

DASH-1



ANTENNAS | DASH-1 SERIES

ULTRA LOW PROFILE, SMART METER LTE ANTENNA

LTE; 690 – 2700 MHz, 4 dBi



| | | | | | |
|------------------------------------|-------------------------|--------------------|----------------------|-----------------------|-----|
| | | | | | |
| 690 – 960 MHz; 1710 – 2700 MHz; | 1 dBi @ 690- 960 MHz | Increase x Mb/s | Omni- Directional | Machine to Machine | IoT |
| | | | | | |
| 690 – 2700 MHz | 2.4 – 2.5 GHz | IP 67 | -40°C to +75°C | Fire Resistant | |

- **Smart Meter, M2M, IoT Antenna**
- **Futureproof wideband LTE antenna**
- **Backwards compatible with 2G and 3G technologies**
- **Increased connectivity stability**
- **Low profile design**

APPLICATION AREAS

- Urban
- Rural/Farm
- Meter

Product Overview

The DASH-1 antenna is purposefully designed for low profile requirements such as Smart Meters. This omni-directional antenna is suitable for indoor and outdoor use, typically mounted on the top or side of smart meter boxes. The DASH-1 antenna is designed with installation simplicity in mind, while covering the LTE frequency bands from 690 – 2700MHz. This antenna has a superior electrical performance over the whole 690 - 2700MHz LTE/cellular bands.

Features

- Omni-directional antenna
- Wideband frequency ranges from 690 – 2700 MHz
- Stylish, but robust design
- Robust, vandal resistant and waterproof (IP67) antenna
- Ultra-versatile mounting options for easy installation

Application Areas

- Smart Utilities: Smart Power Metering, Gas & Water Metering
- Smart Buildings: Climate control, access control, security, irrigation
- Digital signage
- Smart environmental & water systems
- Warehouses & logistics systems
- Industrial factory automation and M2M systems
- Farming & agricultural M2M & IoT

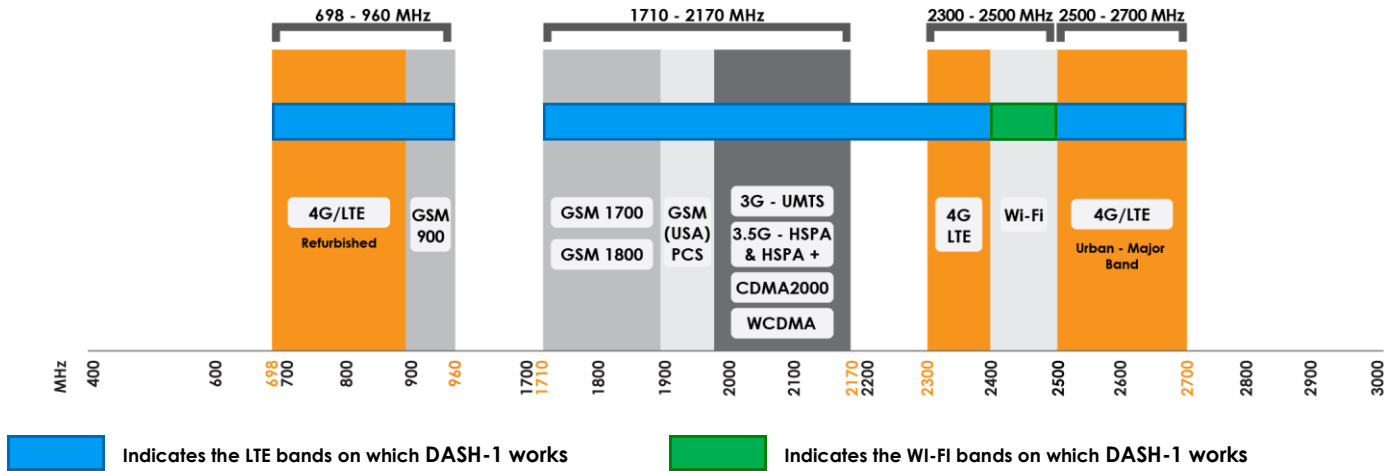
Can be used with the following IoT technologies:

- | | |
|-----------|----------------|
| • Zigbee | • Wi-Fi |
| • Z-Wave | • Wi-Fi HaLow |
| • LoRaWAN | • LTE-M/NB-IoT |
| • Sigfox | • Bluetooth |



Frequency Bands

The DASH-1 works from 690 – 960 MHz | 1710 – 2700 MHz



Antenna Derivatives

| Product Order Code (SKU) | A-DASH-0001-V1 | A-DASH-0001-01-V1 |
|--------------------------|-----------------|-------------------|
| Ports | 1 | 1 |
| SISO / MIMO | SISO | SISO |
| Coax Cable Type | RG 174 | HDF 195 |
| Coax Cable Length | 1m | 1m |
| Connector Type | Right Angle MCX | Right Angle SMA |
| Product Weight | 0.057kg | 0.06kg |
| Packaged Weight | 0.068kg | 0.071kg |
| EAN | 0707273470010 | 0707273470157 |

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

Electrical Specifications

| | |
|-----------------------------|---|
| Frequency bands: | 690 – 960 MHz 1710 – 2700 MHz |
| Gain (max): | 1 dBi @ 690-960 MHz 4 dBi @ 1710-2700 MHz |
| VSWR: | <3:1 Across 90% of the bands |
| Feed power handling: | 10 W |
| Input impedance: | 50 Ohm (nominal) |
| Coax cable loss: | 0.78 dB/m @ 600 MHz 0.92 dB/m @ 900 MHz 1.35 dB/m @ 1800 MHz 1.6 dB/m @ 2400 MHz |
| DC short: | Yes |

Product Box Contents

| | |
|--------------------------|----------------|
| Antenna: | A-DASH-0001-V1 |
| Mounting bracket: | N/A |

Mechanical Specifications

| | |
|-----------------------------|--|
| Product dimensions | 258 mm x 13 mm x 34 mm |
| Packaged dimensions: | 265 mm x 100 mm x 15 mm |
| Radome material: | ABS/PC |
| Radome colour: | Pantone Cool Gray 1C |
| Mounting Type: | Adhesive backing & M8 x 17 mm spigot with M8 brass nut |

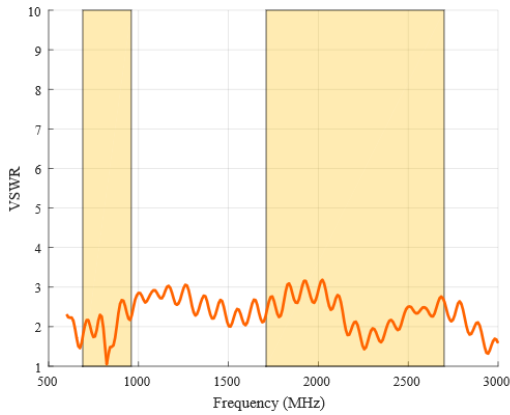
Environmental Specifications, Certification & Approvals

| | |
|---|-------------------------------------|
| Wind Survival: | ≤120 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 |

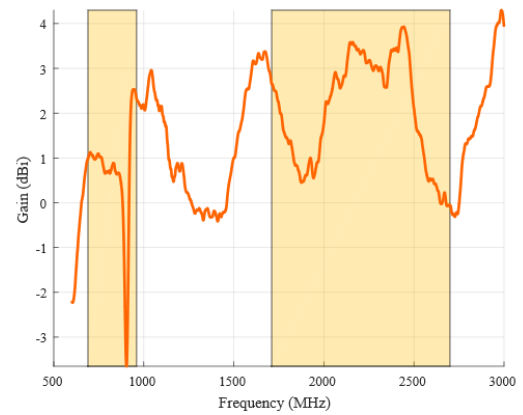


Antenna Performance Plots

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 DASH-1 delivers superior performance across all bands with a VSWR of 3:1 or better across 90% of the bands.

Gain* in dBi

4 dBi is the peak gain across all bands from 690-2700 MHz

Gain @ 690 – 960 MHz:

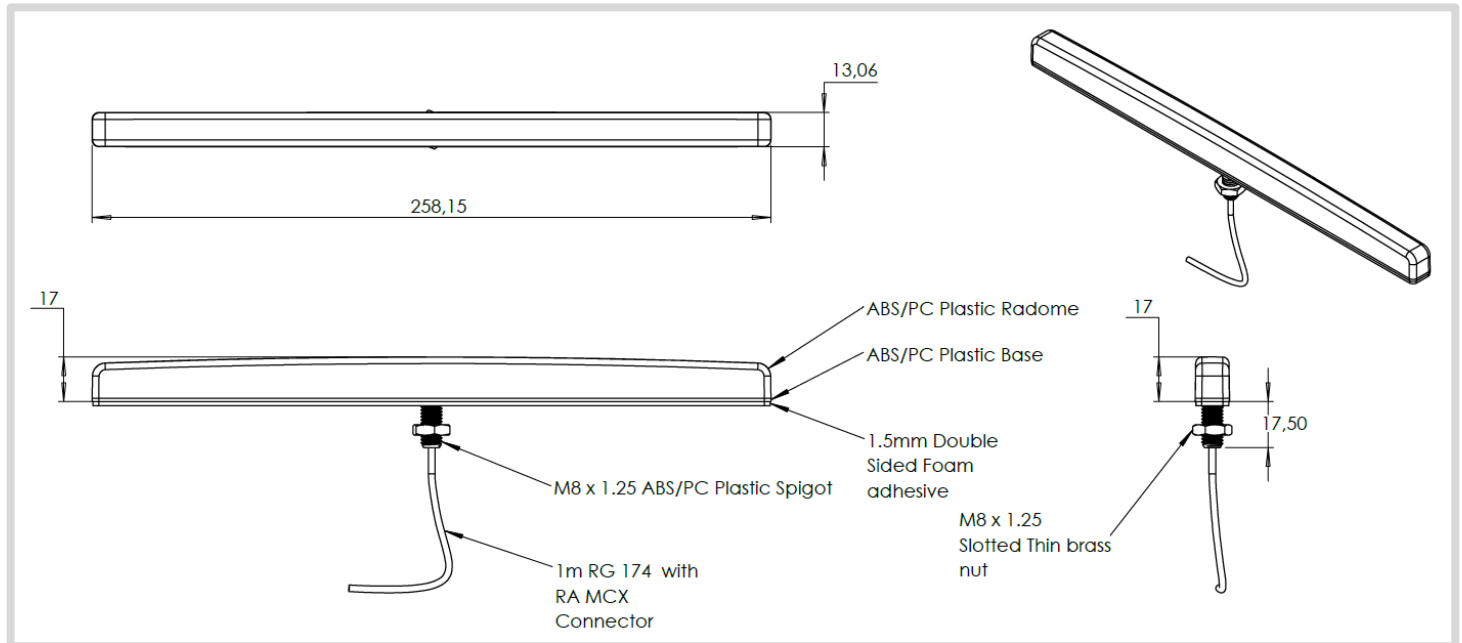
1 dBi

Gain @ 1710 – 2700 MHz:

4 dBi

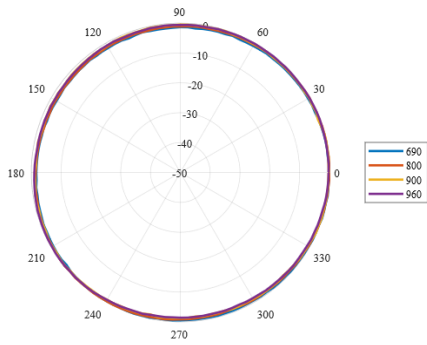
**Antenna gain measured with polarisation aligned standard antenna*

Technical Drawings

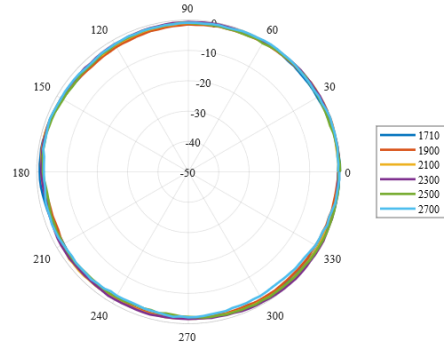


Radiation Patterns

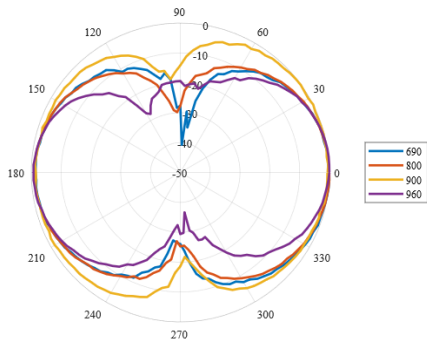
Azimuth: 690 – 960 MHz



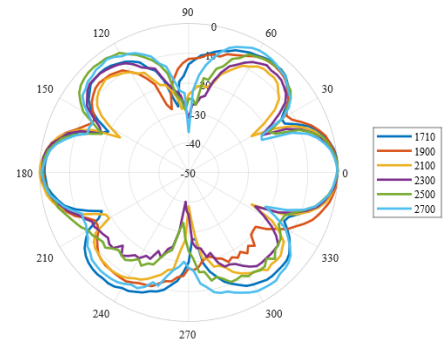
Azimuth: 1710 – 2700 MHz



Elevation: 690 – 960 MHz



Elevation: 1710 – 2700 MHz



Mounting Options



Surface Mount

Surface mounted using the provided adhesive backing.

Additional Accessories

For more information, visit www.poynting.tech

Contact Poynting

Poynting Antennas (Pty) Ltd - Head Office

Unit 4, N1 Industrial Park
Landmarks Avenue,
Samrand, 0157
South Africa

Phone: +27 (0) 12 657 0050

E-mail: sales@poynting.co.za

Poynting Europe

Regus Business Center Neue Messe Riem
Kronstadter Straße 4
81677 München
Germany

Phone: +49 89 208026538

E-mail: sales-europe@poynting.tech