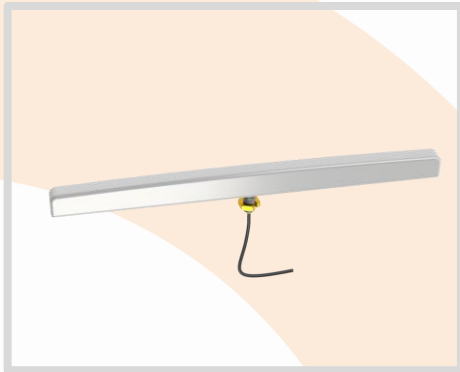


ANTENNAS | DASH-3 SERIES

ULTRA LOW PROFILE, SMART METER LTE ANTENNA

410 – 510 MHz, 1.2 dBi



410 – 510 MHz



1.2 dBi



Increase
X Mb/s



Omni-
Directional



Machine to
Machine



Internet of
Things



CDMA/NB-IoT



IP 67



40°C to + 80°C



Fire Resistant



Urban



Rural/Farm



Meter

APPLICATION AREAS

- Smart Meter, M2M and IoT Antenna
- Futureproof LTE antenna
- 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 410 – 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/cellular CDMA bands.

Features

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

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

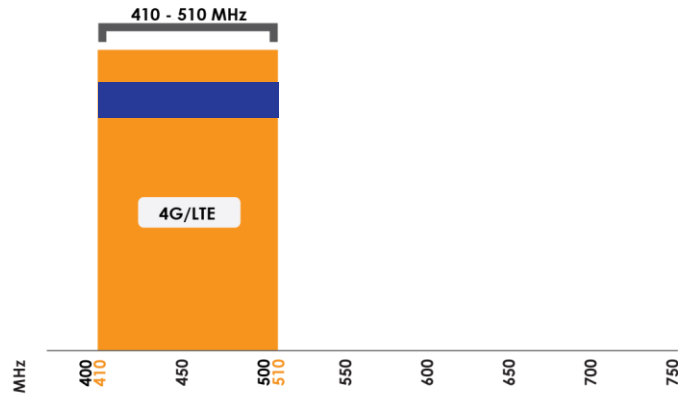
Can be used with the following IoT technologies:

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




Frequency Bands

The DASH-3 is an Omni-directional antenna that works from 410 – 510 MHz



 Indicates the LTE bands on which DASH-3 works

Antenna Overview

	
Ports	1
SISO / MIMO	SISO
Frequency Bands	410 - 510 MHz
Polarisation	Linear (Vertical)
Peak Gain	1.2 dBi
Coax Cable Type	RG 174
Coax Cable Length	1m
Connector Type	Right Angle MCX

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

Electrical Specifications

Frequency bands:	410 – 510 MHz
Gain (Max):	1.2 dBi
VSWR:	<4:1 across 80% of the bands
Feed power handling:	10 W
Input impedance:	50 Ohm (nominal)
Polarisation:	Linear Vertical
Coax cable loss:	0.6 dB/m @ 400 MHz
DC short:	Yes

Product Box Contents

Antenna:	A-DASH-0003-V1
Mounting bracket:	N/A

Ordering Information

Commercial name:	DASH-3
Order product code:	A-DASH-0003-V1
EAN number:	6009710925164

Mechanical Specifications

Product dimensions	258 mm x 13 mm x 34 mm
Packaged dimensions:	265 mm x 100 mm x 15 mm
Product weight:	0.06kg
Packaged weight:	0.07kg
Radome material:	ABS/PC
Radome colour:	Pantone Cool Gray 1C
Mounting Type:	Adhesive backing & M8 x 17 mm spigot with M8 brass nut

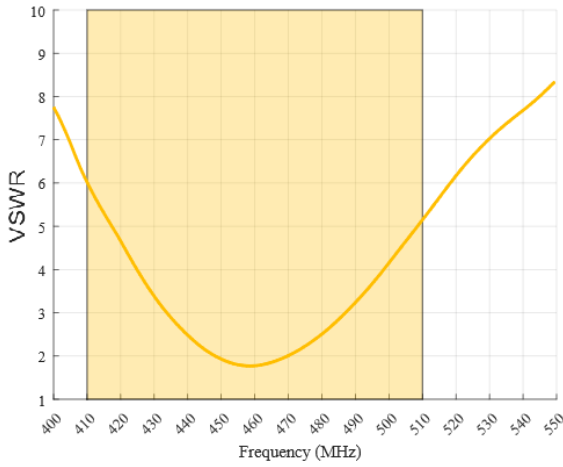
Environmental Specifications, Certification & Approvals

Wind Survival:	≤120 km/h
Temperature Range (Operating):	-40°C to +70°C
Environmental Conditions:	Outdoor/Indoor
Water ingress protection ratio/standard:	IP 67 (When surface mounted correctly)
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

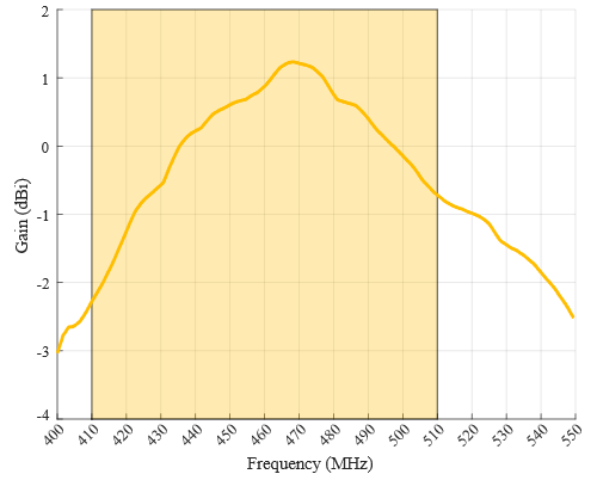


Antenna Performance Plots

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-3 delivers superior performance across all bands with a VSWR of 4:1 or better across 80% of the bands.

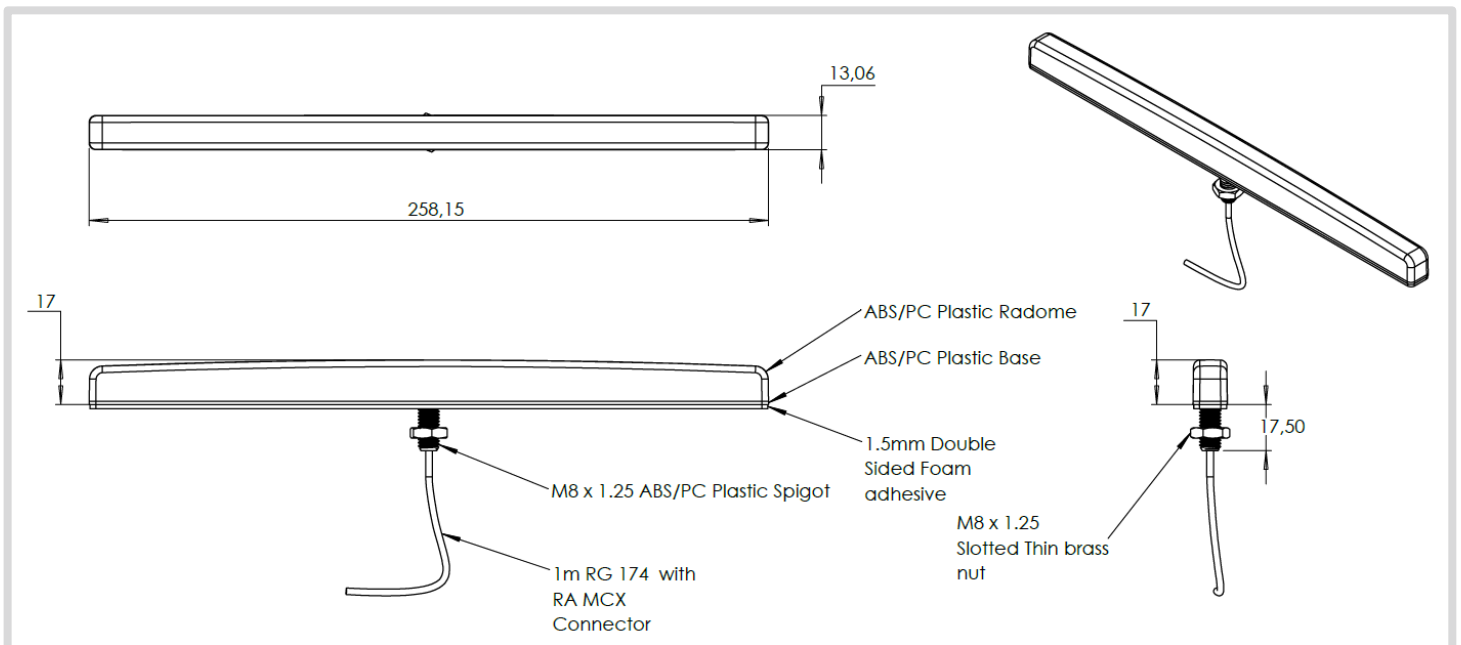
*VSWR measured with 1m low loss cable.

Gain* in dBi

1.2 dBi is the peak gain across all bands from 410 – 510 MHz

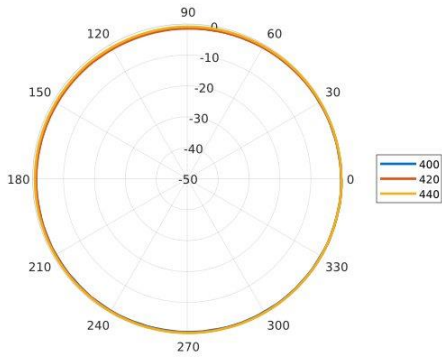
*Antenna gain measured with polarisation aligned standard antenna

Technical Drawings

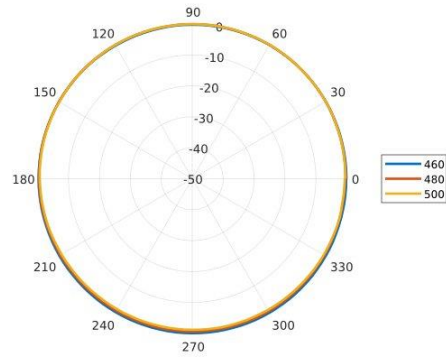


Radiation Patterns

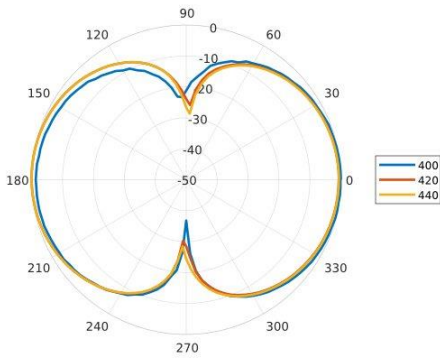
Azimuth: 400 – 440 MHz



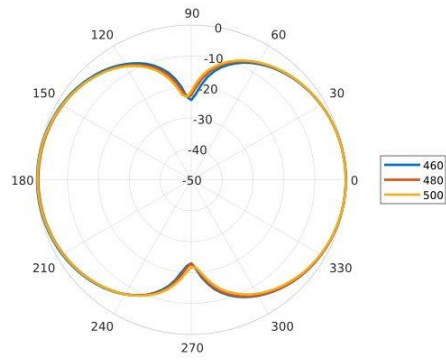
Azimuth: 460 – 510 MHz



Elevation: 400 – 440 MHz



Elevation: 460 – 510 MHz



Mounting Options




Surface Mount

Surface mounted using the provided adhesive backing.

Additional Accessories

For more information, visit www.poynting.tech



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