

Quick User Manual

AL-510 RFID READER 【Equipment/Software Control】



Ver:1.0.1

Federal Communication Commission Interference Statement

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 or more 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 (15.19 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.

Non-modification Statement:

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC 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.

Welcome! This User Manual is to guide you through the steps of setting up your AL-510 RFID reader. You will find in below sections of how to connect your AL-510 to your devices, and how to use it to get the results you want in reading RFID tags.

RFID Solutions

Software	<p>AL-510 has two methods available to develop your own application/software:</p> <ul style="list-style-type: none"> • AL-510 Software Development Kit (C#) • AL-510 Utility Read Tool Keyboard Read Mode
Antenna	<p>We provide various antenna patterns, such as near field, far field, and induction field, so as to meet the changeable field environment.</p>
RFID inlay	<ul style="list-style-type: none"> • General Inlay • Metal Inlay • Customized Inlay <p>This RFID inlay has a wide frequency range from 860 to 960 MHz; which means you can make your own choices to use NXP, Impinj, or Alien RFID chip, as all of them are compatible with this RFID inlay.</p>

The product package should contain the following items:

- 1*AL-510 RFID UHF Reader
- 1* User Manual
- 1*Power Supply
- 1*Wi-Fi Antenna



AL-510 RFID UHF INTERFACE

1. +12VDC Power supply
2. Ethernet
3. RS232 Serial port (DB15 to DB9)
4. USB type-B HID port
5. Wi-Fi 802.11 b/g/n, 2.4GHz
6. GPIO & RS485 Industrial Contact
7. Support 4 antennas

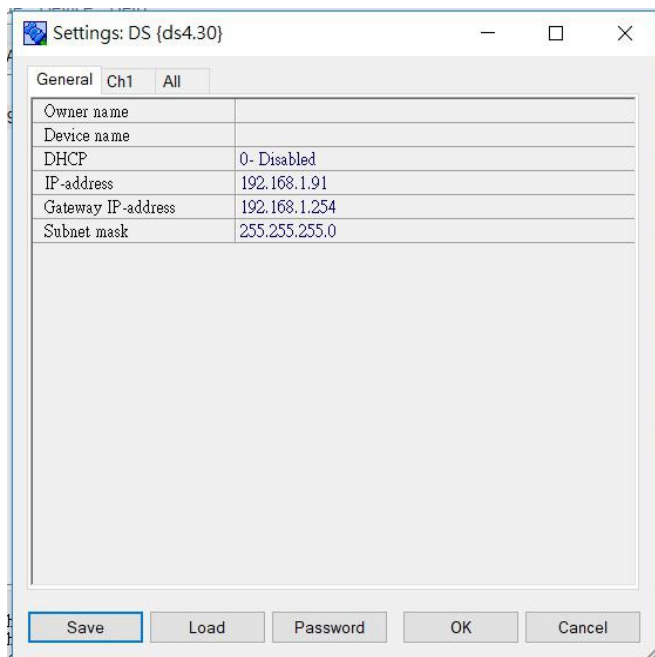
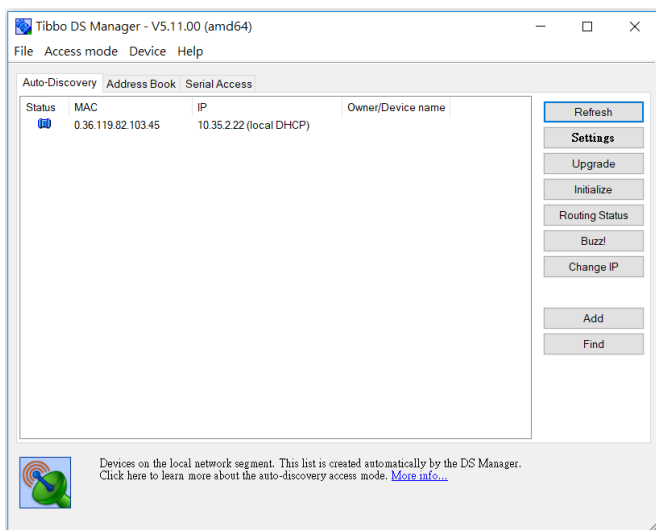
INDICATOR LIGHTS

Status	Blink	When reading tags
Signal	Blink	Reader is enabled / signal processing
	On	Reader is disabled, please restart
Power	On	Reader is ready
Wi-Fi	Off	Reader Wi-Fi is not connected to Wi-Fi AP
	Blink	Reader Wi-Fi is connected to AP
	On	Reader Wi-Fi is connected to the program

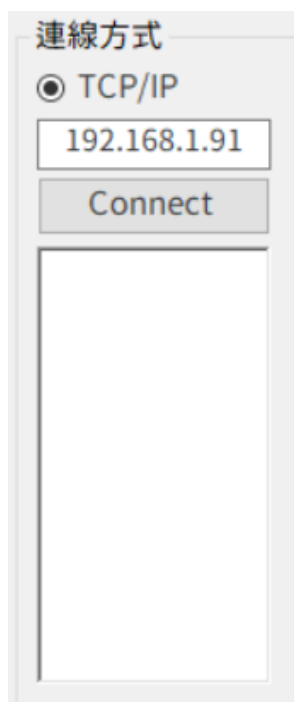
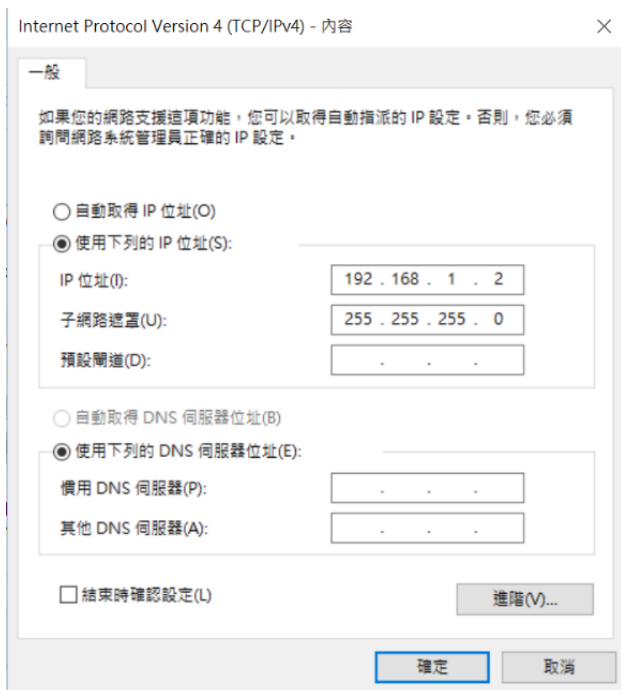
Use AL-510 to Read Tags

1. To Connect Your AL-510 via Wired Network, with Default IP: 192.168.1.91

- A. Securely insert the Ethernet cable into both the ports of AL-510 and your computer, and download DS Manager (<http://tibbo.com/support/downloads/tdst.html>). On DS Manager, search AL-510, and click on “Settings” to revise IP-address to 192.168.1.91.

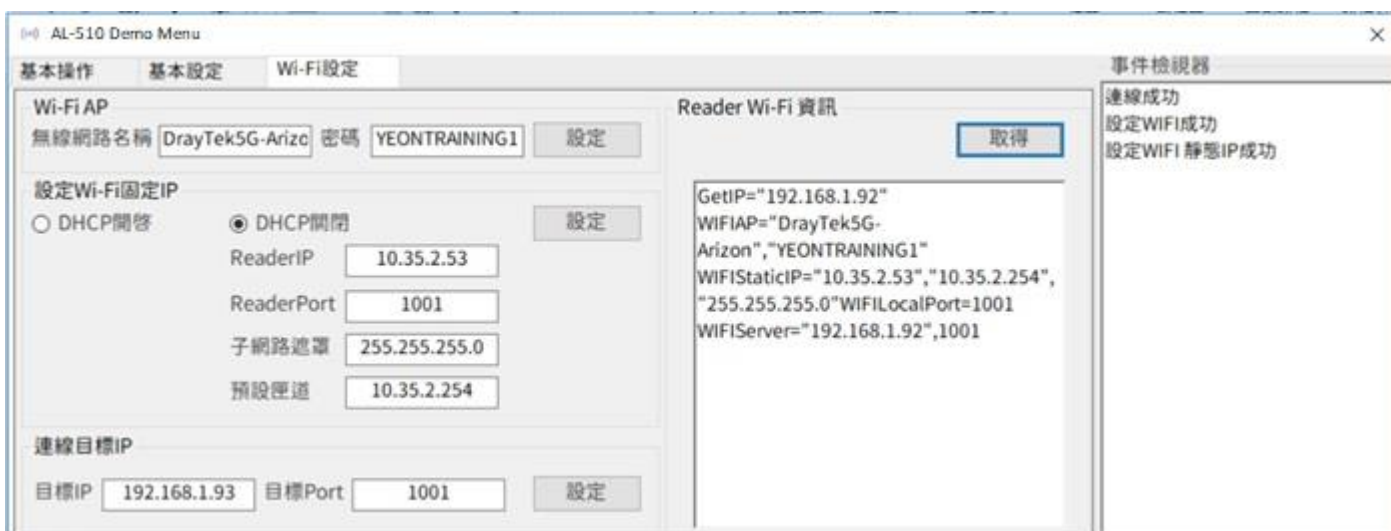


- B. Securely insert the Ethernet cable into both the ports of AL-510 and your computer, and revise IP-address to 192.168.1.X. Your AL-510 should be ready by now.



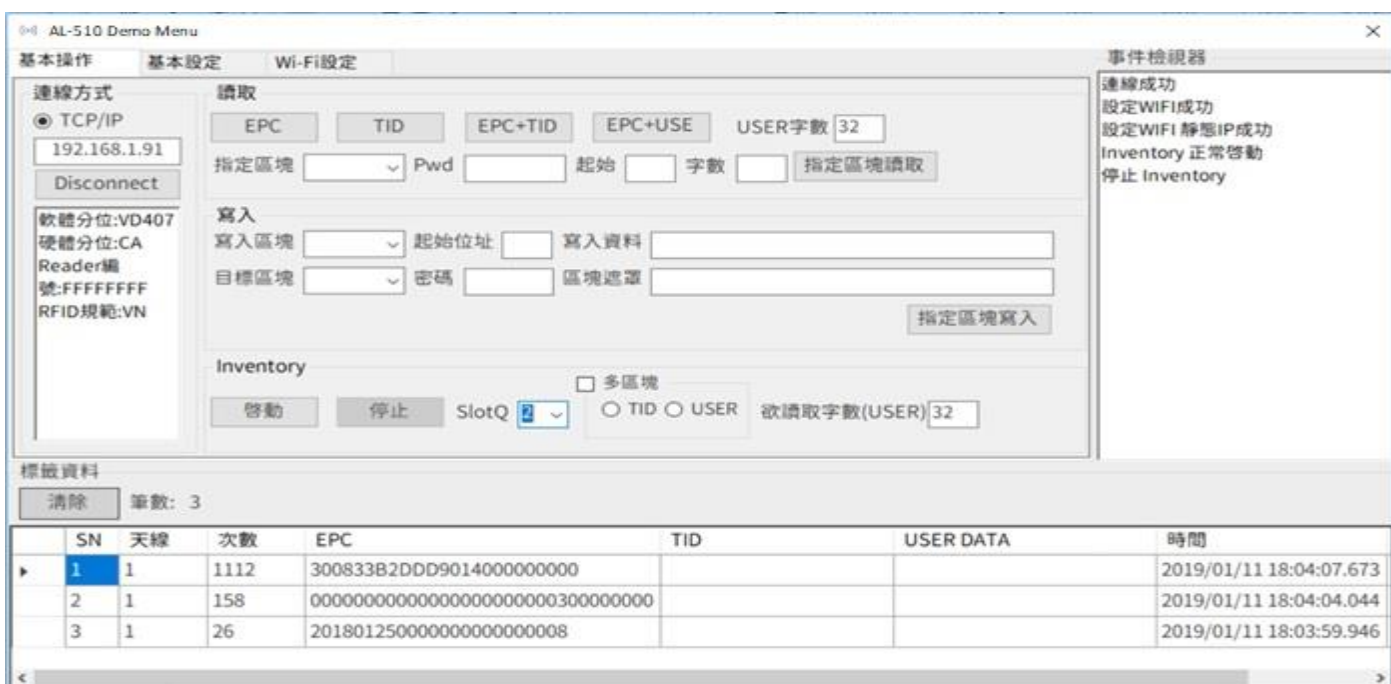
2. To Connect Your AL-510 via Wireless Network

- Step 1: Use the Ethernet cable (Wired Network) to connect AL-510 to your computer.
- Step 2: Set up a wireless network for AL-510 on Utility Demo Menu (as shown below).
- In the section of “Wi-Fi AP”, type in a name and a password for this wireless network.
 - In the section of “Settings for Wi-Fi Fixed IP” – Click on “DHCP Turnoff”, and type in accordingly, ReaderIP (10.35.2.53), ReaderPort (1001), Mask (255.255.255.0), and Gateway (10.35.2.254).
 - After completing these steps, click “Setting”.



3. Use AL-510 Utility Demo Menu to Read Tags

- Step 1: Connect an antenna to the first port on AL-510 Reader.
- Step 2: Open up AL-510 Utility Demo Menu.
- Type in IP (192.168.1.91 as default) and click “Connect” to connect to AL-510 Reader.
 - Place the RFID tags within the reading range of the antenna, then click “Start” in the section of Inventory, you will see the read tags shown on the list below.



4. Use USB Keyboard Mode to Read Tags

- Step 1: Use the Ethernet cable (Wired Network) to connect AL-510 to your computer.
- Step 2: Click “Keyboard” on AL-510 Utility Demo Menu, and you can configure the reading method in Keyboard Mode.
- Step 3: Connect an antenna to the first port on AL-510 Reader.
- Step 4: Place the RFID tags on the antenna, then the list of read tags will appear wherever you have your cursor at. Below uses Notebook to demo the testing results. If you would like to stop using Keyboard Mode, please click “HID” in the section of USD Output Format.

Note: When you use Keyboard Mode to read tags, the antenna will automatically change to PORT 1.

