# QuPanel 5G/LTE Global MIMO 2x2 Nf

## Directional ultra wideband 5G/LTE MIMO 2x2 antenna

QuPanel **5G**/LTE Nf directional MIMO 2x2 is ultra wideband 5G outdoor antenna. It´s primary designed for LTE/5G/3G/2G devices which require high efficiency connections. The antenna covers many LTE bands including the new Extended LTE **Band 71** and frequencies: **600 - 6000MHz**. The mounting bracket allows the antenna to be installed on the pole or on the wall, as the client antenna to receive Internet by LTE/5G/3G/2G. It's ideal solution to use with all industrial and domestic MIMO2x2 5G modems and routers.
Integrated Nf connectors.

5G | BAND 71 | 2x2 MIMO | 617-6000MHz | 7 dBi | DIRECTIONAL | IP 68 | -40° TO +80°

- WIDE BAND 600-6000MHZ, 5G TECHNOLOGY
- FIBERGLASS, WALL OR POLE MOUNTING BRACKET
- TWO NF CONNECTORS
- 80° BEAMWIDTH
- 7DBI GAIN
- MADE IN **EUROPE**



# 5G / LTE ANTENNA SPECIFICATION

| | |
|---|---|
| FREQUENCY | 617 - 960 MHz<br>1.7 - 2.7 GHz<br>3.3 - 4.6 GHz<br>4.7 - 6.0 GHz |
| GAIN | 617 - 960 MHz : 6 dBi<br>1.7 - 2.7 GHz : 7 dBi<br>3.3 - 4.6 GHz : 7 dBi<br>4.7 - 6.0 GHz : 5.5dBi |
| SUPPORTED LTE BANDS | 1, 2, 3, 4, 5, 7, 8, 9, 10, 12, 13, 14, 17, 18, 19, 20, 22, 25, 26, 27, 28, 29, 30, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 46, 47, 48, 49, 52, 53, 65, 66, 67, 68, 69, 71, 85, 103, 106 |
| SUPPORTED 5G BANDS | n1, n2, n3, n5, n7, n8, n12, n13, n14, n18, n20, n25, n26, n28, n29, n30, n34, n38, n39, n40, n41, n46, n47, n48, n53, n65, n66, n67, n71, n77, n78, n79, n80, n81, n82, n83, n84, n85, n86, n89, n90, n95, n97, n98, n100, n101, n256 |
| VSWR | <2.00, max <3.00 |
| BEAMWIDTH | 80°/80° ±15° |
| POLARIZATION | X (+-45degrees) |
| IMPEDANCE | 50 Ω |


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# MECHANICAL SPECIFICATION

| | |
|---|---|
| MATERIALS | ASA, aluminum, PTFE, fiberglass |
| CONNECTOR TYPE | Nf |
| INGRESS PROTECTION | IP68 |
| DIMENSIONS | 277 x 269.8 x 177 mm<br>10.71 x 10.87 x 7 inch |
| WEIGHT | 2.8 kg<br>6.17 lbs |
| OPERATING TEMPERATURE | From -40°C to 80°C<br>From -40°F to 176°F |
| MAST DIAMETER | 25-66mm<br>0.98-2.60 inch |

# FREQUENCY BANDS

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| LTE / 4G | 617 MHz | 1 | 2 | 3 | 4 | 5 | 7 | 8 |
| | | 9 | 10 | 12 | 13 | 14 | 17 | 18 |
| | | 19 | 20 | 22 | 25 | 26 | 27 | 28 |
| | | 29 | 30 | 33 | 34 | 35 | 36 | 37 |
| | | 38 | 39 | 40 | 41 | 42 | 43 | 44 |
| | | 46 | 47 | 48 | 49 | 52 | 53 | 65 |
| | | 66 | 67 | 68 | 69 | 71 | 85 | 103 |
| | | 106 | | | | | | 6000 MHz |


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| | | |
|---|---|---|
| 5G | 617 MHz | n1 n2 n3 n5 n7 n8 n12<br>n13 n14 n18 n20 n25 n26 n28<br>n29 n30 n34 n38 n39 n40 n41<br>n46 n47 n48 n53 n65 n66 n67<br>n71 n77 n78 n79 n80 n81 n82<br>n83 n84 n85 n86 n89 n90 n95<br>n97 n98 n100 n101 n256 |
| | 6000 MHz | |

# COMPATIBLE ROUTERS

## VARIANT: AP5G2-GN

| | |
|---|---|
| TELTONIKA | RUT200, RUT202, RUT204, RUT206, RUT230, RUT240, RUT241, RUT260, RUT261, RUT271, RUT276, RUT281, RUT286, RUT900, RUT901, RUT950, RUT951, RUT951 PoE+, RUT955, RUT956, RUT976, RUT981, RUT986, RUTC40, RUTC41, RUTM09, RUTM11, RUTM16, RUTM56, RUTX09, RUTX11, TRB160 |
| ROBUSTEL | EG3120e, EG5100, LG5100, R1500, R1510, R1511, R1511P, R1520 Global, R1520-4L (S), R1520-4L (V), R2010, R2011, R201x, R2110, R2120, R2120 5G RedCap, R3000, R3000 Industrial, R3000 LG, R3000 Lite, R3000 Quad, R3010 |
| RAJANT | Peregrine LTE BreadCrumb FE1-2455LS, Peregrine LTE BreadCrumb FE1-2455LW |
| ACKSYS | AirBox LTE, AirWan |
| ADVANTECH | ICR-2031 |


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| | |
|---|---|
| **AIRGAIN** | NL-SW-LTE-GELS3, NL-SW-LTE-QBG95, NL-SW-LTE-QBG96, NL-SW-LTE-SRC7611-4, NL-SW-LTE-TC1NAG, NL-SW-LTE-TC1WWG, NL-SW-LTE-TC4NAG, NL-SW-LTE-TC4WWG, NL-SW-LTE-TG1WWG, NL-SWNB-LTE-NRF9160-D |
| **AM TELECOM** | AMM545, AMM5500, AMM574, AMM585 |
| **ANYBUS** | Wireless Router WLAN |
| **CISCO** | C819 LTE, MG21E, Z4C |
| **COMSET** | CM210A-W, CM210Q-W, CM510Q-W, CM685T-W, CM685V-1, CM685V-4, CM685V-6, CM685V-6-G, CM820Q-4, CM820Q-6, CM820T-W, CM820V-4, CM820V-W |
| **D-LINK** | DWR-960, G415 AX1500, G416 AX1500, N300 4G |
| **DIGI** | 6310-DX, 6330-MX, EX12, EX15, IX10, IX15, IX20, IX30, WR31, WR44 RR |
| **ERICSSON (CRADLEPOINT)** | CBA550, E100, E102, IBR200, IBR600C, IBR900, L950, R500, R920, S400, S700 |
| **FIBOCOM** | FG132-M.2, FG132-MiniPCIe, FM101-CG, FM101-EAU, FM101-NA, L610-EU-MiniPCIe, L610-LA-MiniPCIe, L716-CN MiniPCIe, L716-EU-MiniPCIe, NL668-AM MiniPCIe, NL668-EAU-M.2, NL668-EU MiniPCIe, NL668-JP MiniPCIe, NL668-LA MiniPCIe |
| **FORTINET** | FEX-101F, FEX-201F, FEX-211E, FEX-212F, FortiGate Rugged 60F-3G4G, FortiGate Rugged 70F-3G4G |
| **FOUR-FAITH** | 4G Cellular Router F-R100, 4G Industrial Computer F4931-R2H, 4G Industrial Computer F4932-R2H-DF1, Android Industrial Computer F4932-R1Q, Cellular Wireless Router F-R200, Dual Sim 4G Router F3X46, Dual-sim WiFi Router F3946, Edge Computing Gateway F-G100, Industrial WiFi Router F3X36Q, LAN Port Router F3X26 V2, LTE Industrial Router F3X27 V2, LTE Wireless Router F3x36 |
| **INHAND** | IR302, IR315 |
| **MIKROTIK** | RB912, RB922, RBM11G, RBM33G |



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| | |
|---|---|
| **MILESIGHT** | UR32 |
| **OPTION** | CloudGate LTE WW CAT4 |
| **PEPLINK** | Balance 20X, Balance 310 5G, MAX BR1 Classic, MAX BR1 ENT, MAX BR1 IP55, MAX BR1 M2M, MAX BR1 Mini, MAX BR1 Mini (HW3), MAX BR1 Mini Core (HW3), MAX BR1 Mini M2M, MAX BR1 MK2, MAX BR1 Pro, MAX BR1 Slim |
| **PERLE** | IRG5410, IRG5520, IRG5521, IRG5540, IRG5541 |
| **PROROUTE** | H685 4G Router, H685 LTE 4G CAT6 Router, H820 M2M 4G Router |
| **QUECLINK** | WR220 |
| **QUECTEL** | LTE-A EM060K-EA, LTE-A EM060K-GL, LTE-A EM061K-GL, LTE-A EM120K-GL, LTE-A EM120R-GL |
| **RAJANT** | Peregrine LTE BreadCrumb FE1-2455LS, Peregrine LTE BreadCrumb FE1-2455LW |
| **ROBUSTEL** | EG3120e, EG5100, LG5100, R1500, R1510, R1511, R1511P, R1520 Global, R1520-4L (S), R1520-4L (V), R2010, R2011, R201x, R2110, R2120, R2120 5G RedCap, R3000, R3000 Industrial, R3000 LG, R3000 Lite, R3000 Quad, R3010 |
| **SEMTECH (SIERRA WIRELESS)** | AirLink EX400, AirLink LX40, AirLink LX60, AirLink MP70, AirLink RV50X, AirLink RV55, AirLink RX400, AirLink RX55, EM7411, EM7421, EM7431, EM7511, EM7565, EM7590, EM7595, EM7690, EM8695, MC7411, MC7421, MC7431, WP7607, WP7610 |
| **SIEMENS** | 6GK5876-4AA00-2BA2, 6GK5876-4AA00-2DA2, 6GK5876-4AA10-2BA2 |
| **SIMCOM** | A7602E-H-M2, A7602E-H-PCIEA, A7608SA-H MiniPCIe, A7906E-M2, A7908, A8230X, SIM7600X-H MiniPCIe, SIM7600X-H-M2, SIM7600X-MiniPCIe, SIM7906A-M2, SIM7906E-M2, SIM7906G-M2, SIM7912A-M2, SIM7912E-M2, SIM8230E, SIM8230G |
| **TELIT CINTERION** | FN920C04, LE910Cx Linux mPCIe Series, LE910Cx ThreadX mPCIe Series, LM940, LN920, mPLS63, mPLS83 |


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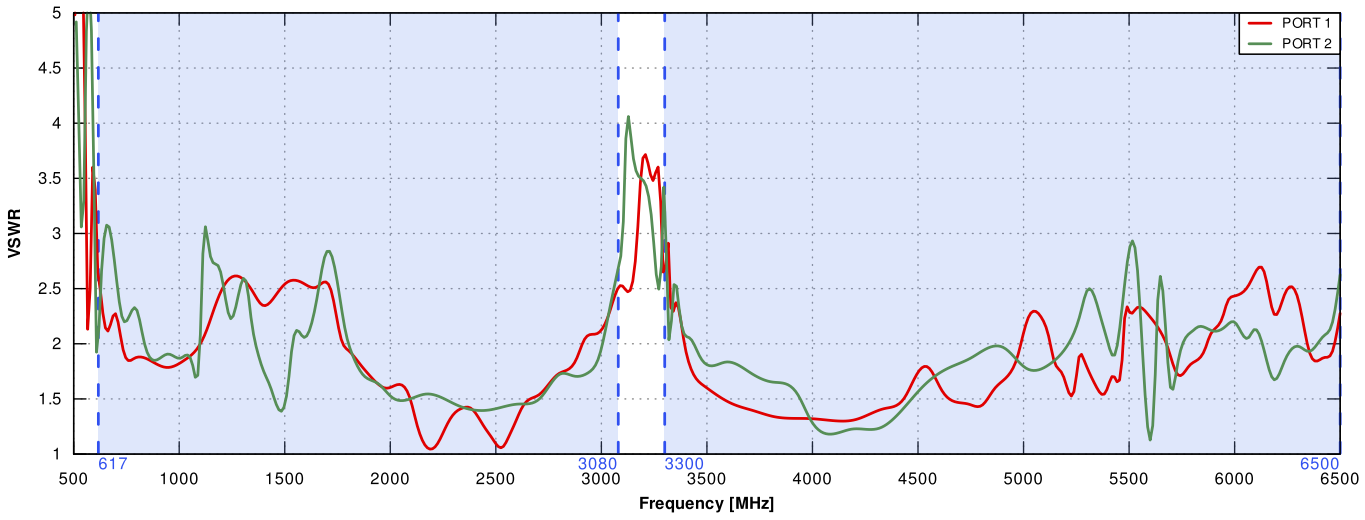
| | |
|---|---|
| TELTONIKA | RUT200, RUT202, RUT204, RUT206, RUT230, RUT240, RUT241, RUT260, RUT261, RUT271, RUT276, RUT281, RUT286, RUT900, RUT901, RUT950, RUT951, RUT951 PoE+, RUT955, RUT956, RUT976, RUT981, RUT986, RUTC40, RUTC41, RUTM09, RUTM11, RUTM16, RUTM56, RUTX09, RUTX11, TRB160 |
| WAVETEL | W2400 LTE , W3600 4G/LTE Dual WAN, W3604 Multi-WAN, W3608 Multi-WAN, W421, W4300S 5G, W4600, W4600-S2 |
| WLINK | ER120, G200, G510, G520, ODU310, R210, R220, R520 |
| ZYXEL | LTE3202-M437, LTE3301-PLUS, LTE5388-M804, LTE5398-M904, NR5101 |
| OTHER | 2 * SMA, 3 * SMA |

# PLOTS

## VSWR



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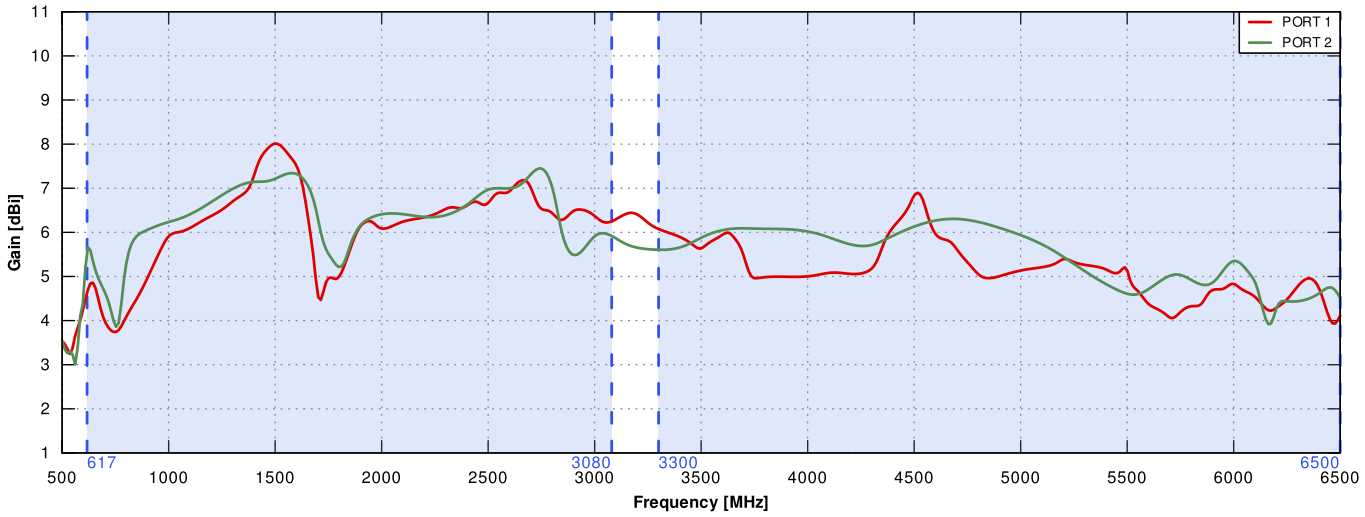
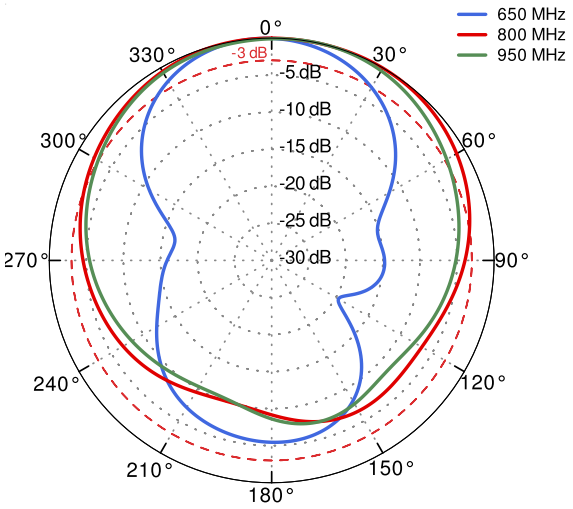
## Gain




## PORT 1 - 5G/LTE From 650MHz to 950MHz

ELEVATION

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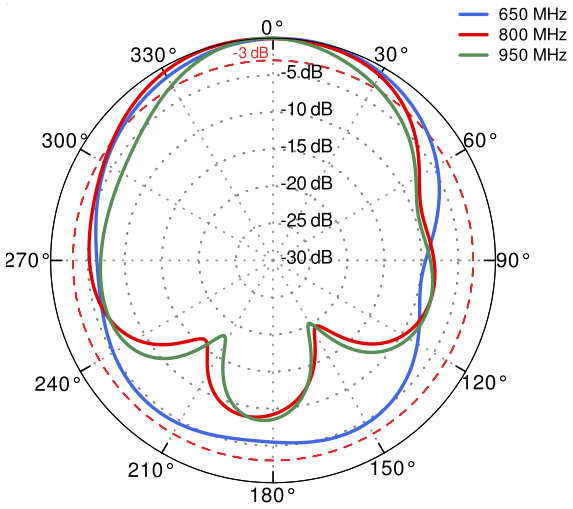




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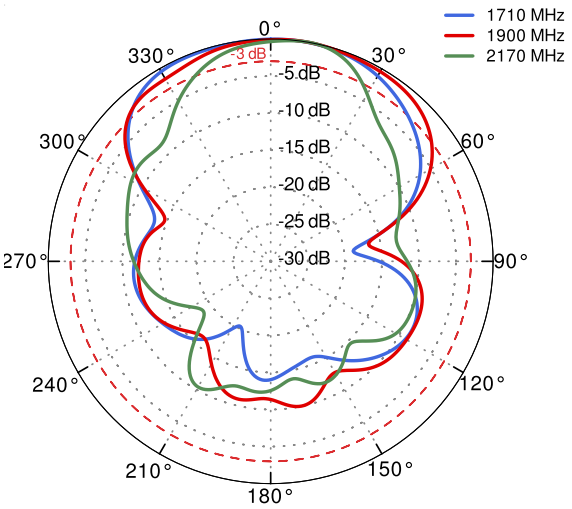
## PORT 1 - 5G/LTE From 1710MHz to 2170MHz

ELEVATION

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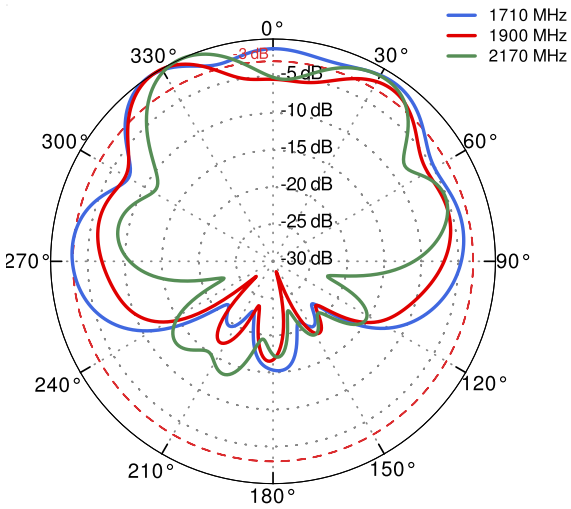


## PORT 1 - 5G/LTE From 2300MHz to 2700MHz

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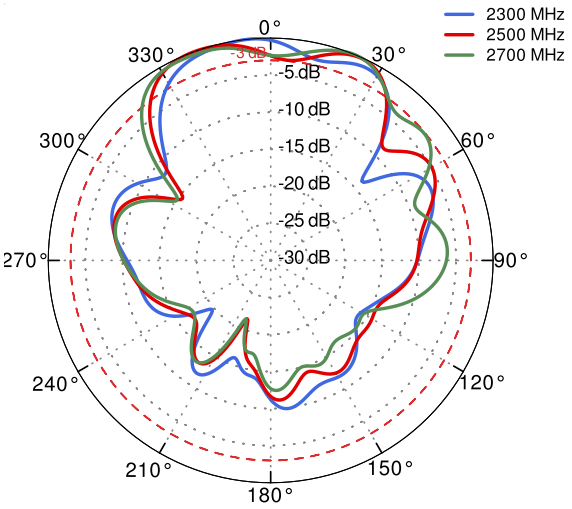


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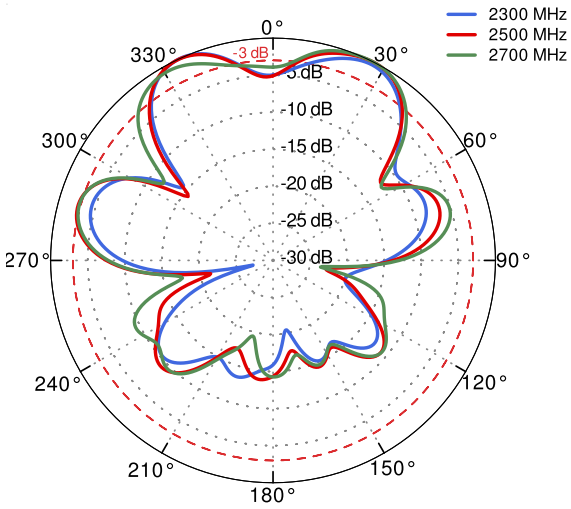




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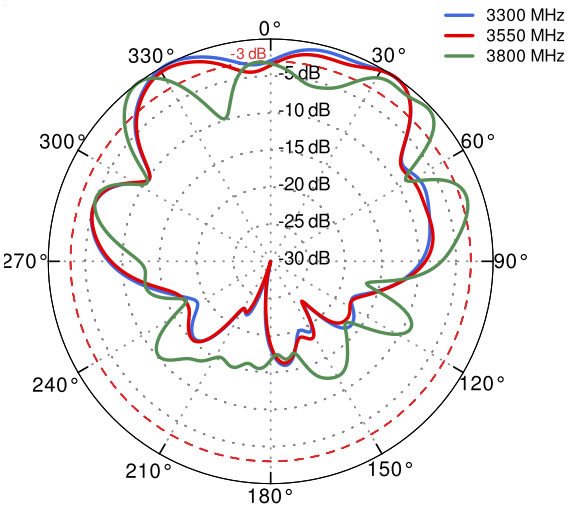
## PORT 1 - 5G/LTE From 3300MHz to 3800MHz

ELEVATION

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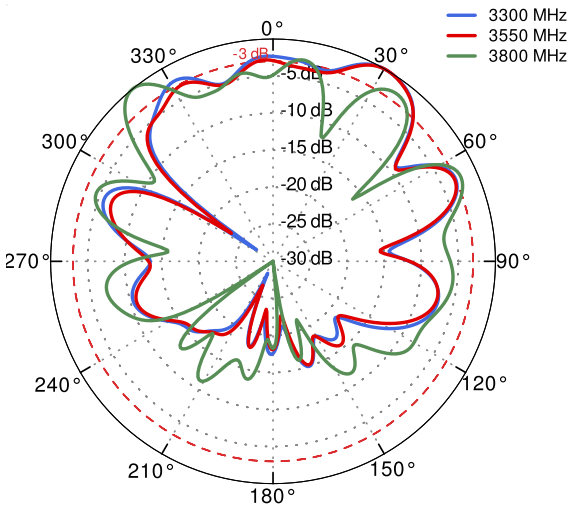
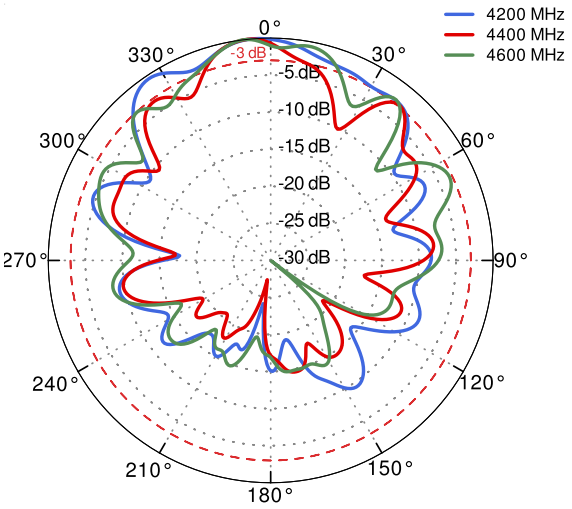



## PORT 1 - 5G/LTE From 4200MHz to 4600MHz

ELEVATION

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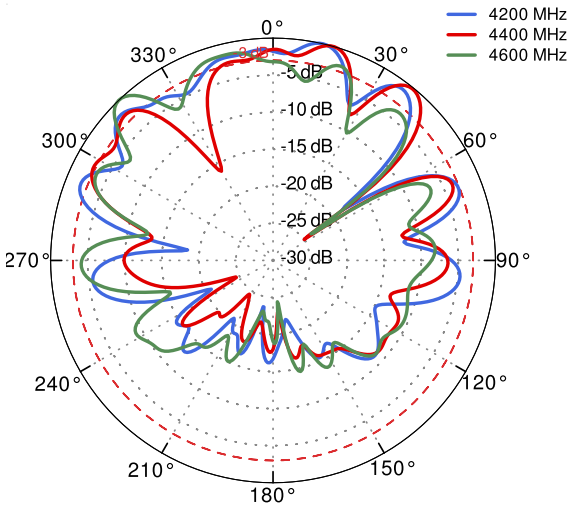




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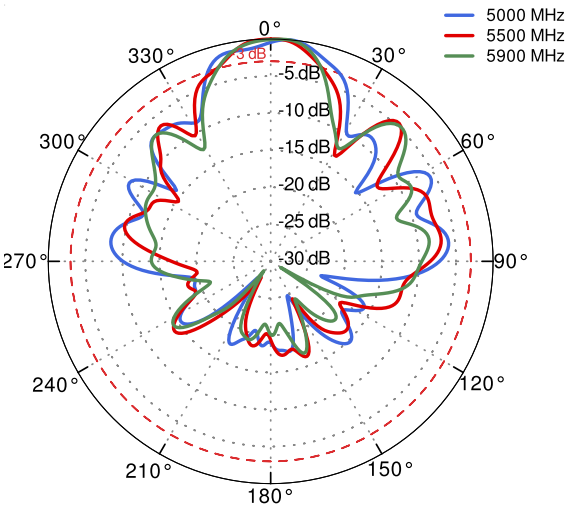
## PORT 1 - 5G/LTE From 5000MHz to 5900MHz

ELEVATION

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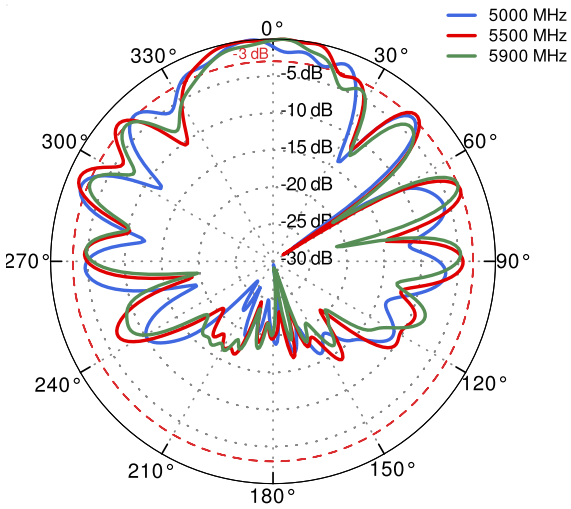
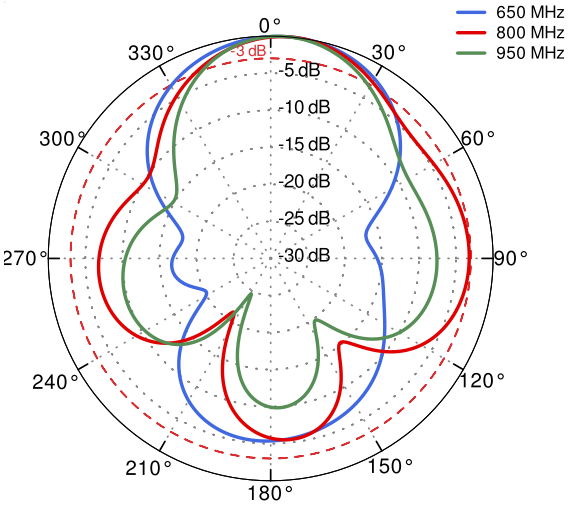



## PORT 2 - 5G/LTE From 650MHz to 950MHz

ELEVATION

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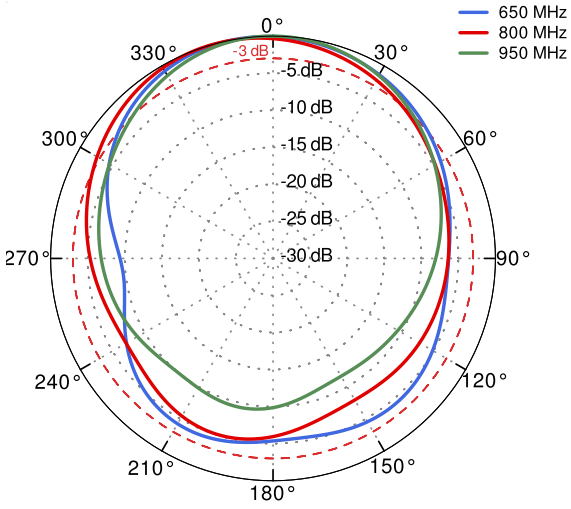




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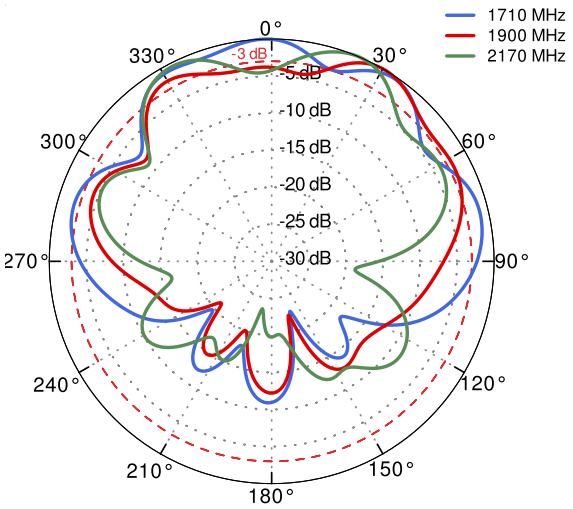
## PORT 2 - 5G/LTE From 1710MHz to 2170MHz

ELEVATION

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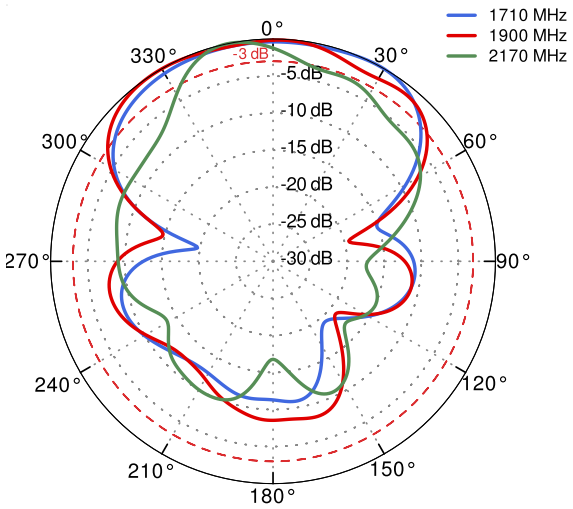
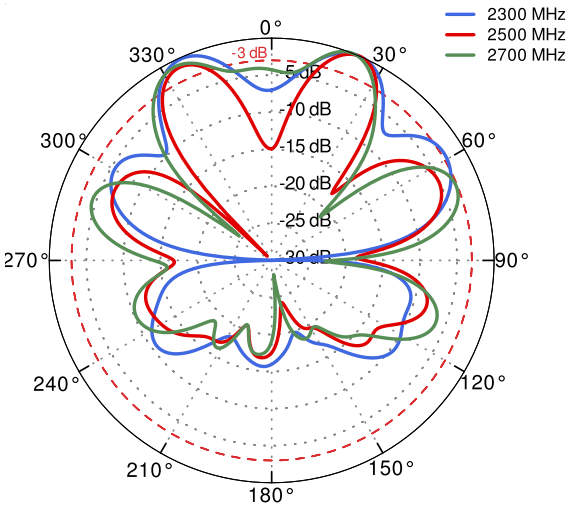



## PORT 2 - 5G/LTE From 2300MHz to 2700MHz

ELEVATION

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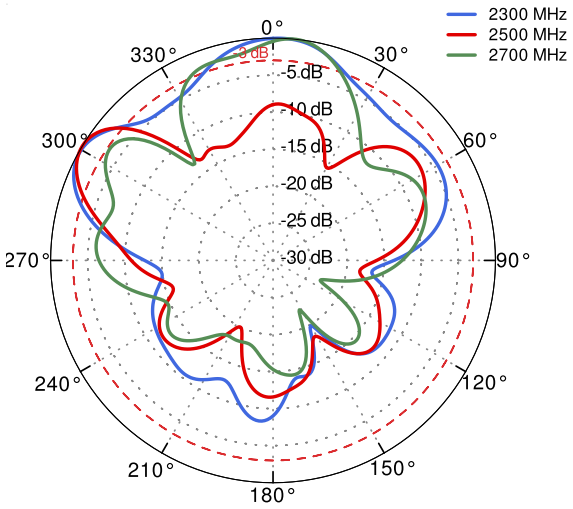




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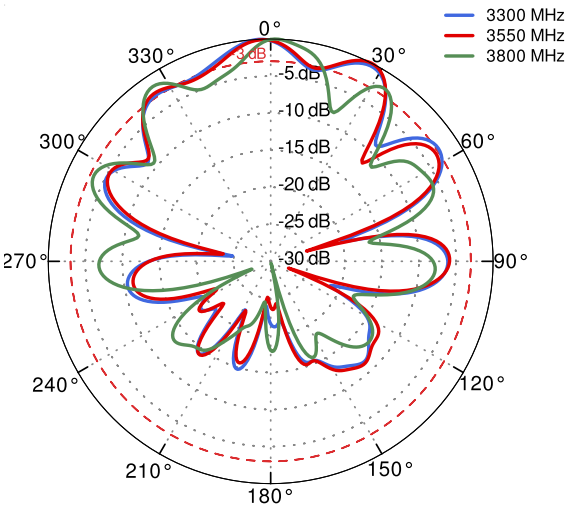
## PORT 2 - 5G/LTE From 3300MHz to 3800MHz

ELEVATION

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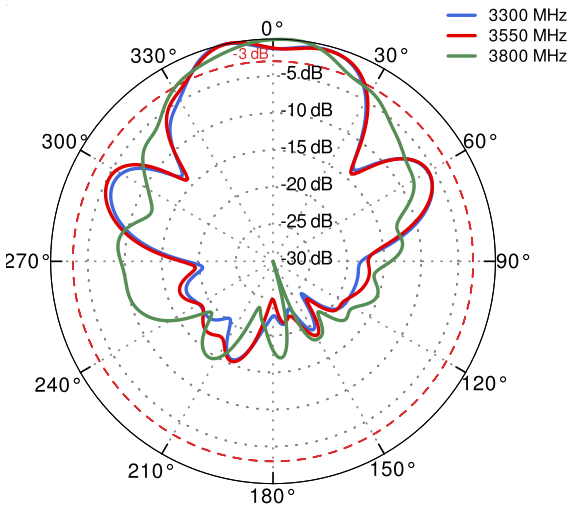
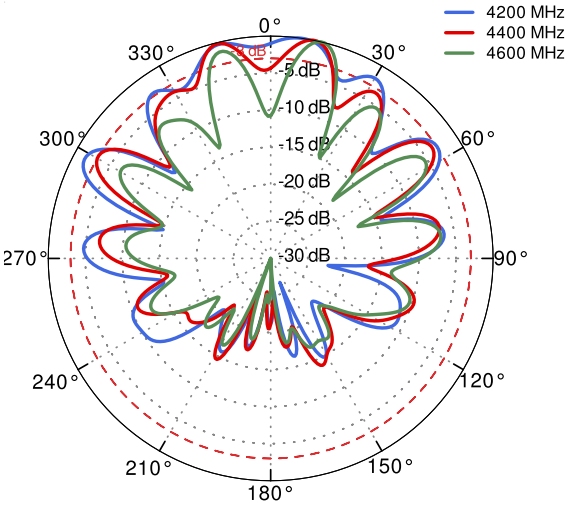



## PORT 2 - 5G/LTE From 4200MHz to 4600MHz

ELEVATION

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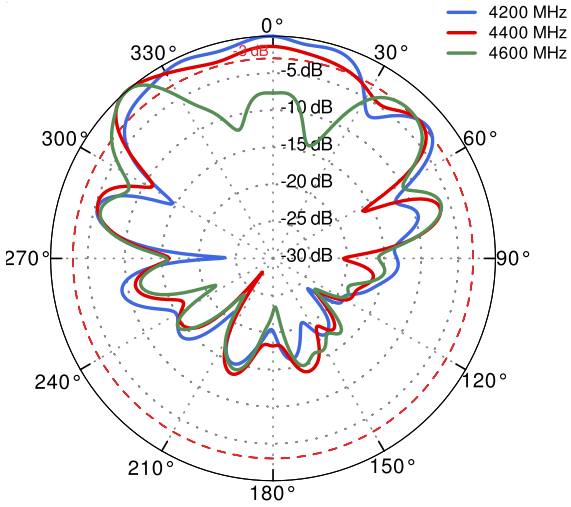




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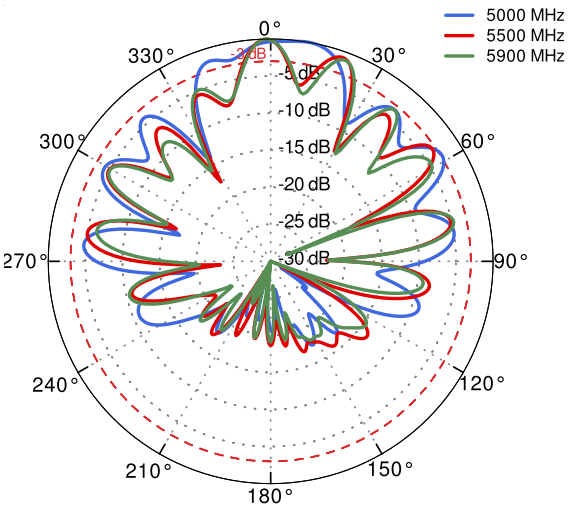
## PORT 2 - 5G/LTE From 5000MHz to 5900MHz

ELEVATION

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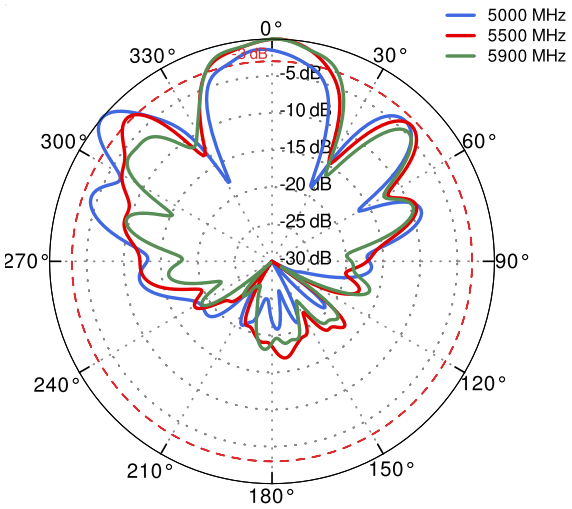
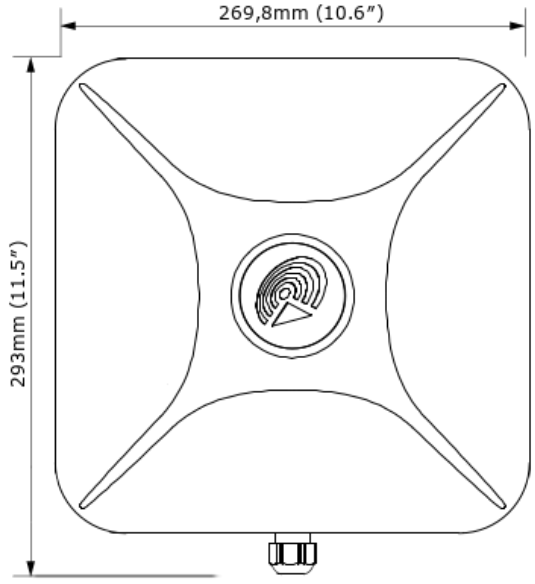
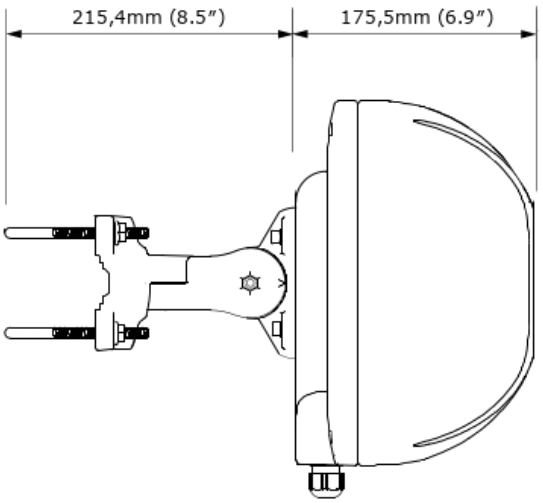



# DIMENSIONS



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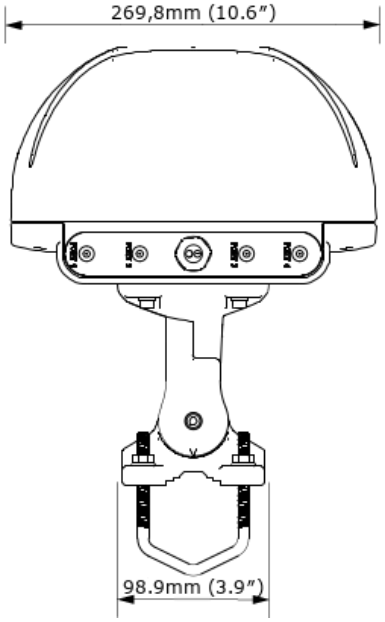


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