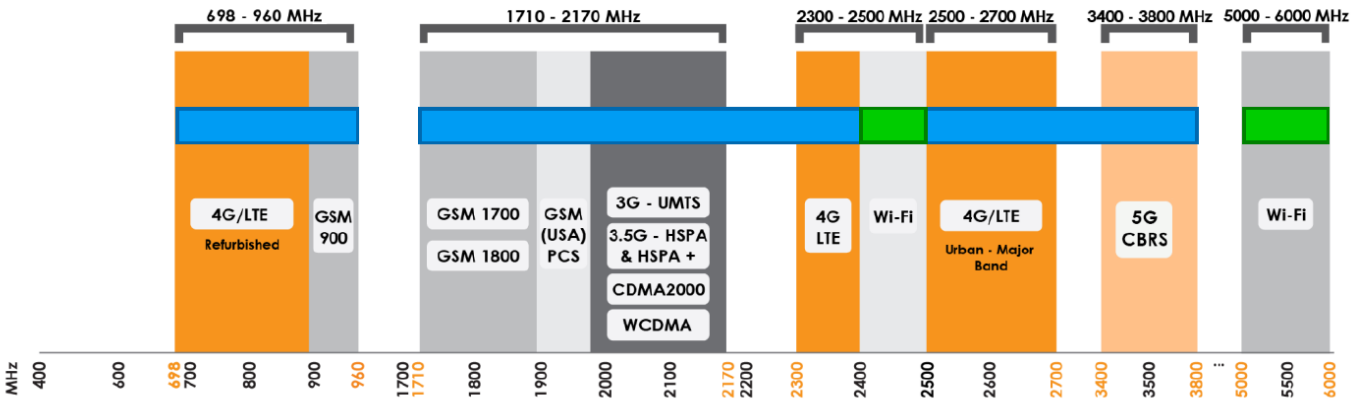
USL-100740 RUGGED 5-IN-1 VEHICLE ANTENNA



USL-100740 RUGGED 5-IN-1 VEHICLE ANTENNA

Electrical Specifications - Cellular

Frequency bands:	698-960 MHz 1710-2700 MHz 3200-3800 MHz
Gain (max) Port 1 & 2:	-1dBi @ 698-960 MHz 6dBi @ 1710-2700 MHz 6dBi @ 3200-3800 MHz
VSWR Port 1 & 2:	≤2.5:1 over 85% of the band
Feed power handling:	10 W
Input impedance:	50 Ohm (nominal)
Polarisation:	Linear Vertical
Coax cable loss:	0.56 dB/m @ 900 MHz 0.72 dB/m @ 1800 MHz 1.2 dB/m @ 3000 MHz
DC Short:	Yes

GPS/Glonass Antenna Electrical Specifications

Frequency Range (GPS):	1575.42MHz/1600MHz
Gain (Max):	21+/-2dBi
VSWR:	≤1.5:1
DC Voltage:	2.7-3.3 V
DC Current:	5-15mA
Noise Figure:	≤1.5 dB
Nominal Impedance:	50 Ω
Polarisation:	RHCP
Filter Out Band Attenuation:	12dB Min f0+50MHz, 16dBi Min f0-50MHz
Cable:	RTK-031
Connector:	SMA male
Voltage:	2.7 - 3.3V
Max. Power-W:	50
Coax cable loss:	0.65 dB/m @ 1500 MHz

Wi-Fi Electrical Specifications

Frequency:	2400-2500 MHz 5000–6000 MHz
Gain (Max) Port 1 & 2:	5dBi @ 2400-2500 MHz 7.5dBi @ 5000–6000 MHz
VSWR Port 1 & 2:	≤2:1 over 95% of the band
Feed power handling:	10 W
Nominal input impedance:	50 Ohm (nominal)
Polarisation:	Linear Vertical
Coax cable loss:	0.88 dB/m @ 2400 MHz 1.65 dB/m @ 5800 MHz
Path to Ground:	Yes

Product Box Contents

Antenna:	A-PUCK-0005-V1-01
Mounting bracket:	Ø20 Threaded Spigots (Up to 60mm clamping thickness), Adhesive Surface Mounting & Magnetic Mount
Adapters:	2x RP-SMA(m) To SMA (f)

Mechanical Specifications

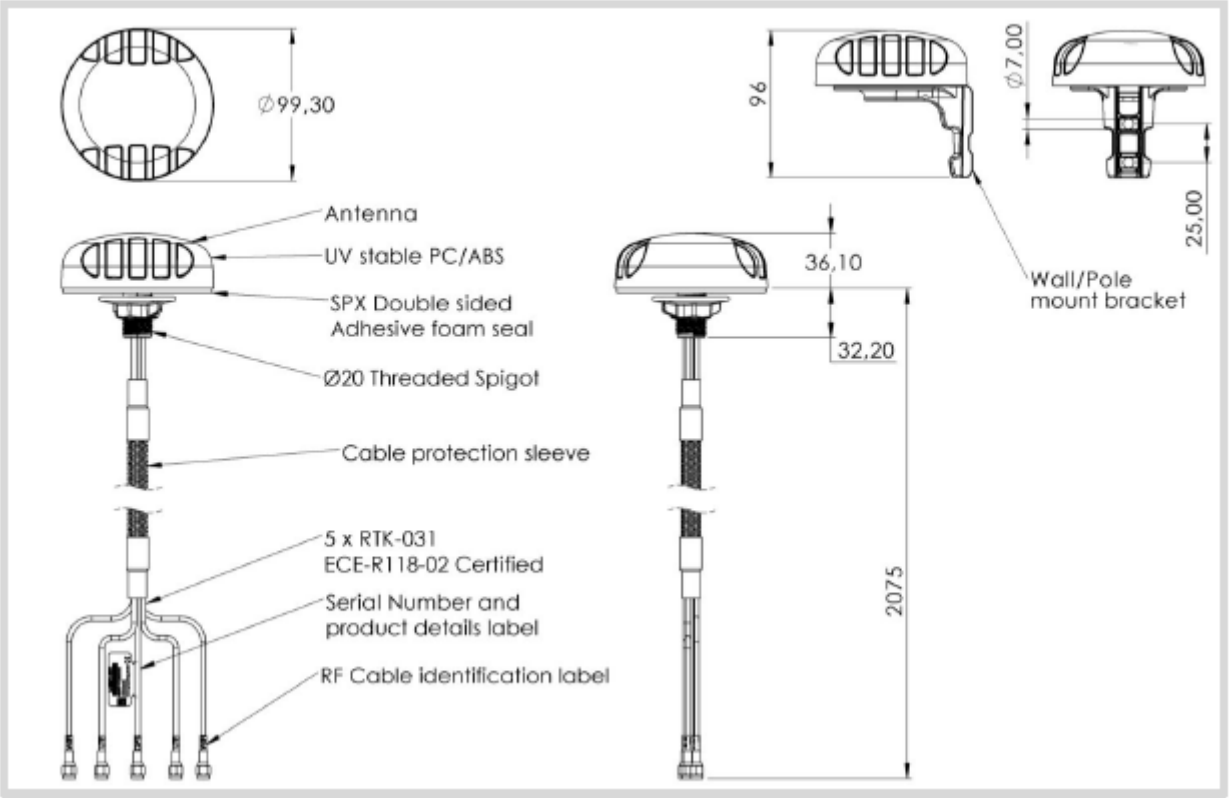
Product dimensions	Ø99.3 mm x 36 mm
Packaged dimensions:	150 mm x 150mm x 120mm
Weight:	0.523kg
Packaged weight:	0.654kg
Radome material:	PC+ABS (Halogen free)
Mounting Type:	Ø20 Threaded Spigot, Pole, Wall, Surface and Magnetic mount

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 68 – 30 minutes up to 1.5m
Salt Spray:	MIL-STD 810F/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, ECE-R118.02 Certified cables
Impact resistance:	IK 10
Product Safety & Environmental:	Complies with CE and RoHS standards

USL-100740 RUGGED 5-IN-1 VEHICLE ANTENNA

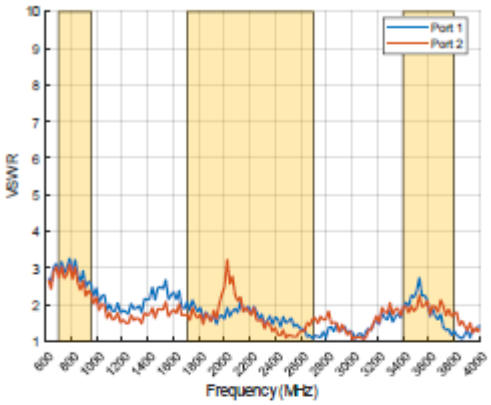
Technical Drawings



USL-100740 RUGGED 5-IN-1 VEHICLE ANTENNA

Antenna Performance Plots

VSWR: Cellular Antenna



Voltage Standing Wave Ratio (VSWR)*

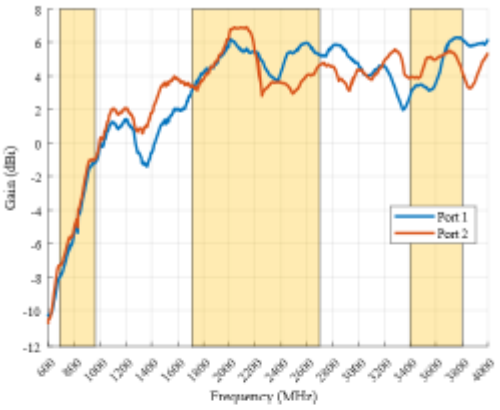
VSWR is a measure of how efficiently radio-frequency power is transmitted from a power source, through a transmission line, into a load. In an ideal system, 100% of the energy is transmitted which corresponds to a VSWR of 1:1.

The PUCK-5 delivers superior performance across all bands with a VSWR of ≤2.5:1 over 85% of the band

*Measured with 2m low loss cable

*Measured with 50Ω load terminated to unused port

Gain: Cellular Antenna

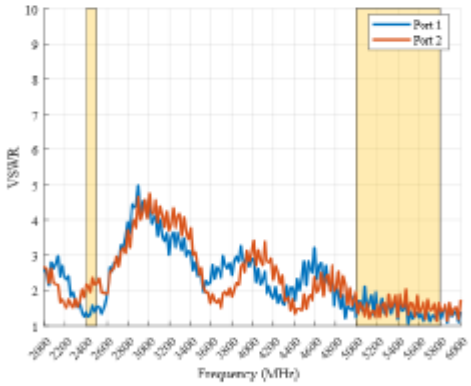


Gain in dBi

6 dBi is the peak gain across all bands from 698-960, 1710-2700 & 3400-3800 MHz

Peak Gain @ 698-960MHz:	-1 dBi
Peak Gain @ 1710-2700MHz:	6 dBi
Peak Gain @ 3400-3800MHz:	6 dBi

VSWR: Wi-Fi Antenna



Voltage Standing Wave Ratio (VSWR)*

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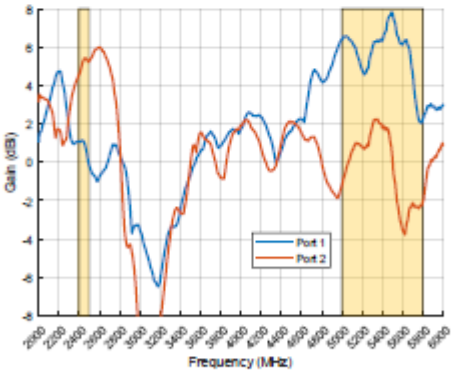
The PUCK-5 delivers superior performance across all bands with a VSWR of ≤2:1 over 95% of the band

*Measured with 2m low loss cable

Gain: Wi-Fi Antenna



Gain in dBi

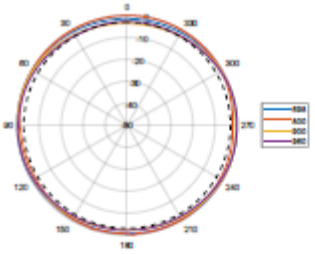
7.5 dBi is the peak gain across all bands from 2400-2500 & 5000 – 5800 MHz

Peak Gain @2400-2500MHz:	5 dBi
Peak Gain @5000-5800MHz:	7.5 dBi

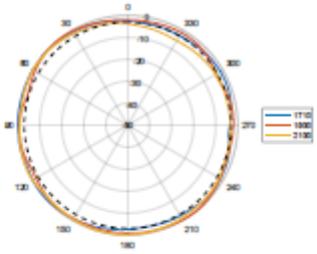
USL-100740 RUGGED 5-IN-1 VEHICLE ANTENNA

Radiation Patterns – Cellular

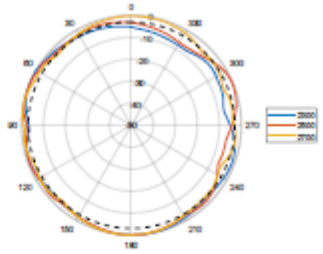
Azimuth (Top View): 698–960 MHz



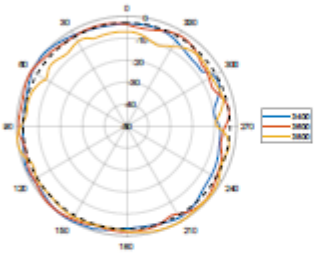
Azimuth (Top View): 1710–2100 MHz



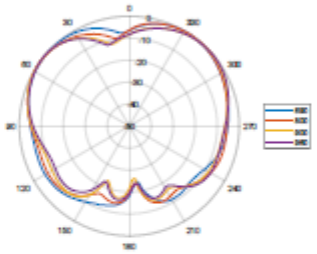
Azimuth (Top View): 2300–2700 MHz



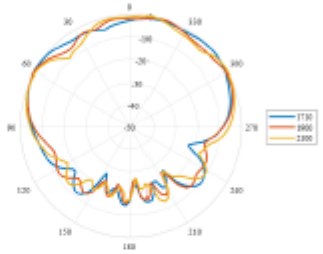
Azimuth (Top View): 3400–3800 MHz



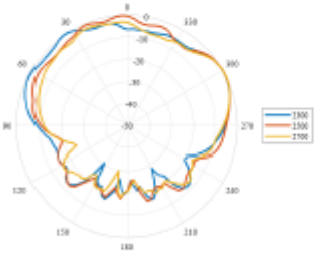
Elevation1 (Side View): 698–960 MHz



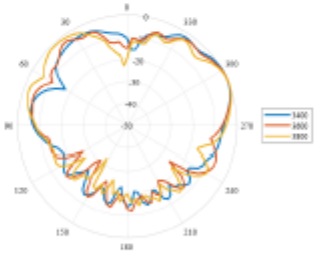
Elevation1 (Side View): 1710–2100 MHz



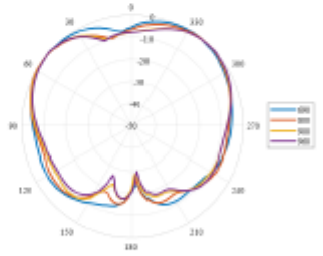
Elevation1 (Side View): 2300–2700 MHz



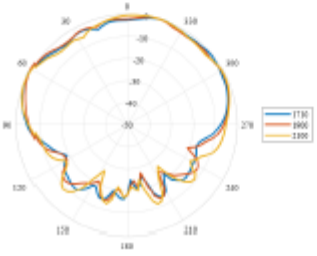
Elevation1 (Side View): 3400–3800 MHz



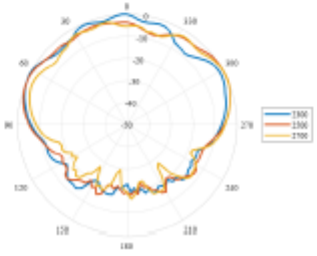
Elevation2 (Side View): 698–960 MHz



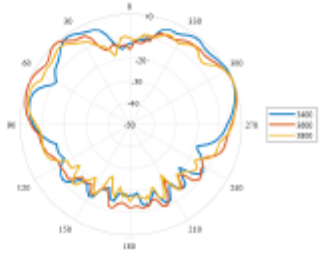
Elevation2 (Side View): 1710–2100 MHz



Elevation2 (Side View): 2300–2700 MHz



Elevation2 (Side View): 3400-3800 MHz



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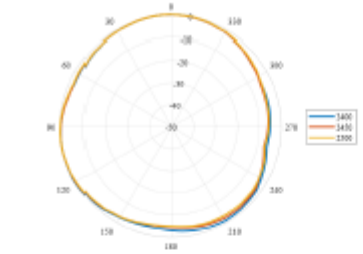
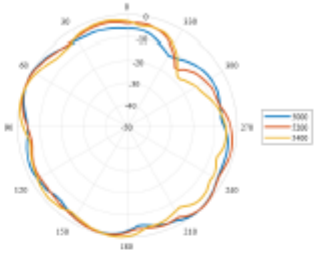
USL-100740 RUGGED 5-IN-1 VEHICLE ANTENNA

Radiation Patterns – Wi-Fi

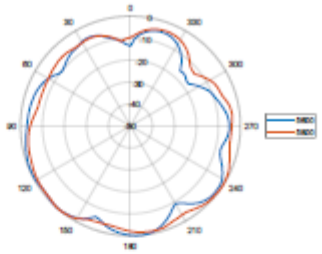
Azimuth (Top View): 2400–2500 MHz



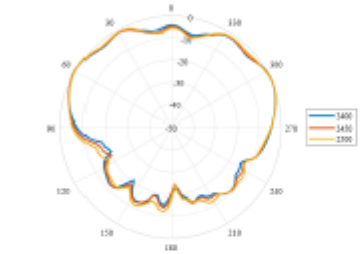
Azimuth (Top View): 5000–5400 MHz



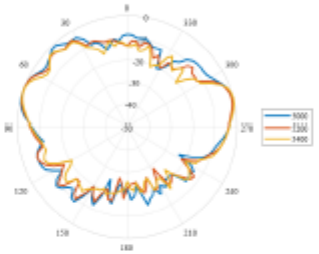
Azimuth (Top View): 5600–5800 MHz



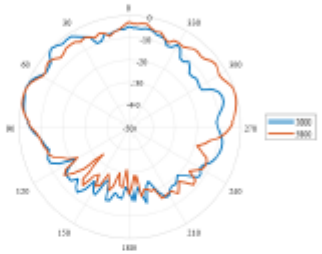
Elevation1 (Side View): 2400–2500 MHz



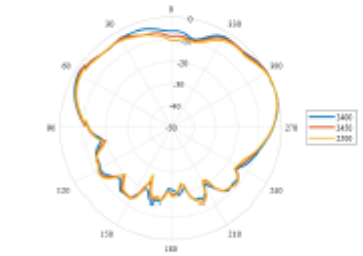
Elevation1 (Side View): 5000-5400 MHz



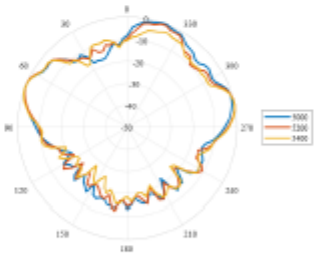
Elevation (Side View): 5600–5800 MHz



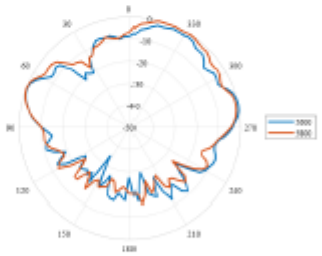
Elevation2 (Side View): 2400–2500 MHz



Elevation2 (Side View): 5000–5400 MHz

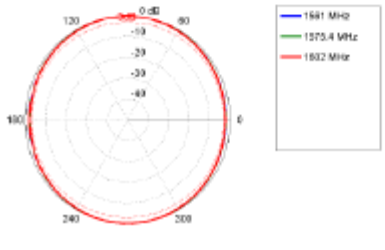


Elevation2 (Side View): 5600–5800 MHz

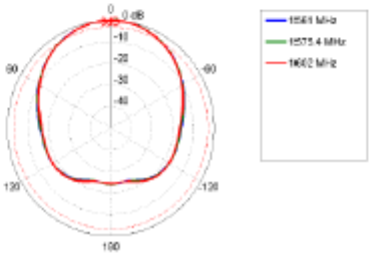


Radiation Patterns – GPS

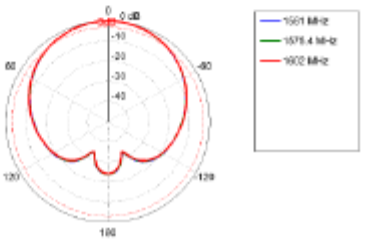
XY Plane: 1561–1602 MHz



XZ Plane: 1561–1602 MHz



YZ Plane: 1561–1602 MHz



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Mounting Options

Many Mounting Possibilities – included as standard

Poynting's new PUCK antenna range provides easy installation with the multiple mounting options. This includes as standard:

- Spigot Mount - two different lengths included (40mm & 80mm)
- Vertical Pole mount (inner & outer mounting for smaller and larger poles)
- Horizontal Pole Mount (e.g. marine rails)
- Magnetic Mount
- Surface Mount (Double Sided Tape)
- Wall Mount

Spigot Mount

Removable 40mm & 80mm threaded spigot (included)

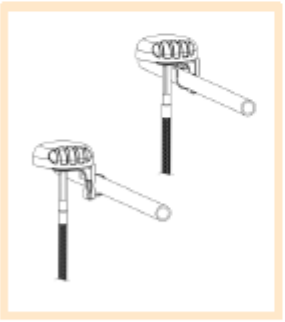
Vertical Pole Mount

Pole/Wall Mounting bracket (included)

Magnetic Mount

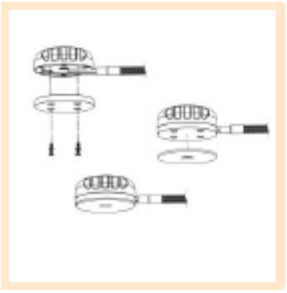
Magnetic Base (included)

For temporary and low mobility installations.



Horizontal Pole Mount

Pole/Wall Mounting bracket (included)



Surface Mount

Adhesive Surface Mounting (included) or can also be directly secured with longer M4 bolts (not included) to the female threaded inserts located in the antenna base

Wall Mount

Pole/Wall Mounting bracket (included)