



Tango 36

Ceiling-Mounted 3-Port MiMo Wi-Fi 6e Antenna



Key Features

- Supports Dual Band Wi-Fi 2.4G & 5G
- Supports Wi-Fi 6E for extended high-band coverage
- Supports IEEE 802.11ac and 802.11ax
- Triple antenna MiMo system for enhanced throughput
- Peak gain up to 4.35 dBi
- Ceiling-mounted for optimised indoor coverage
- Ground plane independent

Typical Applications

- Ceiling-mounted wireless access points
- In-building wireless coverage extension
- Enterprise Wi-Fi deployment
- Indoor wireless repeaters
- Embedded in indoor smart infrastructure

General Description

The Tango 36 is a ceiling-mounted embedded antenna designed for tri-band Wi-Fi applications. Featuring a 3-port MiMo configuration, each internal antenna is arranged on a different spatial plane to optimise signal diversity and minimise multi-path fading.

It supports 2.4 GHz and 5 GHz ISM bands, including the full Wi-Fi 6E spectrum up to 7125 MHz, making it ideal for next-generation Wi-Fi installations. Its compact dome-shaped enclosure ensures discreet integration into ceiling panels.

The radome is designed to withstand indoor environmental variations, and the antenna is supplied with three low-loss cables and reverse polarity SMA male connectors as standard.

Custom cable lengths and connectors are available for volume requirements.

| | | | | |
|---------------------|--------------------|-------------------|--------------------|--------------------|
| T Through | WiFi 2.4G & 5G | WiFi 4 802.11n | WiFi 5 802.11ac | WiFi 6 802.11ax |
| WiFi 6e 802.11ax | WiFi 7 802.11be | WLAN 2400 | WLAN 5800 | IEEE 802.15.4 |
| ISM 2.4G | ISM 5.8G | BLE Bluetooth | ZB Zigbee | |



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Electrical Specifications

| | |
|---------------------------|-------------------------------|
| Frequency range: | 2400-2500 MHz / 5150-7125 MHz |
| Impedance: | 50 Ohm |
| Polarisation: | Vertical |
| Peak gain: | Up to 4.35 dBi |
| Maximum VSWR: | 2.27 |
| Input power: | 10 W |
| Ground plane independent: | Yes |

Environmental Specifications

| | |
|------------------------------|---------------|
| Operating temperature range: | -30 to +60 °C |
| Storage temperature range: | -30 to +60 °C |

Mechanical Specifications

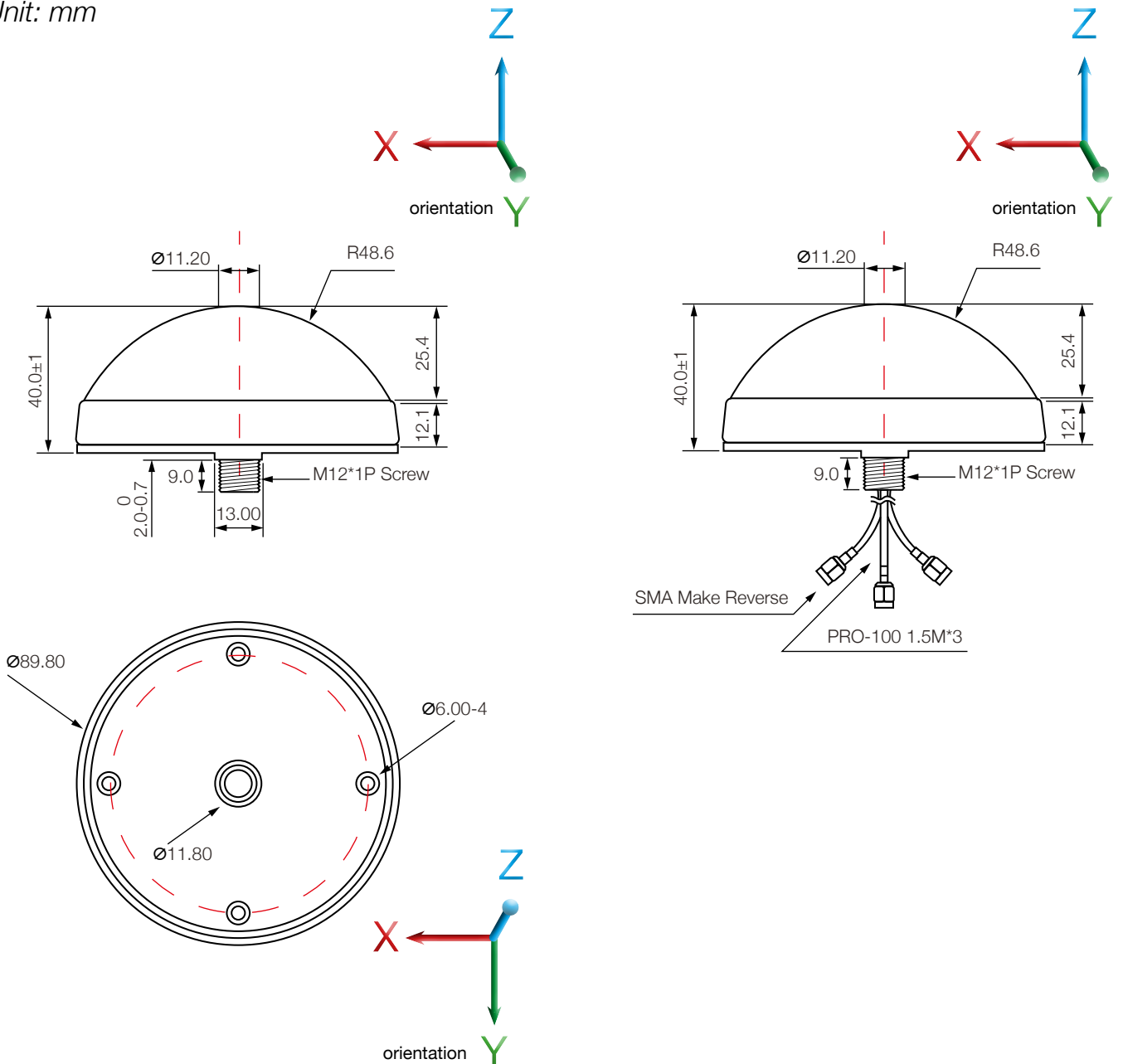
| | |
|-------------------|------------------------------|
| Cable length: | 3x Low Loss 100 Cable (1.5m) |
| Connector: | 3x RP-SMA Male |
| Mounting method: | Through Hole / Ceiling Mount |
| Dimensions: | Ø90 mm x 40.5 mm height |
| Weight: | 240 g |
| Housing material: | ABS (dome) |

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Dimensional Drawing

Unit: mm

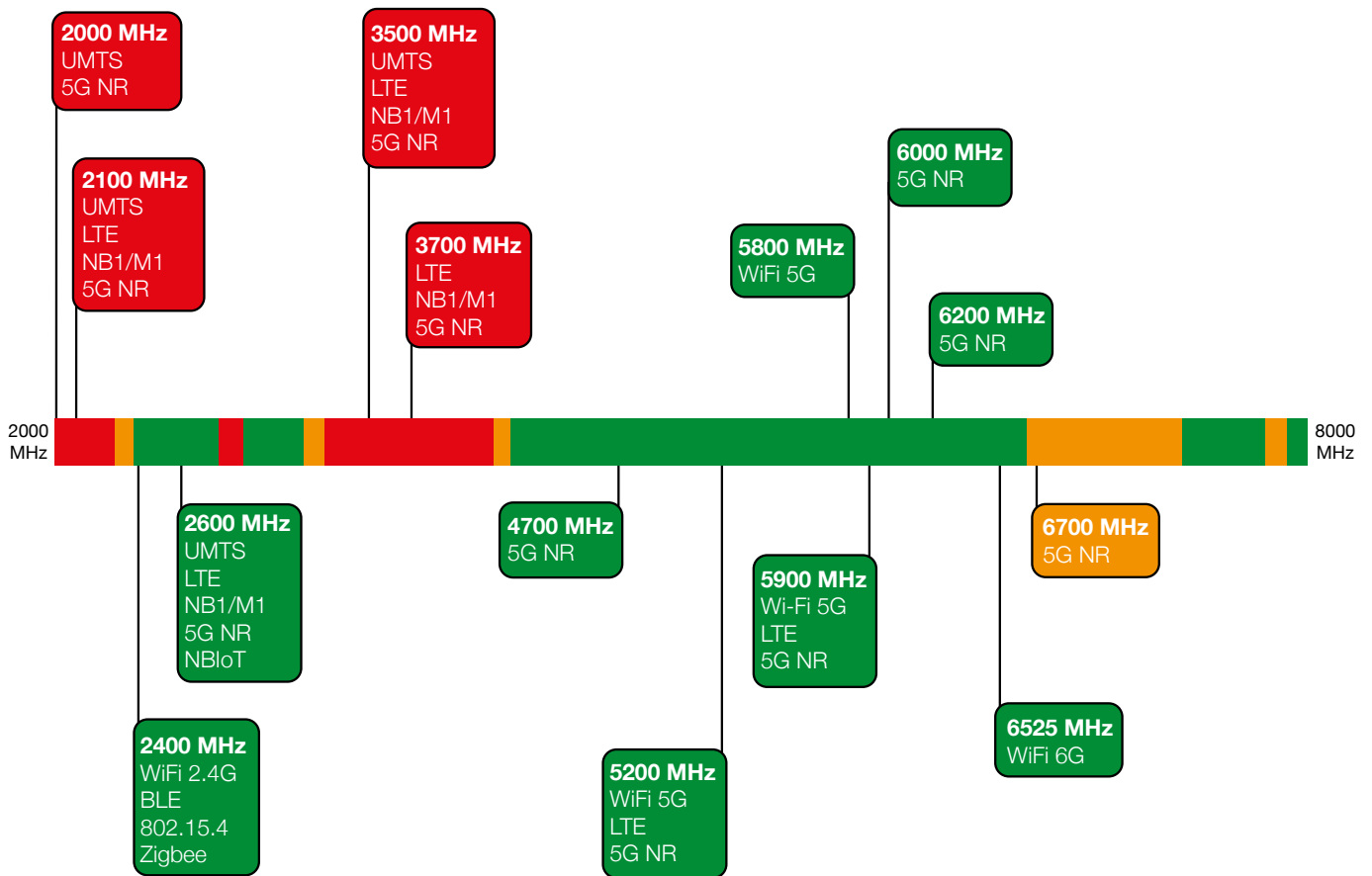




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Spectrum Coverage



● Suitable band

● Adequate band in good signal conditions

● Likely to be unsuitable



Usable Cellular Frequency Support (2100 MHz – 6700 MHz)

| | 2100 | 2300 | 2400 | 2500 | 2600 | 3300 | 3500 | 3700 | 4700 | 5200 | 5900 | 6000 | 6200 | 6700 |
|------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| GSM (2G) Bands | | | | | | | | | | | | | | |
| UMTS (3G) Bands | | | | | ● | | | | | | | | | |
| LTE Bands | | | ● | ● | ● | | | | | ● | ● | | | |
| LTE Cat M bands | | | | ● | ● | | | | | | | | | |
| LTE Cat NB Bands | | | | ● | ● | | | | | | | | | |
| NR Bands | | | ● | ● | ● | | | | | | | | | |
| NR Cat NB Bands | | | | ● | ● | | | | ● | ● | ● | ● | ● | ● |

Usable ISM Frequency Support (433 MHz - 6525 MHz)

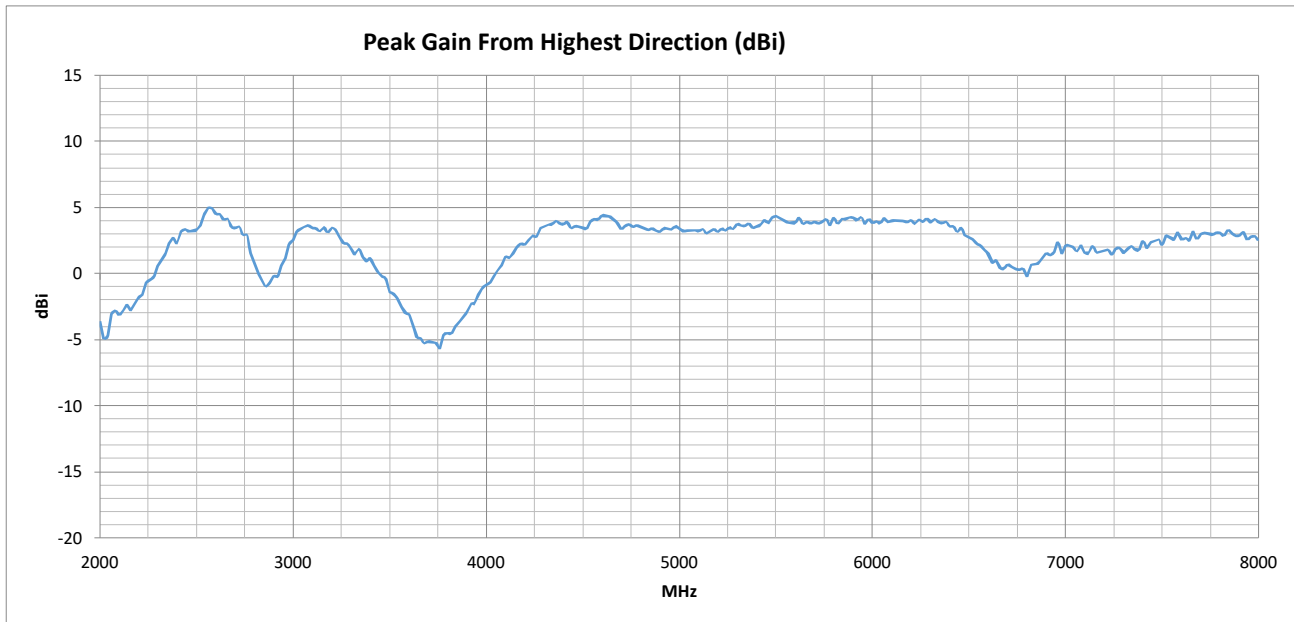
| | 2450 | 5800 | 6525 |
|---------------|------|------|------|
| Bluetooth | ● | | |
| IEEE 802.15.4 | ● | | |
| ISM 2.4G | ● | | |
| ISM 5.8G | | ● | |
| WiFi 2.4G | ● | | |
| WiFi 5G | | ● | |
| WiFi 6E | | | ● |
| Zigbee | ● | | |



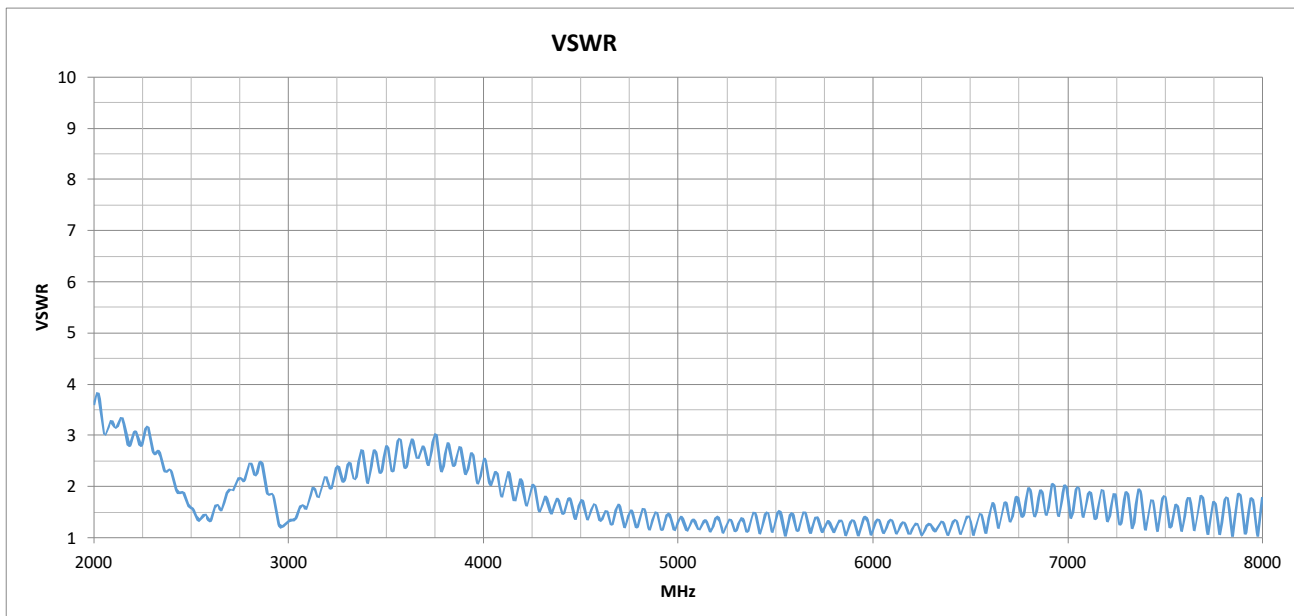
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Peak Gain



VSWR

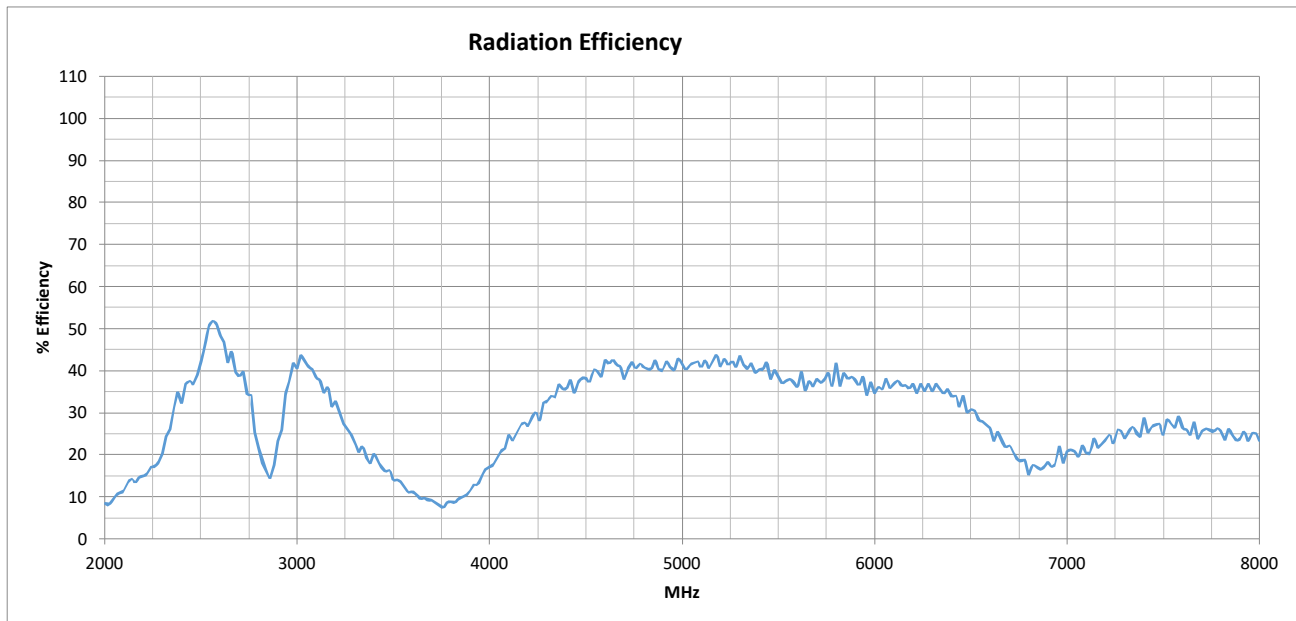




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Radiation Efficiency





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Cellular Standards Band Support

| UMTS (3G) Band | E-UTRA (4G) Band | CAT M E-UTRA Band | CAT NB E-UTRA Band | NR (5G) Band | CAT NB NR (5G) Band | Uplink | Downlink | Average Upload Efficiency (%) | Average Download Efficiency (%) | Maximum Upload VSWR | Maximum Download VSWR | Use Indicator |
|----------------|------------------|-------------------|--------------------|--------------|---------------------|-------------------|-------------------|-------------------------------|---------------------------------|---------------------|-----------------------|---------------|
| 7 | 7 | 7 | 7 | n7 | n7 | 2500 - 2570 MHz | 2620 - 2690 MHz | 48.23 | 42.75 | 1.59 | 1.91 | ● |
| 22 | 22 | | | | | 3410 - 3490 MHz | 3510 - 3590 MHz | 16.86 | 12.66 | 2.72 | 2.96 | ● |
| | 30 | | | n30 | | 2305 - 2315 MHz | 2350 - 2360 MHz | 22.36 | 30.16 | 2.67 | 2.50 | ● |
| | 34 | | | n34 | | 2010 - 2025 MHz | 2010 - 2025 MHz | 8.09 | 8.09 | 3.85 | 3.85 | ● |
| | 38 | | | n38 | | 2570 - 2620 MHz | 2570 - 2620 MHz | 49.27 | 49.27 | 1.60 | 1.60 | ● |
| | 40 | 40 | | n40 | | 2300 - 2400 MHz | 2300 - 2400 MHz | 28.67 | 28.67 | 2.75 | 2.75 | ● |
| | 41 | 41 | 41 | n41 | n41 | 2496 - 2690 MHz | 2496 - 2690 MHz | 46.38 | 46.38 | 1.91 | 1.91 | ● |
| | 42 | 42 | 42 | | | 3400 - 3600 MHz | 3400 - 3600 MHz | 14.78 | 14.78 | 2.96 | 2.96 | ● |
| | 43 | 43 | 43 | | | 3600 - 3800 MHz | 3600 - 3800 MHz | 9.05 | 9.05 | 3.05 | 3.05 | ● |
| | 46 | | | n46 | | 5150 - 5925 MHz | 5150 - 5925 MHz | 39.28 | 39.28 | 1.53 | 1.53 | ● |
| | 47 | | | n47 | | 5855 - 5925 MHz | 5855 - 5925 MHz | 37.74 | 37.74 | 1.34 | 1.34 | ● |
| | 48 | 48 | 48 | n48 | | 3550 - 3700 MHz | 3550 - 3700 MHz | 10.39 | 10.39 | 2.96 | 2.96 | ● |
| | 49 | | | | | 3550 - 3700 MHz | 3550 - 3700 MHz | 10.39 | 10.39 | 2.96 | 2.96 | ● |
| | 52 | | | | | 3300 - 3400 MHz | 3300 - 3400 MHz | 20.37 | 20.37 | 2.74 | 2.74 | ● |
| | 53 | | | n53 | | 2483.5 - 2495 MHz | 2483.5 - 2495 MHz | 40.18 | 40.18 | 1.65 | 1.65 | ● |
| | 69 | | | | | N/A | 2570 - 2620 MHz | N/A | 49.27 | N/A | 1.60 | ● |
| | | | | n77 | | 3300 - 4200 MHz | 3300 - 4200 MHz | 15.33 | 15.33 | 3.05 | 3.05 | ● |
| | | | | n78 | | 3300 - 3800 MHz | 3300 - 3800 MHz | 13.61 | 13.61 | 3.05 | 3.05 | ● |
| | | | | n79 | | 4400 - 5000 MHz | 4400 - 5000 MHz | 40.06 | 40.06 | 1.78 | 1.78 | ● |
| | | | | n90 | n90 | 2496 - 2690 MHz | 2496 - 2690 MHz | 46.38 | 46.38 | 1.91 | 1.91 | ● |
| | | | | n95 | | 2010 - 2025 MHz | N/A | 8.09 | N/A | 3.85 | N/A | ● |
| | | | | n96 | | 5925 - 7125 MHz | 5925 - 7125 MHz | 28.05 | 28.05 | 2.07 | 2.07 | ● |
| | | | | n97 | | 2300 - 2400 MHz | N/A | 28.67 | N/A | 2.75 | N/A | ● |
| | | | | n102 | | 5925 - 6425 MHz | 5925 - 6425 MHz | 35.98 | 35.98 | 1.41 | 1.41 | ● |
| | | | | n104 | | 6425 - 7125 MHz | 6425 - 7125 MHz | 22.39 | 22.39 | 2.07 | 2.07 | ● |

● Suitable band

● Adequate band in good signal conditions

● Likely to be unsuitable



Enabling Industrial IoT



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● Suitable band ● Adequate band in good signal conditions ● Likely to be unsuitable

NOTE: For each frequency band, Siretta provides a traffic light indication to show the suitability of the antenna for use at that frequency band. Determination of exactly what makes an antenna good or bad at any frequency is subjective.

The view presented is that of Siretta's engineering team having taken into account the efficiency and VSWR measurements. The end user is advised to use their own criteria and/or testing to confirm suitability.



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ISM Standards Frequency Support

| Application | Frequency Range | Efficiency (%) | Maximum VSWR | Peak Gain from highest direction (dBi) | Use Indicator |
|------------------------|-----------------|----------------|--------------|--|---------------|
| ISM 2.4 GHz | 2400 - 2500 MHz | 37.35 | 2.27 | 3.35 | ● |
| WiFi 2.4G | 2401 - 2483 MHz | 36.75 | 2.26 | 3.35 | ● |
| WiFi 2.4G (USA) | 2401 - 2473 MHz | 36.50 | 2.26 | 3.35 | ● |
| WiFi 2.4G (Japan) | 2401 - 2495 MHz | 37.18 | 2.26 | 3.35 | ● |
| WiFi 5G (all channels) | 5150 - 5990 MHz | 39.07 | 1.53 | 4.35 | ● |
| WiFi 5G (Ch 32-48) | 5150 - 5250 MHz | 42.21 | 1.42 | 3.43 | ● |
| WiFi 5G (Ch 32-64) | 5150 - 5330 MHz | 42.09 | 1.42 | 3.80 | ● |
| WiFi 5G (Ch 32-161) | 5150 - 5815 MHz | 39.51 | 1.53 | 4.35 | ● |
| WiFi 5G (Ch 32-173) | 5150 - 5875 MHz | 39.40 | 1.53 | 4.35 | ● |
| WiFi 6E (Ch 1-93) | 5925 - 6425 MHz | 35.98 | 1.41 | 4.34 | ● |
| WiFi 6E (all channels) | 5925 - 7125 MHz | 28.05 | 2.07 | 4.34 | ● |
| ISM 5.8 GHz | 5725 - 5875 MHz | 38.42 | 1.34 | 4.30 | ● |
| UWB band 1 | 3168 - 3696 MHz | 18.38 | 2.96 | 3.47 | ● |
| UWB band 2 | 3696 - 4224 MHz | 16.16 | 3.05 | 2.60 | ● |
| UWB band 3 | 4224 - 4752 MHz | 37.22 | 2.04 | 4.44 | ● |
| UWB band 4 | 4752 - 5280 MHz | 41.40 | 1.58 | 3.66 | ● |
| UWB band 5 | 5280 - 5808 MHz | 38.88 | 1.53 | 4.35 | ● |
| UWB band 6 | 5808 - 6336 MHz | 36.64 | 1.41 | 4.34 | ● |
| UWB band 7 | 6336 - 6864 MHz | 25.86 | 1.98 | 3.94 | ● |
| UWB band 8 | 6864 - 7392 MHz | 21.96 | 2.07 | 2.49 | ● |
| UWB band 9 | 7392 - 7920 MHz | 25.98 | 1.88 | 3.36 | ● |

● Suitable band

● Adequate band in good signal conditions

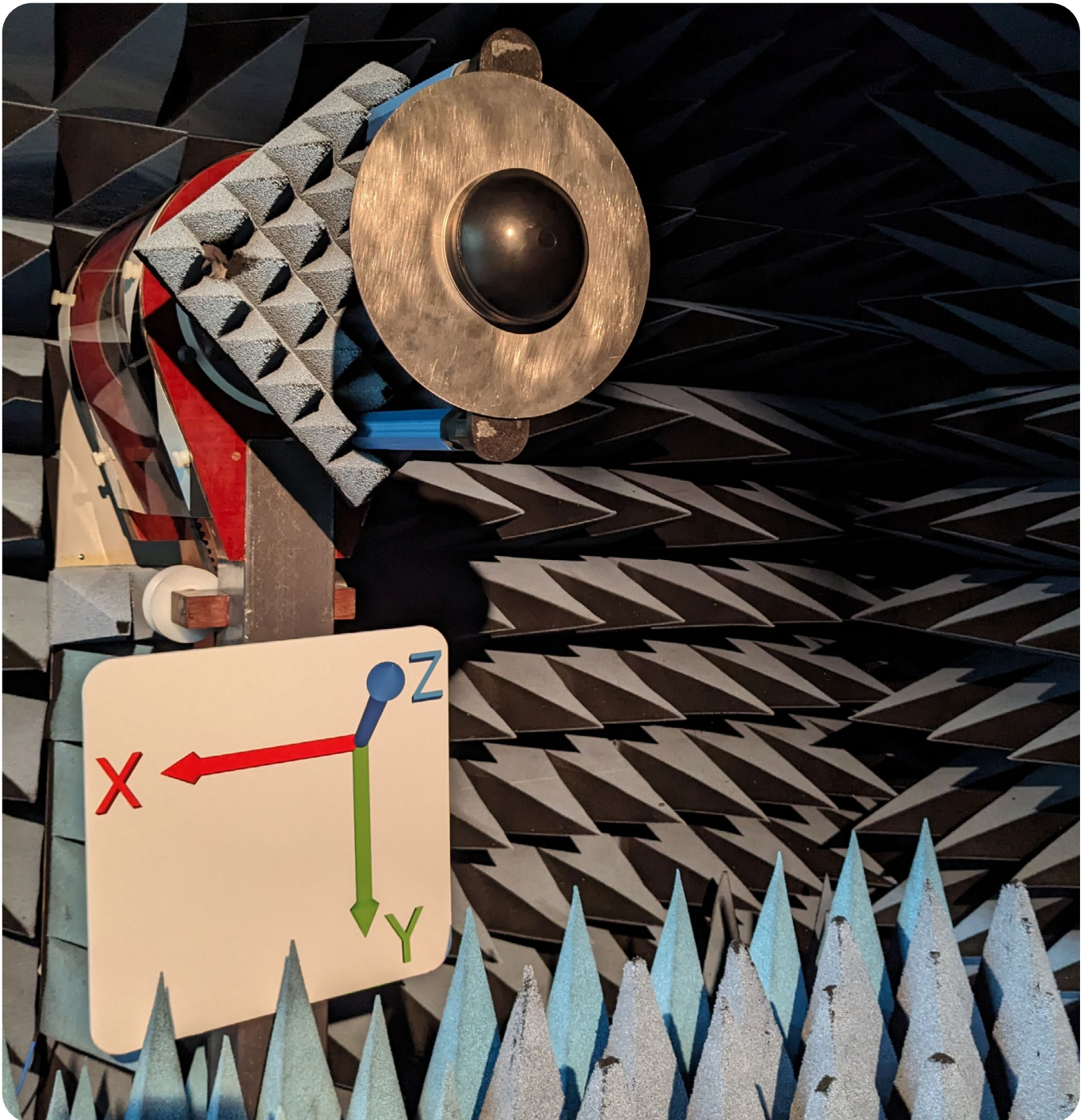
● Likely to be unsuitable



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Test Setup (in $\varnothing 200$ mm Ground Plane)



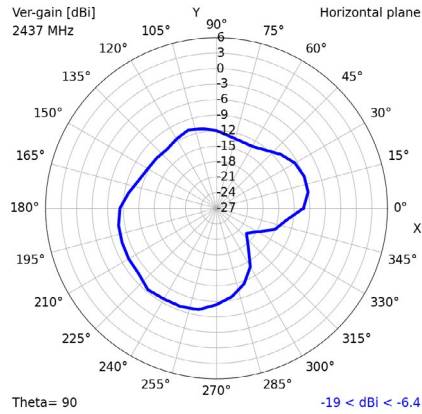


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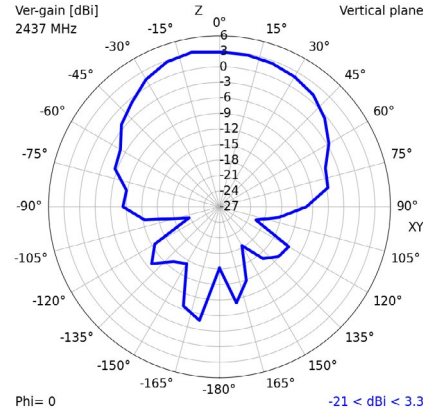
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2D Radiation Plots

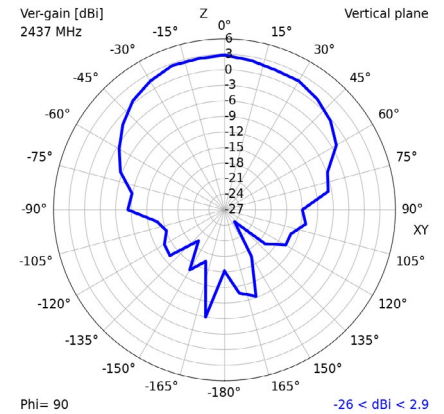
2437 MHz XY



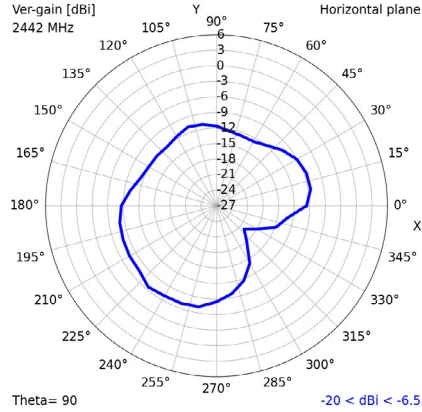
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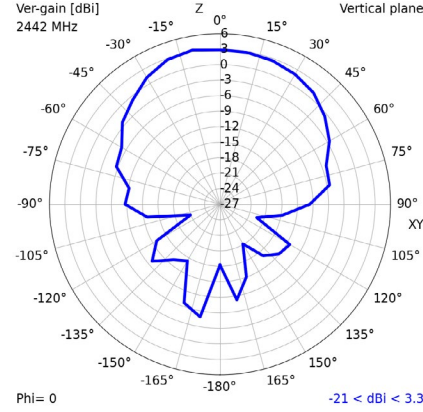
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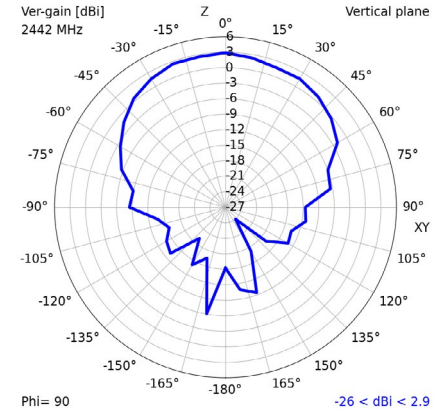
2442 MHz XY



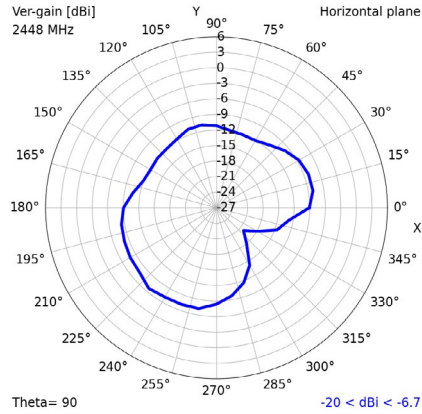
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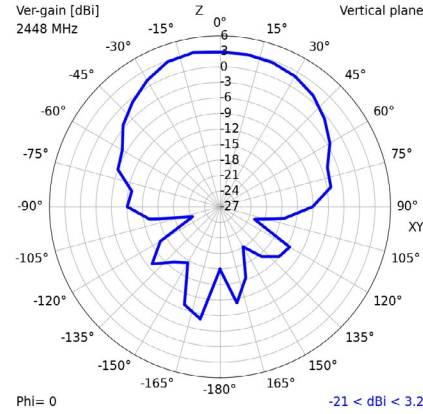
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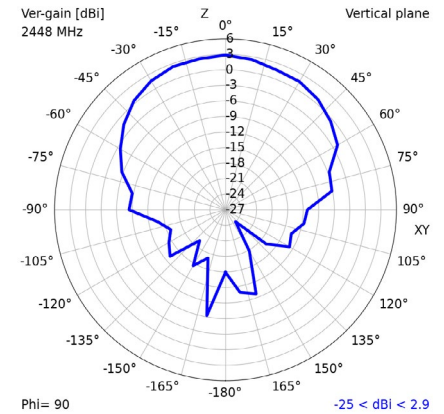
2448 MHz XY



XZ



YZ



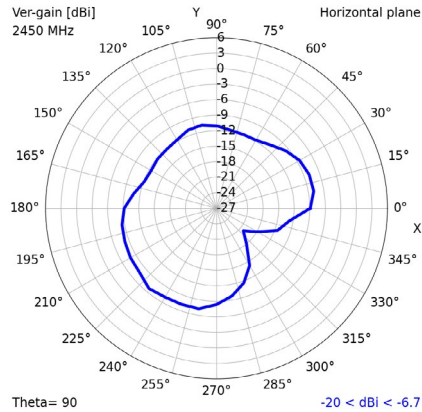


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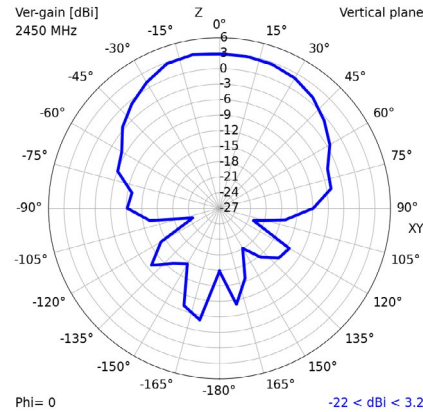
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2D Radiation Plots

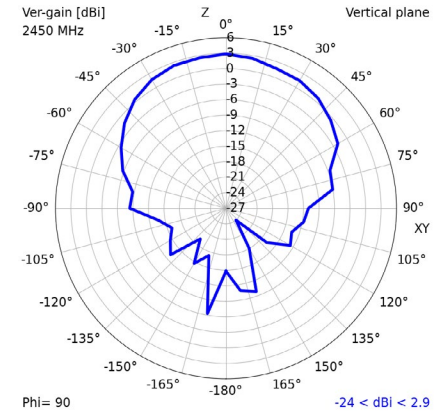
2450 MHz XY



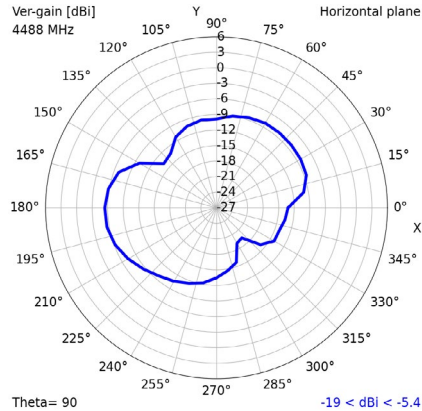
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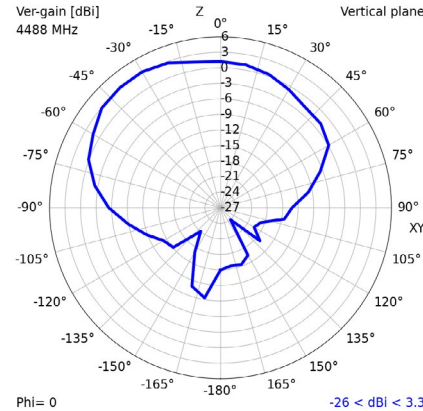
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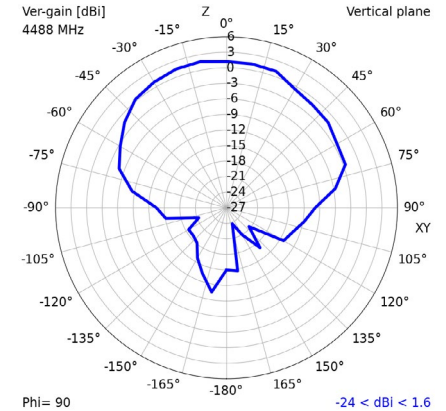
4488 MHz XY



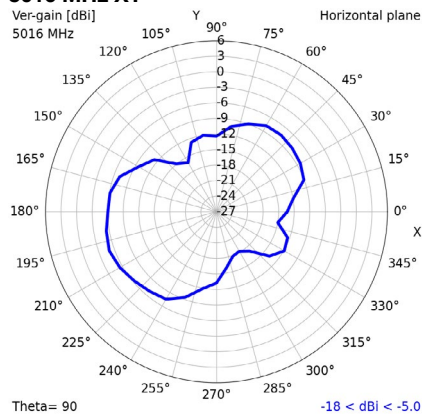
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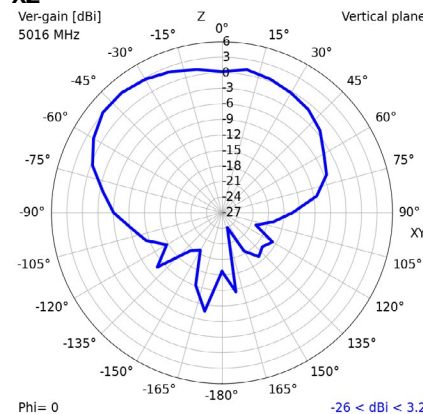
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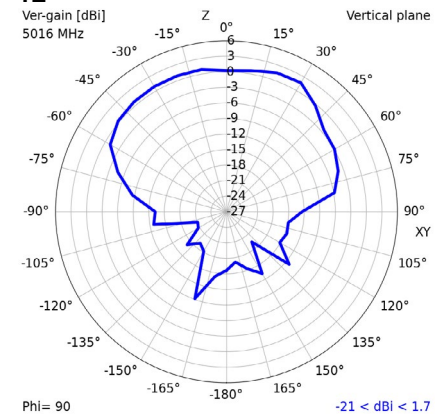
5016 MHz XY



XZ



YZ



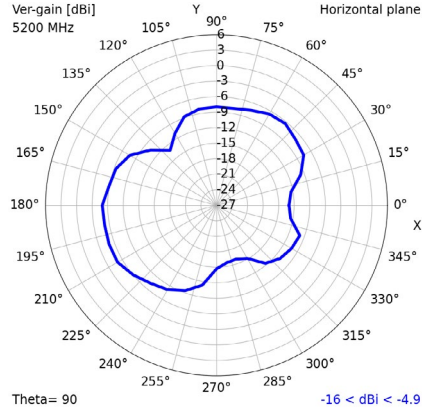


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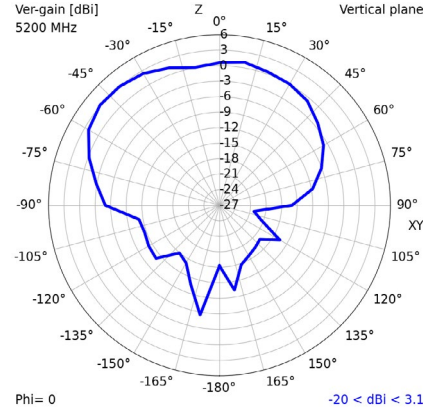
Ceiling-Mounted 3-Port MiMo Wi-Fi 6e Antenna

2D Radiation Plots

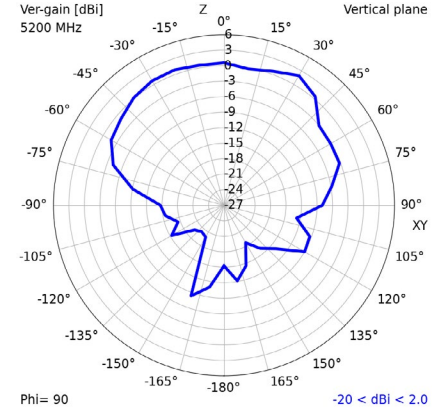
5200 MHz XY



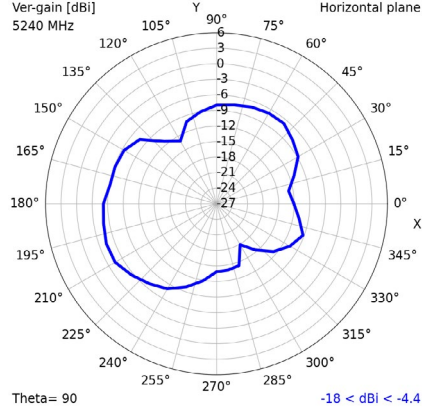
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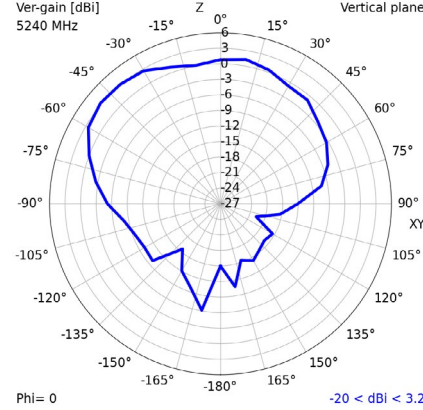
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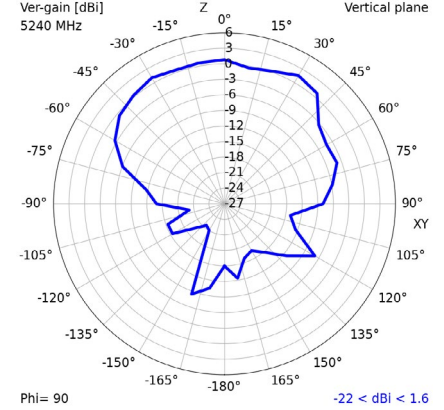
5240 MHz XY



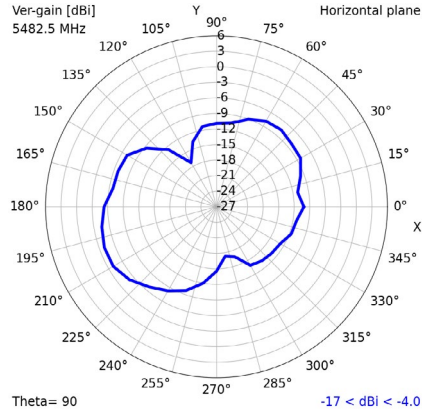
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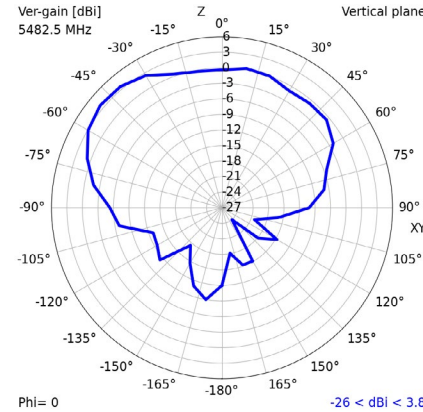
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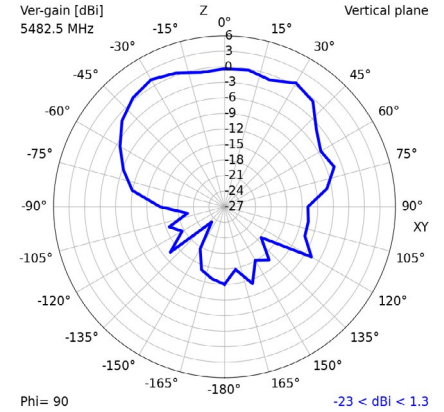
5482.5 MHz XY



XZ



YZ



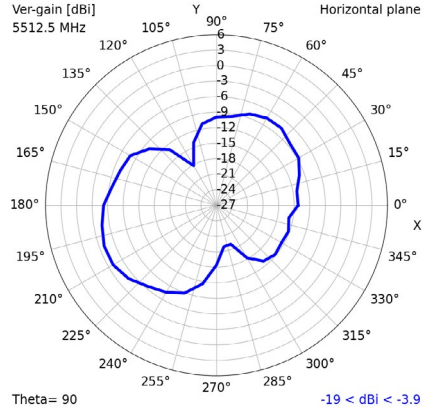


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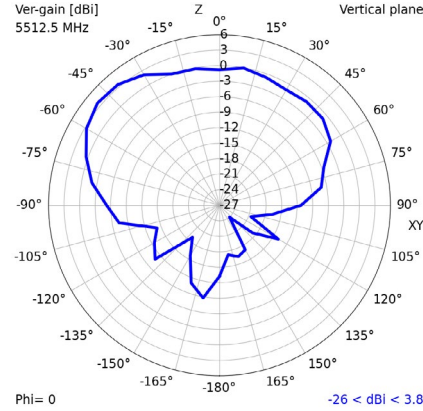
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2D Radiation Plots

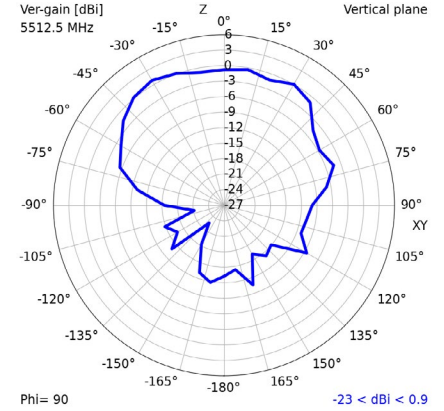
5512.5 MHz XY



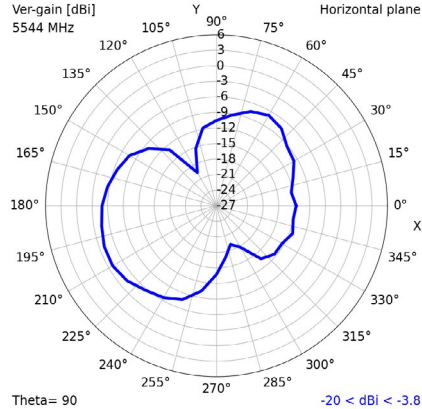
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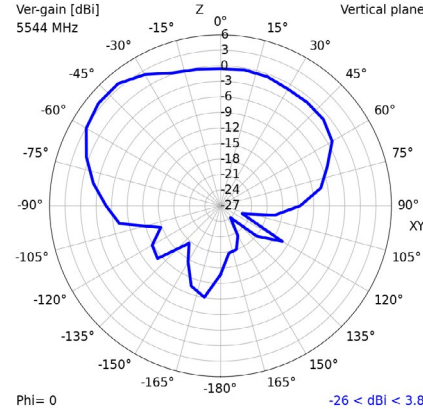
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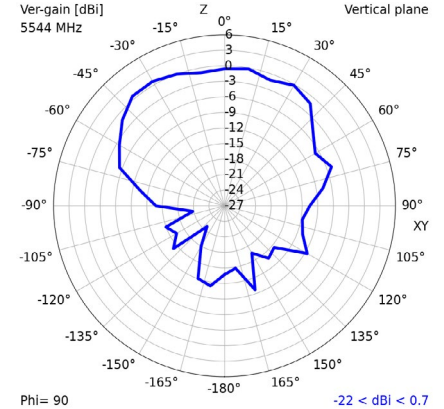
5544 MHz XY



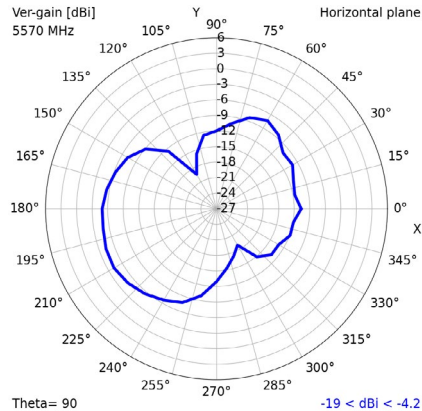
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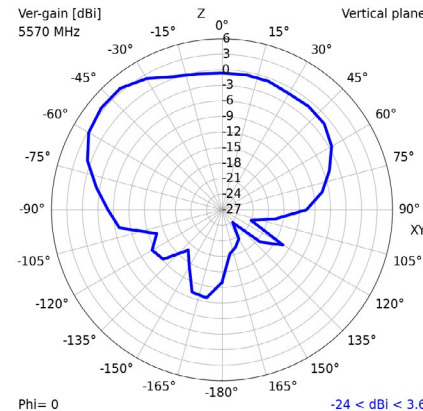
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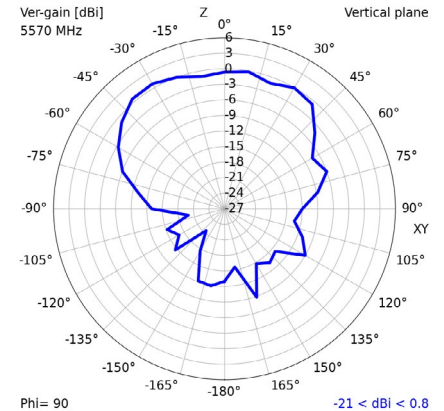
5570 MHz XY



XZ



YZ



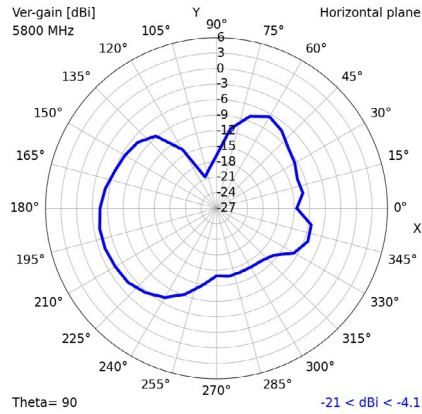


Tango 36

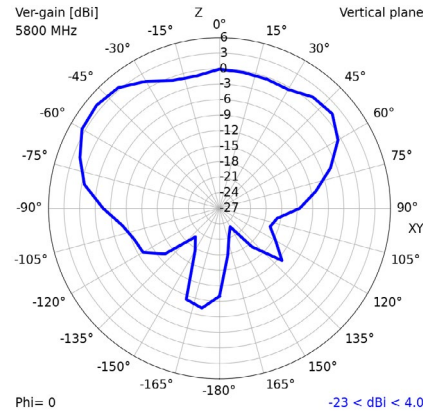
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2D Radiation Plots

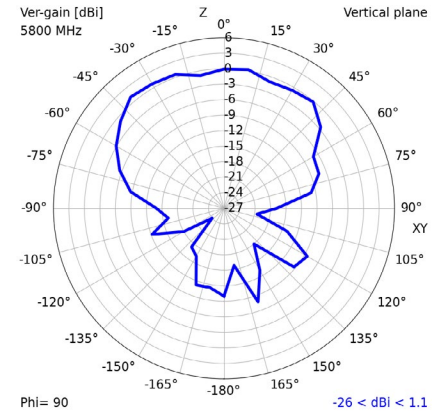
5800 MHz XY



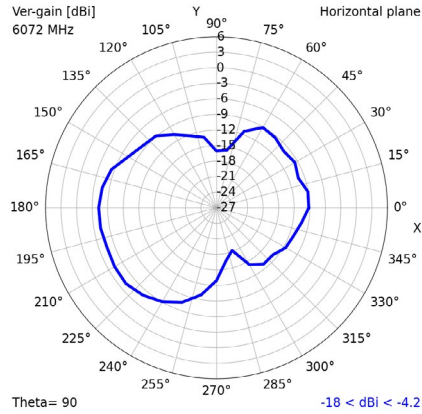
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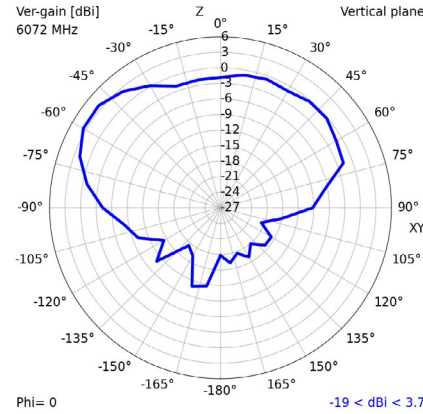
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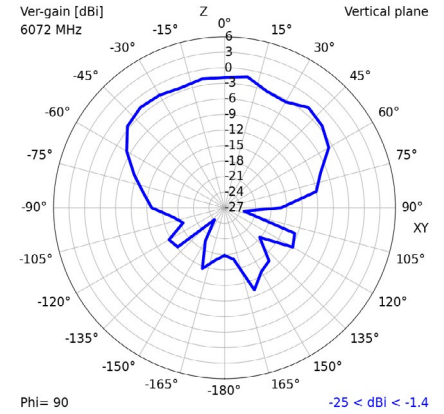
6072 MHz XY



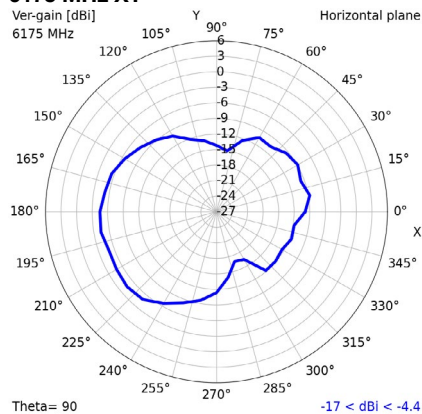
XZ



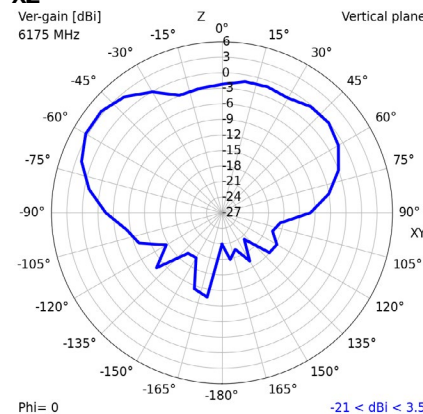
YZ



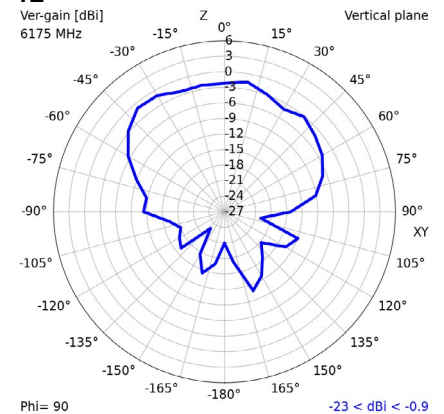
6175 MHz XY



XZ



YZ



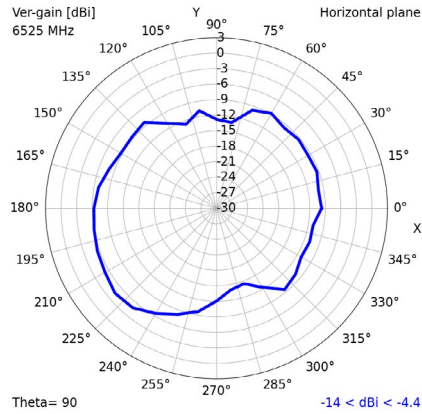


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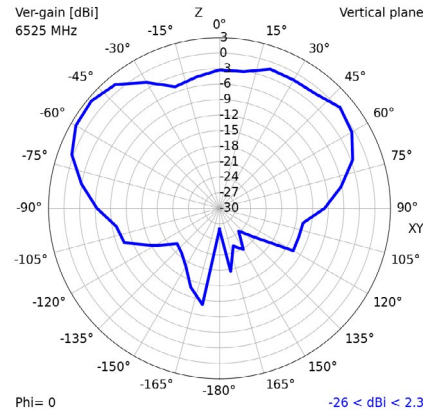
Ceiling-Mounted 3-Port MiMo Wi-Fi 6e Antenna

2D Radiation Plots

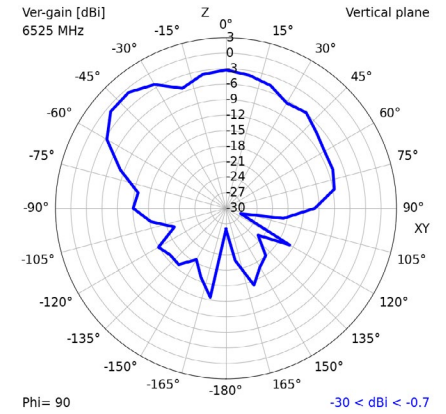
6525 MHz XY



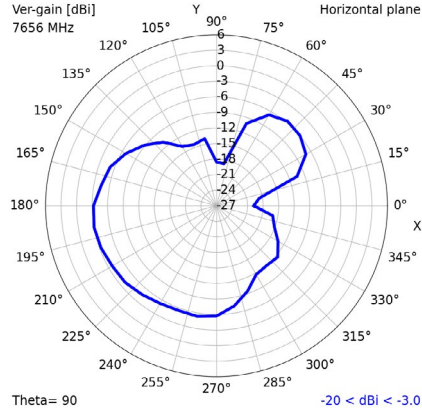
XZ



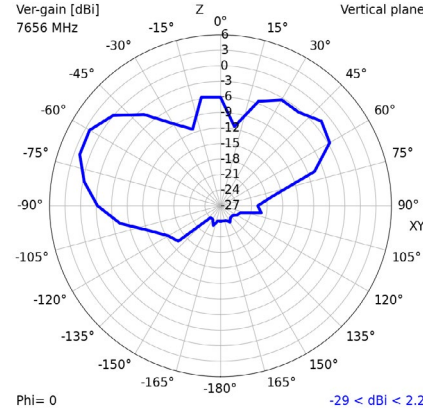
YZ



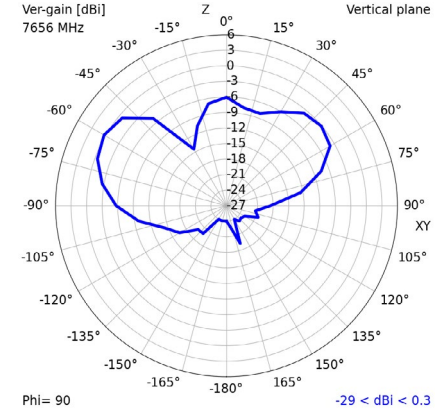
7656 MHz XY



XZ



YZ



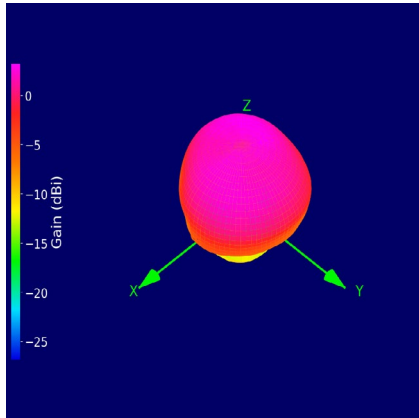


Tango 36

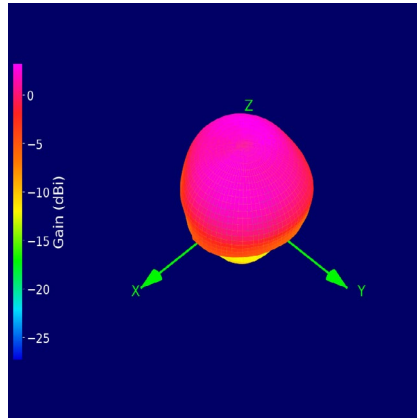
Ceiling-Mounted 3-Port MiMo Wi-Fi 6e Antenna

3D Radiation Plots

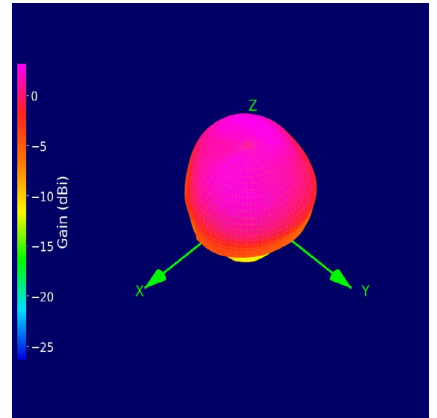
2437 MHz



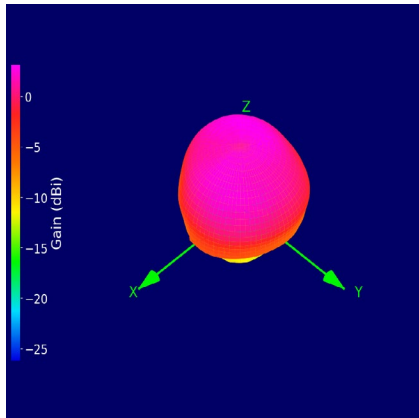
2442 MHz



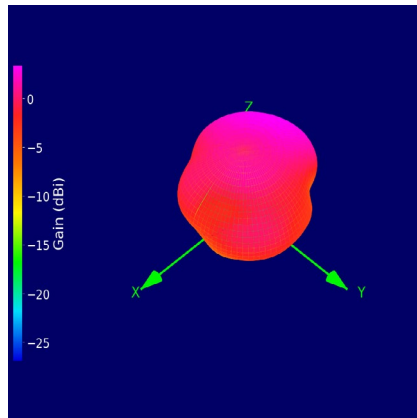
2448 MHz



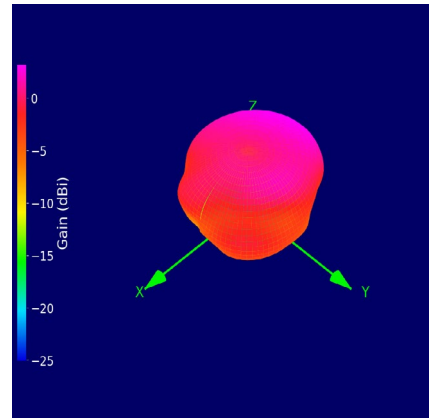
2450 MHz



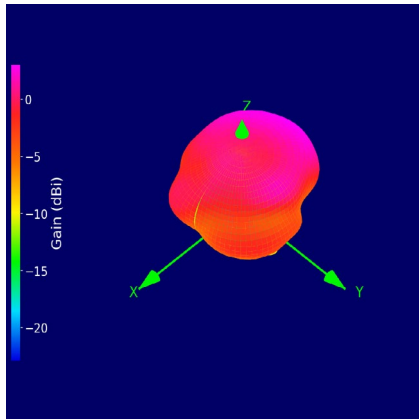
4488 MHz



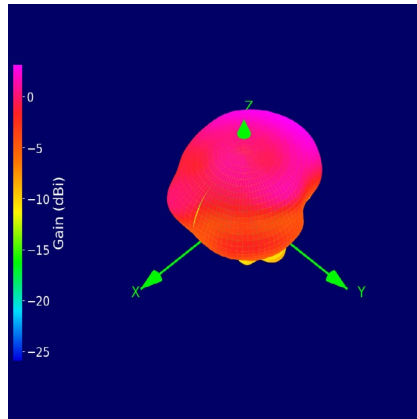
5016 MHz



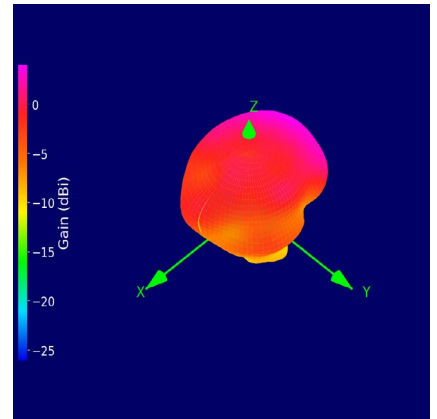
5200 MHz



5240 MHz



5482.5 MHz



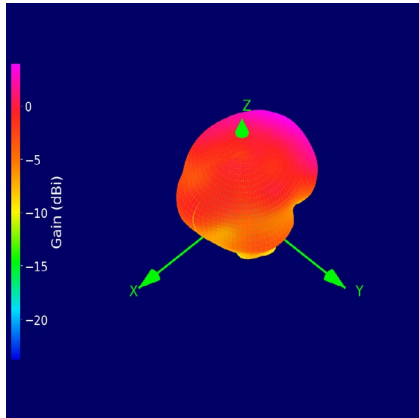


Tango 36

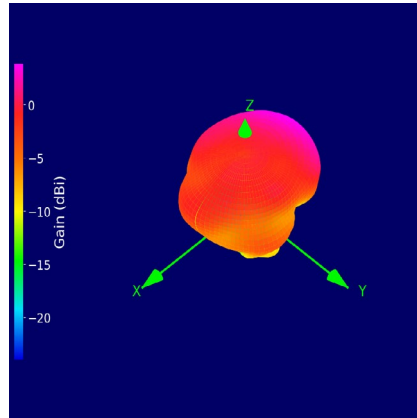
Ceiling-Mounted 3-Port MiMo Wi-Fi 6e Antenna

3D Radiation Plots

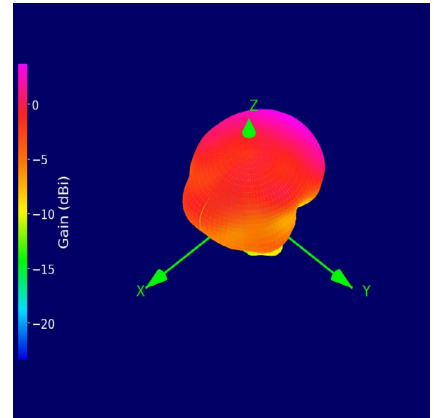
5512.5 MHz



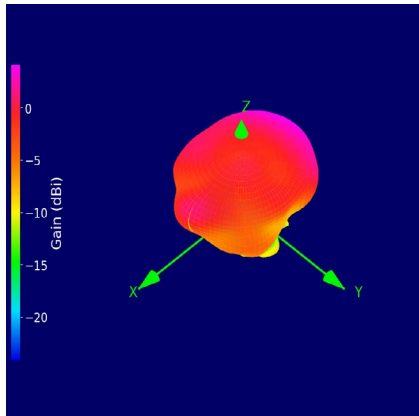
5544 MHz



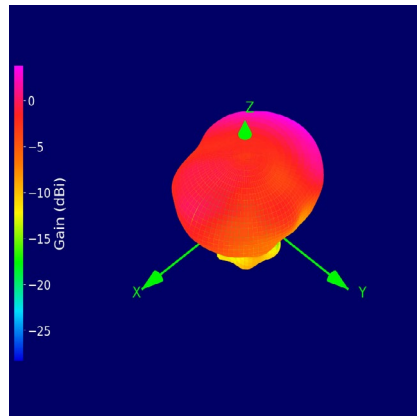
5570 MHz



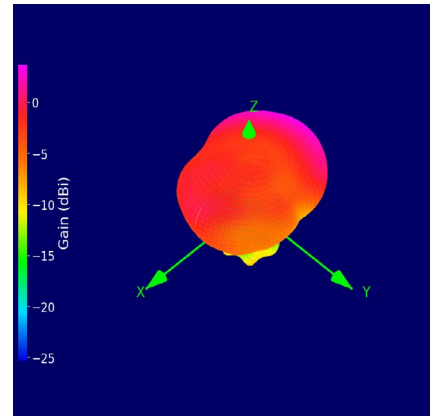
5800 MHz



6072 MHz



6175 MHz



NOTE: All 3D radiation plots are shown with Theta = 45 and Phi = 45.



Enabling Industrial IoT



Tango 36

Ceiling-Mounted 3-Port MiMo Wi-Fi 6e Antenna

Ordering Details:

| Part Number | Description |
|---------------------------|---|
| TANGO36/1.5M/SMAM/RP/S/29 | Ceiling-Mounted 3-Port MiMo Wi-Fi 6e Antenna with 1.5m Low Loss 100 cables and RP-SMA Male connectors |

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