



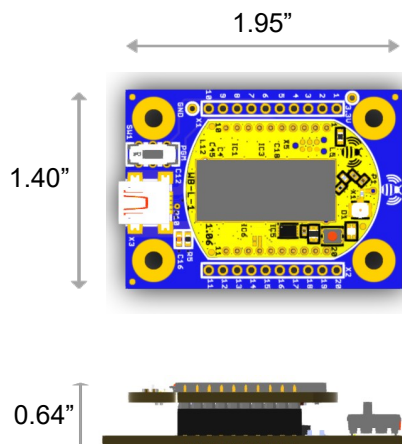
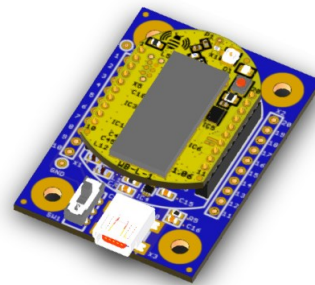
BRD-WB-L-USB

WillowBee Carrier Board with USB

BRD-WB-L-USB is a versatile carrier board that can be used for evaluation, demonstration and deployment of WillowBee LoRaWAN WB-L-1 product. 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.

An engineering kit based on BRD-WB-L-USB and WillowBee is available.

BRD-WB-L-USB is fully backed by a 3-year warranty, technical support and application assistance from BiPOM Electronics, Inc.



Engineering Kit (WB-L-EKIT) contents:

- BRD-WB-L-USB board
- WillowBee LoRaWAN WB-L-1
- Mini USB cable
- Flex Antenna for LoRa Bands (dual band 868/915 MHz)
- STM32 Development System (Free download from BiPOM website)
- (Optional) Tag Connect Debug Cable for STLINK-V3SET

BRD-WB-L-USB Specifications:

- Pin headers for easy access to WillowBee pins
- Communication Method: USB
- Type B Mini high-retention USB connector
- USB connector approved for industrial environments
- FTDI chip to convert USB to serial port
- Powers WillowBee from 5 Volts on USB
- 3.3V Regulator for WillowBee
- 4 mounting holes
- Switch to select program mode
- Temperature range: -40°C to +85°C
- Dimensions (inches): 1.95" x 1.40" x 0.64"
- Dimensions (metric): 49.5mm X 35.6mm X 16.2mm



Easy to Get Started!

1

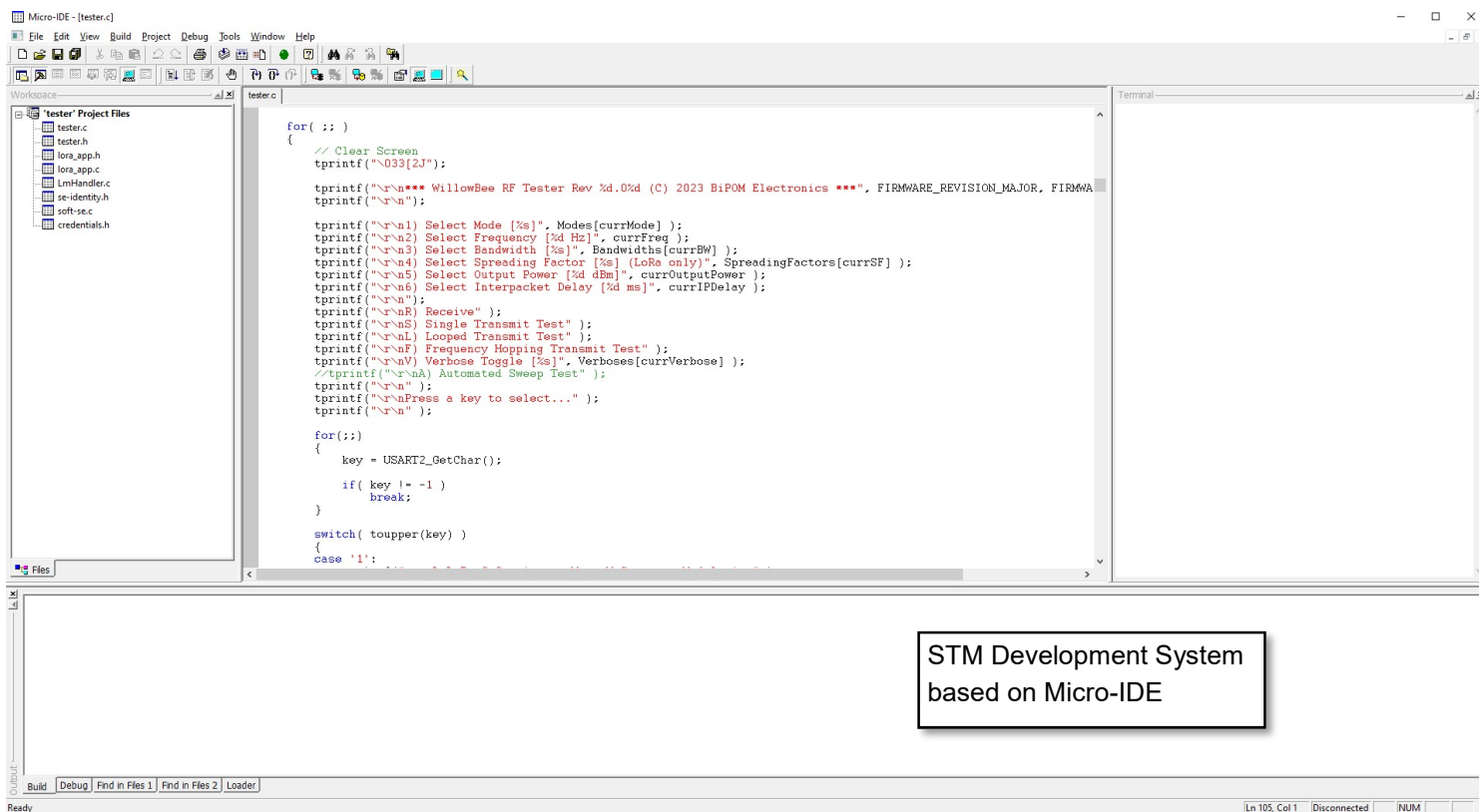
Connect BRD-WB-L-USB to a Windows PC using the USB cable

2

Connect sensors and other external devices to WillowBee using the pin headers

3

Download one of the supplied examples to join a LoRaWAN network



STM Development System
based on Micro-IDE

Software Features:

- Supported by popular development packages
- Micro-IDE integrates GCC Compiler and Downloader for WillowBee
- Keil μ Vision and ST Micro Cube support
- Command line downloader for any 3rd party development tool
- Examples for all major build environments
- Various LoRa sensor projects
- Libraries and drivers for a variety of sensor components and IC's.
- Generic UART, I2C, SPI, 1-wire, analog and digital I/O drivers
- Open source examples for:
 - LED Control
 - FreeRTOS
 - UART
 - Watchdog Timer
 - Engineering Console
 - LoRa End Node
 - Wireless Tester (Transmit and Receive)
 - Actual Sensor Examples

