



WIFI-5G-A

Wi-Fi Antenna Report

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1. Introduction

The present Wi-Fi Antenna Report applies to:

- Product ID: **PC**
FCC ID: ROR2004, IC: 34658-CPC1001

2. Antenna Report – Wi-Fi technology

Antenna Designed by:

COMMUNICATION COMPONENTS ANTENNA RESEARCH
88 HINES ROAD
KANATA, ON K2K 2T8
Canada

Mechanical Design by:

BLiNQ Networks
140 Renfrew Drive
Markham, ON L3R 6B3
Canada

The **WIFI7-5G-A** is using a BLiNQ – CCAI proprietary Wi-Fi Antenna design. It is a stamped metal antenna.

Considering the requirement of Wi-Fi RF needs, output transmitting power, path loss, and mounting/deployment scenarios, 2Patch and 4Patch antennas are selected for 2.4GHz, 5 GHz & 6 GHz respectively.

Below is the performance summary of the antennas.

The return loss of all 3 types of antenna elements is maintained below -10dB throughout the operating band for better impedance matching.

TABLE 1 Wi-Fi TECHNOLOGY – ANTENNA CHARACTERISTICS

WIFI Antennas by CCAI			
Frequency	2.4-2.5Ghz	5.15-5.925Ghz	5.925-7.125Ghz
Gain Peak (dBi)	10.4	13.9	13.6
Gain Average (dBi)	10.3	13.5	13.3
AZ BW(5dB)	101	88	91
EL BW(5dB)	40	21	20
EDT(°)	0	0	0
FBR min @ 180 deg(dB)	20	20	20
FSSL avg (dB)	-15.9	-16.6	-17.4
Isolation min [dB]	25	19	22
VSWR	<1.5:1	<1.7:1	<1.5:1
Input Power(W)	50	50	50
Polarization	Dual Linear 45°	Dual Linear 45°	Dual Linear 45°
Input Impedance	50 Ohms	50 Ohms	50 Ohms
Lightning Protection	Through the overall mechanical product design		

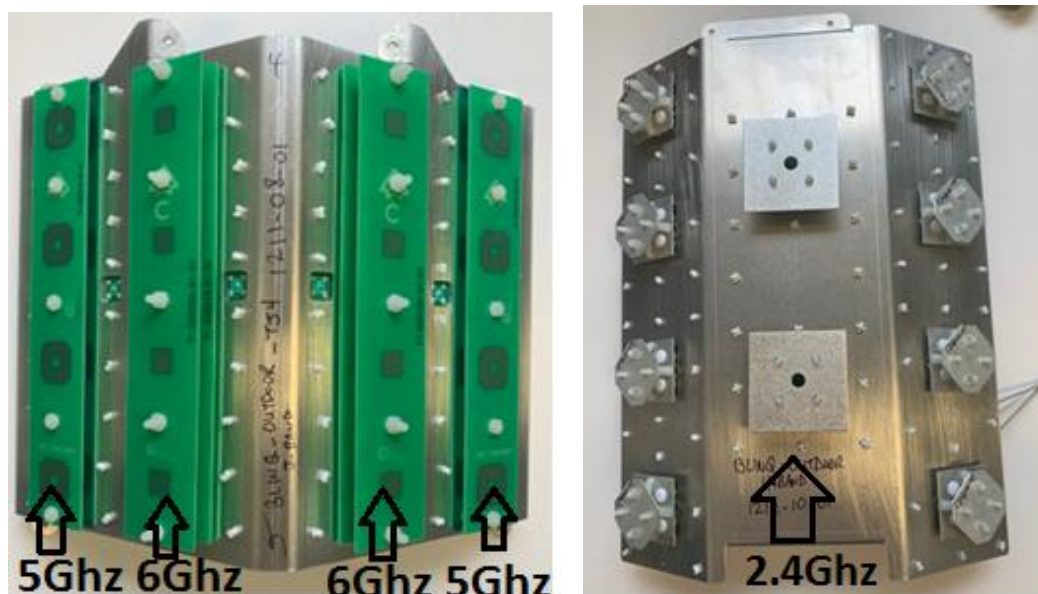


FIGURE 1 WIFI7-5G-A ANTENNA REPORT - WiFi ACCESS TECHNOLOGY

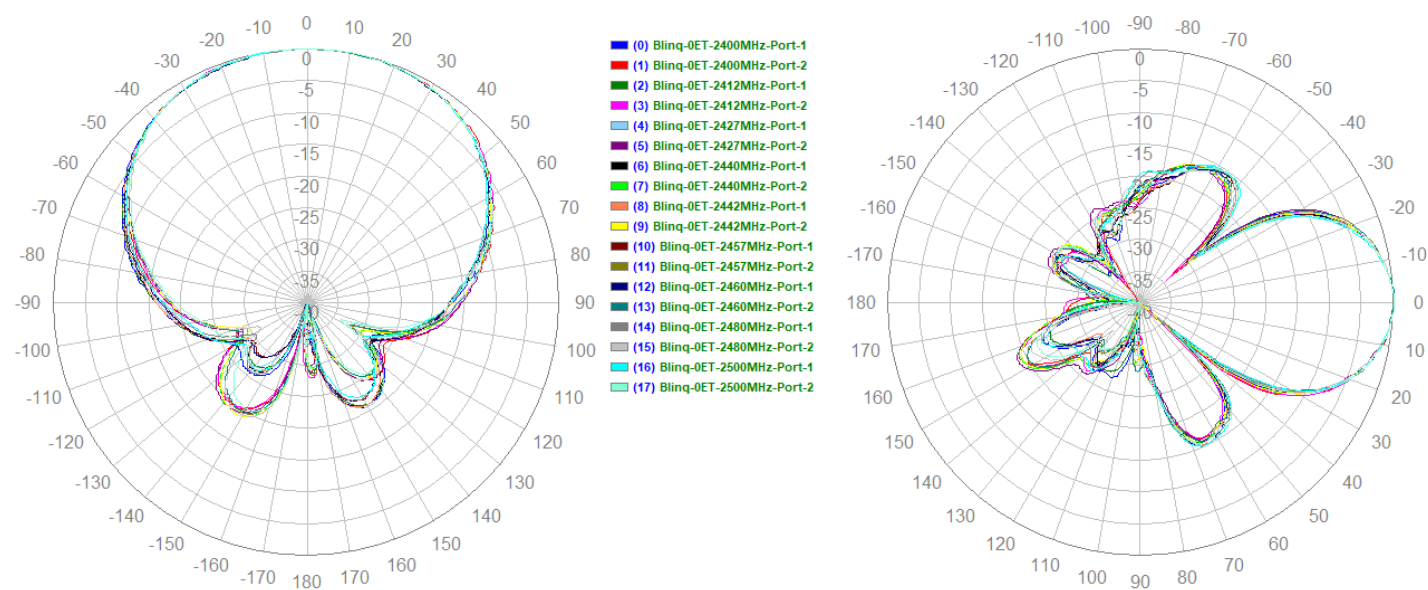


FIGURE 2 Wi-Fi 2.4GHz RADIATION PATTERNS FOR AZIMUTH AND ELEVATION PLANE

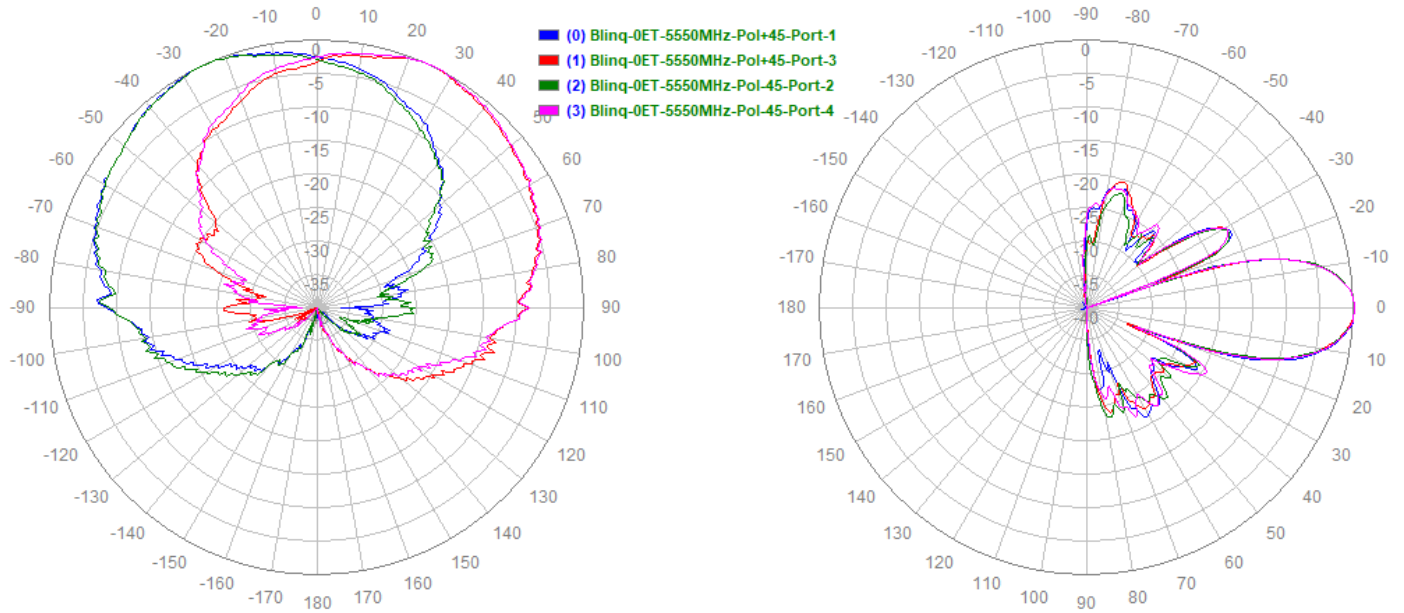


FIGURE 3 Wi-Fi 5GHz RADIATION PATTERNS FOR AZIMUTH AND ELEVATION PLANE

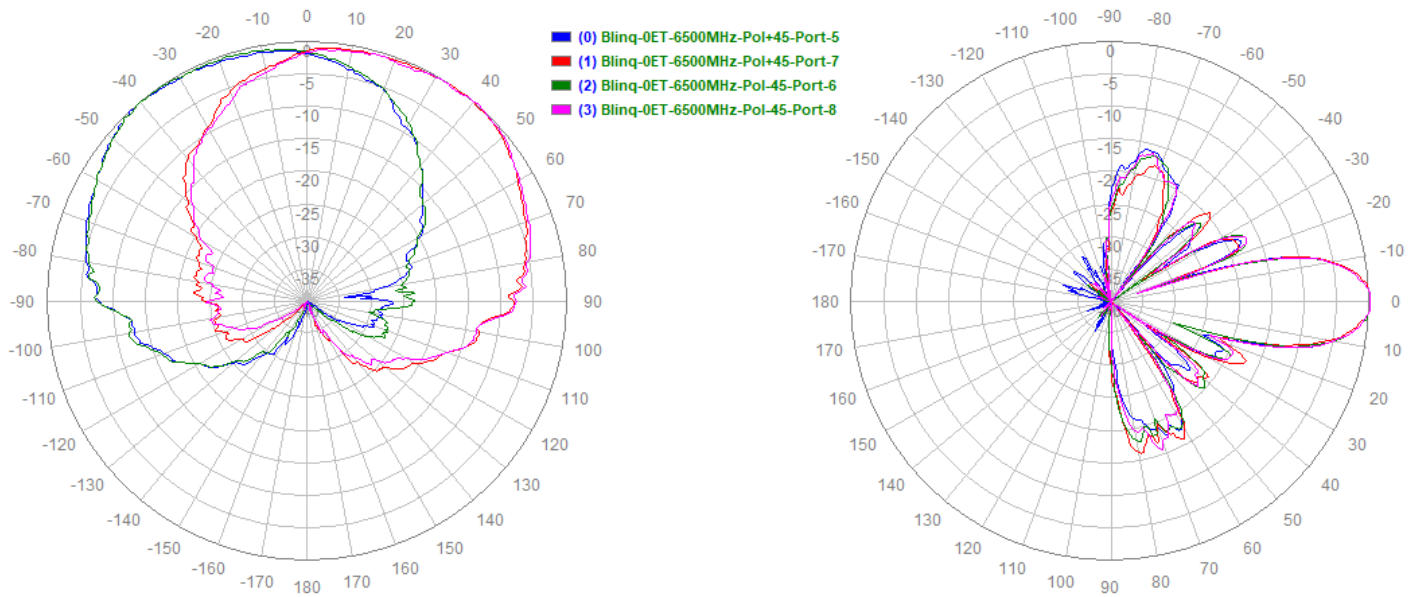


FIGURE 4 Wi-Fi 6GHz RADIATION PATTERNS FOR AZIMUTH AND ELEVATION PLANE