# Content

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# C Serial Product E-Ink Name Badge Manual

## 1. Overview

This manual mainly introduces the origin, the applications and usage of C serial product E-Ink Name Badge, the functions of the WTCard APP, and how to make templates on WTCard APP.

## 2.  Origin of C Serial Product E-Ink Display

"E-Ink" was invented by E-Ink company from America on end of 20th century, the full name is Electronic Ink. It is a new material which produced by integration of chemistry, physics and electronics. The feature is high readability, flexibility and low power consumption. Compared with traditional paper, E-Ink paper can be used repeatedly, therefore, it is heralded as " a piece of paper that never can be used up". Simply speaking, you can regard it as a technology which just like you can write letters with a pen on paper. The principle is that the surface of the e-ink screen is attached with many small " microcapsules", with the particles inside the capsules of different colors(red, black, white) and different electric charges. Electrodes are placed above and below the capsule film. When a positive or negative electric field is applied to an individual electrode, the color particles with the corresponding charge will move either to the top or bottom of a capsule, making the surface of the e-ink screen appear a certain color. According to different application scenarios, we divide E-Ink display device to different serials(E, Q, G, M, C, P Serial product). This manual is a introduction of C Serial E-Ink Name badge. The realization of the function of C serial E-Ink name badge depend on three elements: E-Ink display device, WTCard APP, WT transmitter.
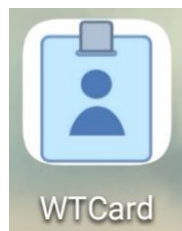
## 3.  Elements for realization of C serial product Electronic Nameplate

The realization of function of C product electronic nameplate depends on four elements: 1)WT Card APP, 2)electronic display device(electronic nameplate), 3)transmitter(the Bluetooth base), 4)USB line. The content displayed on the nameplate is transmitted from WT Card APP. After opening the Bluetooth of the mobile phone, user DIY the template information, then connect the transmitter and nameplate device via USB line, around 15 seconds, the DIY template information can be transmitted to the nameplate device. The transmitter can be removed after the information transmitted to the nameplate, as the device is ultra low power consumption. The content will be last permanently even no power supply, only refreshing template need power consumption.

## 3.1    WT Card APP

WT Card APP is the data source of C serial product electronic nameplate. It is used to process information, such as DIY template, sending template. The APP consists of four modules: Device, Template, Discovery, Setting. The content displayed on the nameplate is transmitted from WT Card APP. After opening the Bluetooth of the mobile phone, user DIY the template information, then connect the transmitter and nameplate device via USB line, around 15 seconds, the DIY template information can be transmitted to the nameplate device. It includes many edit functions such as: input characters, insert photos and lines, make QR code and bar-code, adjust the direction and size of all contents inputted. The detail introduction of the APP please refer to chapter 4.



### 3.1.1    WT Card Download Methods

WT Card can be downloaded from WTCard Cloud/ App Store/ Google Play. You can also click below links or scan below QR code to download the APP.

A.  WTCard Cloud(Android) download link and QR code
https://dev.witstec.com/downloadCenter/getAndroid/C



B.  App Store download link and QR code
https://apps.apple.com/cn/app/wtcard/id1538678586

C.  Google Play download link and QR code

https://play.google.com/store/apps/details?id=com.witstec.badgeepaper

## 3.2 Electronic Nameplate

Electronic nameplate is the terminal display device of DIY contents. Open the Bluetooth of mobile phone, after the data processed on WT Card APP, connect the transmitter (Bluetooth base), the data will be transmitted to the nameplate.

### 3.2.1 Specification of C Serial Product E-Ink Name Badge

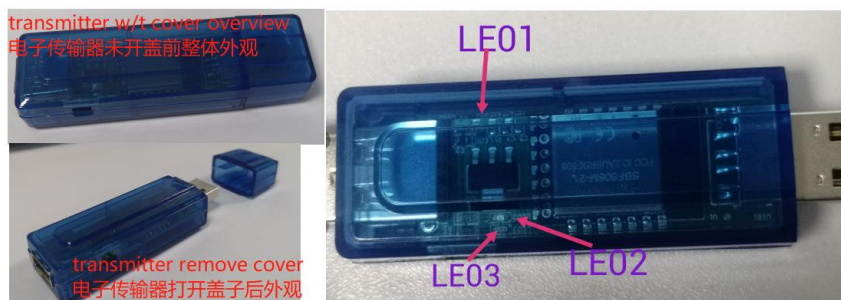| Item | Parameter | Description |
|------|-----------|-------------|
| 1 | Screen Type | E-ink screen |
| 2 | Display color | Red,White,Black |
| 3 | Display Resolution(pixel) | 250*122 |
| 4 | Active area/Display size(mm) | 23.7(H)*48.55(V) |
| 5 | Screen Outline dimension(mm) | 29.2(H)*59.2(V)*1.05(D) |
| 6 | Device Outline dimension(mm) | 36.22(H)*69.73(V)*6.4(D) |
| 7 | DPI | 130 |
| 8 | Working temperature | 0-40℃ |
| 9 | Communication | Bluetooth |
| 10 | Material | ABS |
| 11 | Application | Businessman, student, worker |

## 3.3 Transmitter

Transmitter, what we called Bluetooth base normally. Before sending the DIY template data, You have to turn on the Bluetooth of the mobile phone, keep the base power supplied, then connect the matching USB line so that connecting the transmitter and nameplate device. Please note that there are three indicate lights:LE01/ LE02/ LE03. These indicate lights can help you judge the connecting and communicate status between transmitter and nameplate device.

**LE01**: Power indicate light, red indicate. When the transmitter connect power supply, LE01 will red showed permanently until disconnect with power source.

**LE02**: Connecting status indicate light, green indicate. If LE02 continually and regularly flashes, stands for the transmitter and nameplate device connect successfully.

**LE03**: Data communication indicate, red indicate. After click "Sending to Device" on WT Card APP, LE03 will flashes immediately and rapidly around 1 second, stands for the template data starts transmitted from APP to nameplate device.



## 3.4 USB Line

USB line connect the transmitter(Bluetooth base) and nameplate, only connecting this special USB line, the base and nameplate connected and data can be transmitted.
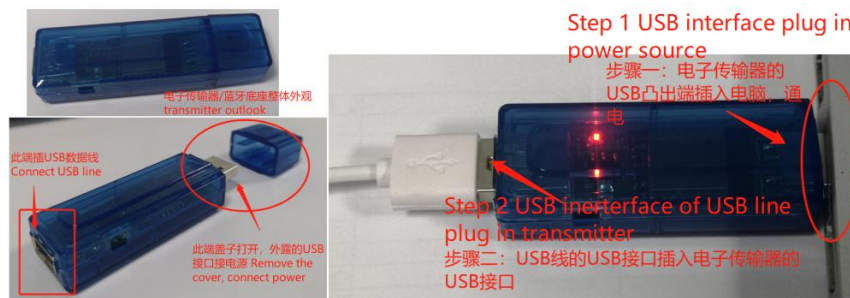


## 3.5 Connecting Method

The connecting steps of transmitter and nameplate as below:

Step 1: Keep transmitter power supplied. Remove the cover of the transmitter, and plug in to power supply(plug into USB interface of computer of USB interface of recharger)

Step 2: Plug in the USB interface of USB line to the USB interface of transmitter

Step 3: Place the magnet end of USB line on the magnet end of the bottom of nameplate.

Step 3 Magnet end of USB line put on the magnet end of nameplate 步骤三： USB线的磁吸端吸附在铭牌底部的磁吸端

Please note, if there is repulsion occurred after the magnet end of USB line placed on the magnet end of the bottom of nameplate, that means the direction of the magnet end of the USB line is placed opposite. If the direction is correct, repulsion will not occurred.



The direction of the magnet end is placed opposite, repulsion occurred
磁吸端方向放反，出现排斥现象

USB maget correct direction
USB磁吸端真正确方向

Meanwhile, please pay attention to the indicate light status during the connecting of transmitter and nameplate.
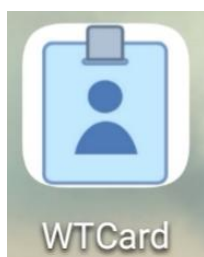
**LE01**: Power indicate light, red indicate. When the transmitter connect power supply, LE01 will red showed permanently until disconnect with power source.

**LE02**: Connecting status indicate light, green indicate. If LE02 continually and regularly flashes, stands for the transmitter and nameplate device connect successfully.

**LE03**: Data communication indicate, red indicate. After click "Sending to Device" on WT Card APP, LE03 will flashes immediately and rapidly around 1 second, stands for the template data starts transmitted from APP to nameplate device.
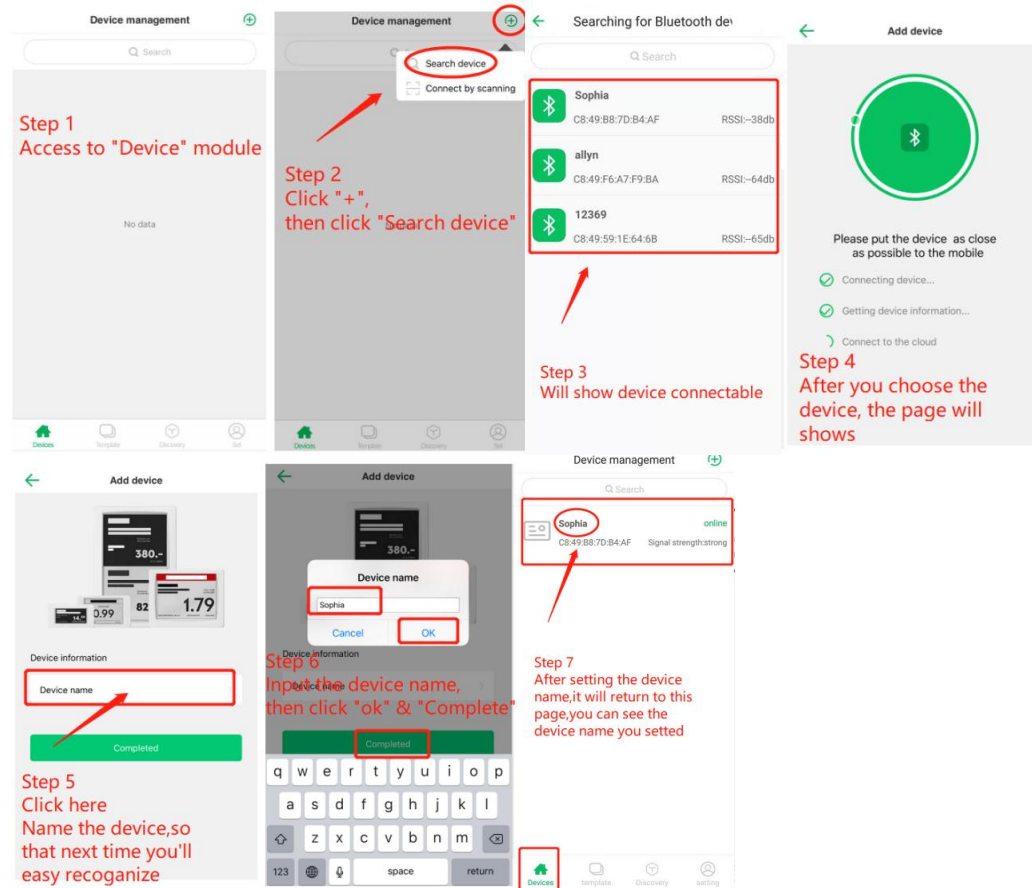
# 4. Introduction of WTCard APP

The WTCard APP is consists of four function modules: Device/ Template/ Discovery/ Setting. Through this app, you can edit contents and then send to the C serial E-Ink Display Name Card device via Bluetooth after connected with the transmitter and USB line. It includes many edit functions such as: input characters, insert photos and lines, make QR code and bar-code, adjust the direction and size of all contents inputted.
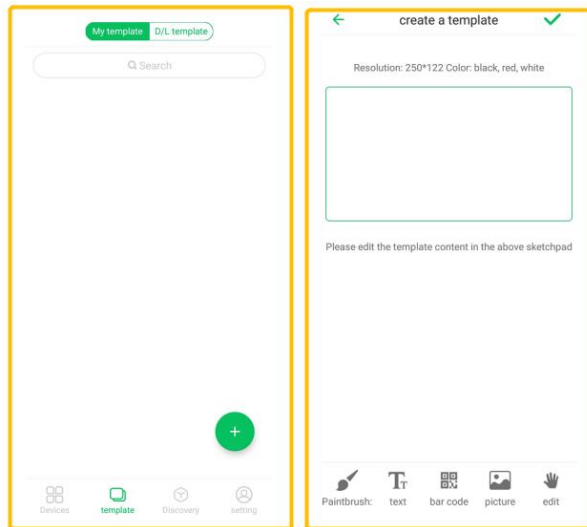
## 4.1 Module 1. Device

After click the "+" on the top right corner and click "search device", the device ID will show on this module. It will show the device connecting status connect or not. Data cannot be transmitted unless the device is connected.



## 4.2 Module 2. Template

There are two sections of this part. One section is "My Template". This is where you can make templates and where you can see the templates records you've made. Click the "+" on the bottom right corner, you can start making templates. Another section is "Download Template". From this module, you can see the records of templates download from Official template. You can use this template sample and edit the content and then send to the device, which saving lots of time for the process of design.

**4.2.1 Edit Function Buttons**

| Template Edit Page | Icon | Function Button | Function |
|---|---|---|---|
|  | Paintbrush: |  | **Paintbrush**<br>First row: available to manual draw picture and Insert straight line/square/rectangle/round/oval.<br>Second row: available to set the thickness and full or dot line effect.<br>Third row: available to set the color of graphs to black or red. |
| | text |  | **Text Edit Function**<br>1. Available to type in characters and edit characters.<br>2.Available to set the direction of contents(horizontal & vertical).<br>3.Available to set the color of contents (black & red).<br>4.Available to set five font size of the contents.<br>5.Available to enlarge or decrease the font size except for the five setted font size. |
| | bar code |  Barcode    QR code | **Bar-code & QR Code Generator**<br>Available to produce barcode and QR code after typed in contents. |
| | picture | | **Insert Photo from Album**<br>Available to insert photos from album,and the photo size can be enlarged or decreased. |
| | edit |  | **Edit Function**<br>1.Delete content.<br>2.Copy content.<br>3.Set content to center of the display.<br>4.Set tiltted content to horizontal direction.<br>5.Delete all contents in template. |
| | | | Display the contents under editted. |

**4.3 Module 3. Discovery**

There are different kinds of templates saved in this module for users downloading usage. You can choose any template you like by clicking the "Download" button on the bottom right corner of the template, then it will be saved and viewed from "Template" module and edit it, which saving lots of time.
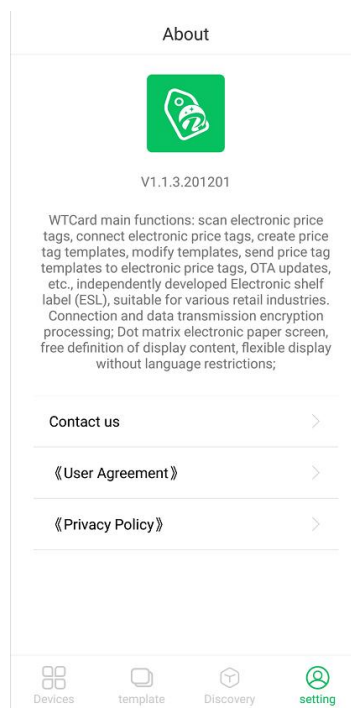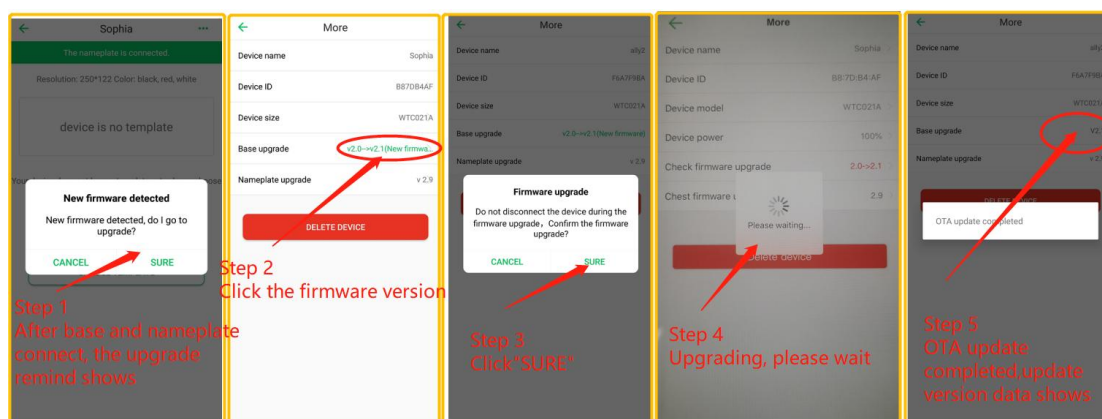
**4.3.1 Official Templates Showing**



## 4.4 Module 4. Setting

This module introduces the main functions and features of the device, meanwhile, the users' agreement and related private policy are attached. Furthermore, our contact information also listed. Should you have any questions please do not hesitate to contact us.
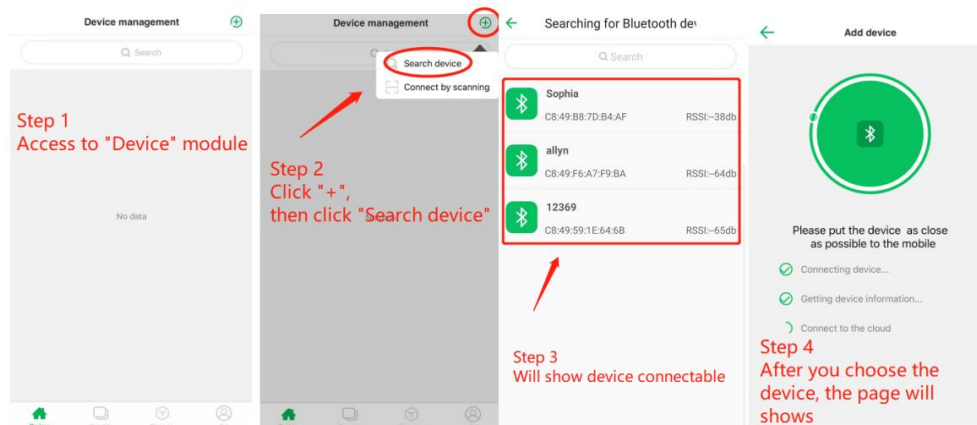
**4.5 Online OTA for Firmware**

C serial product nameplate can do online OTA. OTA including the transmitter(Bluetooth base) OTA and nameplate OTA. When there is new function added on APP or firmware are optimized, we'll upload the update information to cloud, users can do OTA online for base and nameplate. If there is firmware can be upgrade, you'll see the automatic notification of OTA after the Bluetooth base and nameplate connected(Please note that if you'd like to learn about the base upgrade only, no need to connect the nameplate, the upgrade steps are the same). Below are the steps of OTA:
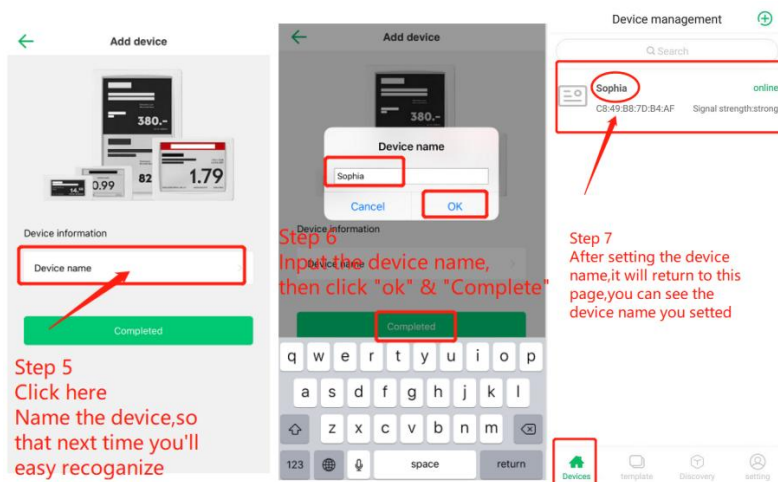


# 5.  How to Make Template and Send to E-ink Name Badge

**5.1 Step 1. Connect Device**

1.  Install WTCard app on mobile phone

2. Plug the transmitter and USB port into power supply, and put the magnet end on the corresponding position on the device

3.  Click WTCard APP and Click the "+" in the top right corner

4.  Click "ALLOW" after the message alert "An app wants to turn on Bluetooth" popped out

5. Choose "WTCard" Bluetooth to access the device（the Bluetooth name "WTCard" can be renamed as your wanted）
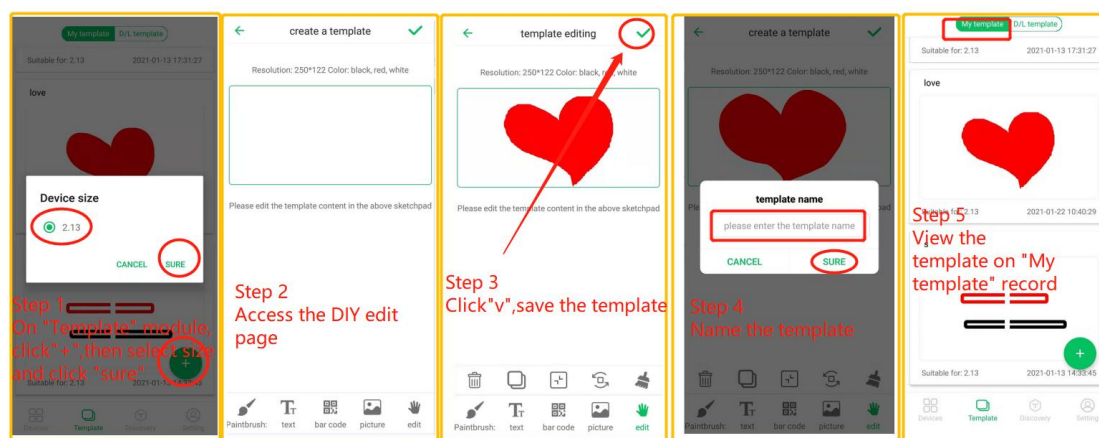
6.  Name the device

## 5.2 Step 2. Make Template

There are three methods to design template. One method is make template yourself, you can design individual template by yourself. Another way is by downloading certain template from Official Templates and edit the content, which saves lot of time thinking about how to make the template. The third method to make template is based on existing template and it is more efficient. Method 2 and method 3 are applied to adopting same template format. Below are the steps of making templates.
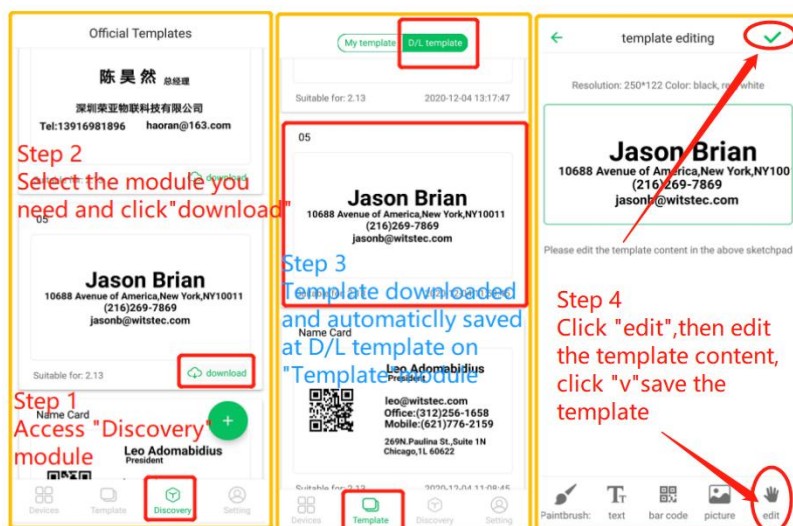
### 5.2.1 A. Make Individual Template

1. Enter into "Template"module, select "My template"
2. Click the "+" in the bottom right corner
3. Choose the device you need
4. Make individual templates you want by using existed edit function buttons
5. Click the "√" in the top right corner and name the template, template finished
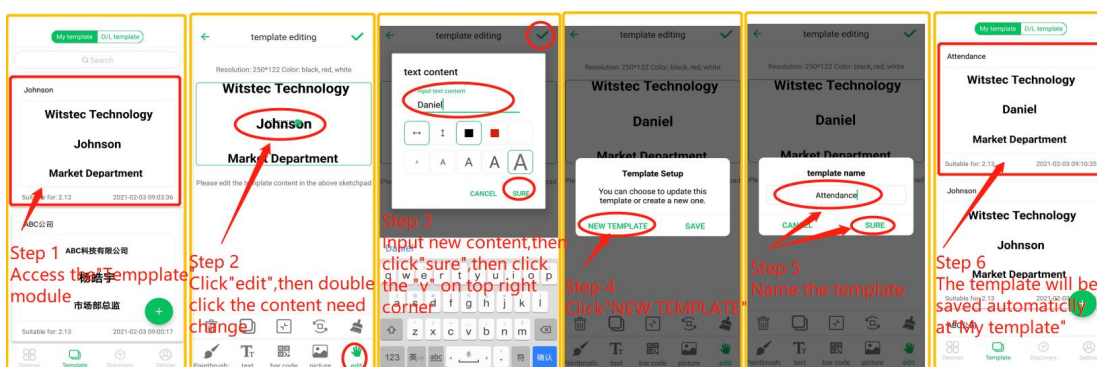
**5.2.2 B. Fast Make Template by Downloading from Official Templates**

1.  Enter into "Discovery" module,

2.  Download any template you like, it will be saved at "D/L template" section of "Template" module.

3.  Enter into "Device" module, click "Edit" button on bottom right corner

4.  Click the "√" in the top right corner and name the template, template finished



**5.2.3 C Fast Make Template Base on Existing Template from My Template**

1、 Turn on the Bluetooth of the mobile, access to "Template" module, then click the template you'd like to apply

2、 Click the "edit" button, then double click the content you'd like to change

3、 Input new content, then click "sure" and "√"on top right corner

4、 Click "NEW TEMPLATE"(click new template means save the template as a new template and do not change the content of the existing one, if choose "SAVE" means replace the existing one)

5、 Name the template

6、 New template will be saved automatically at template record
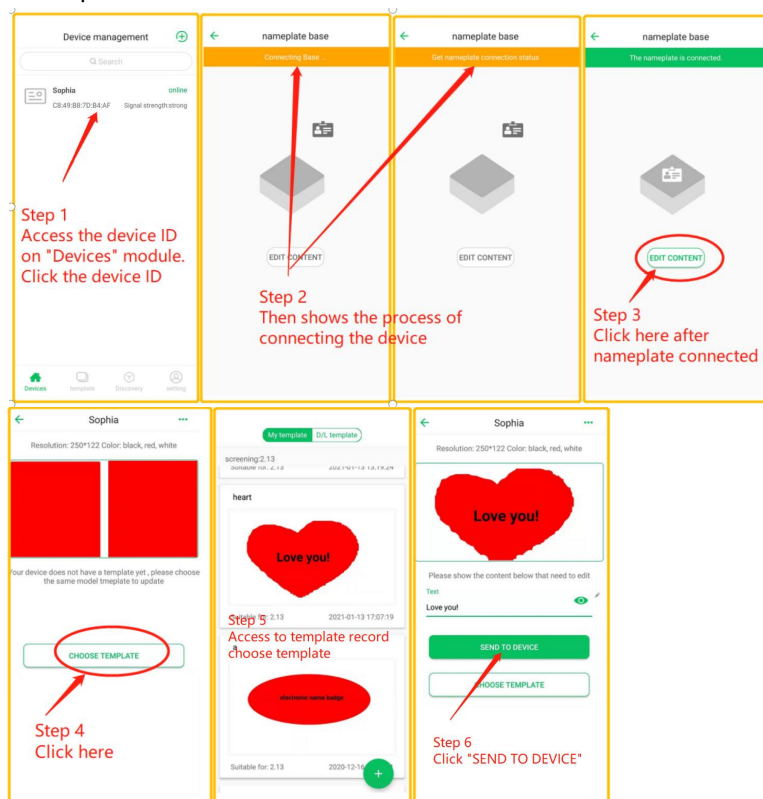
## 5.3 Step 3. Sending Template

There are two conditions for sending template , condition one is sending edited template including the individual template you've made and the template downloaded from Cloud which is already modified . Condition two is sending the template which downloaded from cloud and need modified.

### 5.3.1 A: Sending Edited Template

1.  Connect the device
2.  Click"Edit Content"
3.  Click"Select Template"
4.  Click the edited template on "My Template" or "D/L template" section
5.  Click"Send to Device"
6.  Template contents will be showed on device around 15s

### 5.3.2 B: Sending Template Download from Official Templates and Unedited

1.  Connect the device
2.  Click"Edit Content"
3.  Click"Select Template"
4.  Click the edited on "D/L template" section
5.  Edit the content which need modified
6.  Click"Send to Device"
7.  Template contents will be showed on device around 15s

After click"SEND TO DEVICE" will show



Step 7 Template update successfully

# 6. Applications of C Serial Product E-Ink Name Badge

There are many advantages of the device such as: ultra low power consumption(No backlight, keeps Displaying last content even when power down), individually templates for selection or design, high efficiency (fast update), durable and reliable, environmental friendly (save paper cost), online OTA, it is a very good choice for applications like name badge(name card, employee's card, student card, exhibition certificate).