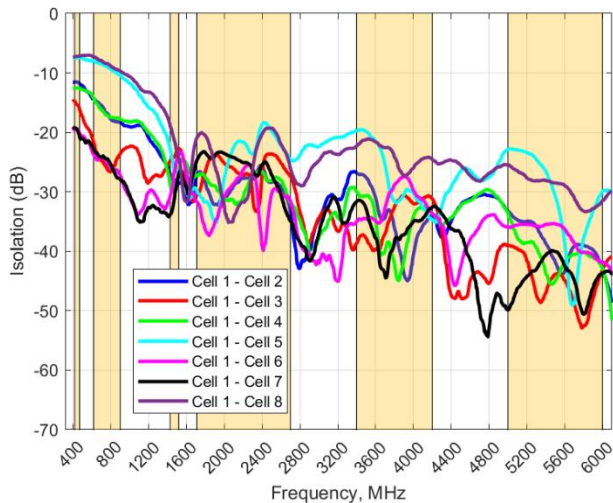
Gain* in dBi

8.3 dBi is the peak gain across all bands from 410 – 6000 MHz

Gain @ 410 – 470 MHz:	-4 dBi
Gain @ 617 – 960 MHz:	-1 dBi
Gain @ 1427 – 1517 MHz:	3 dBi
Gain @ 1710 – 2700 MHz:	8 dBi
Gain @ 3300 – 4200 MHz:	8.3 dBi
Gain @ 5000 – 6000 MHz:	8 dBi

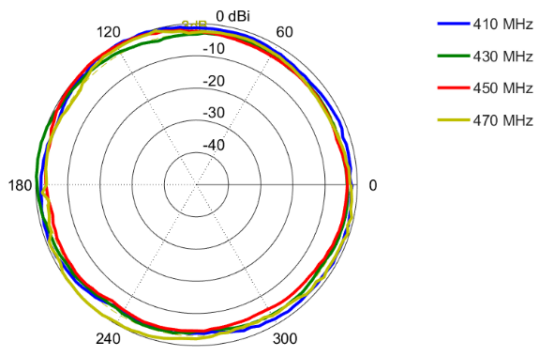
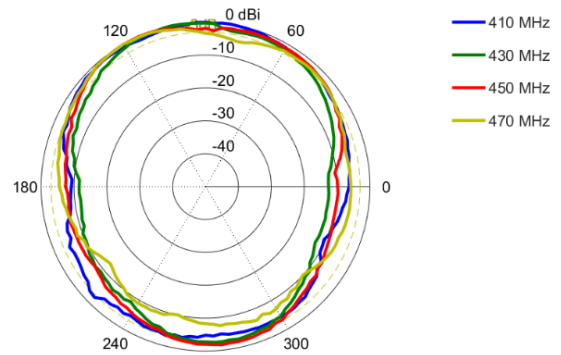
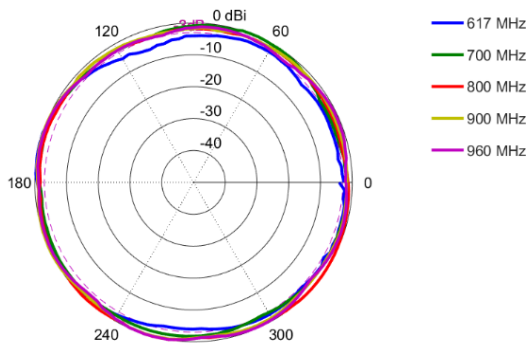
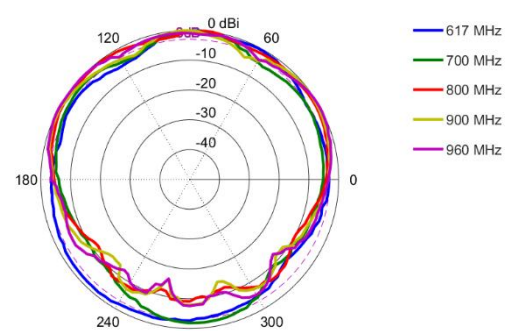
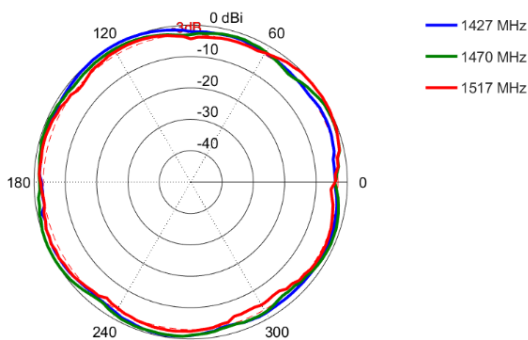
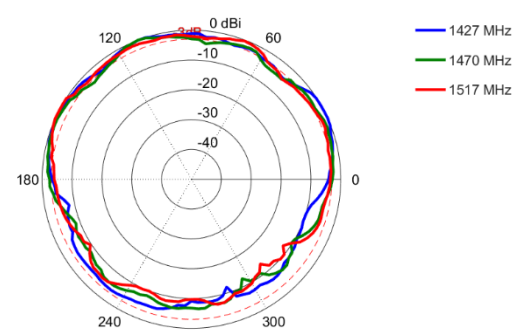
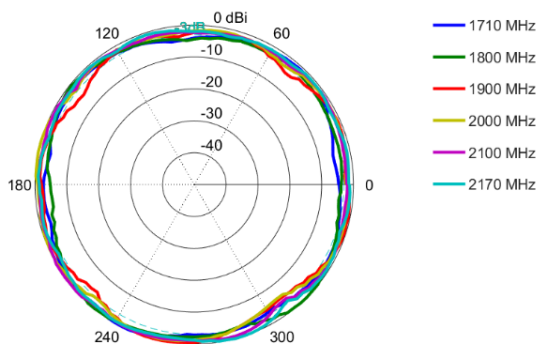
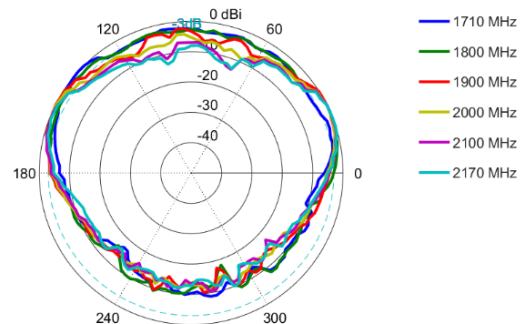
*Antenna gain measured with polarisation aligned standard antenna on a 600mm ground plane.

ISOLATION: Cellular Antenna

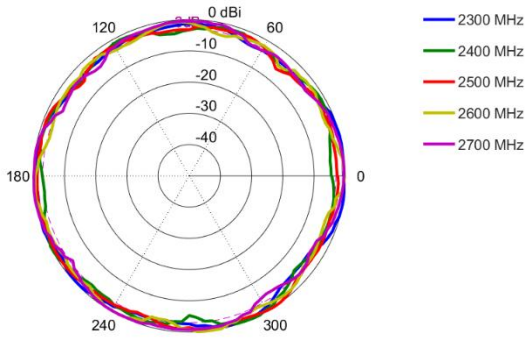


Isolation

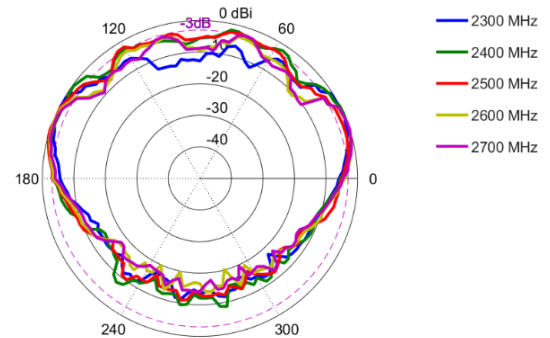
Isolation is a measure of how much energy from one port leaks into another port undesirably. Isolation of 0 dB between 2 ports means that there are no isolation and the energy from 1 port excitation is visible on another port. Isolation of -30 dB or more means that <0.1% of 1 port's energy is leaked into another. A good isolation is under -10 dB.

Radiation Patterns – Cellular
Azimuth: 410 – 470 MHz

Elevation: 410 – 470 MHz

Azimuth: 617 – 960 MHz

Elevation: 617 – 960 MHz

Azimuth: 1427 – 1517 MHz

Elevation: 1427 – 1517 MHz

Azimuth: 1710 – 2170 MHz

Elevation: 1710 – 2170 MHz


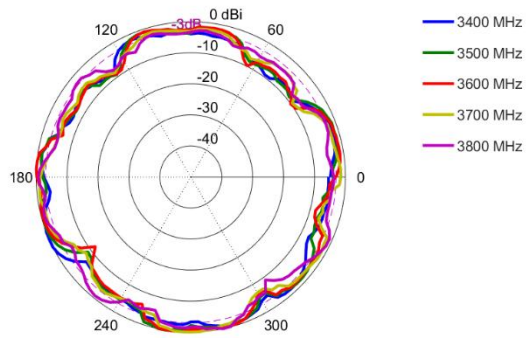
Azimuth: 2300 – 2700 MHz



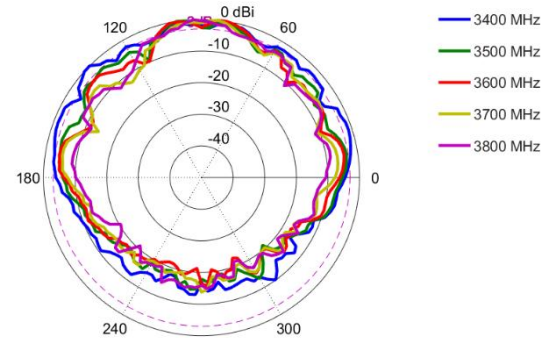
Elevation: 2300 – 2700 MHz



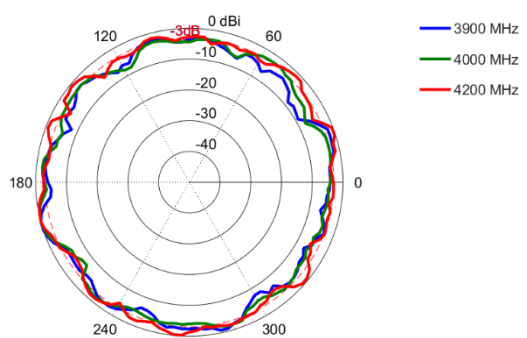
Azimuth: 3400 – 3800 MHz



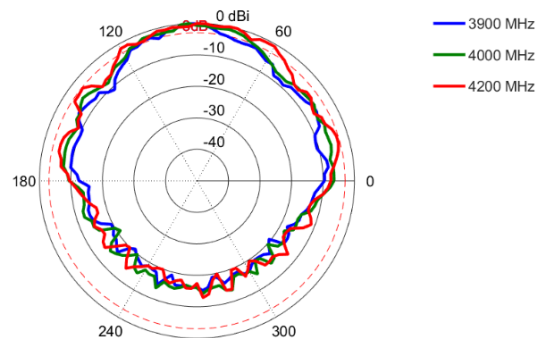
Elevation: 3400 – 3800 MHz



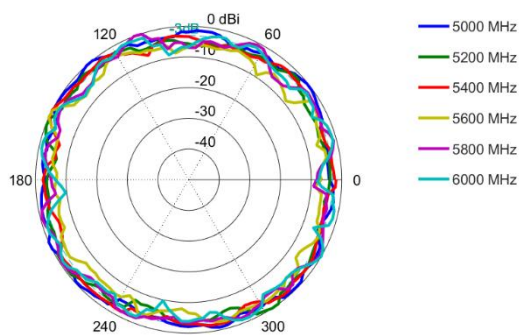
Azimuth: 3900 – 4200 MHz



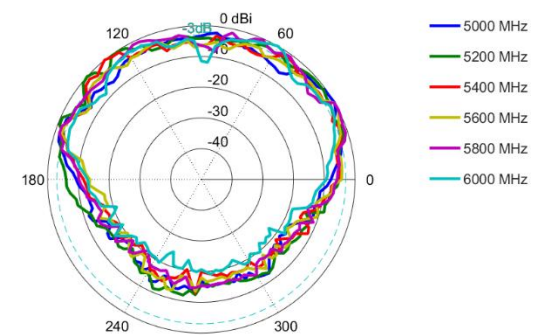
Elevation: 3900 – 4200 MHz



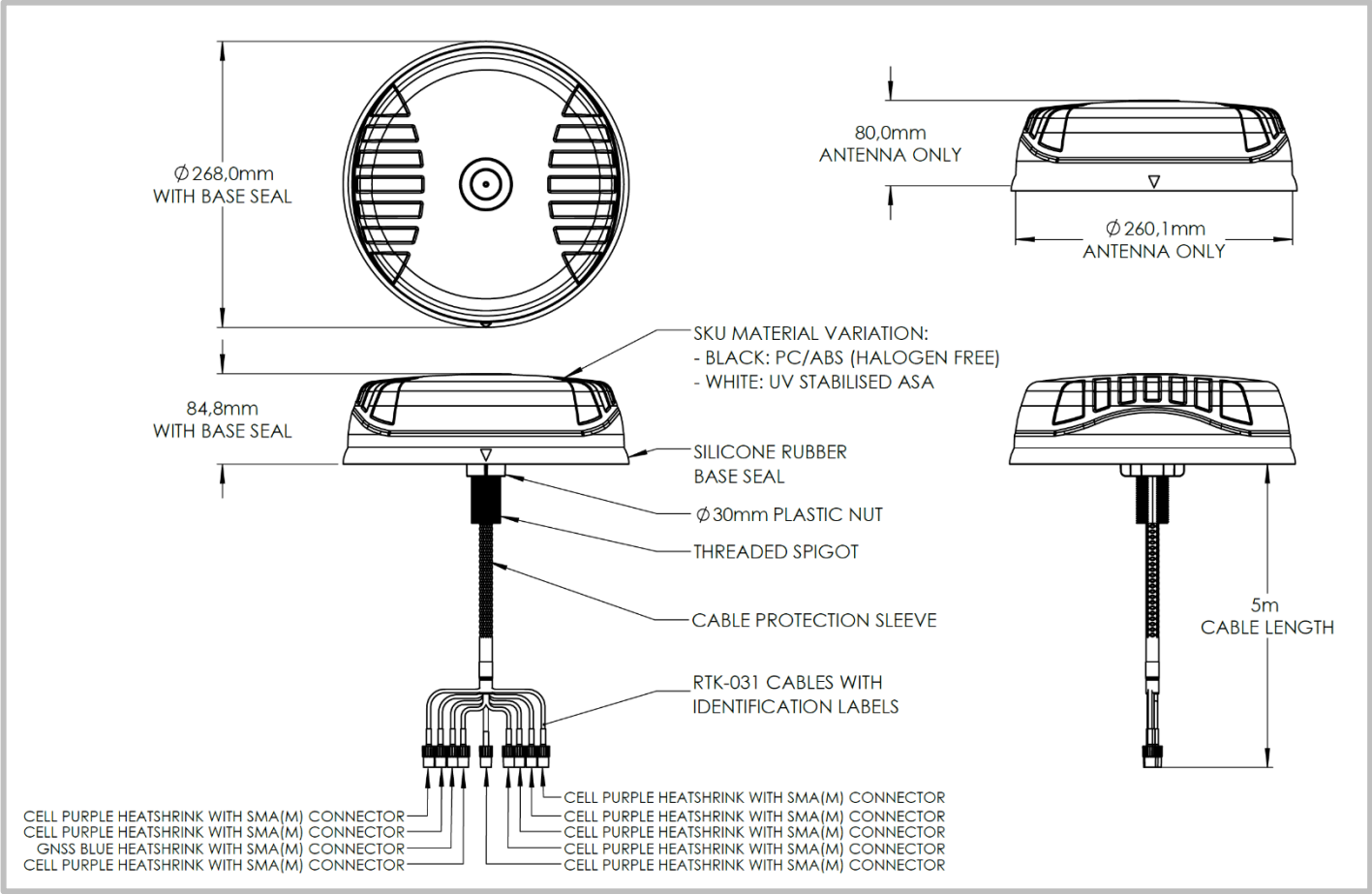
Azimuth: 5000 – 6000 MHz



Elevation: 5000 – 6000 MHz



Technical Drawing



Mounting Options



Surface Mount

Adhesive surface mount foam (included) to directly secure the antenna to a surface.



Spigot Mount

Long and Short Threaded Spigots and Ø30mm Plastic nut (included) to directly secure the antenna to a surface.

Long Spigot: M30 x 120mm

Short Spigot: M30 x 60mm



Magnet Mount (Optional)

Magnetic Base Kit (MBK-5 Not provided)

For temporary and low-mobility installations.

MBK-5 Description: Gripper Magnet M6 66 x 8.5 mm, M6 Thread Neodymium Magnet set.

Qty 4.



Pole Mount (Optional)

Vertical/ Horizontal Pole mounting using the bracket **A-BRKT-095-V1-01**
(Not provided)



Wall Mount (Optional)

Wall mounting using the bracket **A-BRKT-095-V1-01** (Not provided)

Additional Accessories

See accessories technical specifications on www.poynting.tech

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