



**Raspberry Pi
Trading**

Raspberry Pi Trading
Maurice Wilkes Building
Cowley Road
Cambridge
CB4 0DS

Web
<http://raspberrypi.com>

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Antenna Use in Raspberry Pi Products Antenna Emission Response

This document provides details of the antenna used in Raspberry Pi products that have radio communication capabilities. The use of an antenna is necessary for the propagation of radio signal from the onboard chip. It pertains to the following products:

Product Name	Antenna Type	Manufacture Part Number	Reference in this Document
Raspberry Pi Model 3A+ Raspberry Pi Model 3B+ Raspberry Pi Model 4B Raspberry Pi Compute Module 4 Raspberry Pi400 Raspberry RM0	ProAnt 2.4G + 5G Niche antenna	PRO-LIC-1020	Appendix A

2.4G

Frequency(Mhz)	H Plane	V0 Plane	V90 Plane
VP(dBi)	-5.3201	-10.023	2.3320
HP(dBi)	2.3012	3.5001	-11.232

5G

Frequency(Mhz)	H Plane	V0 Plane	V90 Plane
VP(dBi)	-13.025	-12.995	-0.5651
HP(dBi)	0.2000	-2.636	-1.5640

Appendix A ProAnt Niche Antenna PRO-LIC-1020 at 2.4GHz and 5GHz

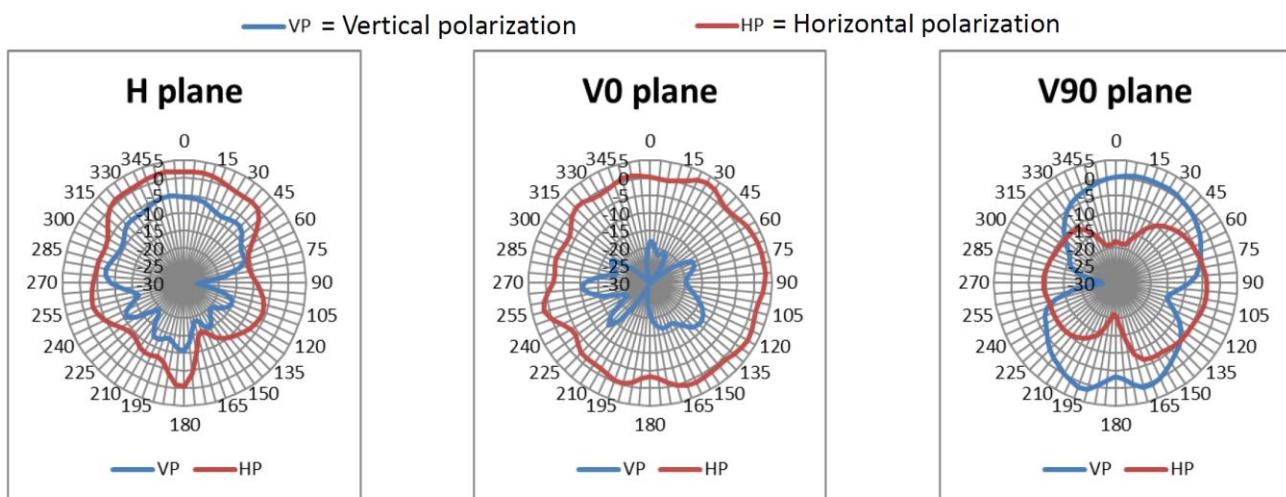


Figure 7 Niche Antenna 2.4 GHz Operation

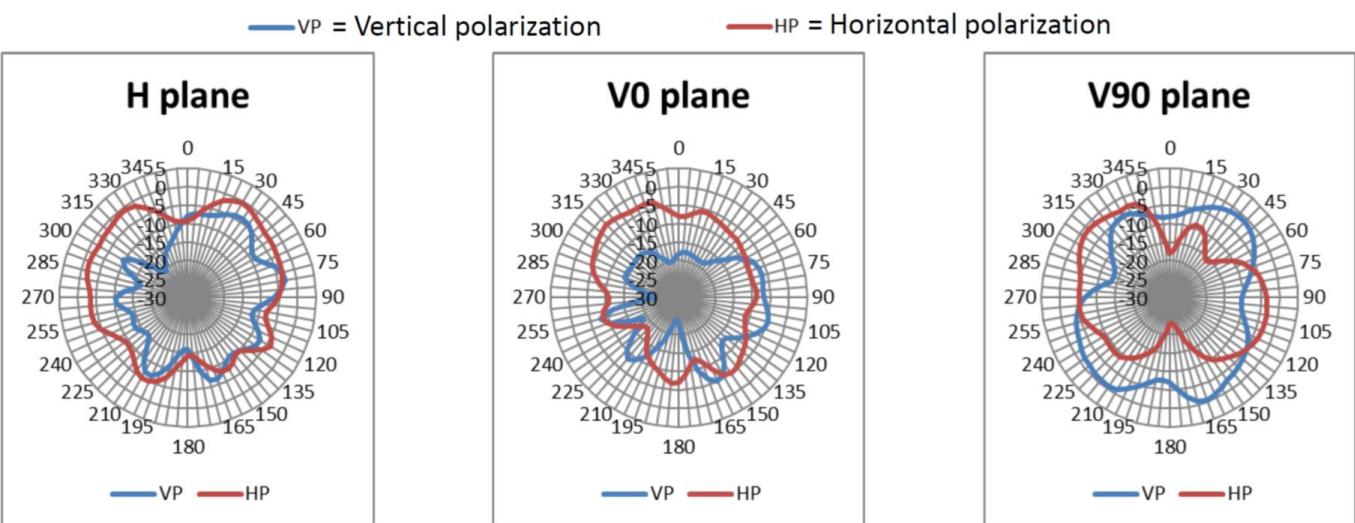


Figure 8 Niche Antenna 5GHz Operation

The Antenna can be identified on the board as follows:

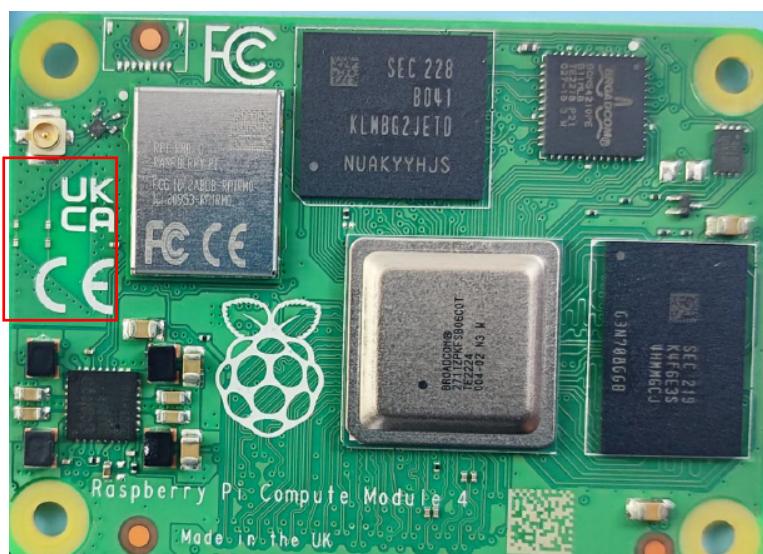


Figure 9 Niche Antenna PCB Example 2.4GHz and 5GHz Page 3 of 3