OMNI-85

ANTENNAS | OMNI-85 SERIES

WIDEBAND ROUTER/EQUIPMENT MOUNT 5G/LTE ANTENNNA

617 – 3800 MHz, 3.5 dBi

617 – 960 MHz; 1427 – 1517 MHz; 1710 – 2700 MHz; 3400 – 3800 MHz

3.5 dBi

Increase x Mb/s

Omni-Directional

4G LTE

5G Ready

CBRS Band

Machine to Machine

IP 55

-40°C to +70°C

Fire Resistant

APPLICATION AREAS

Urban

Rural/Farm

- **Future proof wideband LTE/5G omni-directional antenna**
- **Highly portable and rugged design**
- **Increased connectivity stability**
- **Quick and compact setup**
- **Direct router mount**

Product Overview

The OMNI-85 Poynting's third generation "V3" of the very popular router/equipment mount antenna. The OMNI-85 is a wideband omni-directional antenna that covers all the contemporary 4G/LTE and future 5G frequency bands. The wideband performance from the antenna allows it to operate from 617 to 3800 MHz with a peak gain of 3.5 dBi across the bands of operation. This makes the antenna usable in all parts of the world and is backwards compatible with 2G, 3G and 4G technologies. The antenna is ground plane independent and can be fitted directly on any equipment that uses an SMA female connector. The knuckle base of the antenna allows for multiple angles of deployment to accommodate the orientation of the equipment.

Features

- Omni-directional antenna
- Wideband performance, covering 617 to 3800 MHz
- Antenna is ground plane independent
- Knuckle base allows for multiple angles of deployment
- Portable, lightweight, and rugged design

Application Areas

- Highly portable and ideal for on-the-go implementation
- Improve poor data signal reception (indoor or outdoor)
- Improve slow data transmission connection
- Increase system transmission reliability
- 5G/LTE fringe areas (close to an 4G/LTE area, but out of reach)
- Network operator flexibility – as the antenna is wideband, a new antenna is not needed per network operator

Revised: April 2021

Regulatory Compliance: RoHS 2011/65/EU Compliant | ISO 9001:2015
Document version: TS-OMNI-0085-V3-01 REV 1
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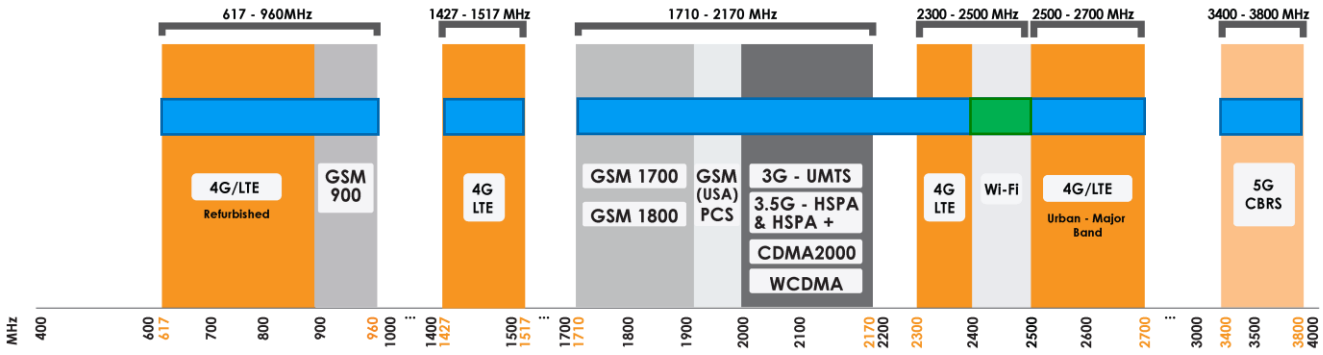
Frequency Bands

The OMNI-85 is an omnidirectional antenna that works from 617 – 960 MHz | 1427 – 1517 MHz | 1710 – 2700 MHz | 3400 – 3800 MHz



Indicates the LTE bands on which **OMNI-85 works**

Indicates the WI-FI bands on which **OMNI-85 works**

Antenna Overview

	LTE
Ports	1
SISO / MIMO	SISO
Frequency Bands	617 – 3800 MHz
Polarisation	Linear (Vertical)
Peak Gain	3.5 dBi
Connector Type	SMA (M)

**The connector is factory mounted to the antenna*

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Electrical Specifications

Frequency bands:	617 – 960 MHz 1427 – 1517 MHz 1710 – 2700 MHz 3400 – 3800 MHz
Gain (max):	0 dBi @ 617 - 960 MHz 1.2 dBi @ 1427 - 1517 MHz 3.5 dBi @ 1710 – 2700 MHz 2.5 dBi @ 3400 - 3800 MHz
VSWR:	<2.5:1
Feed power handling:	10 W
Input impedance:	50 Ohm (nominal)
Polarisation:	Linear Vertical
DC short:	Yes

Product Box Contents

Antenna:	A-OMNI-0085-V3-01

Ordering Information

Commercial name:	OMNI-85
Order product code:	A-OMNI-0085-V3-01
EAN number:	6009710921098

Mechanical Specifications

Product dimensions	209 mm x 31 mm x Ø13 mm
Packaged dimensions:	250 mm x 45 mm x 16 mm
Weight:	0.042 kg
Packaged weight:	0.044 kg
Radome material:	ABS (Halogen Free)
Radome colour:	Black
Mounting Type:	Screw-on

Environmental Specifications, Certification & Approvals

Wind Survival:	Indoor
Temperature Range (Operating):	-40°C to +70°C
Environmental Conditions:	Indoor
Water ingress protection ratio/standard:	IP 55
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 +70°C
Enclosure Flammability Rating:	UL 94-HB
Impact resistance:	IK 05
Product Safety & Environmental:	Complies with CE and RoHS standards

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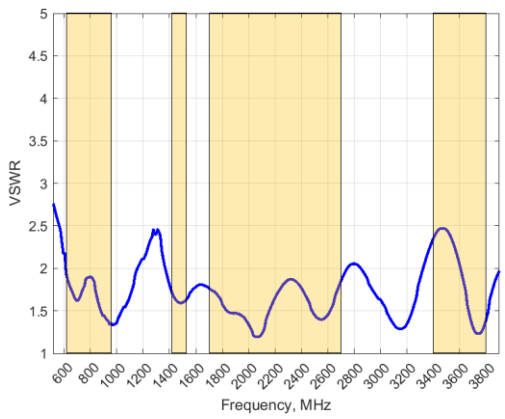
Antenna Performance Plots

VSWR



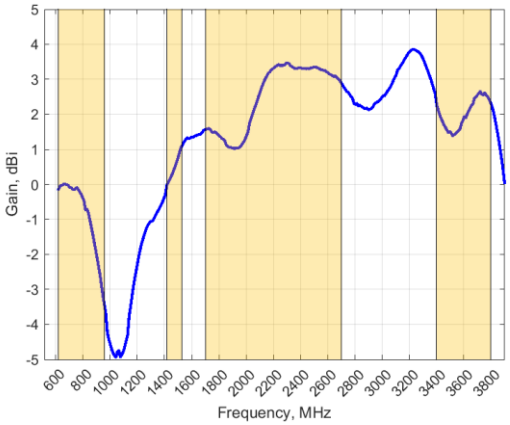
Voltage Standing Wave Ratio (VSWR)

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 OMNI-85 delivers superior performance across all bands with a VSWR of 2.5:1 or better across 90% of the bands.

⁺ VSWR measured with no cable

GAIN (EXCLUDING CABLE LOSS)



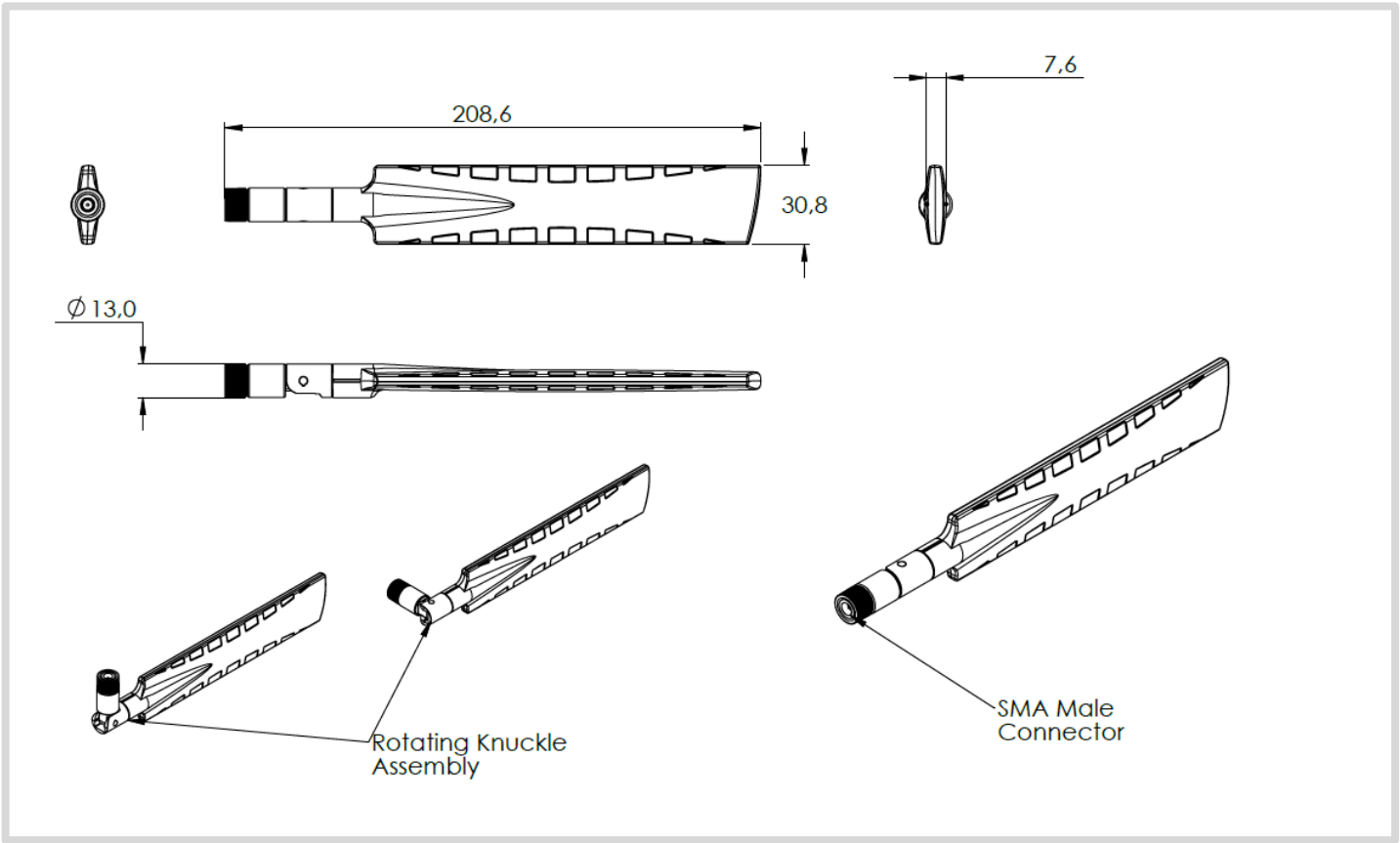
Gain* in dBi

3.5 dBi is the peak gain across all bands from 617 – 3800 MHz

Gain @ 617 – 960 MHz:	0 dBi
Gain @ 1427 – 1517 MHz:	1.2 dBi
Gain @ 1710 – 2700 MHz:	3.5 dBi
Gain @ 3400 – 3800 MHz:	2.5 dBi

**Antenna gain measured with polarisation aligned standard antenna*

Technical Drawings



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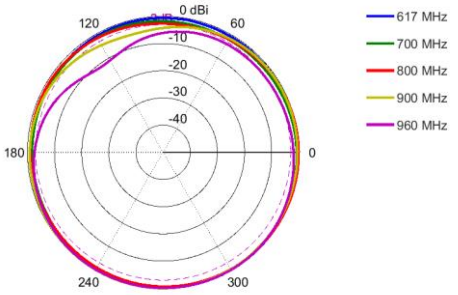
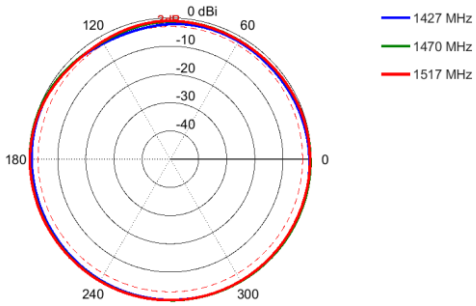
Radiation Patterns

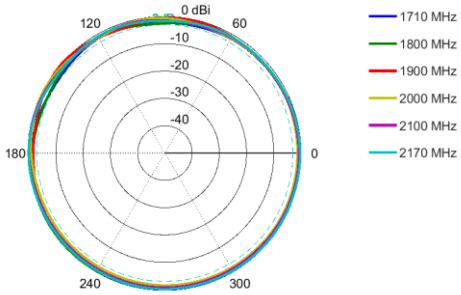
Azimuth: 617 – 960 MHz



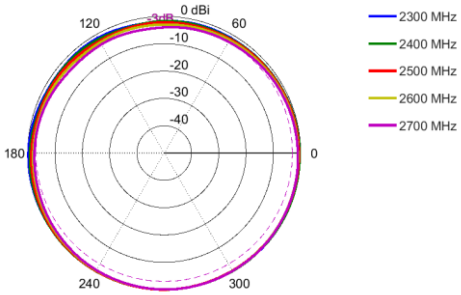
Azimuth: 1427 – 1517 MHz



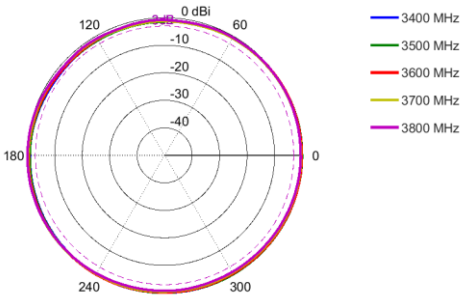
Azimuth: 1710 – 2170 MHz



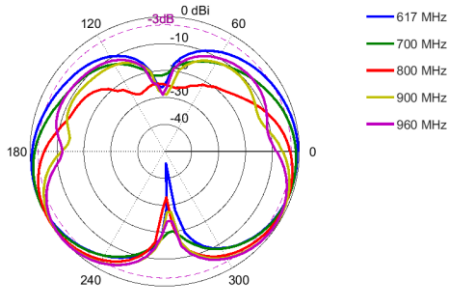
Azimuth: 2300 – 2700 MHz



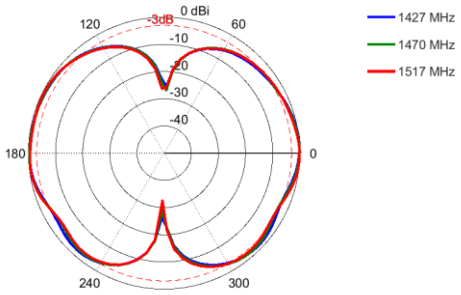
Azimuth: 3400 – 3800 MHz



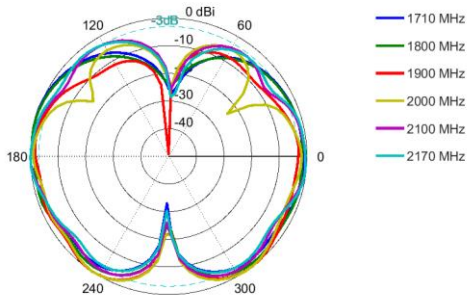
Elevation: 617 – 960 MHz



Elevation: 1427 – 1517 MHz



Elevation: 1710 – 2170 MHz



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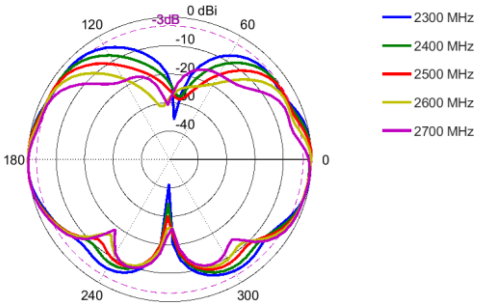
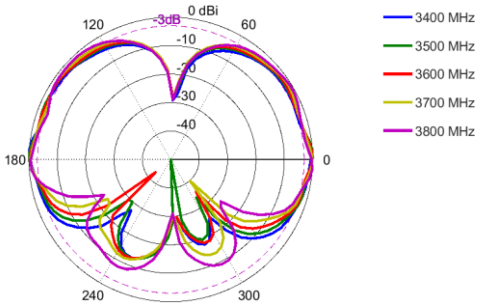
Elevation: 2300 – 2700 MHz



Elevation: 3400 -3800 MHz



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Additional Accessories

No additional accessories required.

Contact Poynting

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