

2JW1115-C943B Antenna Use Scenarios for WillowBee

FCC §15.203 Compliance Statement

WillowBee is a modular certified device and will be marketed under two controlled use cases:

◆ Case 1: Evaluation and Prototyping Units (End Users)

Evaluation kits and development modules sold directly to end users include the [2JF0415P-010MC137](#) flex antenna with built-in u.FL connector.



u.FL connectors are allowed by FCC, so this case does not present an issue.

For customers who want to perform their evaluation and testing with a stub antenna, BiPOM will offer an antenna system option comprising:

- A u.FL to RP-SMA coaxial pigtail part number
- A certified RP-SMA antenna ([2JW1115-C943B](#))
- The antenna and cable permanently affixed using epoxy

This assembly will be delivered as a non-serviceable transmission system, compliant with FCC §15.203. The user will not be able to disconnect or replace the antenna with the RP-SMA connector.

◆ Case 2: OEM Production Use

WillowBee modules sold to OEMs in production quantities will include:

- A u.FL to RP-SMA pigtail
- One of the certified coil, flex or RP-SMA antennas

In this use case, the antenna is not permanently affixed to the cable, but we will require that the entire antenna + cable + module be installed inside a host enclosure, typically sealed and rated IP65/IP67, such that:

- The antenna is not accessible to end users
- The end user cannot substitute or replace the antenna without disassembling the enclosure
- Installation instructions and integration guide will explicitly state this requirement

As a result, antenna substitution is restricted, satisfying §15.203 by design. OEM customers are required to follow these integration guidelines, and a compliance checklist will be included in the documentation.

The drawing below illustrates a typical OEM product that houses WillowBee, 2JW1115-C943B antenna, battery, printed circuit board and other circuitry inside a weatherproof sealed IP67 enclosure. This type of packaging prevents end users from being able to access the antenna.



In the **WillowBee User Manual**, which has a **Host Device Integration** section, we will include both cases and state:

- “Only antennas listed in this document may be used.”
- “For evaluation kits, antenna assemblies are fixed and not user replaceable.”
- “For production use, the antenna must be installed inside a non-accessible enclosure.”

Summary

To ensure compliance with §15.203, we propose two well-controlled use cases for WillowBee. Evaluation units will include fixed antenna assemblies (e.g., epoxy-sealed), while OEM production units will rely on physical inaccessibility via sealed enclosures. In both cases, the substitution of antennas by end users is prevented, and only antennas listed in the certification are permitted. We will document this in the user manual and integration guide.