# QuPanel LTE HP MIMO 2x2 Nf

## Directional High Power multiband LTE MIMO 2x2 antenna

QuPanel LTE HP directional MIMO 2x2 high gain antenna is predicted for 4G LTE mainly, but is compatible with 3G and 2G as well. The antenna improves the signal in rural/suburban and locations where the mobile signal is weak. That antenna is predicted to be installed on the buildings (on the pole or on the wall). Due to very wide working frequency range, the antenna is universal client for LTE bands like LTE700/800/1800/1900/2100/2300/2600. It's compatible with Teltonika: RUT240, RUT900, RUT950, RUT955, RUTX09, RUTX11 and other MIMO 2x2 LTE/3G/2G modems and routers.

4G LTE | 2x2 MIMO | 694-2700MHz | 7 dBi | DIRECTIONAL | IP 67 | -40° TO +80°



# LTE ANTENNA SPECIFICATION

| | |
|---|---|
| FREQUENCY | 694 - 960 MHz<br>1.7 - 2.2 GHz<br>2.2 - 2.7 GHz |
| SUPPORTED LTE/5G BANDS | 1, 2, 3, 4, 5, 7, 8, 9, 10, 12, 13, 14, 17, 18, 19, 20, 25, 26, 27, 28, 29, 30, 33, 34, 35, 36, 37, 38, 39, 40, 41, 44, 53, 65, 66, 67, 68, 69, 85, 103, n80, n81, n82, n83, n84, n86, n89, n90, n95, n97, n98, n100, n101, n256 |
| GAIN | 694 - 960 MHz : 7 dBi<br>1.7 - 2.2 GHz : 7 dBi<br>2.2 - 2.7 GHz : 7 dBi |
| FRONT-TO-BACK | >10 dB |
| VSWR | <1.70, max <2.00 |
| BEAMWIDTH | 70°/70° ±15° |
| POLARIZATION | Dual polarized X-Pol |
| IMPEDANCE | 50 Ω |


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# MECHANICAL SPECIFICATION

| | |
|---|---|
| MATERIALS | ASA, aluminum, PTFE, Fiberglass |
| INGRESS PROTECTION | IP67 |
| DIMENSIONS | 272 x 276 x 96 mm<br>10.71 x 10.87 x 3.78 inch |
| WEIGHT | 1.8 kg<br>3.97 lbs |
| OPERATING TEMPERATURE | From -40°C to 80°C<br>From -40°F to 176°F |
| CABLE LENGTH | 5m (P/N: APLM2-H) or 10m (P/N: APLM2-H1) or Nf connector (P/N: APLM2-HN) |
| CABLE TYPE | LMR195 white |
| CONNECTOR TYPE | 2x SMA |
| MAST DIAMETER | 25-66mm<br>0.98-2.60 inch |


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# FREQUENCY BANDS

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **LTE / 4G GSM** | 617 MHz | 5 | 8 | 12 | 13 | 14 | 17 | 18 | 960 MHz |
| | | 19 | 20 | 26 | 27 | 28 | 29 | 44 | |
| | | 67 | 68 | 85 | 103 | n81 | n82 | n83 | |
| | | n89 | n100 | | | | | | |
| **LTE / 4G UMTS** | 1710 MHz | 1 | 2 | 3 | 4 | 9 | 10 | 25 | 2170 MHz |
| | | 33 | 34 | 35 | 36 | 37 | 39 | n80 | |
| | | n84 | n86 | n95 | n98 | n101 | | | |
| **LTE / 4G WCS DARS** | 2300 MHz | 30 | 40 | n97 | | | | | 2400 MHz |
| **LTE / 4G** | 2400 MHz | 7 | 38 | 41 | 53 | 69 | n90 | | 2700 MHz |


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# COMPATIBLE ROUTERS

## VARIANT: APLM2-HN

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


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|---|---|
| **ERICSSON (CRADLEPOINT)** | CBA550, E100, E102, IBR200, IBR600C, IBR900, L950, R500, R920, S400, S700 |
| **FIBOCOM** | 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, Industrial WiFi Router F3X36Q, LAN Port Router F3X26 V2, LTE Industrial Router F3X27 V2, LTE Wireless Router F3x36 |
| **INHAND** | IR302 |
| **MIKROTIK** | RB912, RB922, RBM11G, RBM33G |
| **MILESIGHT** | UR32 |
| **OPTION** | CloudGate LTE WW CAT4 |
| **PEPLINK** | Balance 20X, 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 |
| **PROROUTE** | H685 4G Router, H685 LTE 4G CAT6 Router, H820 M2M 4G Router |
| **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 FE1-2455LW |
| **ROBUSTEL** | EG3120e, EG5100, LG5100, R1500, R1510, R1511P, R1520 Global, R1520-4L (S), R1520-4L (V), R2010, R2011, R2110, R2120, R3000, R3000 Industrial, R3000 LG, R3000 Lite, R3000 Quad, R3010 |

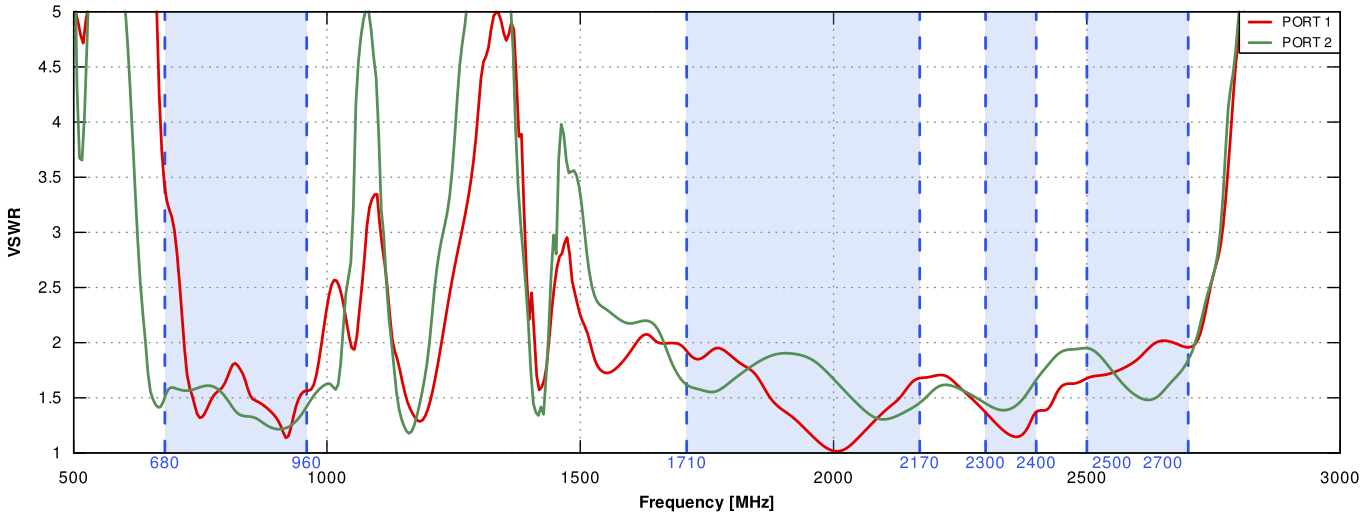

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| | |
|---|---|
| **SEMTECH (SIERRA WIRELESS)** | AirLink LX40, AirLink LX60, AirLink MP70, AirLink RV50X, AirLink RV55, AirLink RX55, EM7411, EM7421, EM7431, EM7511, EM7565, EM7590, EM7595, EM7690, MC7411, MC7421, MC7431, WP7607, WP7610 |
| **SIEMENS** | 6GK5876-4AA00-2BA2, 6GK5876-4AA00-2DA2, 6GK5876-4AA10-2BA2 |
| **SIMCOM** | A7602E-H-M2, A7602E-H-PCIEA, A7608SA-H MiniPCIe, A7906E-M2, A7908, SIM7600X-H MiniPCIe, SIM7600X-H-M2, SIM7600X-MiniPCIe, SIM7906A-M2, SIM7906E-M2, SIM7906G-M2, SIM7912A-M2, SIM7912E-M2 |
| **TELIT CINTERION** | LE910Cx Linux mPCIe Series, LE910Cx ThreadX mPCIe Series, LM940, LN920, mPLS63, mPLS83 |
| **TELTONIKA** | RUT200, RUT202, RUT206, RUT230, RUT240, RUT241, RUT260, RUT261, RUT281, RUT286, RUT900, RUT901, RUT950, RUT951, RUT951 PoE+, RUT955, RUT956, RUT981, RUT986, RUTC40, RUTM09, RUTM11, RUTM16, RUTM56, RUTX09, RUTX11, TRB160 |
| **WAVETEL** | W2400 LTE , W3600 4G/LTE Dual WAN, W3604 Multi-WAN, W3608 Multi-WAN, W421, W4600, W4600-S2 |
| **WLINK** | ER120, G200, G510, G520, ODU310, R210, R220, R520 |
| **ZYXEL** | LTE3202-M437, LTE3301-PLUS, LTE5388-M804, LTE5398-M904 |
| **OTHER** | 2 * SMA, 3 * SMA |

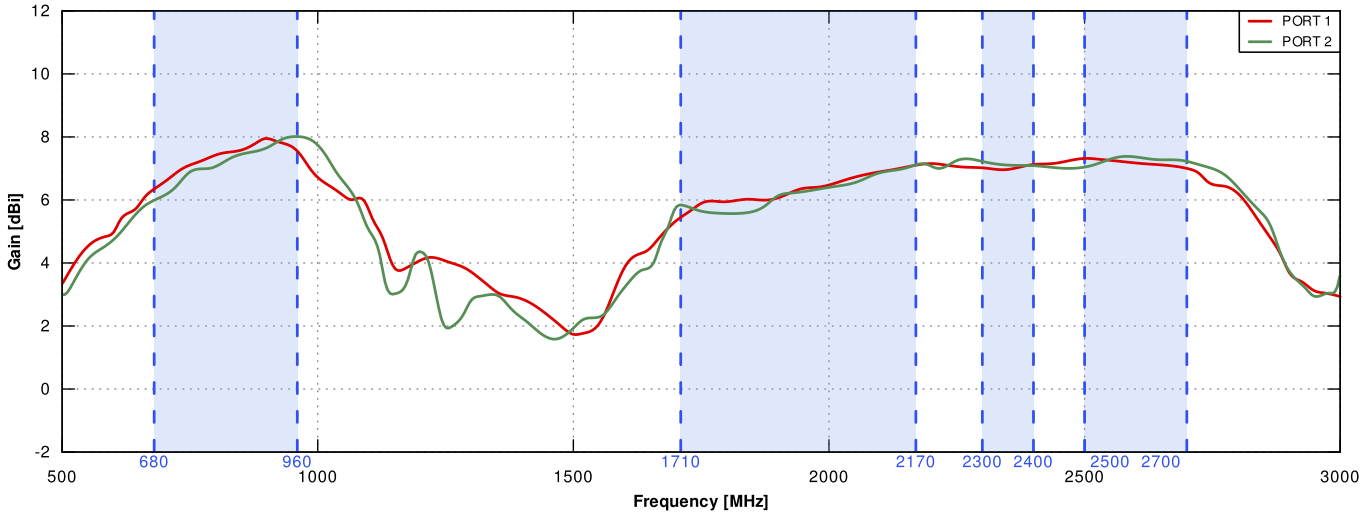

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# PLOTS

## VSWR




## Gain

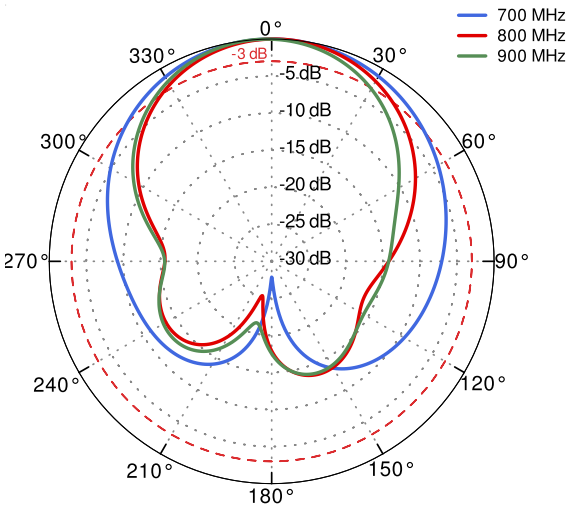




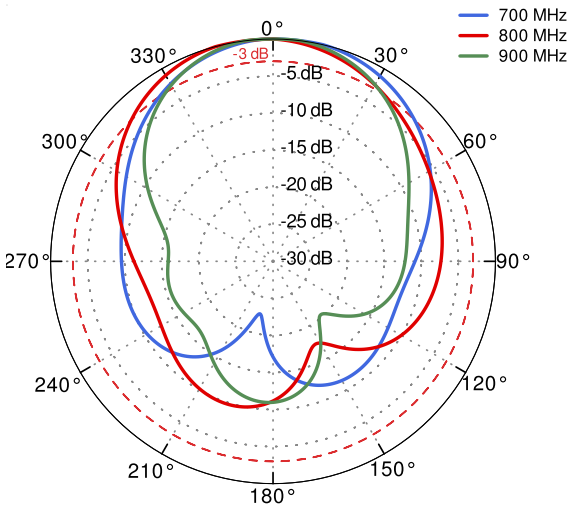
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## Port 1 700MHz to 900MHz

ELEVATION

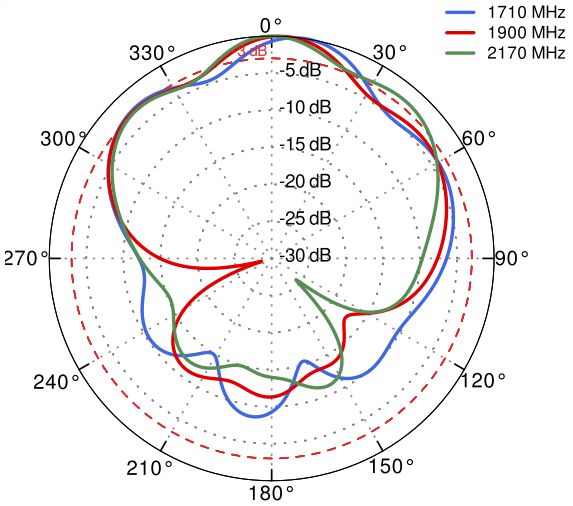



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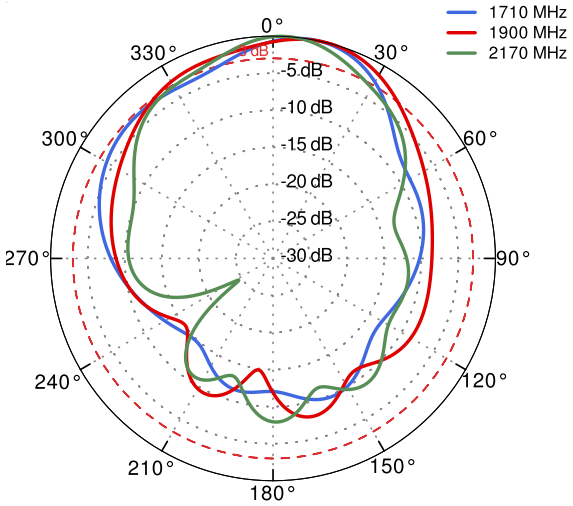



## Port 1 1.71GHz to 2.17GHz

ELEVATION




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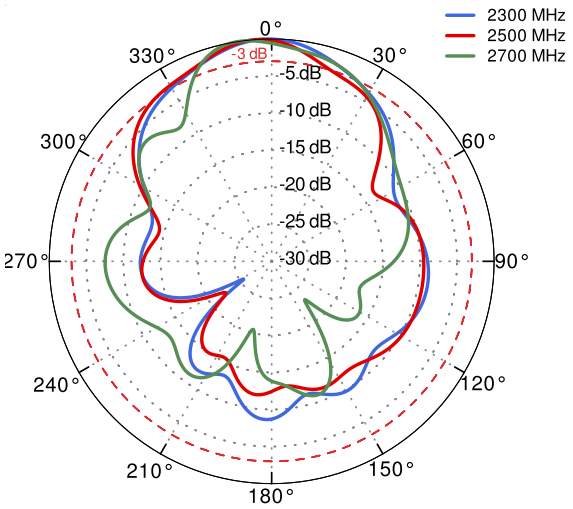




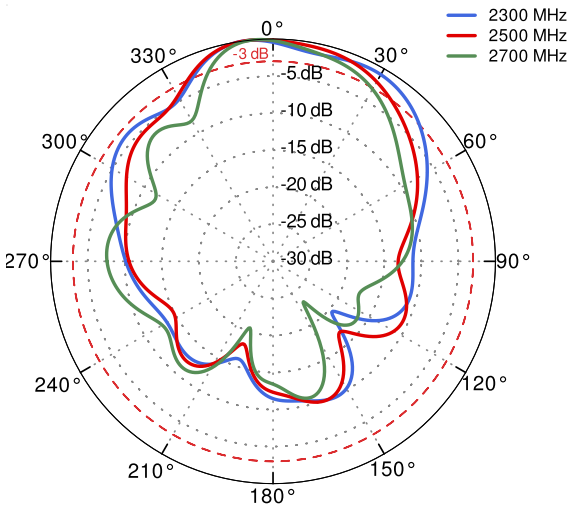
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## Port 1 2.3GHz to 2.7GHz

ELEVATION

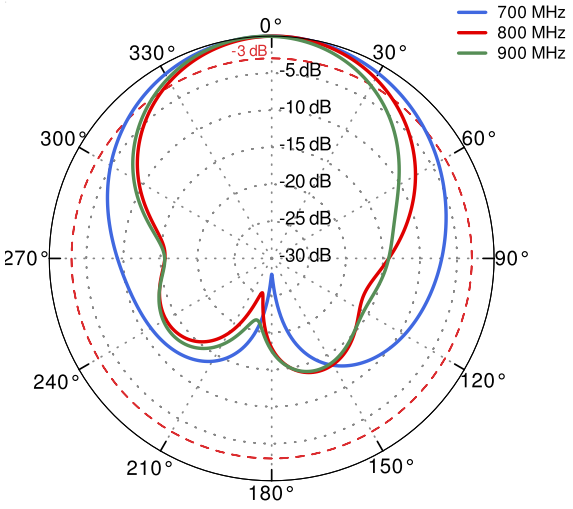



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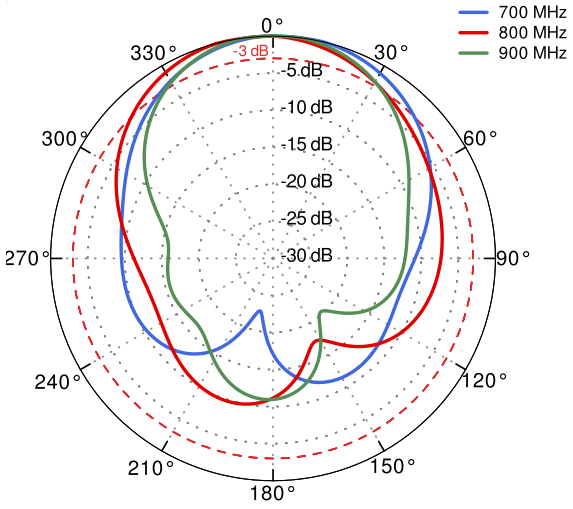



## Port 2 700MHz to 900MHz

ELEVATION




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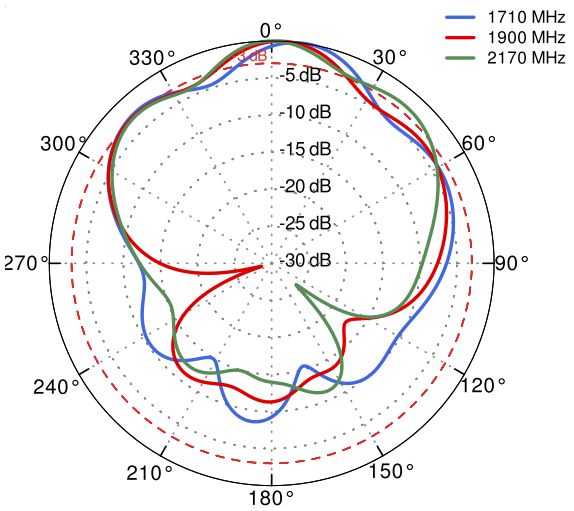




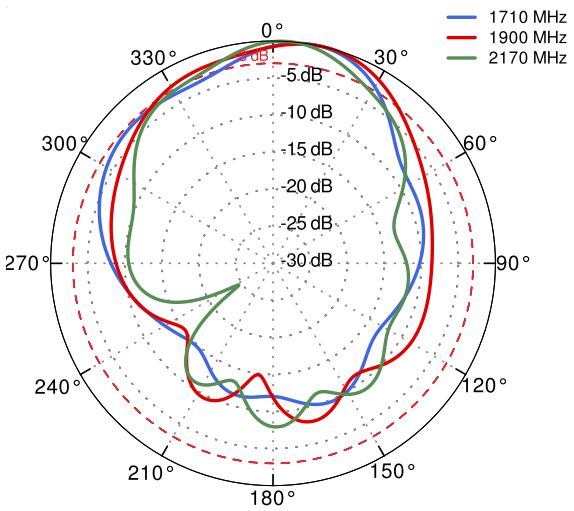
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## Port 2 1.71GHz to 2.17GHz

ELEVATION

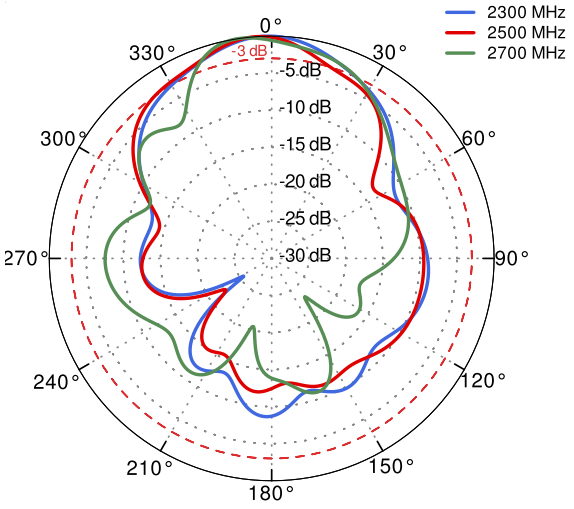



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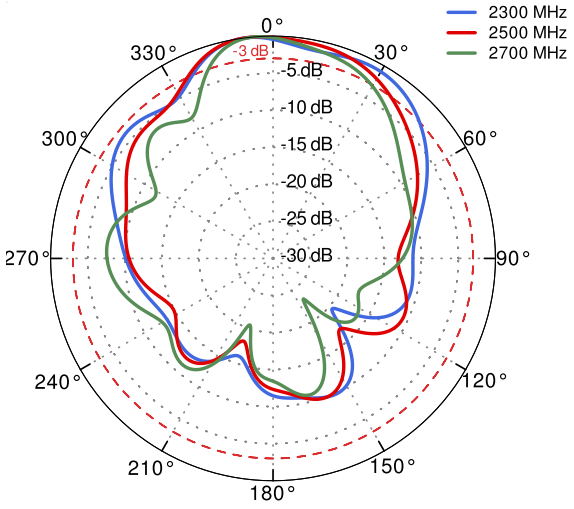



## Port 2 2.3GHz to 2.7GHz

ELEVATION



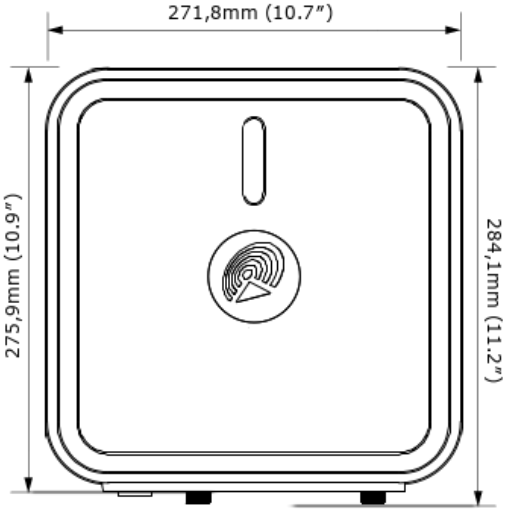

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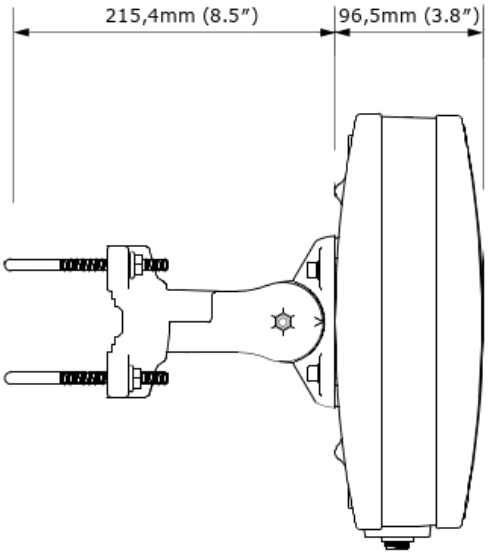


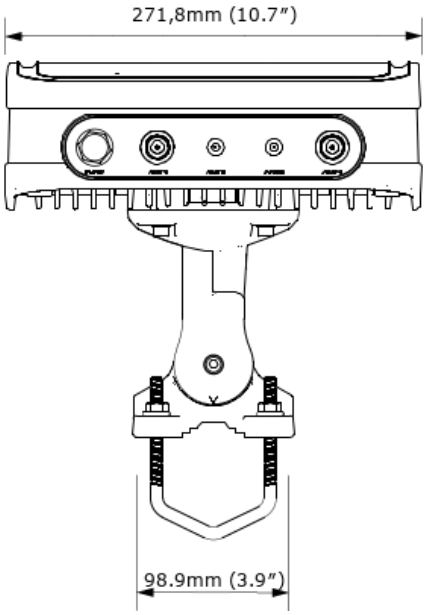


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# DIMENSIONS




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