MANUAL

DESKTOP READER

Description

The AIR-D desktop RFID personalizer is an essential element for an access control system with a large number of users. It provides a convenient way to add identifiers to the system. A special feature of the device is the functionality that allows you to protect identifiers from copying by encrypting the available memory areas. The device is also capable of restoring previously protected identifiers to the factory state.

The advantages of AIR-D are ease of use, simple connection, and no need for additional software. You can start using the device right out of the package. In addition, we have a user-friendly, built-in web interface that allows you to quickly and responsively change the configuration to meet your system requirements.

The AIR-D desktop RFID personalizer finds its application in companies, residential complexes, hotels, and many other institutions with a constantly changing number of users in the system.

AIR-D

CONTENTS

Introduction

This document provides detailed information on the structure of the AIR-D desktop RFID personalizer and the steps to connect and configure it.

It also includes instructions for preventing or troubleshooting many common problems.

This guide is for informational purposes only, and in the event of any discrepancies, the actual product takes precedence.

All instructions, software, and functionality are subject to change without prior notice.

The latest version of the manual and additional documentation canbe found on our website or by contacting customer support.

The user or installer is responsible for complying with local laws and privacy regulations when collecting personal data during the use of the product.

Default Device Settings

- Access point (AP) Wi-Fi name   AIR-D_(serial number)
- AP Wi-Fi IP address of the device   192.168.4.1
- AP Wi-Fi password (default)   none
- Login   admin
- Password   admin
- RFID 125 kHz   Enabled
- RFID 13.56 MHZ   Enabled
- Work mode   Reads
- AP Wi-Fi timer   30 minutes

Device Specifications

Device info

• Model	AIR-D
• Processor	ESP32-S3
• Over-the-air (OTA) update	Yes
• Built-in web server	Yes
• Support for 125 kHz identifiers	EM Marine
• Support for 13.56 MHz identifiers	MIFARE DESFire; MIFARE Plus; MIFARE Ultra Light; MIFARE Classic mini/1K/4K; MIFARE Classic EV1 1K/4K; NFC Tag
• Support for copy protection for MIFARE Classic mini/1K/4K identifiers	Yes

Communications

• Wi-Fi	802.11 b/g/n 2.4 GHz
• Bluetooth	Bluetooth® 5 (LE)
• USB 2.0	Yes

Electrical characteristics

• Input voltage	5 VDC +/- 10%
• Operation current (AVG) 12 VDC	0.13 A (1.56 W)

Environmental requirements

• Operating temperature	-22°F ~ 158°F (-30°C ~ 70°C)
• Ingress Protection rating	IP54

Physical characteristics

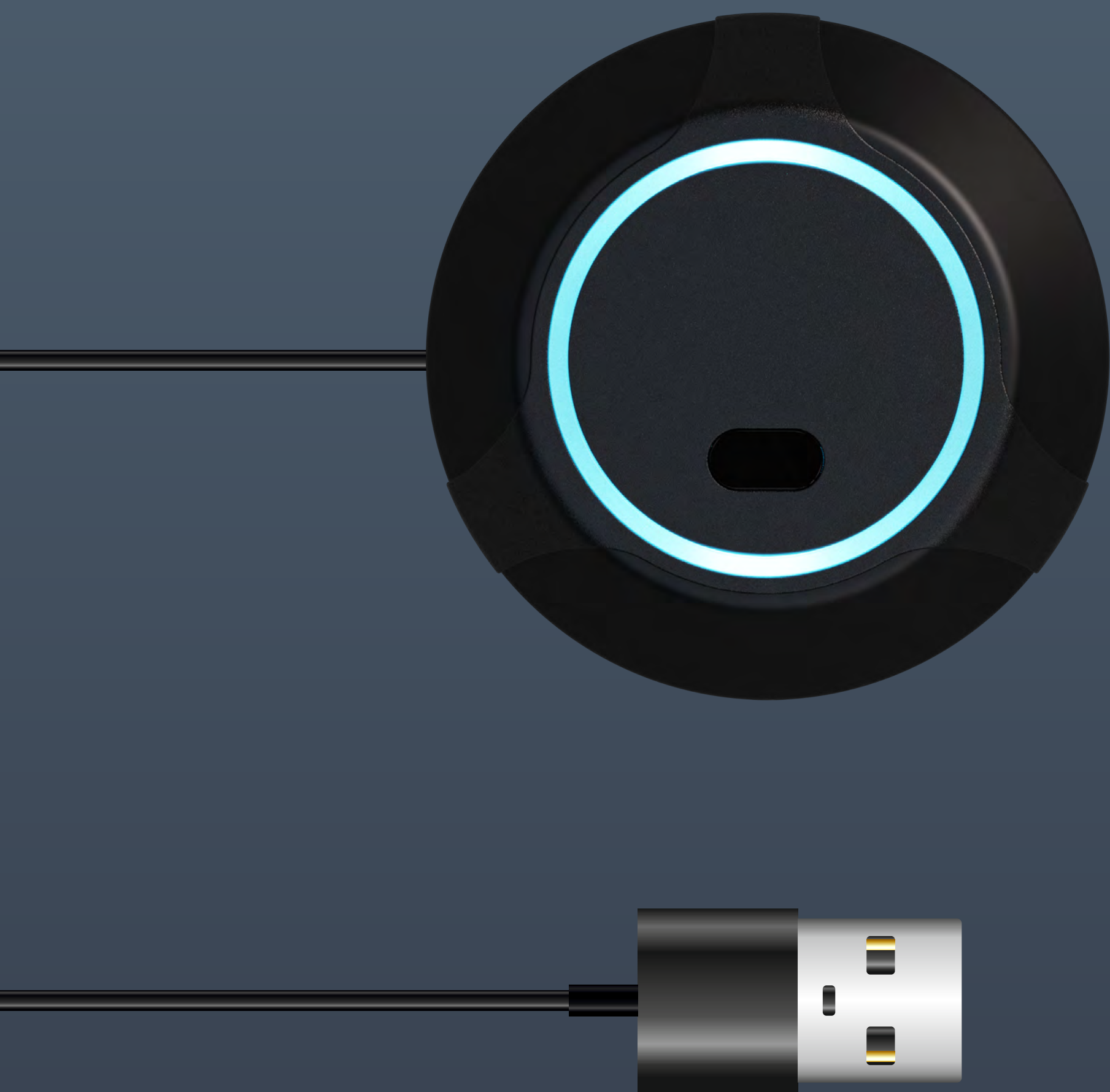|	
• Housing material	ABS plastic UL94 V-0
• Dimensions (diameter, height)	2.36" x 0.86" (60 x 22 mm)
• USB cable length	40" (100 cm)
• Weight	1.59 oz (45 g)

Device Dimensions

2.36"

0.67"

2.125"

RFID CARD

125, 65535

3.375"

Device Appearance

Connecting to Device

Connecting to the built-in Wi-Fi AP

Step 1. Connect the device to a USB port.

Step 2. Search for Wi-Fi and connect to the AIR-R-USB_(serial number) network.

Step 3. Enter the AP Wi-Fi IP address of the device (192.168.4.1) in the address bar of your browser and press Enter.

Step 4. After the page loads, enter your login and password.
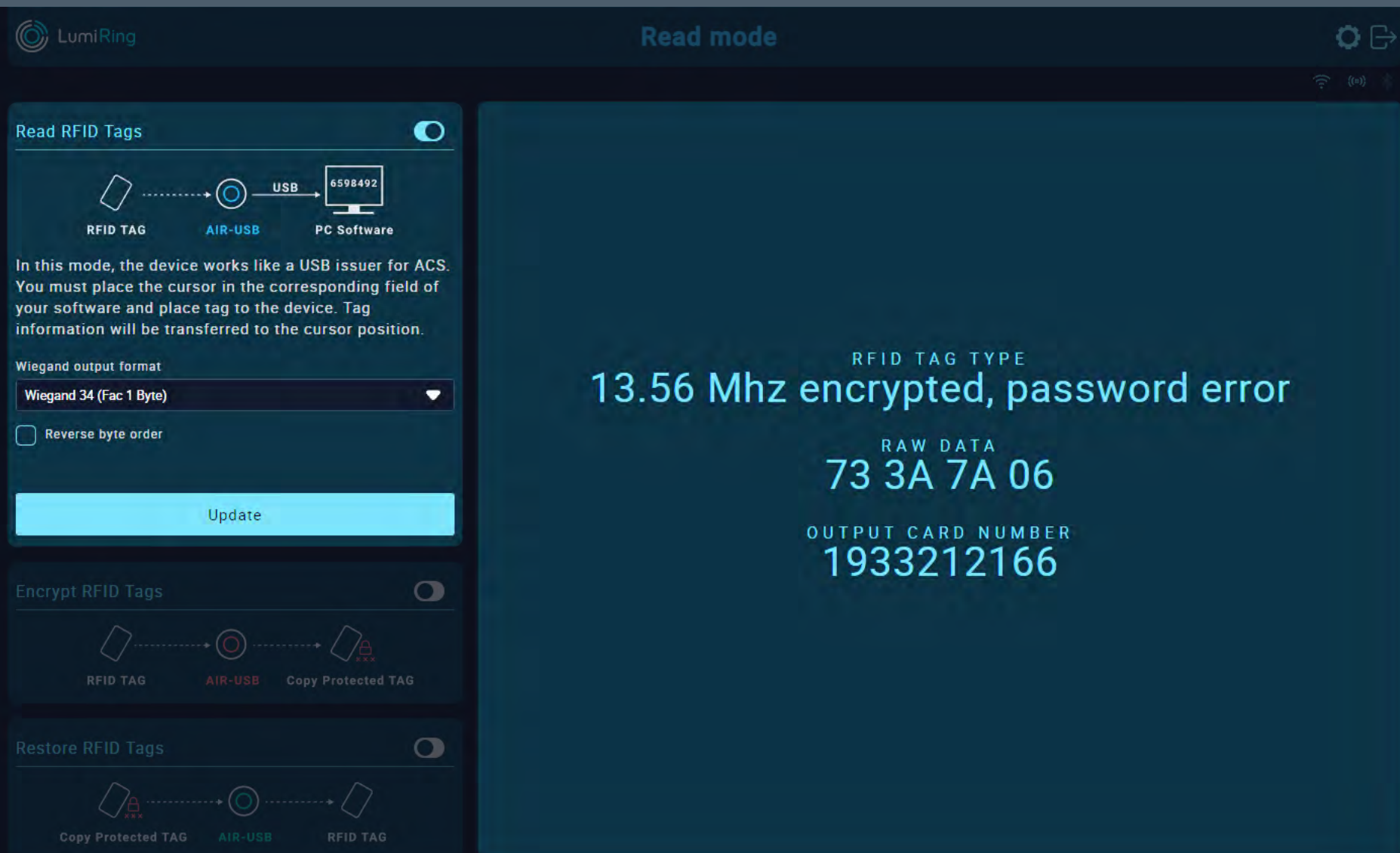
After login, the browser will redirect you to the Identifications Read Mode page.

Login

Read Mode

Work mode includes various functions such as Read mode, Encryption mode, and Restore mode for RFID operation. To change modes, use the radio buttons in the mode name headers.

Read mode is designed to read information from IDs and display it on the screen. Merely touch the ID to the device, and its data will be displayed on the right side of the interface screen.

The read ID will automatically be placed in the active field where the mouse pointer is located. This simplifies transferring information to applications or forms, as there will be no need to enter data manually.

Select the desired output format of the ID codes using the Output Format drop-down list. This allows the ID code output to be tailored to the requirements of a particular system or program.

The user can also select the order in which the ID bytes are read using the appropriate option. This can be useful when the identifier data is read from different devices and where specific formatting is required.

Click the Update button to apply all settings.

Note: The distance from which the ID can be read depends on the type and size of the built-in antenna. It is recommended to keep the IDs at a sufficient distance from the device to avoid reading errors.
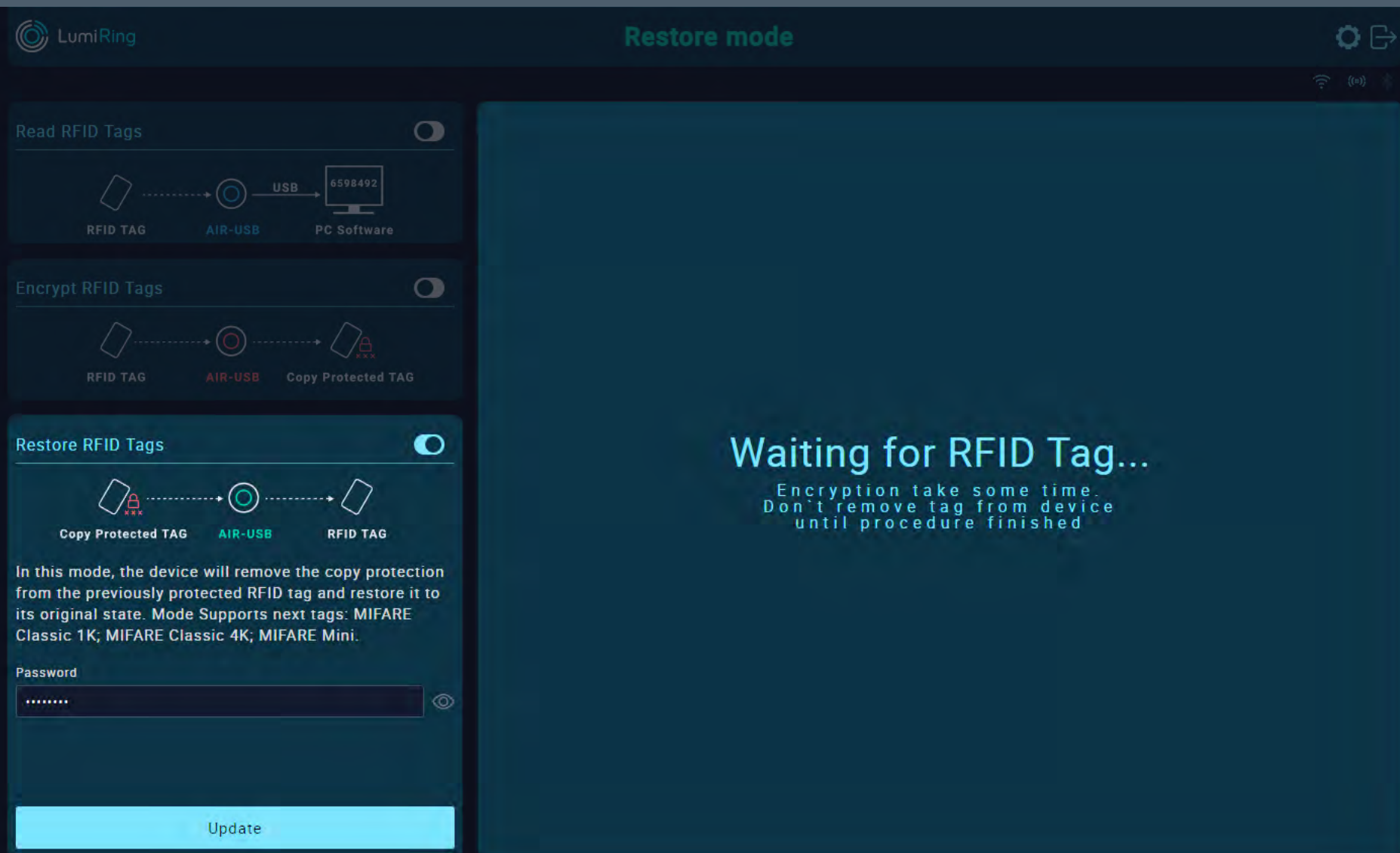
Encrypt Mode
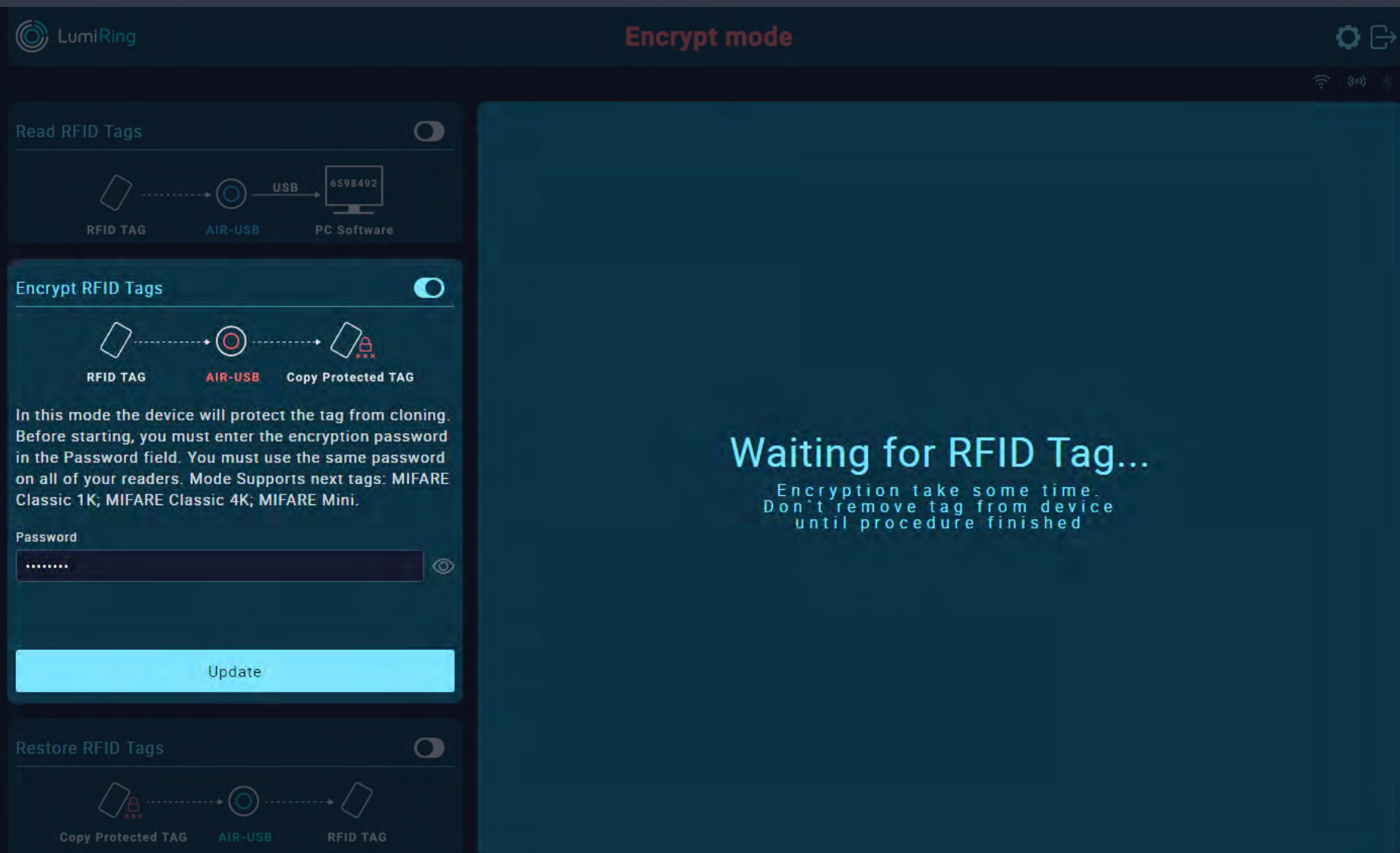
Encrypt mode is designed to protect MIFARE Classic mini/1K/4K RFID identifiers.

To encrypt the identifier, it is necessary to specify a six-character password. After that, to apply the settings, press the Update button.

For the encryption process, attach the identifier to the device and wait for the encryption procedure to finish. After completion, the result of the encryption process will be displayed on the right side of the interface screen: "Success" and the device indication will turn green, or "Failure" and the device indication will turn red.

Note: The encryption process may take longer than an average reading. Wait to remove the attached ID until the encryption process is complete to avoid data transmission errors and prevent data damage.

Restore Mode

Restore mode is used to unprotect MIFARE Classic mini/1K/4K RFID IDs.

To unprotect, enter the previously used encryption password and press the Update button to apply the setting.

For the recovery process, attach the ID to the device and wait for the recovery procedure to complete. Upon completion, the recovery result will be displayed on the right side of the interface screen: "Success" and the device indication will turn green, or "Failure" and the device indication will turn red.

Note: The ID recovery process may take longer than an average reading. When attaching the ID to the device, do not remove it until the recovery procedure is complete to avoid corrupting the transmitted data and prevent the ID from malfunctioning.

System
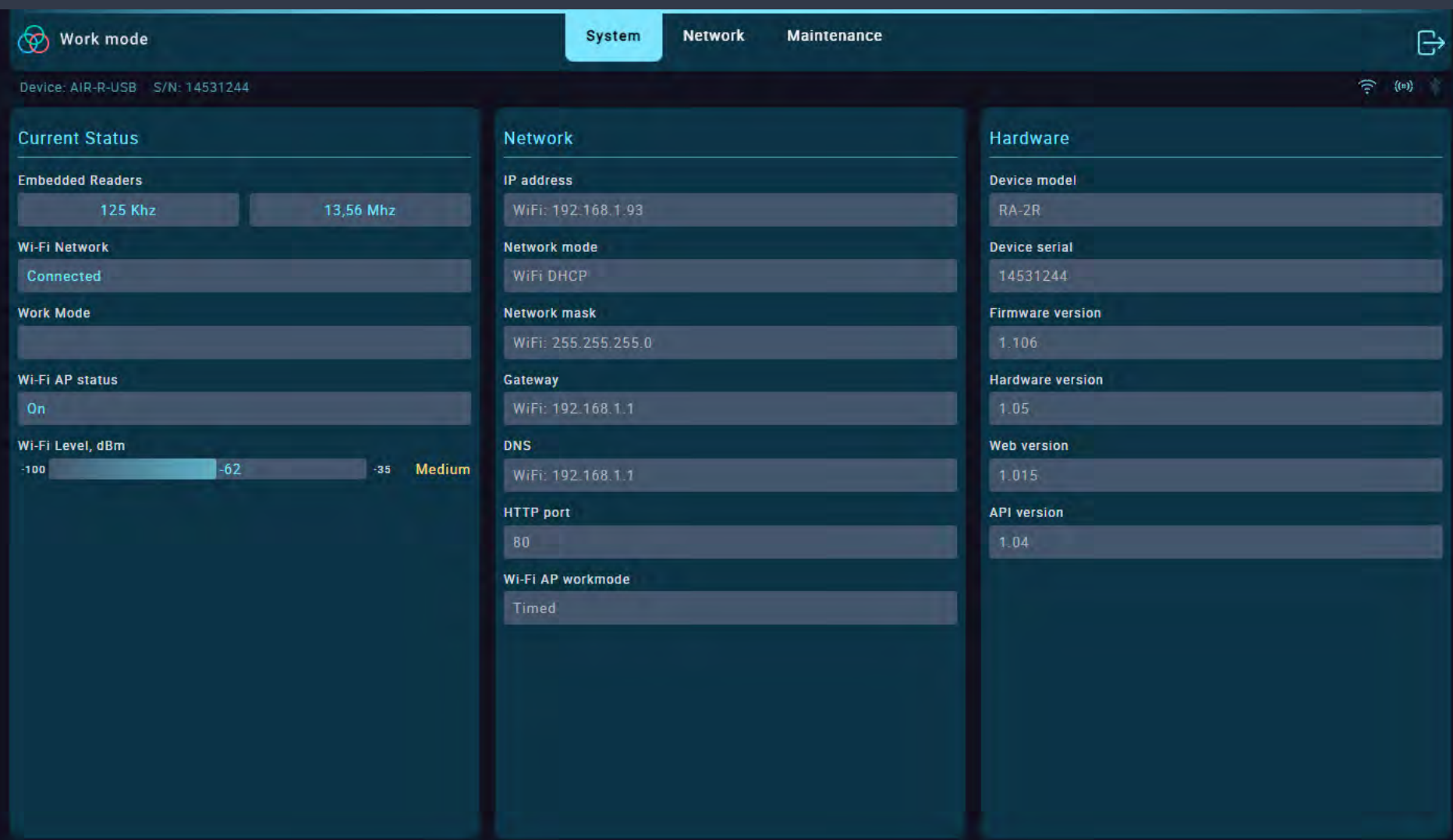
The System section displays information about the current settings and status of the device.

The Current Status subsection displays the:
- Status of Embedded Readers 125 kHz and 13.56 MHZ. If highlighted, the readers are active. If not highlighted, they are inactive.
- Status of the device's connection to the Wi-Fi router.
- Work Mode status: Read mode, Encrypt mode, or Resore mode.
- Status of the built-in Wi-Fi AP: On or Off.
- Level and quality of the device's connection to the Wi-Fi router.

The Network subsection displays the:
- Device's current network settings.
- Device's network address.
- Network mode - Manual or Dynamic Host Configuration Protocol (DHCP).
- The network mask.
- Gateway.
- Domain Name Service (DNS).
- Network port of the device.
- Wi-Fi AP Workmode: Timed or Always On.

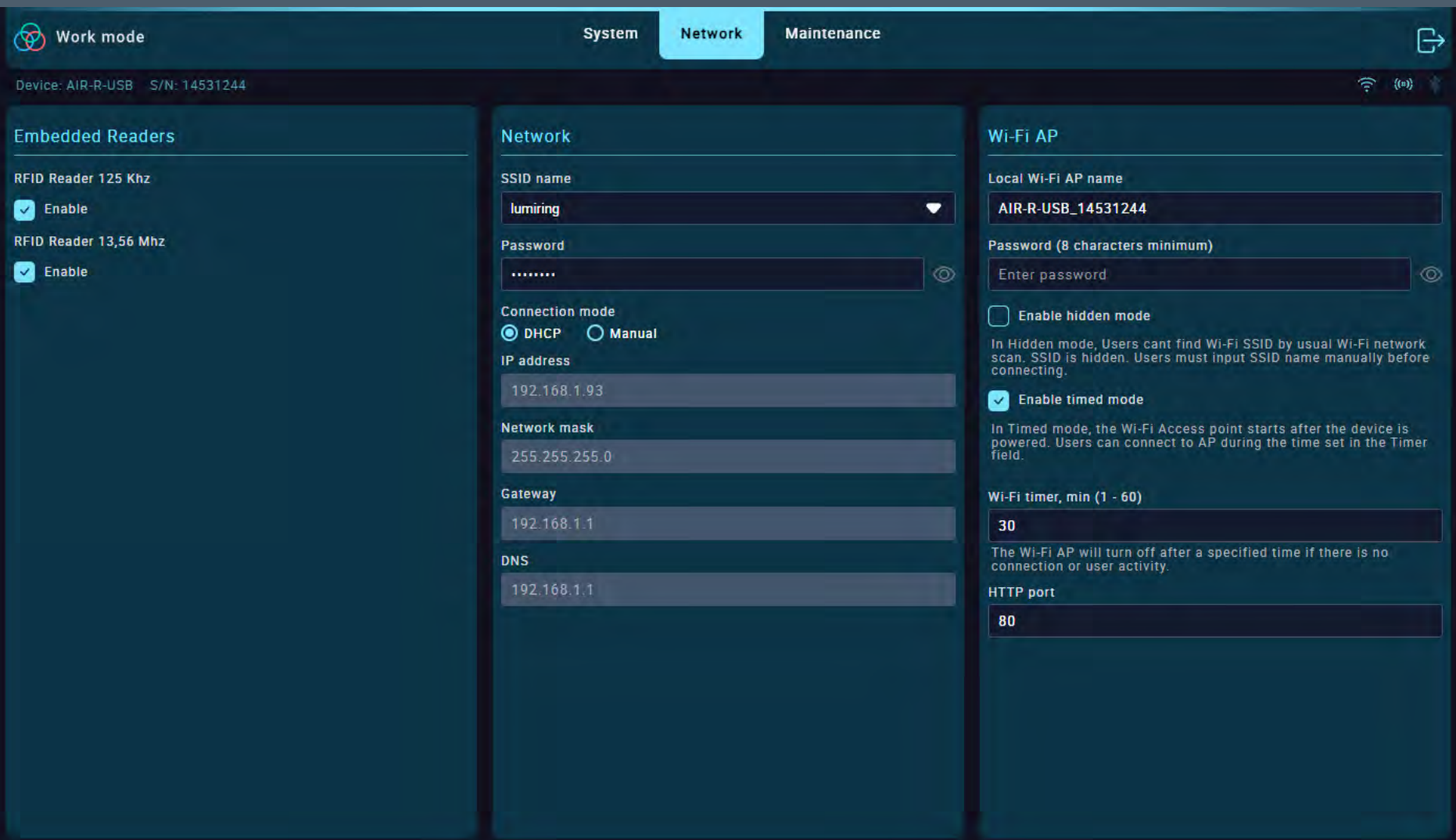In the Hardware subsection, you can see the:
- Device model name.
- Device serial number.
- Current firmware version of the device.
- Current hardware version.
- Web version used by the device.
- Application programming interface (API) version used by the device.

Network

In the Network section, you can turn the ability to read 125 kHz and 13.56 MHz IDs on or off and set up a connection to the Wi-Fi router for remote administration or firmware updates. You can also change the connection settings for the built-in Wi-Fi AP and set the activity time.

Embedded Readers
- To disable or enable reading of 125 kHz or 13.56 MHz identifiers, select the corresponding Enable checkboxes.
- Click the Update button to apply the settings.

Network
- Click on the SSID Name field to start scanning for available Wi-Fi networks.
- Select the desired network and enter the connection password.
- You can choose the DHCP connection path, in which the device will receive all settings automatically, or Manual, where you will have to enter all network settings yourself.
- Click the Update button to apply the settings.

Wi-Fi AP
- In the Local Wi-Fi AP name field, enter the device's network name.
- In the Password field, enter the connection password.
- Enable Hidden Mode checkbox: hides the AP's built-in network name when searching. To connect to the device, you must know its name and enter it manually when connecting.
- Enable Timed Mode checkbox: allows the user to specify when the built-in Wi-Fi AP is available.
- Wi-Fi Timer field: sets the built-in Wi-Fi AP availability time from 1 to 60 minutes.
- HTTP port: By default, the device uses port 80.

Note: A reboot may be required to apply the network settings.

Maintenance
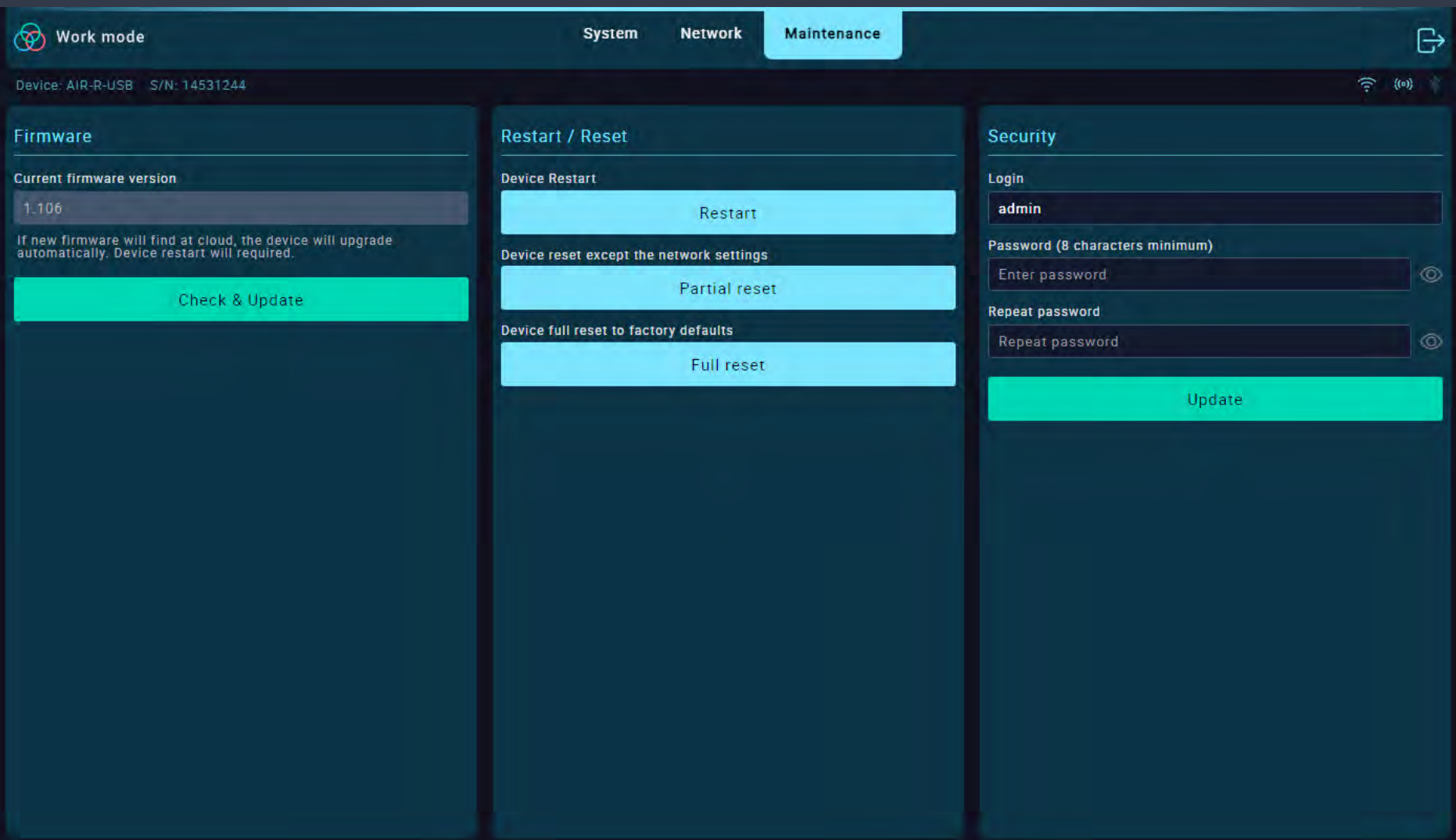
The Firmware section displays the current version of the unit's firmware.

Note: It is recommended to use the latest firmware version.

- To download a new firmware version, connect to a network with Internet access in the Network section.
- Click the Check & Update button and wait until the update process completes.
- A modal window will prompt you to reboot the device.
- After restarting, verify that the device version has changed.

Note:
The update duration depends on the Internet connection quality and firmware version but usually takes a maximum of 5 minutes.
If the update takes more than 5 minutes, forcibly reboot the device by switching off the power and trying the update again.
A power failure or network connection interruption during the update may cause a firmware update application error.
If this happens, disconnect power from the device for 10 seconds and reconnect.
Leave the unit switched on for 5 minutes without attempting to connect or log in to the web interface.
The unit will automatically download the latest previously used firmware version and resume operation.

The Restart/Reset subsection performs the following actions:

- Restart - restarts the device.
- Partial reset - resets all device settings except for network connection settings.
- Full reset - resets all settings of the device to factory defaults.

The Security subsection is used to change the password for logging into the interface of the device:

- Enter the new login password and confirm it.
- Apply the changes by pressing Update.

The new password can be used the next time you log in to the device interface.

For Notes

www.lumiring.com