DPLX-2

POYNTING
BEYOND A CONNECTED LIFE

ANTENNAS | DPLX-2 SERIES

4-TO-2 DUAL-BAND WI-FI DIPLEXER

2400 – 2500 MHz, 5000 – 6000 MHz; 2x2 MIMO

2400 – 2500 MHz
5000 – 6000 MHz

VSWR ≤1.5:1

Increase x Mb/s

Wi Fi DUALBAND 2.4 – 2.5 GHz 5.0 – 6.0 GHz

IoT Internet of Things

M2M Machine to Machine

2x2 MIMO

Chemical Protection

IP 68

-40°C to +80°C

Fire Resistant

- **Dual-Band Wi-Fi Diplexer for 2.4 GHz and 5 to 6 GHz**
- **4-to-2 diplexer which allows for 2x2 MIMO on both Wi-Fi frequency bands**
- **Easy to implement with rugged design for any environment**
- **Ideal for use with multiband Access Points and Routers**
- **Weather, dust, and vandal-resistant enclosure (IP 68)**

APPLICATION AREAS

Urban

Rural/Farm

Tunnelling

Marine

Product Overview

The DPLX-2 is dual-band Wi-Fi diplexer, which multiplexes a 2.4 GHz and 5 GHz signal from a single radio feed to separate 2.4 GHz and 5 GHz antennas. The DPLX-2 can also be used to split a 2.4 GHz and a 5 GHz signal, from a single antenna port, into dedicated 2.4 GHz and 5 GHz ports. The DPLX-2 features two diplexers within a single housing, with 2 x 2.4 GHz and 2 x 5 GHz ports, feeding into two output ports, allowing for 2x2 MIMO.

The DPLX-2 features exceptionally low insertion loss and high isolation between the various port, which is ideal for optimal performance from a radio with two separate dual-band ports. The enclosure is made from ABS with UV stabilizer, which is a high-impact resistant plastic and also resistant to acids and other chemicals. The product was designed for highly rugged environments with an IK10 impact rating and IP68 ingress protection rating. The DPLX-2 comes with N-Type (female) connectors for ease of installation.

Features

- Dual-band Wi-Fi diplexer for 2.4 GHz and 5 to 6 GHz
- 4-to-2 diplexer, allowing for 2x2 MIMO operation
- Multiplexes 2.4 GHz and 5 GHz onto single ports
- Excellent isolation between ports for improved performance
- Weatherproof and rugged enclosure with IP 68

Application Area

- Least Cost Routers (LCR's)
- Access Points and Routers for 802.11a/b/g
- Dual-band Wi-Fi routers with single ports
- WiMAX and Wi-Fi Systems

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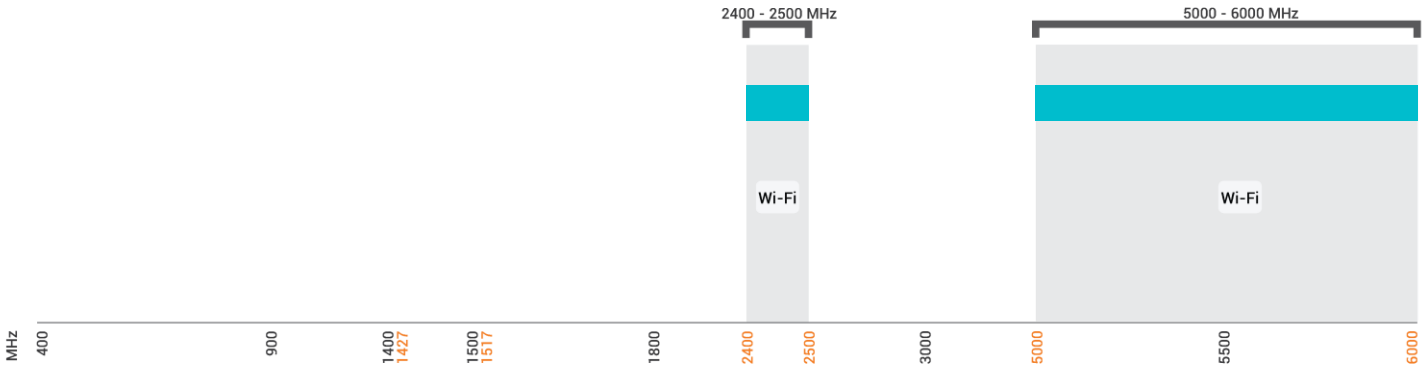
Frequency Band

The DPLX-2 is a dual-band diplexer that works from | 2400 – 2500 MHz | and | 5000 – 6000 MHz |



Indicates the Wi-Fi bands on which DPLX-2 works

Antenna Overview

	Wi Fi DUALBAND
Ports	6
SISO / MIMO	MIMO
Frequency Bands	2400-2500 MHz & 5000-6000 MHz
Coax Cable Type	N/A
Coax Cable Length	N/A
Connector Type	N-Type (F)

**The connectors are factory mounted to the diplexer*

Electrical Specifications

Frequency Bands:	2400 – 2500 MHz

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	5000 – 6000 MHz
Insertion Loss (Max):	1.7 dB
VSWR:	≤1.5:1
Feed Power Handling:	10 W
Input Impedance:	50 Ohm (nominal)
DC Short:	Yes

Product Box Contents

Antenna:	A-DPLX-0002-V1-01

Ordering Information

Commercial Name:	DPLX-2
Order Product Code:	A-DPLX-0002-V1-01
EAN Number:	6009710927489

Packaged Dimensions:	195 mm x 230 mm x 550 mm
Weight:	0.378 kg
Packaged Weight:	0.518 kg
Radome Material:	PC-ABS with UV Stabilizer
Radome Colour:	Pantone – Cool Gray (11C)
Mounting Type:	Surface Mount

Environmental Specifications, Certification & Approvals

Wind Survival:	<160 km/h
Temperature Range (Operating):	-40°C to +80°C
Environmental Conditions:	Outdoor/Indoor
Water Ingress Protection Ratio/Standard:	IP 68
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 +80°C
Enclosure Flammability Rating:	UL 94-HB
Impact Resistance:	IK 10
Product Safety & Environmental:	Complies with CE and RoHS standards

Mechanical Specifications

Product Dimensions	171 mm x 132 mm x 39 mm

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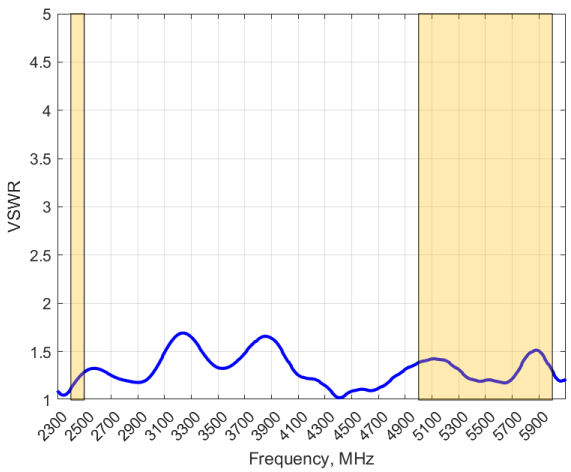
Antenna Performance Plots

VSWR



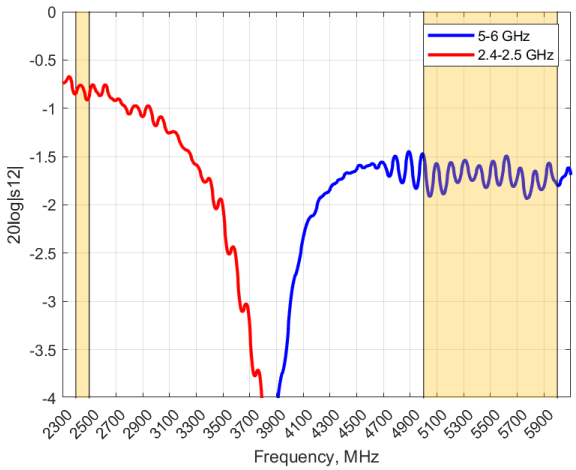
Voltage Standing Wave Ratio (VSWR)*

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, corresponding to a VSWR of 1:1.

The DPLX-2 delivers superior performance across all bands with a VSWR of 1.5:1 or better across.

VSWR measured at the port. Unused port(s) terminated with 50Ω load(s)

Insertion loss: 2.4GHz & 5GHz Ports



Insertion loss in dB+

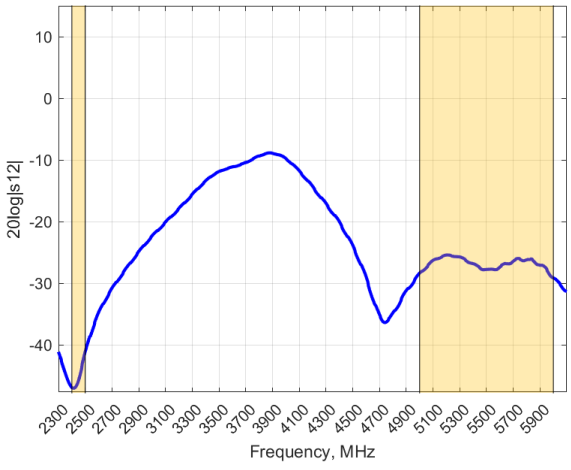
Insertion loss is a measurement of how much energy is received at the 2.4 GHz and 5GHz ports relative to the energy sent from port 1.

1.7 dB is the peak loss from 2400 - 6000 MHz

Loss @ 2400 – 2500 MHz:	0.9 dB
Loss @ 5000 – 6000 MHz:	1.7 dB

+Insertion loss measured at the ports. Unused port(s) terminated with 50Ω load(s)

Isolation: 2.4GHz & 5GHz Ports



Isolation in dB+

S23 is a measurement of the amount of energy is leaked from one port to another. In an ideal case, no energy should leak from port 2 to port 3.

Isolation of 25 dB or more across all bands from 2400 - 6000 MHz

+Isolation measured at the ports. Unused port(s) terminated with 50Ω load(s)

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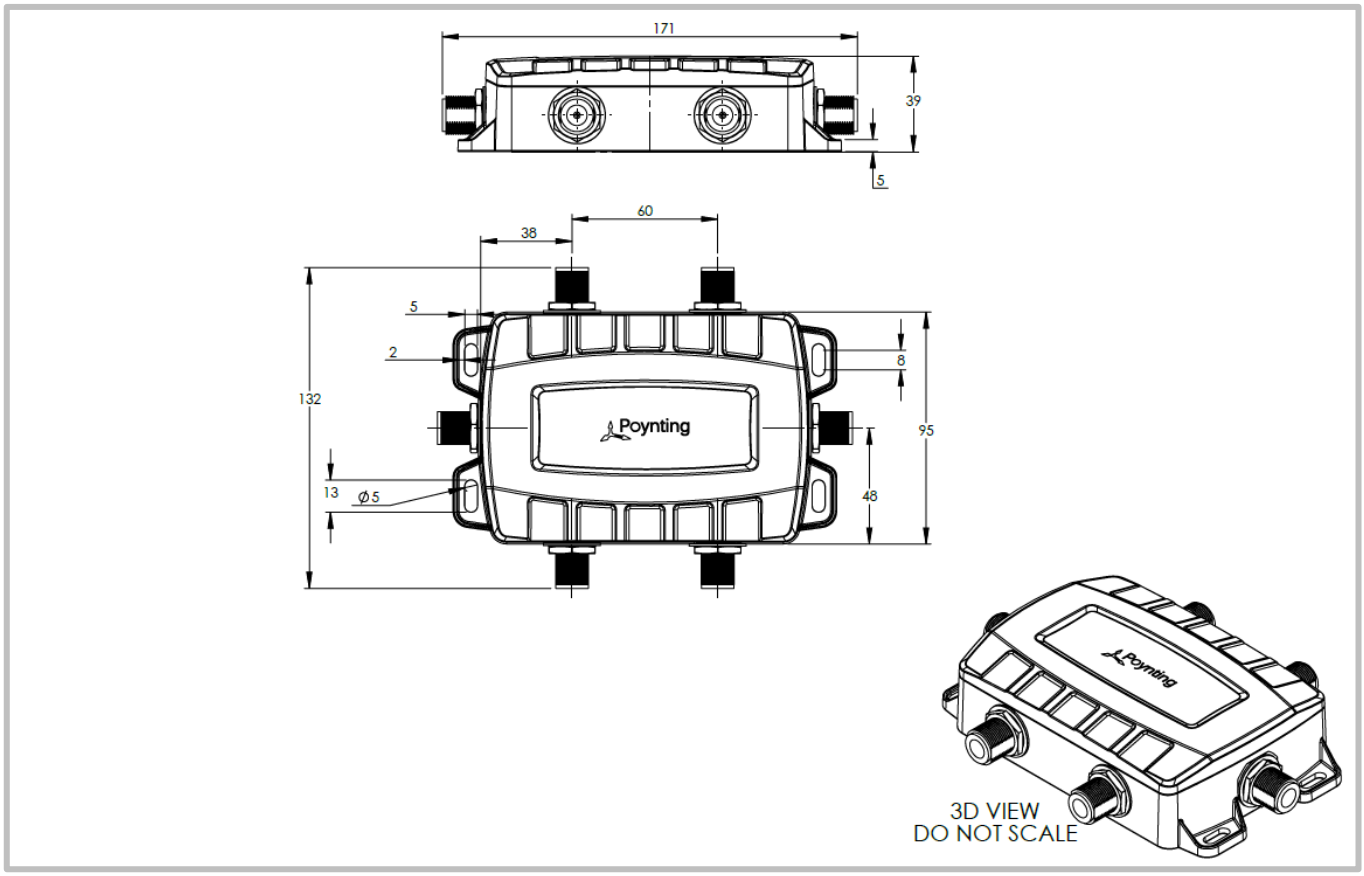
Technical Drawings



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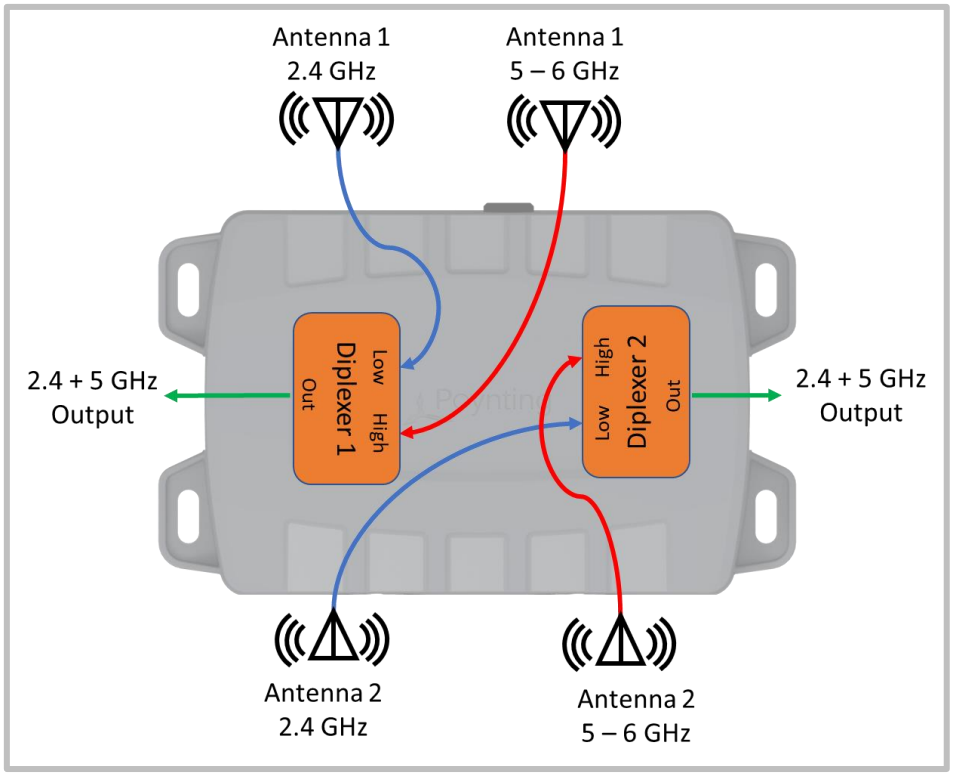
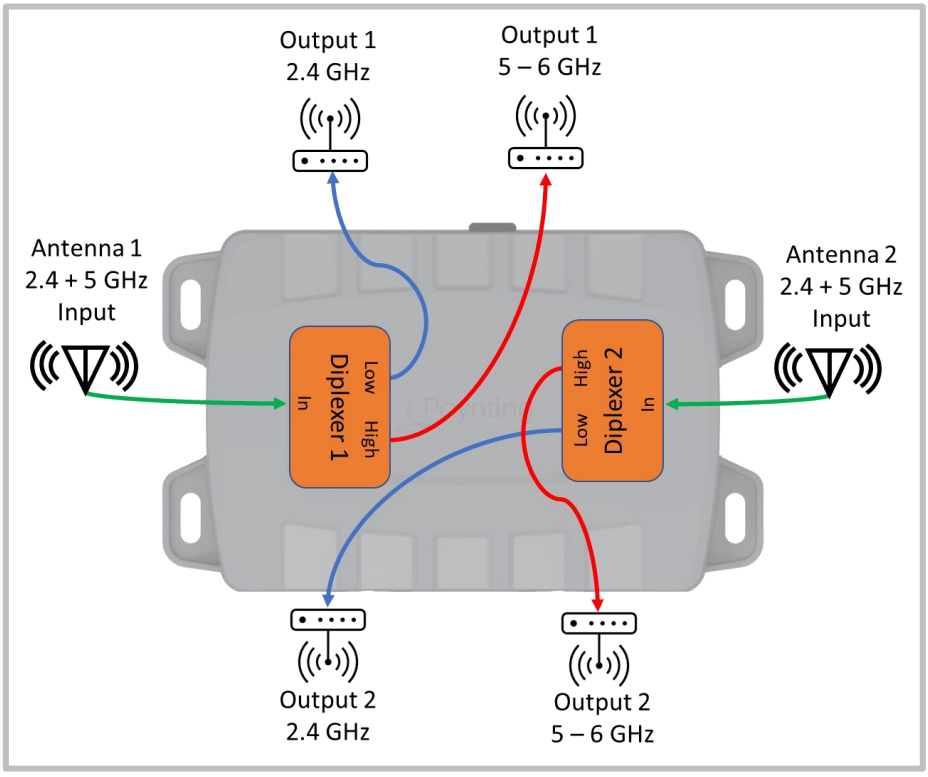
Product Implementation

Option 1: Combiner



Option 2: Splitter



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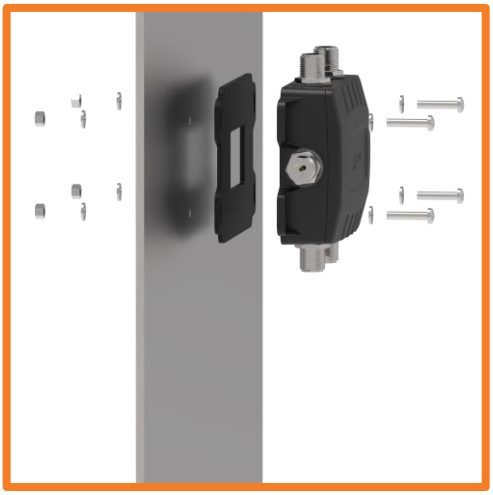
Mounting Options



Surface Mount

Using provide adhesive and optional suitable fasteners (not included)

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Additional Accessories

See accessories technical specifications on www.poynting.tech

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