

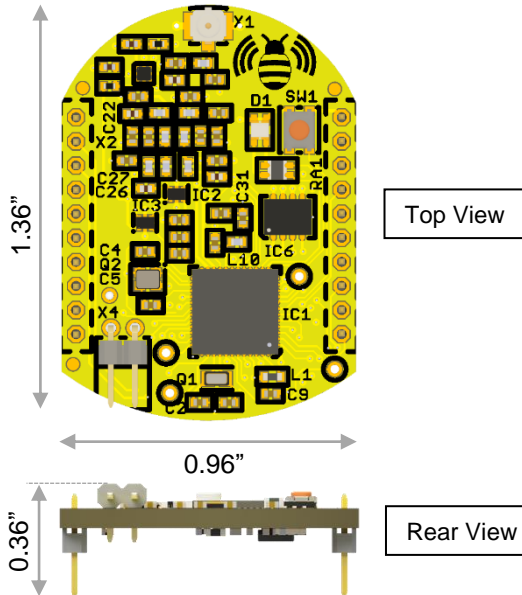
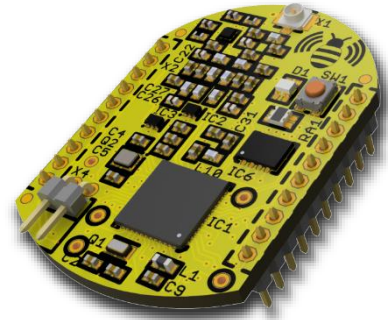


# WillowBee

## Industrial LoRaWAN Wireless Module

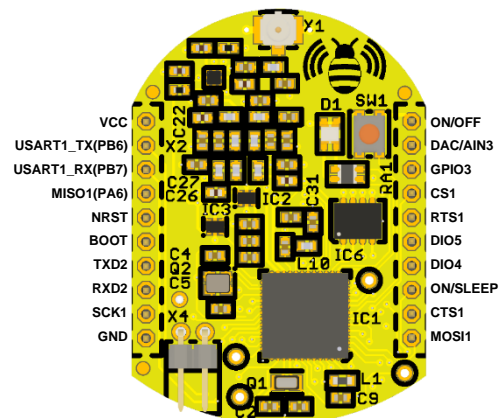
WillowBee is an industrial wireless microcontroller module that is designed for LoRaWAN sensor end-node designs and embedded applications that need LoRaWAN communications. WillowBee uses the popular STM32WL Cortex-M4 microcontroller from ST Micro. This microcontroller combines a computer unit and a LoRaWAN radio on a single chip.

WillowBee is pin compatible with other popular wireless devices. WillowBee is fully backed by a 3-year warranty, technical support and application assistance from BiPOM Electronics, Inc.



- Microcontroller Features:**
- Built-in LoRaWAN 1.1.0 Stack
  - Ultra Low Power
  - Suitable for battery operation
  - User programmable
  - Configurable power output
  - Maximum output power: 22 dBm
  - Frequency Bands: US915 /AS915/ AU915/ EU868/CN779/EU433/KR920/IN865/RU86 (Supported but not officially certified in all region)
  - 64 KB of RAM and 256 KB of Flash available to user applications

- WillowBee Specifications:**
- Pin compatible with popular modules
  - U.FL Connector
  - Dual Power option: Battery or DC Power
  - Temperature Range: -40°C to +85°C
  - Dimensions 1.36" x 0.96" x 0.36" (34.54 mm x 24.38 mm x 9.14 mm)
  - 2 LEDs and 1 Button
  - 32-Mbit Serial Flash
  - Configurable 15 Pins
  - Drivers for ADC/IO/DAC/SPI/UART/I2C Protocols





# WiPOM

## Wireless Point of Monitoring

WiPOM is a software application package that adds sophisticated data logging, remote terminal, and PLC-like capabilities to the WillowBee sensor board. WiPOM can run on STM32WL family of processors, WiPOM handles all aspects of Industrial IoT applications development, including I/O management, tags, alarms, events, SMS/email handling, MODBUS master and slave capability, modem detection, and management and Cloud portal support. WiPOM runs directly on WillowBee sensor board. Coupled with the WiPOM Client running on a Windows PC or on a web server, programming the WillowBee sensor board is reduced to a series of configuration selections to build a complete IoT system. WiPOM takes software out of the equation for faster time to market. Creating remote monitoring and control systems has not

