

NR800 Utility

Documentation

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Version 1.0R1

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NR800 Utility User's Manual

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Introduction

NR800Utility is a tool to set up NR800, that is, you are able to modify NR800 settings with this program by USB. For further information please refer to [Using NR800Utility](#).

System Requirements

NR800Utility is a Windows-based program, following is the requirements:

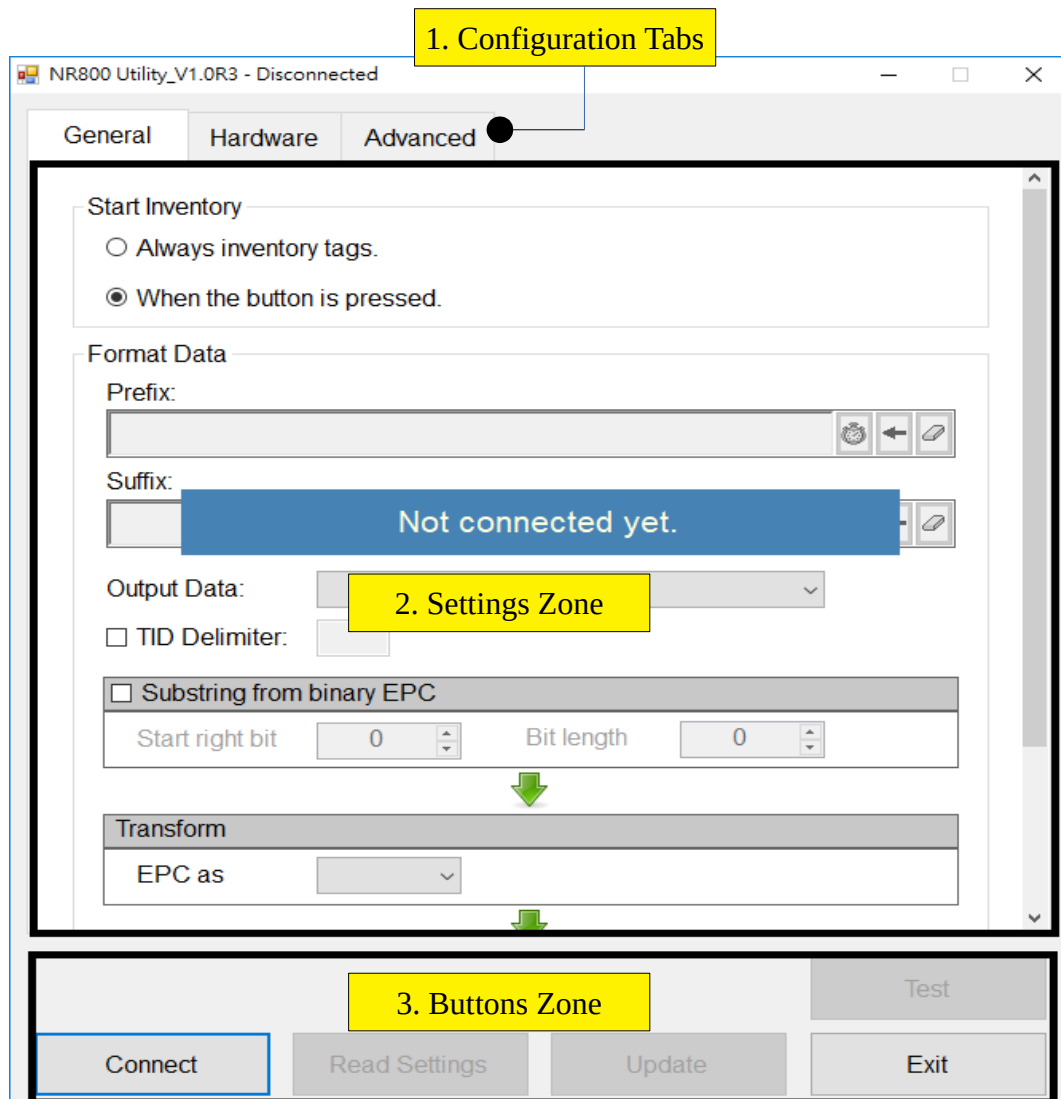
- Windows XP/7/10 (x86/x64)
- .NET Framework 4.0

Start the Program

Click **NR800Utility.exe** to configure NR800.

Using NR800Utility

Explore the User Interface



The main window contains following elements:

1. Configuration Tabs

Show different type of configuration. There is following tabs:

- **General** Tab: Set up type of inventory and format output data. For further information, please refer to [General Settings](#).
- **Hardware** Tab: Modify hardware configurations. For further information, please refer to [Hardware Settings](#).
- **Advanced** Tab: Modify advanced configurations. For further information, please refer to [Advanced Settings](#).

2. Settings Zone

Show the details of specified configuration.

3. Buttons Zone

There is following buttons:

- **Connect** button: Connect to NR800.
- **Read Settings** button: Retrieve settings from NR800.
- **Update** button: Update modified settings to NR800.
- **Exit** button: Disconnect with NR800 and close the program.
- **Test** button: Update current settings to NR800 and test functions. For further information, please refer to [Test Functions](#).

General Settings

In **General Tab**, you could change configurations as below.

General Hardware Advanced

Start Inventory

☐ Always inventory tags.

☒ When the button is pressed.

Format Data

Prefix:

<STX>

Suffix:

<CR>

Output Data: Text: EPC

☐ TID Delimiter:

☐ Substring from binary EPC

Start right bit 0 Bit length 0

Transform

EPC as Hex

- Timing of start inventory.
 1. **Always Inventory tags:** NR800 inventory tags always after it's power on.
 2. **When the button is pressed:** Inventory tags only when you press the button on the NR800.

- Format output data.

Format Data

Prefix:

Suffix:

Output Data:

☐ TID Delimiter:

☐ Substring from binary EPC

A Start right bit Bit length

↓

Transform

B EPC as

↓

☐ Substring from data

C Start right char Char length

Mode (Trim string)

1. **Prefix / Suffix:** Set up prefix and suffix.

NOTE: Prefix/Suffix accept visible keys and control keys, so you may use to delete text.

2. **Output Data:** Select a type of output data you'd like to get.
3. **TID Delimiter:** if *Output Data* contains TID, you could enable the setting and assign a specific char to split it.
4. **Substring and Transform EPC:** NR800 follows below steps to format EPC data.
 - A. **Substring from binary EPC:** Enable to extract a substring from EPC binary data.
 - **Start right bit:** Specified a start bit from the right hand side.
 - **Bit length:** Specified the length you'd like to pick.
 - B. **Transform:** Transform the substring EPC data to hexadecimal or decimal.
 - C. **Substring from data:** Enable to extract a substring from the transformed string.
 - **Start right char:** Specified a start char from the right hand side.
 - **Char length:** Specified the length you'd like to pick.
 - **Mode:** Select a length mode to padding zeros or/and trimming string. There is four modes as below.

	Fixed Mode	Minimum Mode	Maximum Mode	Full Mode*
Zero padding*	Yes	Yes	X	X
Trim string*	Yes	X	Yes	X

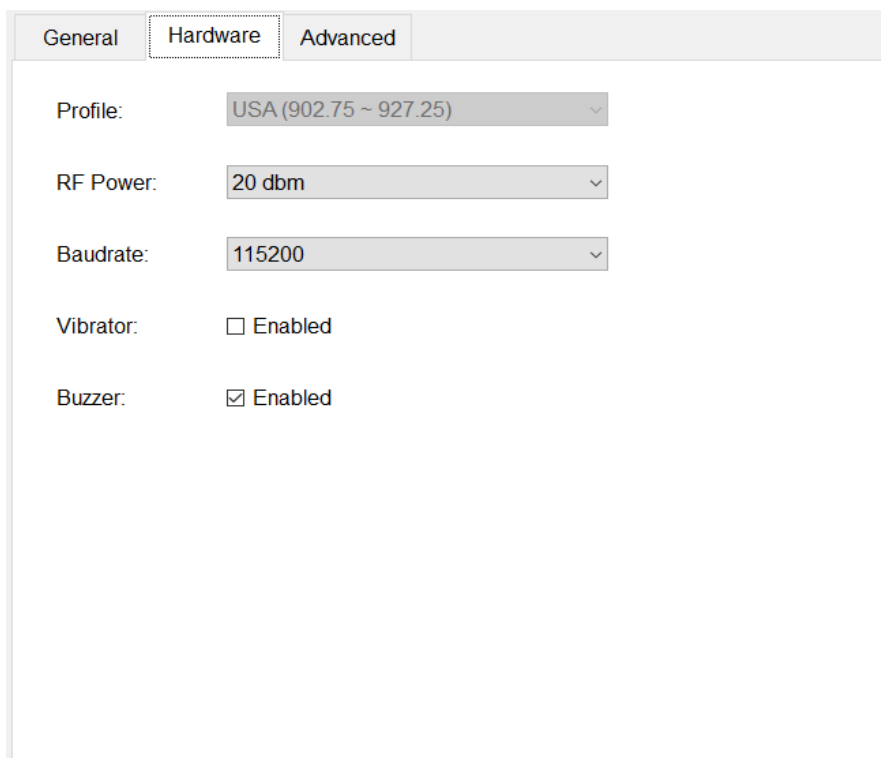
* **Zero padding**: Padding zeros to output string when data length is less than *Char length* that you setted.

* **Trim string**: Trimming the data when data length is longer than *Char length* that you setted.

* **Full Mode**: Output will keep binary digits.

Hardware Settings

In **Hardware Tab**, you could change configurations as below.



The screenshot shows a software interface with three tabs: 'General', 'Hardware' (which is selected), and 'Advanced'. Under the 'Hardware' tab, there are five settings:

- Profile:** A dropdown menu showing 'USA (902.75 ~ 927.25)'.
- RF Power:** A dropdown menu showing '20 dbm'.
- Baudrate:** A dropdown menu showing '115200'.
- Vibrator:** A checkbox labeled 'Enabled' which is currently unchecked.
- Buzzer:** A checkbox labeled 'Enabled' which is currently checked.

- **Profile**
Identify the NR800 frequency range.
- **RF Power/Sensitivity**
Optimize inventory effect.
- **Vibrator**
Switch the vibrator ON/OFF.
- **Buzzer**
Switch the buzzer ON/OFF.

Advanced Settings

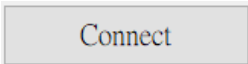
In **Advanced Tab**, you could change configurations as below.

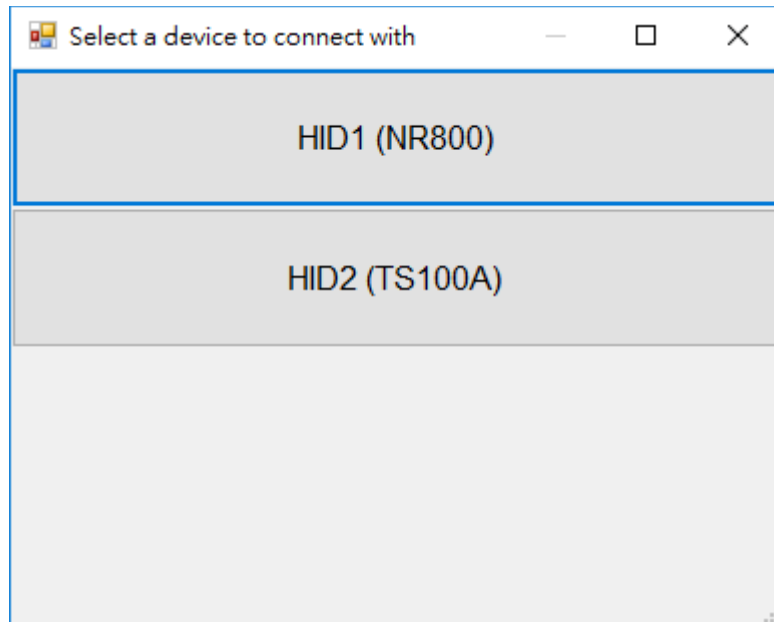
The screenshot shows the 'Advanced' tab of a settings window. It contains three main sections: 'Device ID', 'Inventory Tags', and 'Output'. 'Device ID' has a numeric input set to 0. 'Inventory Tags' has two sliders: 'Time to remove' is positioned at 18.1% between 'Immediate' and 'Slow', and 'Repeat Interval' is positioned at 'Never' between 'Fast' and 'Never'. 'Output' has three settings: 'Interface' is checked for 'Keyboard', 'Keyboard Layout' is set to 'English [英文(美國)]', and 'Tag Interval' is set to 0 ms.

- **Device ID**
 - Set up device ID (0 to 255) to NR800.
- **Inventory Tags**
 - **Time to remove:** Set how long NR800 couldn't inventory the tag which just appeared in the field, it thought the tag was removed.
 - **Repeat Interval:** Set how long to re-send output data for the same tag.
- **Output**
 - **Interface:** Enable/Disable that prints data as a keyboard.
 - **Keyboard Layout:** Set keyboard layout to output prefix and suffix correctly.
 - **Tag Interval:** Set the time interval (0 to 2540) between two tags' output.

Tutorials

Connect to NR800

1. Plug in NR800 to your computer by USB.
2. Click  button in the main window.
 - 3.1. If there is only one device could be found, it connects the device directly.
 - 3.2. If there are one more devices could be found, it shows a list as blow. Then you may select a target device to connect with.



Update Settings

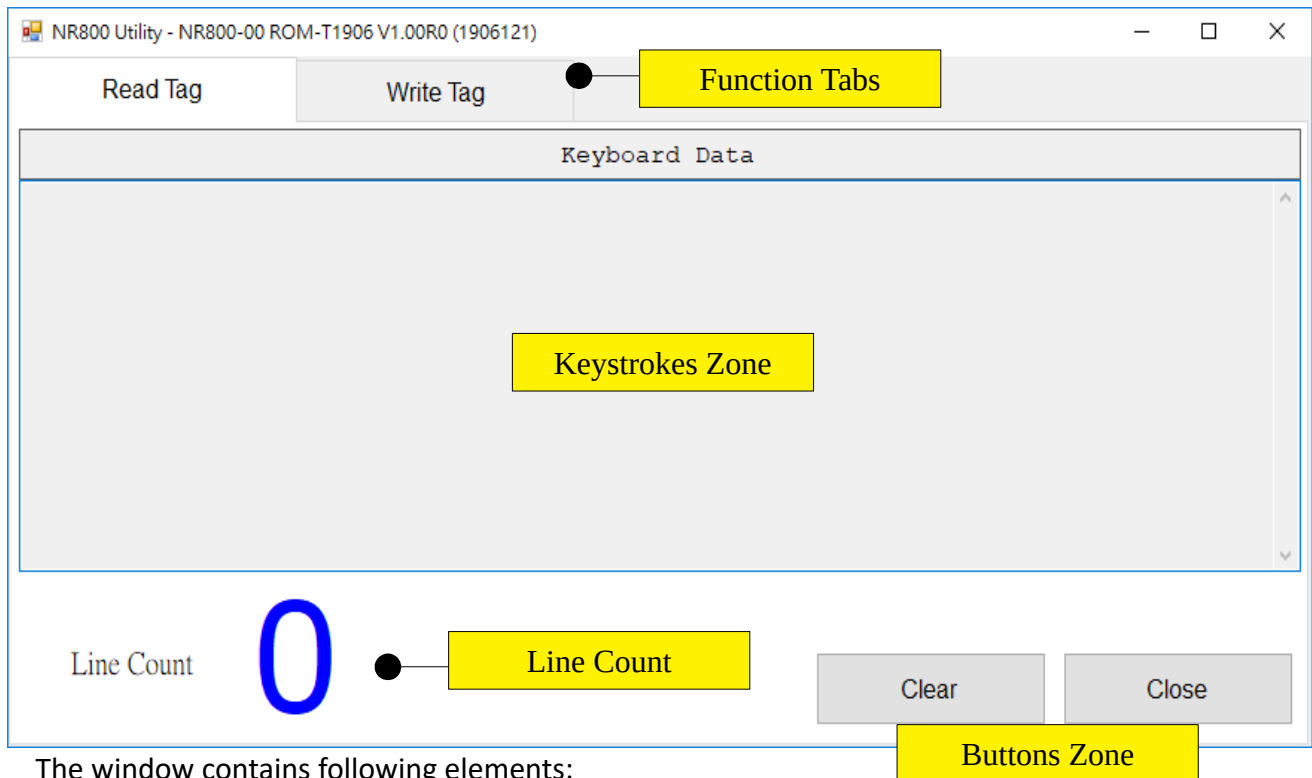
Please follow below steps to update settings to NR800A.

1. [Connect to NR800](#).
2. Modify settings to fit your need.
3. Click **Update** button to save the settings to NR800.
4. Click **Exit** button to close the program.

Test Functions

You may test current settings whether it meets your expectation.

After connecting with NR800, click **Test** button, a window shows as below:



The window contains following elements:

1. **Function Tabs:**

- **Read Tag** Tab: Test NR800 inventory tags.
- **Write Tag** Tab: Encode data to tags. Refer to [Write Tag](#).

2. **Keystrokes Zone:** Show NR800 output data here.

3. **Buttons Zone:** There is following buttons:

- **Clear** button: Clear data in Keystrokes Zone.
- **Close** button: Close the window and then back to main window.

4. **Line Count:** Show how many lines in Keystrokes Zone.

Write Tag

You may write data to tags with a selected format.

Click **Test** button, and click **Write Tag** tab on the new window. A window shows as below:

[illegible]

The window contains following elements:

1. **Data:** Enter hexadecimal data to EPC for the source of encoding.
2. **Encode Format:**
 - **EPC:** Data as EPC. (EPC length must be a multiple of four.)
3. **Result:** History of writing tags.
 - **Clear** button: Clear the result list.
 - **Close** button: Close the window and then back to main window.

Update History

17Jun2019 release

- Version 1.0R1