

## 1 u-blox PCB trace antenna radiation patterns

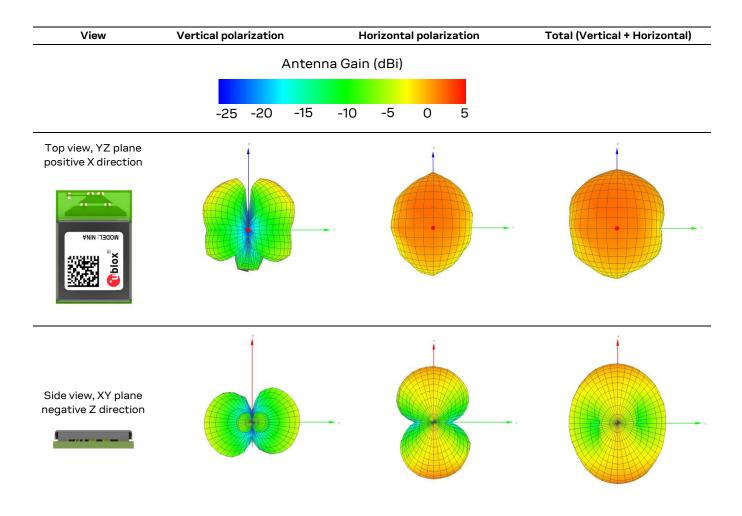
The "u-blox PCB trace antenna" is created with antenna technology licensed by Abracon. It is integrated into the module PCB. The operating frequency of this antenna is 2400 MHz to 2485 MHz

The below radiation patterns show the relative output power of a NINA module equipped with the u- blox 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 in its optimal direction, as shown in Table 1, is just above +2 dBi. Adjusted for variations in production and measurement uncertainty, rounded up the maximum gain will be +3 dBi.



Figure 1: A NINA module with the u-blox PCB trace antenna





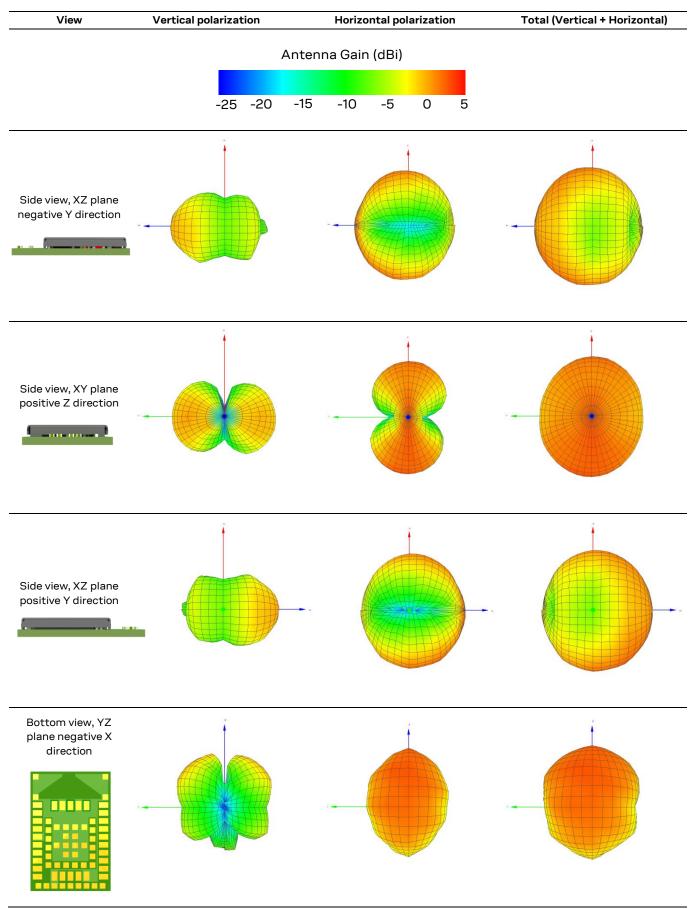


Table 1: NINA PCB trace antenna radiation patterns