



# **VCB-5001LN-W User Manual**

**RTL8195AM 802.11b/g/n 1Tx1R WIFI Module**

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# 1. Product Overview

## 1.1. General Description

The VCB-5001LN-W is a WIFI data collector module which can collect data from other devices via RS485 serial port and then send out data via WIFI or Ethernet. This device is built in Realtek RT8195AM which is a highly integrated single-chip low power 802.11n Wireless LAN network controller. The RTL8195AM combines an ARM-Cortex M3 MCU, WLAN MAC, a 1T1R capable WLAN baseband, and RF in a single chip. It provides useful high speed connectivity interfaces, such as USB2.0 host, USB2.0 device, SDIO device, and MII/RMII interfaces. It also provides a bunch of configurable GPIOs which are configured as digital peripherals for different applications and control usage.

## 1.2. Features

- ☐ 802.11b/g/n compatible WLAN
- ☐ Up to 150 Mbps data rate
- ☐ RS485 interface
- ☐ 10/100Mb Ethernet interface
- ☐ Dual 8-pin header connector

Standard	IEEE 802.11b/g/n
Data Rate	54, 48, 36, 24, 18, 12, 9, 6 20 MHz BW: ~72.2M 40 MHz BW: ~150M
Modulation	DSSS with DBPSK and DQPSK, CCK modulations with long and short preamble. OFDM with BPSK, QPSK, 16QAM, and 64QAM modulations, QPSK, 16QAM, 64QAM and 256QAM modulations.
Operating Frequencies	2.412~2.462GHz
Antenna Connector	R-SMA connector

## 2. Revision History

Revision	Date	By Whom	Remark
1.0	03/30-2017	Wronski.Su	▪ Initialize
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			▪

### 3. Statement

#### Federal Communication Commission Interference Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

#### Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

#### **This device is intended only for OEM integrators under the following conditions:**

- 1) The antenna must be installed such that 20 cm is maintained between the antenna and users, and
- 2) The transmitter module may not be co-located with any other transmitter or antenna.

As long as **2** conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed

**IMPORTANT NOTE:** In the event that these conditions can not be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID can not be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

**End Product Labeling**

This transmitter module is authorized only for use in device where the antenna may be installed such that 20 cm may be maintained between the antenna and users. The final end product must be labeled in a visible area with the following: "Contains FCC ID: **PD5-VCB5001LNW**". The grantee's FCC ID can be used only when all FCC compliance requirements are met.

**Manual Information To the End User**

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module. The end user manual shall include all required regulatory information/warning as show in this manual

Only approved Dipole antenna may be used with this module