

DATA SHEET

# ARUBA 9004 LTE-ANTO OUTDOOR ANTENNA

R6M37A

The 9004-LTE-ANTO is a high-performance omnidirectional outdoor dipole antenna. It is ideally designed for use with Aruba 9004-LTE Gateways. The 90xx-LTE-ANTO is installed outdoors and is connected to a 9004-LTE via the outdoor extender cable. The antenna can also be used as a GPS antenna.



## SPECIFICATIONS

### A. Electrical Characteristics

Frequency	V.S.W.R.	Peak Gain (max.)	Efficiency (avg.)
700 ~ 960 MHz	< 3.0	0.6dBi	53%
1700 ~ 2700 MHz	< 2.0	2.8dBi	74%
Polarization	Linear, vertical		
Impedance	50 Ohm		

### B. Material & Mechanical Characteristics

Material of Radiator	PCB
Material of Plastic	PC / POM
Cable Type	1.37mm coaxial cable
Connector Type	N Type Plug
Radome Color	White
Dimensions	Ø 31.8 x 280.8 mm

### C. Environmental

Operation Temperature	- 40 °C ~ + 80 °C
Storage Temperature	- 40 °C ~ + 70 °C
Antenna Color Storage life	< 2 year

GPS antenna range: 1448~1511MHz



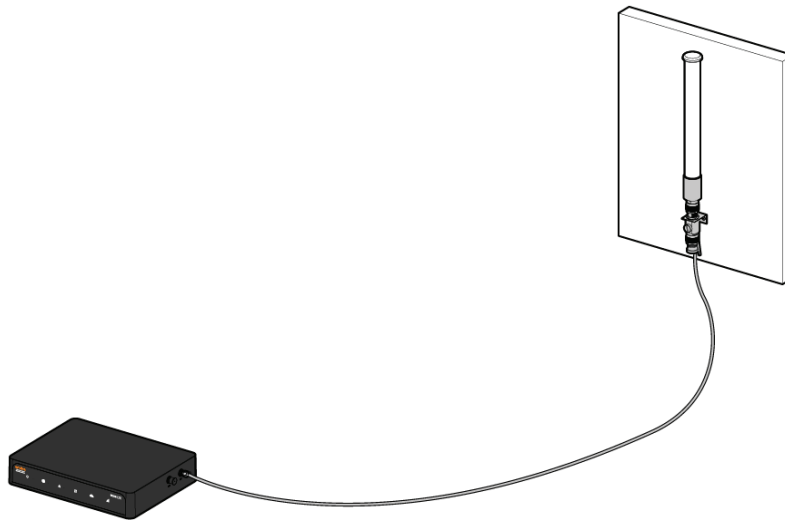
### OUTDOOR ANTENNA EXTENDER KIT

LTE/GPS indoor antennas connected locally to the 9004-LTE Gateway could be extended using an installed outdoor mount using the following extender kit which includes the outdoor antenna:

Part Number	Description
R4Y93A	Aruba 90xx-LTE Outdoor Ant Ext Kit-35ft

Each kit is for extending one antenna. To extend both Main and Diversity LTE antennas, two (2) kits are needed. To extend the GPS antenna, one additional kit is needed. To install, the LTE/GPS antenna connected to the 9004-LTE gateway would be detached. One end of the extender cable would connect to the antenna connector. The other end would connect to the outdoor antenna as depicted below.

Please refer to Aruba 9004-LTE Gateway Installation Guide for installation steps.

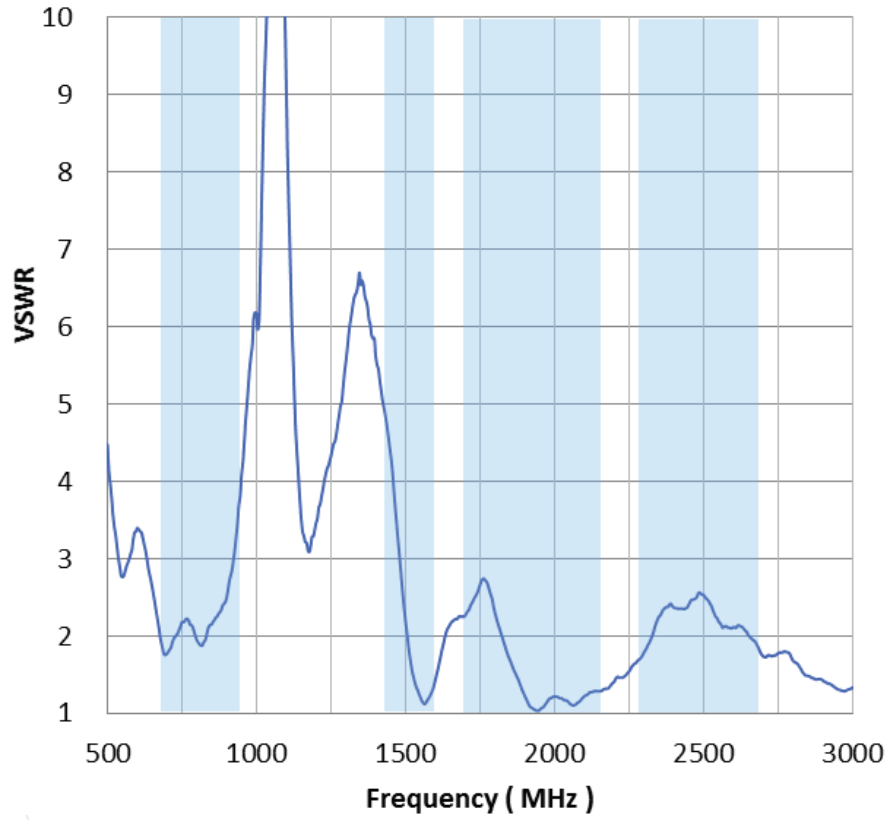


CABLE LOSS	
Frequency (MHz)	Cable loss (dB)
	35 ft cable
600	4.3
1200	6.4
1800	8.1
2400	9.6
3000	10.9



## ANTENNA PERFORMANCE

### VSWR





**EFFICIENCY**

Frequency	Antenna Only (%)	With 35 feet RG58 Cable (%)
698	22	25
704	23	24
710	26	25
716	31	26
734	38	27
740	42	28
746	46	28
751	48	27
756	47	26
777	61	30
782	58	28
787	56	29
791	55	29
806	70	29
821	64	27
824	57	26
836	71	25
849	62	26
862	63	24
869	67	22
880	59	24
894	54	20
900	60	20
915	46	19
925	46	17
940	48	16
960	38	13
<b>Avg.</b>	<b>50</b>	<b>24</b>

Frequency	Antenna Only (%)	With 35 feet RG58 Cable (%)
1448	41	9
1455	42	9
1463	38	10
1476	52	11
1486	54	11
1496	55	14
1503	65	15
1511	71	15
1560	72	15
1565	67	16
1575	51	14
1585	71	16
1592	70	15
1595	67	15
1597	65	15
1602	60	14
1607	60	15
1610	62	15
<b>Avg.</b>	<b>59</b>	<b>14</b>



Frequency	Antenna Only (%)	With 35 feet RG58 Cable (%)
1710	63	14
1733	62	13
1750	61	13
1770	55	13
1785	58	12
1805	54	12
1840	62	13
1850	64	13
1880	72	14
1910	76	14
1920	76	14
1930	77	14
1950	76	14
1960	76	14
1980	76	14
1990	77	14
2010	81	14
2018	81	14
2025	80	14
2110	84	15
2140	77	13
2170	75	12
<b>Avg.</b>	<b>71</b>	<b>14</b>

Frequency	Antenna Only (%)	With 35 feet RG58 Cable (%)
2300	71	10
2305	72	10
2315	65	10
2325	59	9
2350	59	9
2375	63	8
2400	61	8
2500	55	8
2515	54	8
2535	59	8
2555	56	8
2570	60	8
2595	57	8
2620	58	8
2630	61	8
2655	62	8
2680	69	8
2690	63	8
2700	66	8
<b>Avg.</b>	<b>62</b>	<b>8</b>



**PEAK GAIN**

Frequency	Antenna Only	With 35 feet RG58 Cable
698	-0.14	-0.27
704	0.05	-0.28
710	0.43	-0.24
716	0.60	-0.04
734	0.42	-0.03
740	0.43	0.03
746	0.15	-0.17
751	-0.06	-0.52
756	-0.36	-0.51
777	0.76	-0.56
782	0.29	-0.59
787	0.17	-0.23
791	0.23	-0.12
806	1.39	-0.29
821	0.77	-0.80
824	0.43	-1.08
836	1.29	-1.07
849	0.36	-1.38
862	1.07	-1.71
869	0.84	-2.24
880	0.20	-1.94
894	0.36	-2.62
900	0.15	-2.90
915	-0.74	-3.11
925	-0.28	-3.64
940	-1.32	-4.03
960	-1.42	-4.77
<b>Max.</b>	<b>1.39</b>	<b>0.03</b>

Frequency	Antenna Only	With 35 feet RG58 Cable
1448	-0.08	-5.41
1455	-0.13	-5.36
1463	-0.56	-5.05
1476	0.92	-4.41
1486	0.98	-4.37
1496	0.95	-3.38
1503	1.42	-3.17
1511	1.67	-3.28
1560	2.54	-4.16
1565	2.19	-3.83
1575	1.07	-4.48
1585	2.80	-3.80
1592	2.82	-4.05
1595	2.69	-3.99
1597	2.56	-3.86
1602	2.25	-4.12
1607	2.34	-3.88
1610	2.38	-3.88
<b>Max.</b>	<b>2.82</b>	<b>-3.17</b>



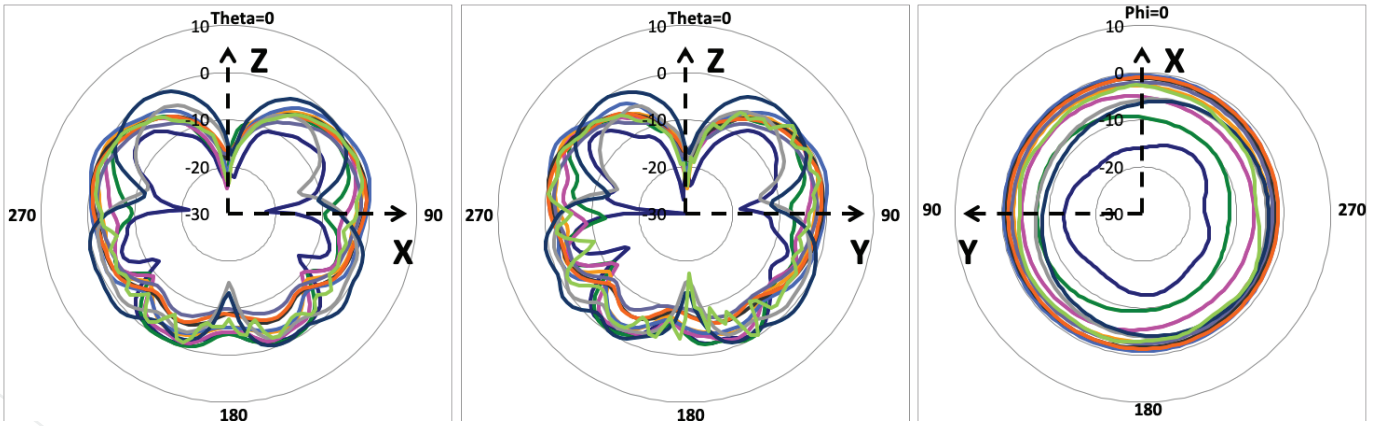
Frequency	Antenna Only	With 35 feet RG58 Cable
1710	1.19	-4.82
1733	1.20	-5.20
1750	1.11	-4.72
1770	0.48	-4.97
1785	0.43	-5.20
1805	0.59	-5.24
1840	1.56	-4.70
1850	1.62	-4.66
1880	1.87	-4.49
1910	1.51	-4.88
1920	1.29	-5.09
1930	1.17	-5.19
1950	1.01	-5.83
1960	1.13	-5.81
1980	1.51	-5.52
1990	1.66	-5.54
2010	2.01	-5.32
2018	2.04	-5.28
2025	1.98	-5.26
2110	2.28	-5.43
2140	1.99	-5.60
2170	2.10	-5.85
<b>Max.</b>	<b>2.28</b>	<b>-4.49</b>

Frequency	Antenna Only	With 35 feet RG58 Cable
2300	2.12	-6.29
2305	2.25	-6.30
2315	1.86	-6.31
2325	1.51	-6.47
2350	1.36	-6.53
2375	1.56	-7.16
2400	1.46	-6.86
2500	1.52	-6.49
2515	1.60	-6.29
2535	2.18	-6.25
2555	2.05	-6.18
2570	2.50	-6.27
2595	2.52	-6.14
2620	2.75	-5.80
2630	2.95	-5.85
2655	3.04	-5.94
2680	3.61	-5.89
2690	3.24	-5.70
2700	3.46	-6.24
<b>Max.</b>	<b>3.61</b>	<b>-5.70</b>

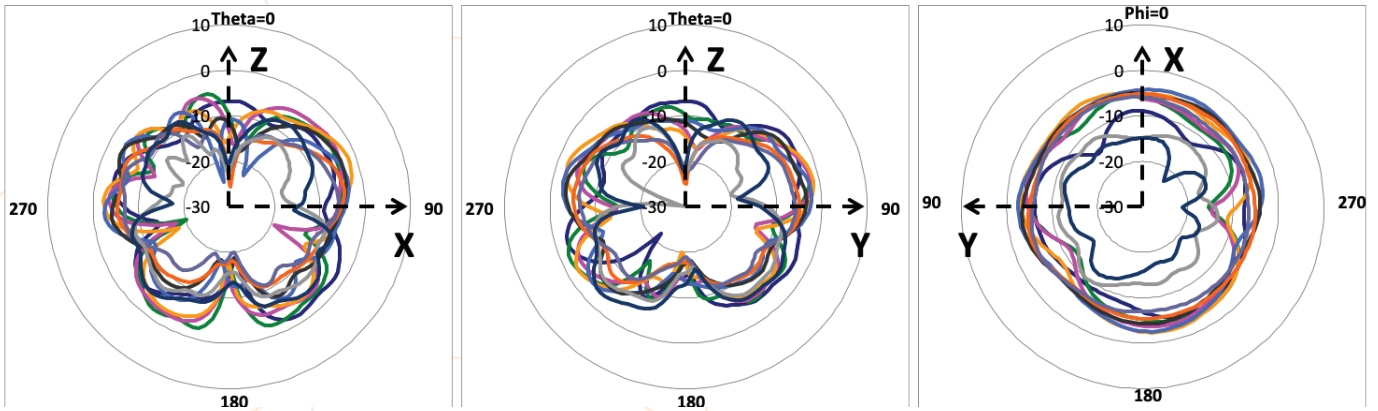


## RADIATION PATTERNS

Antenna only



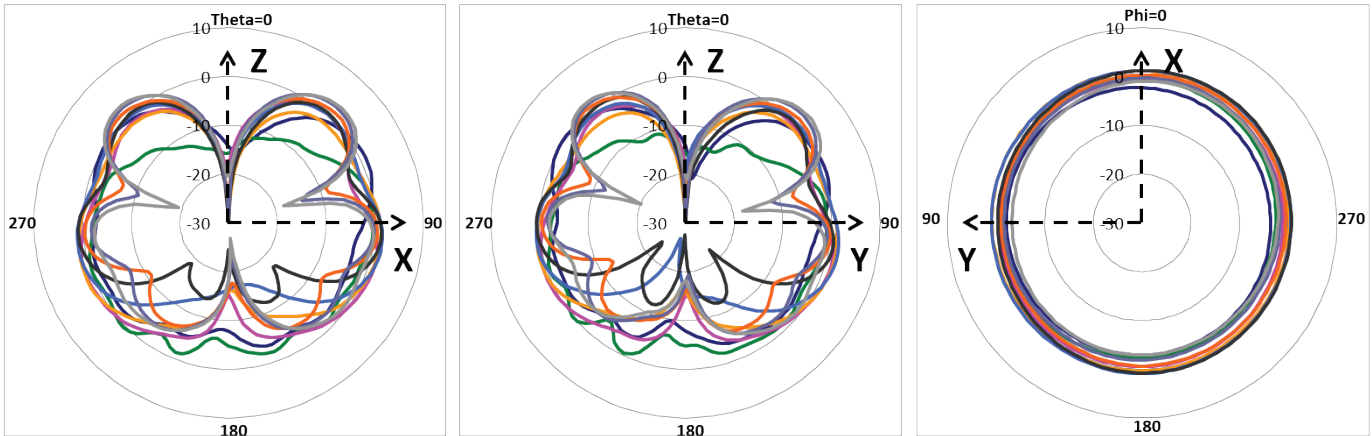
Antenna with 35ft. RG58 Cable







Antenna only



Antenna with 35ft. RG58 Cable

