



The ZIM-B module includes an integrated Printed Circuit Board (PCB) trace antenna with a nominal gain of -1.0 dBi.

The PCB antenna employs an inverted F-Antenna topology that is compact and supports an omni-directional radiation pattern. To maximize antenna efficiency, an adequate ground plane must be provided on the host PCB. Correctly positioned, the ground plane on the host PCB board under the module (but not directly under the inverted F-Antenna) will contribute significantly to the antenna performance. The position of the module on the host board and overall design of the product enclosure contributes to the antenna performance.

Guidelines to help ensure antenna performance:

- Never place the ground plane or route copper traces directly underneath the antenna portion of the module.
- Never place the antenna close to metallic objects.
- In the end application, ensure that wiring and other objects are not placed near the antenna.
- Do not place the antenna in a metallic or metalized plastic enclosure.
- Keep plastic enclosures 1cm or more from the antenna in any direction. For optimum performance, the module should be mounted with the PCB trace antenna overhanging the edge of the host board. To further improve performance, a ground plane may be placed on the host board under the module, up to the antenna ground plane. The installation of an uninterrupted ground plane on the layer directly beneath the module will also allow you to run traces on the host board's internal layers.