

LPDA-92



ANTENNAS | LPDA-92 SERIES

WIDEBAND LOG-PERIODIC DIPOLE ARRAY ANTENNA

698 - 3800 MHz, 11 dBi



| | | | | | |
|---|---------------|--------------------|-----------------|----------------|----------------|
| | | | | | |
| 698 – 960 MHz; 1710 – 2700 MHz; 3400 – 3800 MHz | 11 dBi | Increase x Mb/s | Uni-Directional | IoT | 4G LTE |
| | | | | | |
| 5G READY | 2.4 - 2.5 GHz | 3.5 GHz CBRS | IP 65 | -40°C to +70°C | Fire Resistant |

- Futureproof wideband LTE and Wi-Fi antenna covering 690 – 3800 MHz
- Compatible with 2G, 3G and 4G technologies
- 5G Ready; includes 3.2 GHz to 3.8 GHz CBRS Band
- Improves mobile network subscriber's user experience
- Weather- and vandal resistant
- Used in extreme weather environment

APPLICATION AREAS

Urban

Rural/Farm

Product Overview

This high-gain, wideband, directional antenna covers all international cellular, mobile, and wireless data bands including GSM 900/ GSM1800/UMTS/LTE bands. It also covers the extended cellular and WiMAX bands such as European/USA "Digital Dividend bands" and 2.3- 2.7GHz licensed and unlicensed data bands. Its configuration is suitable for various wireless communications systems. This antenna is unique in its combination of ultra-wide-band operator with a consistent high-gain performance. It has been successfully used in extreme weather environments in Africa and Europe with close to zero failures. A firm favourite, in any area where operators are having signal challenges. It is ideal for any application using the GSM network (LTE/ HSPA/3G/EDGE/GPRS).

Features

- High gain directional antenna
- Easy alignment with main beam around 50° wide
- Broadband covering multiple operational frequencies
- Pole mountable
- Lightweight
- Water and dust resistant
- Tremendous improvement in reliability of wireless data
- Four-year track record in all climate conditions from snow to desert to tropical

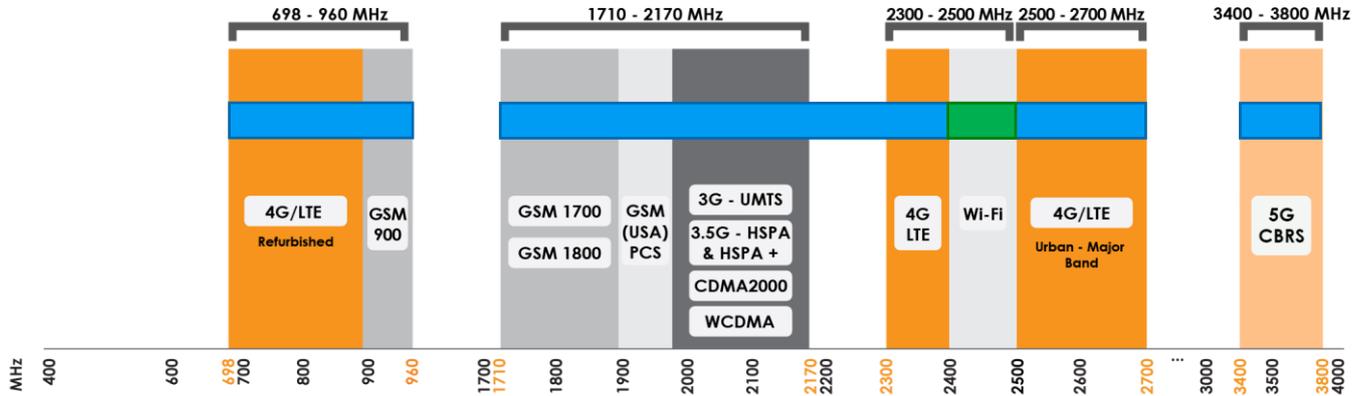
Application Areas

- Urban and rural areas
- Antenna of choice for rural areas due to high gain
- Poor data signal reception (indoor or outdoor)
- Slow data transmission connection
- Unstable connection
- Increase system transmission reliability
- LTE fringe areas (close to an LTE area, but out of reach)
- Network operator flexibility – as the antennas are wideband, a new antenna is not needed per network operator – works on most networks



Frequency Bands

The LPDA-92 is a directional antenna that works from 698 – 960 MHz | 1710 – 2700 MHz | 3400 – 3800 MHz



 Indicates the LTE bands on which LPDA-92 works

 Indicates the Wi-Fi bands on which LPDA-92 works

Antenna Derivatives

| Product Order Code (SKU) | A-LPDA-0092 | A-LPDA-0092-04 | A-LPDA-0092-LTE | A-LPDA-0092-30-LTE |
|---------------------------|--------------------|--------------------|--------------------|--------------------|
| Ports/Antennas Included | 1 | 1 | 2 | 2 |
| Coax Cable Type | HDF 195 | HDF 195 | HDF 195 | HDF 195 |
| Coax Cable Length | 7m | 0.3 m | 7m | 7m |
| Connector Type | SMA (M) | N-Type (F) | SMA (M) | SMA (M) |
| Included Mounting Bracket | N/A | N/A | A-BRKT-033 | A-BRKT-030 |
| Antenna Unit Weight | 1.63 Kg | 1.55 Kg | 1.63 Kg | 1.63 Kg |
| Bracket Weight | N/A | N/A | 990 g | 293 g |
| Antenna Dimensions | 1112 x 200 x 47 mm |
| Bracket Dimensions | N/A | N/A | 414 x 166 x 120 mm | 127 x 100 x 97 mm |
| Packaged Weight | 2.02 Kg | 1.94 Kg | 5.01 Kg | 4.46 Kg |
| Packaged Dimensions | 1120 x 210 x 60 mm | 1120 x 210 x 60 mm | Quantity Dependent | Quantity Dependent |
| EAN | 6009693810556 | 0707273469120 | 6009710921166 | 6009710921180 |

Electrical Specifications

| | |
|----------------------|---|
| Frequency bands: | 698 – 960 MHz 1710 – 2700 MHz 3400 – 3800 MHz |
| Gain (max): | 10.8 dBi @ 698-960 MHz 11 dBi @ 1710-2700 MHz 2.3 dBi @ 3400-3800 MHz |
| VSWR: | <1.5:1 across 95% of the bands |
| Feed power handling: | 10 W |
| Input impedance: | 50 Ohm (nominal) |
| Polarisation: | directional Linear |
| Coax cable loss: | 0.385 dB/m @ 900 MHz 0.565 dB/m @ 1800 MHz 0.666 dB/m @ 2400 MHz 0.788 dB/m @ 3000 MHz |
| DC short: | Yes |

Product Box Contents

| | |
|-------------------|---|
| Antenna: | A-LPDA-0092 |
| Mounting bracket: | Econo brackets, U-bolts, and fasteners suitable for pole mounting |

Mechanical Specifications

| | |
|--------------------|------------------|
| Plastics material: | Nylon 6 |
| Plastics colour: | Black |
| Frame material: | Passivated ADC12 |
| Frame colour: | Aluminium grey |
| Mounting Type: | Pole Mount |

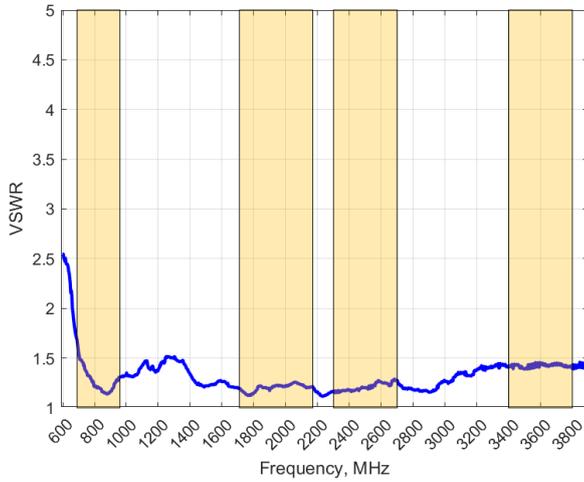
Environmental Specifications, Certification & Approvals

| | |
|--|-------------------------------------|
| Wind Survival: | ≤160 km/h |
| Temperature Range (Operating): | -40°C to +70°C |
| Environmental Conditions: | Outdoor/Indoor |
| Water ingress protection ratio/standard: | IP 65 |
| 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 +70°C |
| Enclosure Flammability Rating: | UL 94-HB |
| Impact resistance: | IK 08 |
| Product Safety & Environmental: | Complies with CE and RoHS standards |

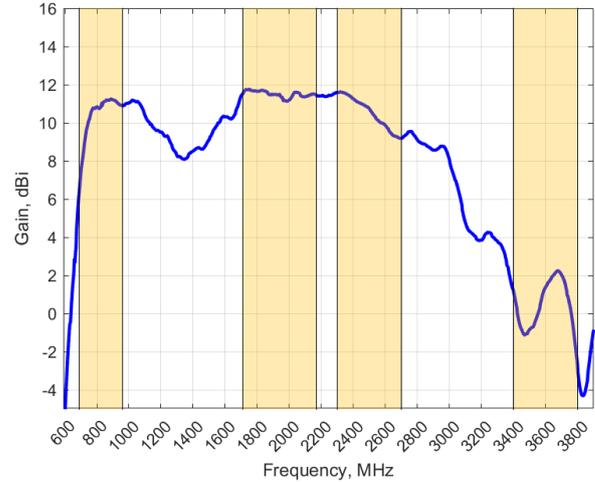


Antenna Performance Plots

VSWR



GAIN (EXCLUDING CABLE LOSS)



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 LPDA-92 delivers superior performance across all bands with a VSWR of <1.5:1 across 95% of the bands.

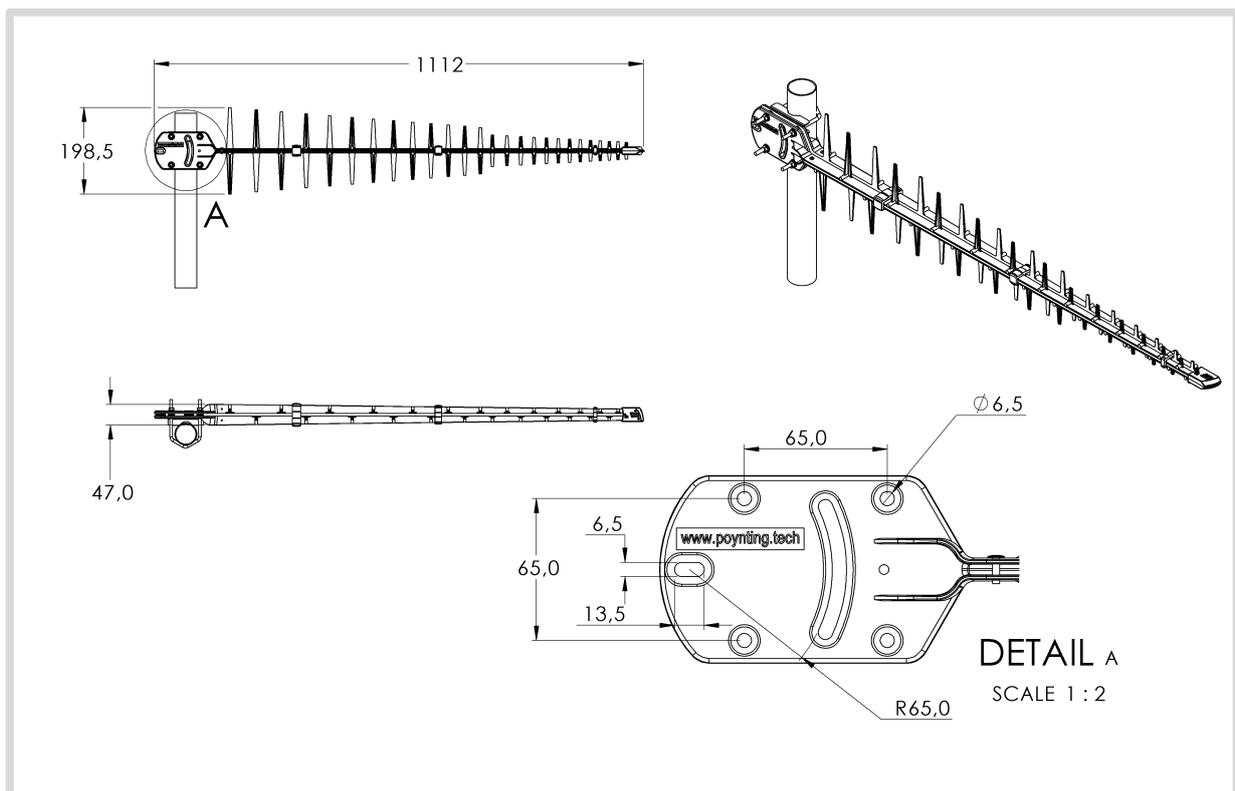
Gain in dBi

11 dBi is the peak gain across all bands from 698 – 3800 MHz

| | |
|-------------------------|----------|
| Gain @ 698 – 960 MHz: | 10.8 dBi |
| Gain @ 1710 – 2700 MHz: | 11 dBi |
| Gain @ 3400 – 3800 MHz: | 2.3 dBi |

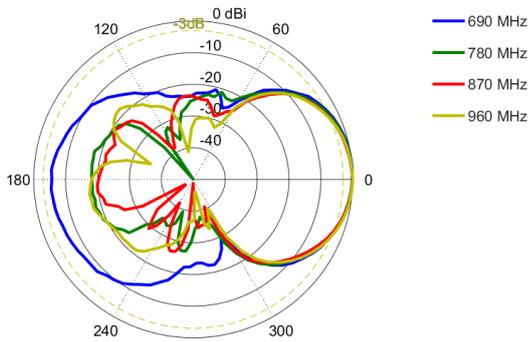
***Antenna gain measured with polarisation aligned standard antenna*

Technical Drawings

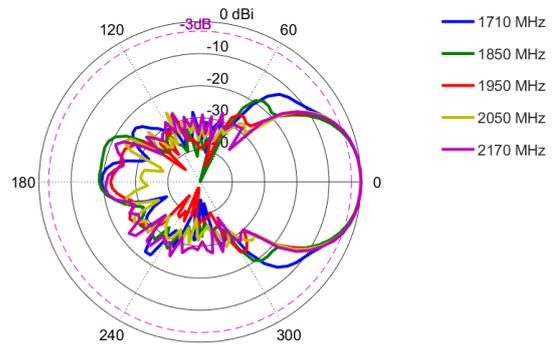


Radiation Patterns

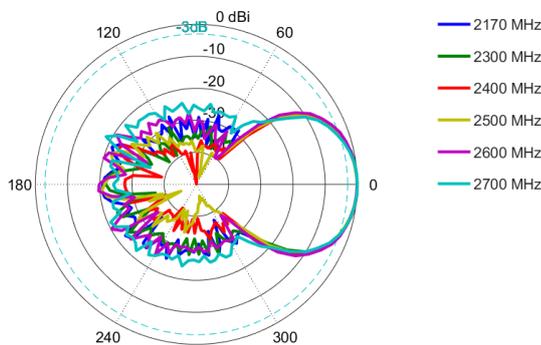
Azimuth: 690 – 960 MHz



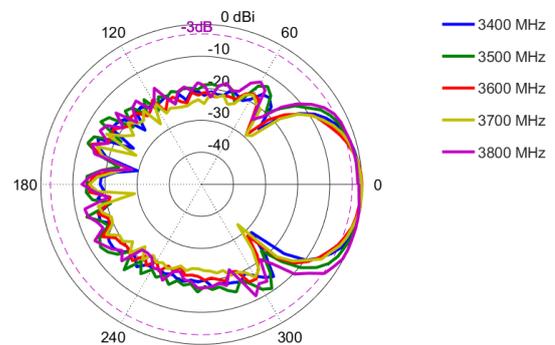
Azimuth: 1710 – 2170 MHz



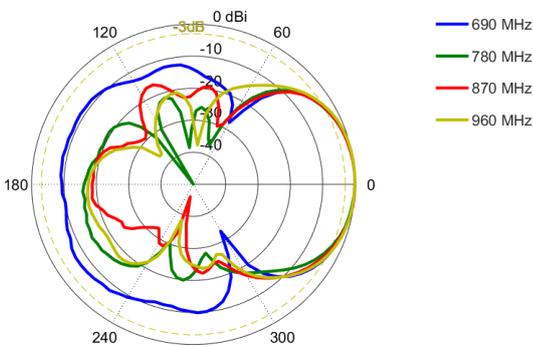
Azimuth: 2170 – 2700 MHz



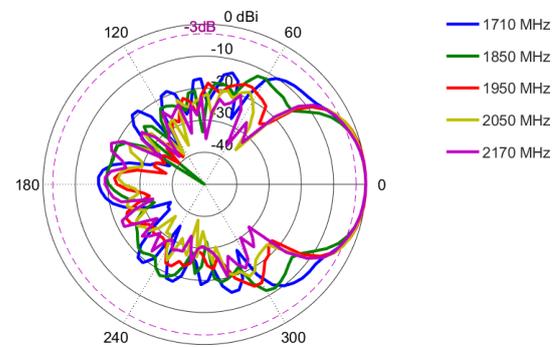
Azimuth: 3400 – 3800 MHz



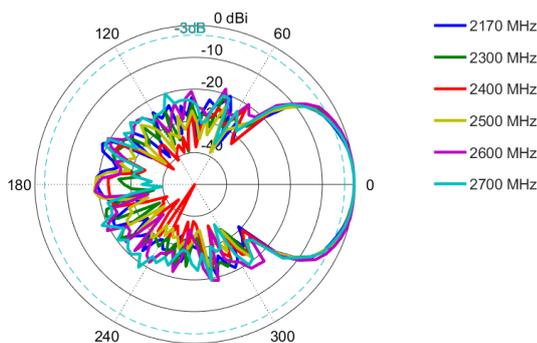
Elevation: 690 – 960 MHz



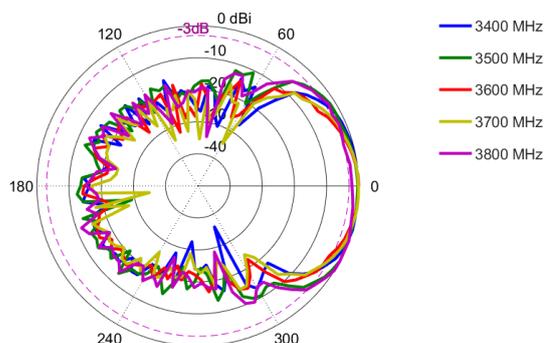
Elevation: 1710 – 2170 MHz



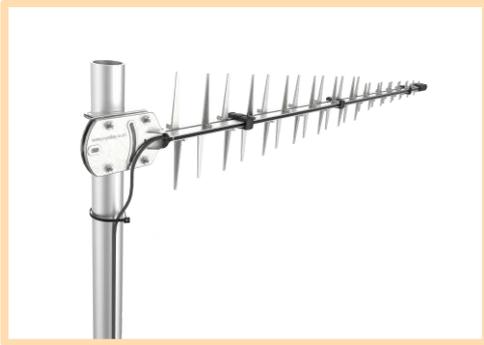
Elevation: 2170 – 2700 MHz



Elevation: 3400 – 3800 MHz



Mounting Options



Pole Mount

Pole mounted vertically using U-bolts



A-LPDA-0092-30-LTE Mount

Pole mounted vertically and horizontally using U-bolts and a BRKT-030



A-LPDA-0092-LTE Mount

Pole mounted at $\pm 45^\circ$ using U-bolts and a BRKT-033

Additional Accessories

Extension Cables: Up to 10m HDF 195
Various connectors available
Installation poles and brackets available

See accessories technical specifications on www.poynting.tech

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