

1 u-blox PCB trace antenna radiation patterns

The "u-blox PCB trace antenna" is created with antenna technology licensed by ProAnt AB. It is integrated into the module PCB.

The below radiation patterns show the relative output power of a MAYA module equipped with the ublox PCB trace antenna transmitting at 0 dBm output power. Both horizontal and vertical antenna polarizations are shown, as well as the total of both.

The gain of the antenna is summarized for the top, middle, and bottom of each frequency band (2G and 5G) in Table 1. Table 2 and Table 3 show the radiation diagrams of the antenna in the middle of each frequency band, 2G and 5G respectively.



Figure 1: MAYA-476 module with the u-blox PCB trace antenna

Transmission	Measured TRP	Measured peak gain
Channel 1, 2.412 GHz	-4.31 dBm	-0.52 dBi
Channel 6, 2.437 GHz	-4.03 dBm	+0.40 dBi
Channel 13, 2.472 GHz	-3.0 dBm	+1.56 dBi
Channel 36, 5.180 GHz	-4.83 dBm	-1.74 dBi
Channel 100, 5.500 GHz	-1.32 dBm	+1.56 dBi
Channel 159, 5.795 GHz	+1.38 dBm	-2.23 dBi
Channel 177, 5.885 GHz	-4.46 dBm	-0.95 dBi

Table 1: MAYA-W4 PCB trace antenna radiation parameters





Table 2 Wi-Fi, Bluetooth and 15.4 antenna characteristics at 2.437 GHz





Table 3 Wi-Fi, Bluetooth and 15.4 antenna characteristics at 5.500 GHz