

ANTENNAS | DASH SERIES, SMART METER ANTENNA

DASH-3

Ultra low profile smart meter/M2M/IoT antenna, 400MHz - 510MHz



| | | | |
|------------------------------|----------------------|---------------------|-----------|
| 1.2 dBi 400 - 510 MHz | Omni-Directional | Increase x Mb/s | M2M |
| -40°C to +75°C | IP 67 | UL 94 HB | IK 08 |

- Smart Meter, M2M, IoT antenna
- Futureproof wideband LTE antenna
- Backwards compatible with 3G and 2G technologies
- Increased connectivity stability
- LoRa 433 MHz
- CDMA 450 MHz
- NB-IoT/LTE-M 450 MHz



Product Overview

The DASH-3 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-3 antenna is designed with installation simplicity in mind, while covering the LTE frequency bands 400 – 510MHz. This antenna has a superior electrical performance over the 433MHz - 510MHz international bands for IoT, and can also be used for the whole 400MHz - 510MHz LTE/cellularCDMA bands.

Features

- Omni-directional antenna
- ISM frequency band
- Easy installation
- Stylish, but robust design
- Weather & vandal resistant

M2M and IoT 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 & Logistic systems
- Industrial factory automation and M2M systems
- Farming & Agricultural M2M & IoT

Can be used with the following IoT technologies:

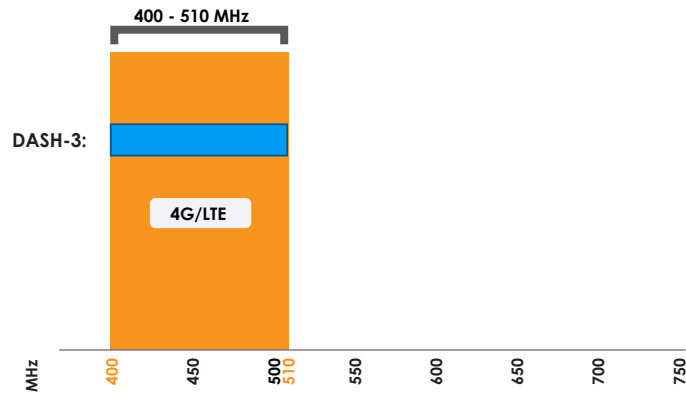
- LoRa 433MHz
- LTE-M/NB-IoT band 31, 72, 73
- CDMA 450



Frequency bands

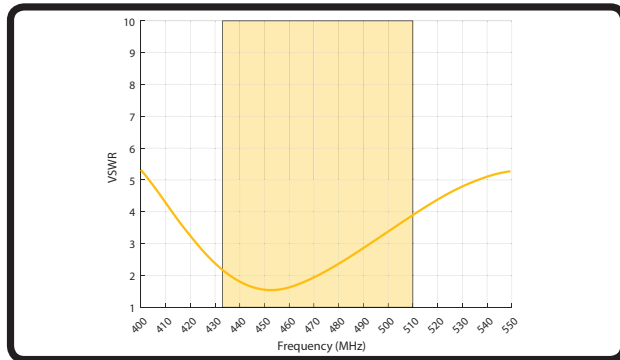
LTE bands 31, 72, 73

Indicates the bands on which this antenna works

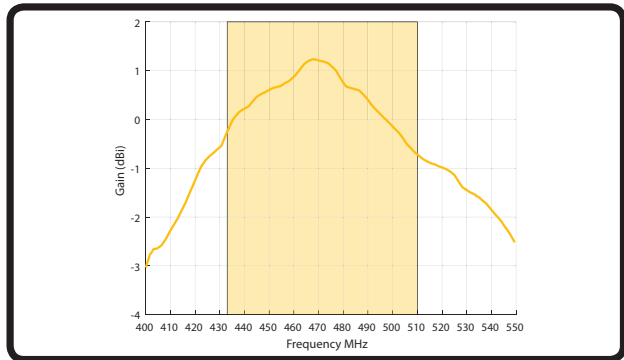


Antenna Performance Plots

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-3 delivers superior performance with a VSWR of:

- < 2.2:1 @ 433 MHz
- < 2:1 @ 450 - 470 MHz

Gain* in dBi

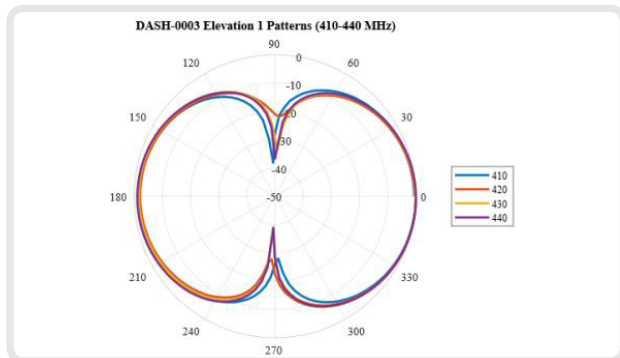
Gain @ 433 - 510 MHz:

1.2 dBi

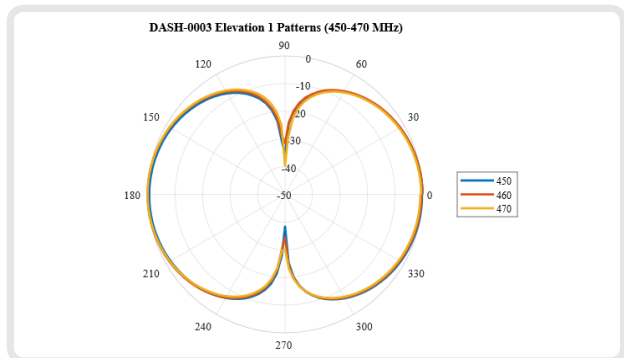
*Antenna gain measured with polarisation aligned standard antenna

Radiation Patterns - Antenna mounted vertically

Elevation: 410 - 440 MHz (side view)



Elevation: 450 - 470 MHz (side view)



Electrical Specifications

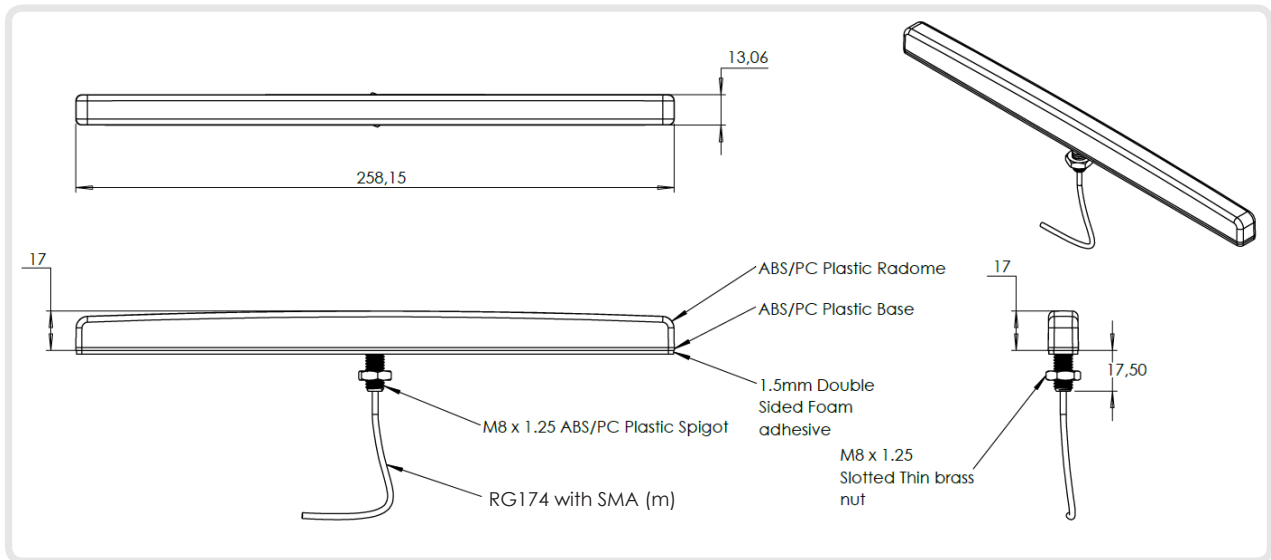
| | |
|----------------------|--|
| Operating Frequency: | 400 - 510 MHz |
| Gain (Max): | 1.2 dBi |
| VSWR: | < 2.2:1 @ 433 MHz < 2:1 @ 450-470 MHz |
| Feed Power Handling: | 10 W |
| Input impedance: | 50 Ohm (nominal) |
| Polarisation: | Linear Horizontal / Vertical |
| Cable loss: | 0.62dB/m @ 400 MHz |
| Cable: | RG 174 |
| Cable length: | 1m |
| Connector: | SMA male |
| DC Short: | Yes |

Mechanical Specifications

| | |
|---------------------------------|---|
| Product Dimensions (L x W x D): | 258mm x 34mm x 13mm |
| Packaging Material: | Poly bag |
| Packaged Dimensions: | 265mm x 100mm x 15mm |
| Weight: | 60g |
| Packaged Weight: | 70g |
| Radome Material: | ABS/PC (Halogen Free) |
| Radome Colour: | Cool Gray 1C |
| Mounting: | Adhesive backing & M8 x 17mm spigot with M8 brass nut |

Environmental Specifications

| | |
|--------------------------------|------------------------------|
| Wind Survival: | 160 km/h |
| Temperature Range (Operating): | -40°C to +75°C |
| Environmental Conditions: | IP67 (excl. Spigot Mounting) |
| Operating Relative Humidity: | Up to 98% |
| Storage Humidity: | 5% to 95% non-condensing |
| Storage Temperature: | -40°C to +75°C |



Certification Approvals and Standards

| | |
|--|---|
| Cable Flammability rating: | UL 94-HB |
| Water Ingress Protection Ratio/Standard: | IP 67 (NEMA 4X) |
| Impact resistance: | IK 08 |
| Salt Spray: | MIL-STD 810F/ASTM B117 |
| Product Safety: | Complies with UL, CE, EN, CSA and IEC standards |

Ordering Information

| | |
|---------------------|----------------|
| Commercial name: | DASH-3 |
| Order Product Code: | A-DASH-0003-V1 |
| EAN number: | 0707273470256 |



For more detailed information and availability in your region, visit our web site: 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
Kronstadler Straße 4
81677 München
Germany

Phone: +49 89 208026538
E-mail: sales-europe@poynting.tech